STUDIO International

Journal of Modern Art November/December 1976 £1.75 $5

Art & Experimental Music

George Brecht Interview

Gavin Bryars
Berners, Rousseau, Satie
Marcel Duchamp's Music

Paul Burwell & David Toop
Radical Structure

Cornelius Cardew
Viggly Lines and
Vobbly Music

Germano Celant
Record as Artwork

Brian Eno
Generating and Organising
Variety in the Arts

Morton Feldman Interview

Stuart Marshall
Alvin Lucier's Music of
Signs in Space

Michael Nyman
Hearing/Seeing

Tom Phillips Interview

Steve Reich Interview

Jeffrey Steele
Collaborative Work
at Portsmouth

Arts Council Exhibitions

London

HAYWARD GALLERY
Sacred Circles:
2000 Years of North American Indian Art
until 16 January

SERPENTINE GALLERY
Prunella Clough: recent paintings
Harry Thubron: collages
until 21 November
Six Times: installations and performances
26 November–12 December
Beyond Light:
work by Bill Culbert and Liliane Lijn
18 December–16 January

WAREHOUSE
Peasant Paintings from Hu County, Shensi Province, China
18 November– 23 December

HORNIMAN MUSEUM
Masks
11 December–8 January

CRAFTS ADVISORY COMMITTEE GALLERY
The Gregynog Press
12 November–29 January

Regions

BILSTON, Art Gallery
Patrick Caulfield Prints
until 7 November

BIRMINGHAM, Midland Arts Centre
George Rodger, photojournalist
until 14 November

BRISTOL, City Art Gallery
18th Century Venetian Paintings
(a National Gallery loan exhibition)
until 4 December

CAMBRIDGE, Kettle's Yard
Eduardo Paolozzi
20 November–16 December

CAMBRIDGE, Fitzwilliam Museum
Stanley Spencer
4 December–9 January

CARLISLE, Museum and Art Gallery
English Cottages and Small Farmhouses (documentary)
18 December–15 January

COVENTRY, Herbert Art Gallery
Félicien Rops
4 December–2 January

EASTBOURNE, Towner Art Gallery
Other Eyes (documentary)
6–28 November

GATESHEAD, Shipley Art Gallery
Constable:
drawings, watercolours and mezzotints
6 November–5 December

HARTLEPOOL, Gray Art Gallery
Image, Reality and Superreality
(prints from the Arts Council Collection)
6–28 November

HULL, Ferens Art Gallery
Artist's Books
11 December–9 January

KENDAL, The Brewery
Frank Meadow Sutcliffe 1853–1941 (photography)
until 6 November

KENDAL, Abbot Hall Art Gallery
Pages and Fuses and other prints by Robert Rauschenberg
until 7 November

LEEDS, University Adult Education Centre
Developments
(prints from the Arts Council Collection)
Until 9 November

LEEDS, City Art Gallery
Stanley Spencer
until 21 November

LIVERPOOL, Sudley Art Gallery
English Cottages and Small Farmhouses (documentary)
13 November–5 December

MIDDLESBROUGH, Cleveland Camera Gallery
Tony Ray-Jones: the English seen
6–27 November

NEWCASTLE-UPON-TYNE, Hatton Gallery
Daumier: Eyewitness of an Epoch
until 27 November

NORWICH, University of East Anglia
English Cottages and Small Farmhouses (documentary)
until 20 November

NORWICH, Castle Museum
The Graphic Work of Félix Vallotton 1865–1925
27 November–12 December
18th Century Venetian Paintings
(a National Gallery loan exhibition)
11 December–23 January

NOTTINGHAM, Trent Polytechnic
Thurston Hopkins (photography)
1–19 November

PORTSMOUTH, City Art Gallery
Sculpture purchased for the Arts Council Collection by Bryan Kneale
until 7 November

PRESTON, Polytechnic Arts Centre
The Human Clay
(selected for the Arts Council Collection by R B Kitaj)
5 November–11 December

SHEFFIELD, Graves Art Gallery
Constable:
drawings, watercolours and mezzotints
11 December–9 January

SHREWSBURY, Nesscliffe Gallery
Cut Folded and Tied: prints and drawings by Richard Smith
until 6 November

SHREWSBURY, The Castle
Patrick Caulfield Prints
20 November–11 December

SOUTHAMPTON, Art Gallery
Eduardo Paolozzi
until 14 November
English Cottages and Small Farmhouses (documentary)
4–26 December

SOUTH SHIELDS, The Museum
The Idea of the Village
(documentary)
20 November–12 December

STOKE-ON-TRENT, North Staffs Polytechnic
Bert Hardy: photojournalist for Picture Post
30 November–16 December

SUTTON, College of Liberal Arts
Developments
(prints from the Arts Council Collection)
7 December–1 January

TOTNES, Dartington College of Arts
Cut Folded and Tied: prints and drawings by Richard Smith
20 November–12 December

UTTOXETER, Abbotsholme School
De Stijl (documentary)
until 7 November

WALTHAMSTOW, William Morris Gallery
Frank Meadow Sutcliffe 1853–1941 (photography)
20 November–12 December

WARMINSTER, Arts and Civic Society
Photographs of Paul Nash
until 6 November

YORK, Impressions Gallery
Photographs of Paul Nash
20 November–12 December

Welsh Arts Council

BANGOR, Oriel Bangor
Origins
A Royal National Eisteddfod of Wales/ Welsh Arts Council joint exhibition
11–24 December

CARDIFF, University College
Peasant Paintings from Hu County, Shensi Province, China
until 6 November
Bert Hardy (photography)
until 14 November

CARDIFF, Chapter Arts Centre
Watercolours: from Welsh Collections
selected by Tom Rathmell
until 13 November

CARDIFF, Oriel
Richard Cox: paintings and drawings
24 November–8 December
Bob Mitchell/Phillip O'Reilly: paintings and sculpture
11–24 December

CARDIFF, National Museum of Wales
Jewellery in Europe
27 November–3 January

CWMBRAN, Llantarnam Grange Arts Centre
Watercolours: from Welsh Collections
selected by Tom Rathmell
21 November–4 December

HARLECH, Coleg Harlech
Coalface
until 13 November

HAVERFORDWEST, The Regional Library
Watercolours: from Welsh Collections
selected by Tom Rathmell
18 December–15 January

LLANELLI, Public Library
African Shelter (documentary)
until 6 November

MOUNTAIN ASH, The Library
The Idea of the Village
(documentary)
13 November–4 December

Coalface
11 December–8 January

SWANSEA, Glynn Vivian Art Gallery
Masks
until 27 November

Scottish Arts Council

DUMFRIES, Gracefield Art Centre
Horses from the Seton Murray Thompson Collection
until 21 November

DUNDEE, City Art Gallery
Arshile Gorky
until 27 November

EDINBURGH, Scottish Arts Council Gallery
English Naive Paintings
until 14 November
Horses from the Seton Murray Thompson Collection
28 December–30 January

EDINBURGH, Fruit Market Gallery
An exhibition of work by contemporary Scottish Artists
selected by Paul Overy
until 27 November
Edinburgh Arts 76
4–24 December

GLASGOW, Jordanhill College of Education
New Prints
until 6 November

HAWICK, Museum and Art Gallery, Wilton Lodge
Horses from the Seton Murray Thompson Collection
27 November–19 December

Catalogues and posters for most of these and other Arts Council exhibitions and also a list of Arts Council publications are obtainable from the **Arts Council Shop** 28 Sackville Street London W1X 1DA Tel: 01-734 4318
or from the Welsh Arts Council shop: **Oriel** 53 Charles Street Cardiff Tel: Cardiff 395548
and by post from:
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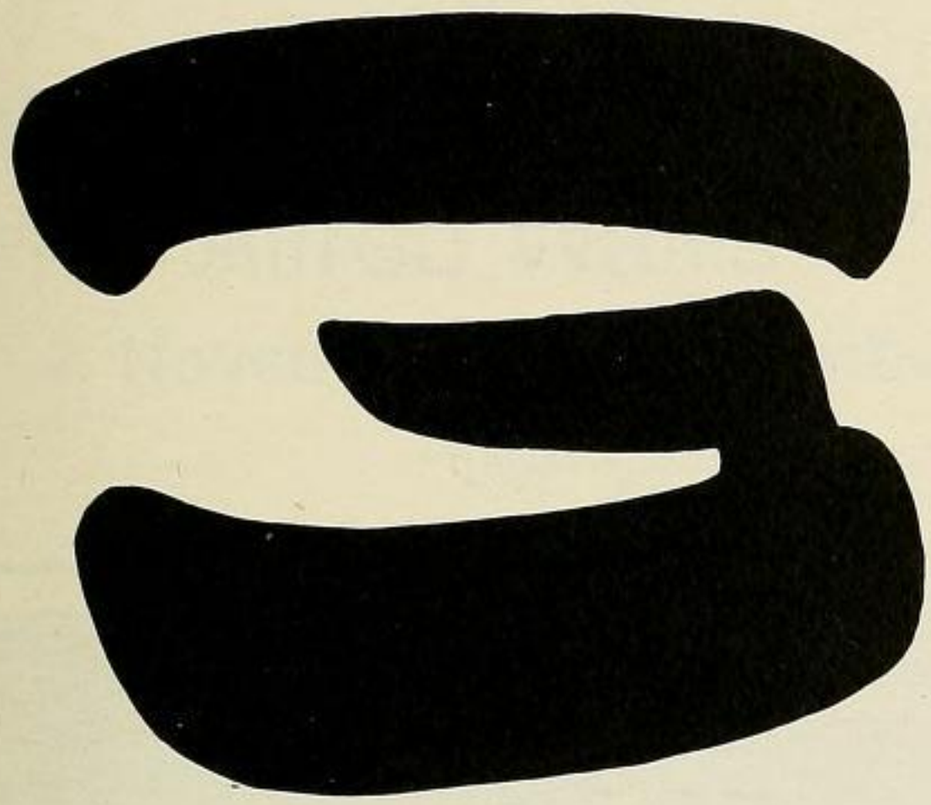
London W1V 0AU

5th actual art fair 19 - 28 11 76

palais des beaux-arts de bruxelles



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John Cage	Aria with Fontana Mix
Luciano Berio	Visage
Luciano Berio	Sequenza III
Karlheinz Stockhausen	Gesang der Jünglinge
Denis Smalley	Slopes

November 8	Music Centre, University of East Anglia
9	N. Kesteven Music Club, Lincoln
10	Leeds University
12	Bingley College of Education
13	Huddersfield Polytechnic
14	Tees-side Polytechnic

NASH ENSEMBLE Lionel Friend - conductor

Mozart	Adagio & Rondo in C minor, K.617
Aaron Copland	Appalachian Spring
Roger Sessions	Concertino for chamber orchestra
Spohr	Nonet in F, op. 31

November 13	The Arts Centre, Christ's Hospital, Horsham
14	Charterhouse School
15	Keele University
16	Carlisle Cathedral
17	Lancaster University
20	Shrewsbury School
21	Dartington Hall
23	Banqueting Room, Royal Pavilion, Brighton
24	Southampton University

For further details please contact
Annette Morreau,
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and prejudices'

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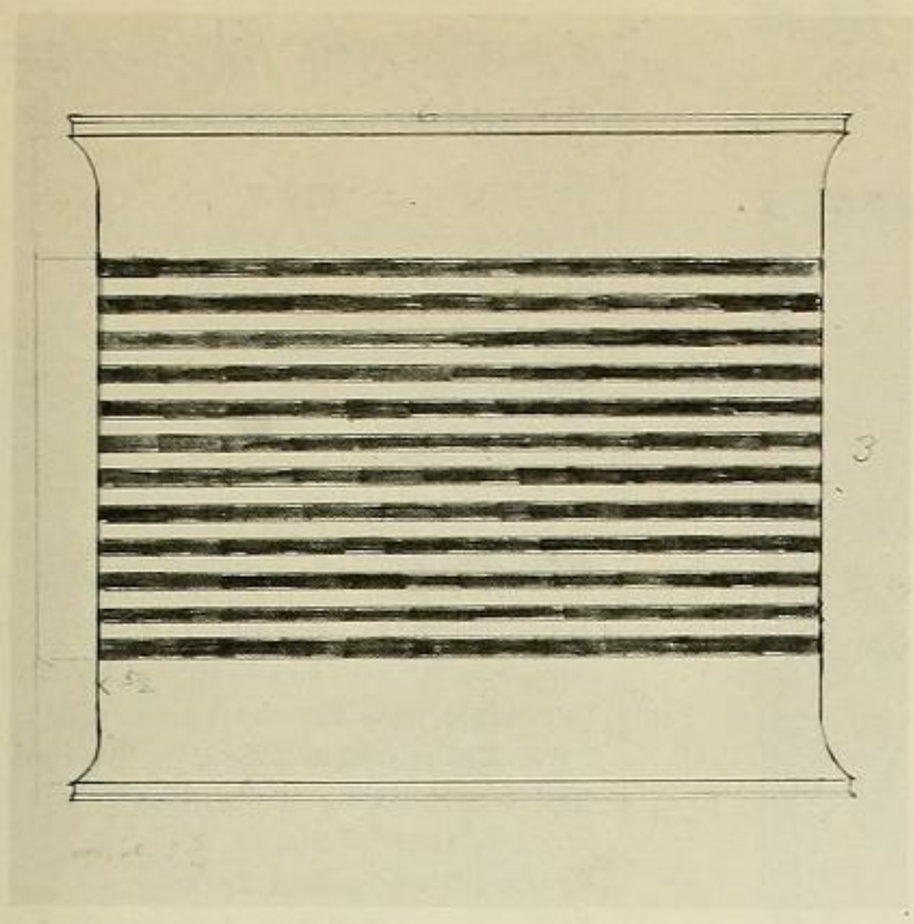
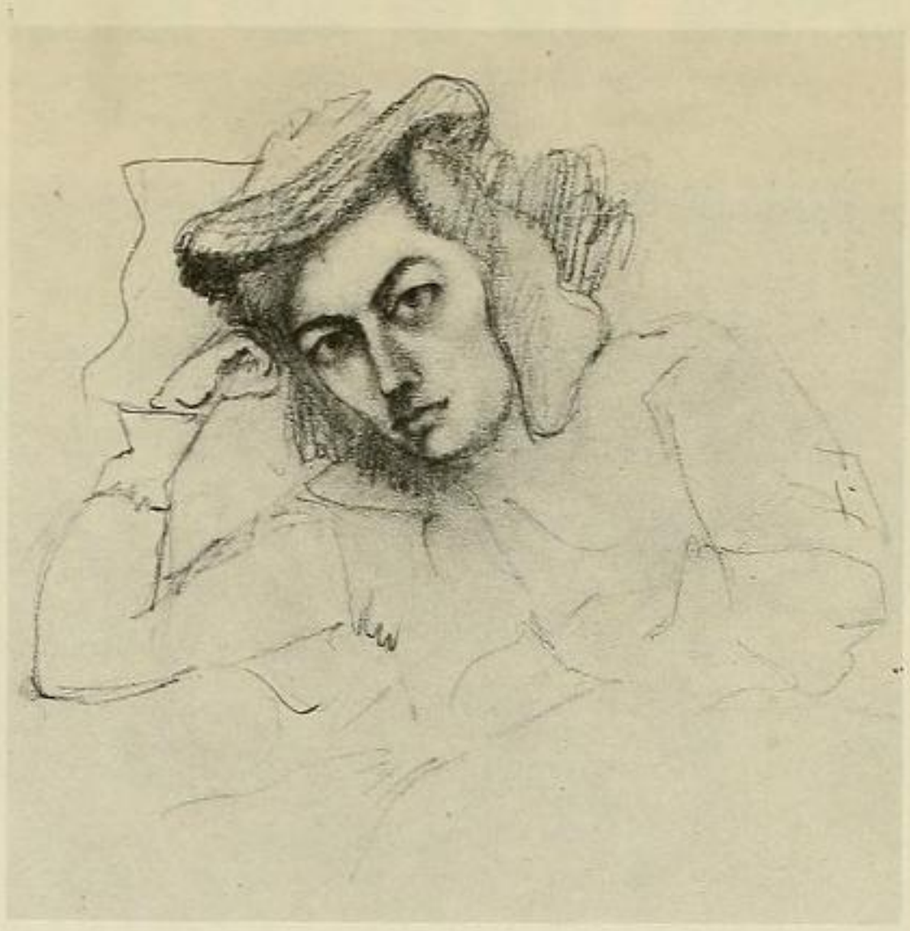


Donald Judd Drawings
Alfred Wallis

7 November – 12 December



Arshile Gorky

19 December – 16 January

Tuesday-Saturday 10am-5pm Sunday 2-5pm. Closed Monday

Whitechapel Art Gallery
13 November-12 December 1976

an exhibition of community arts by the Tower Hamlets Arts Project

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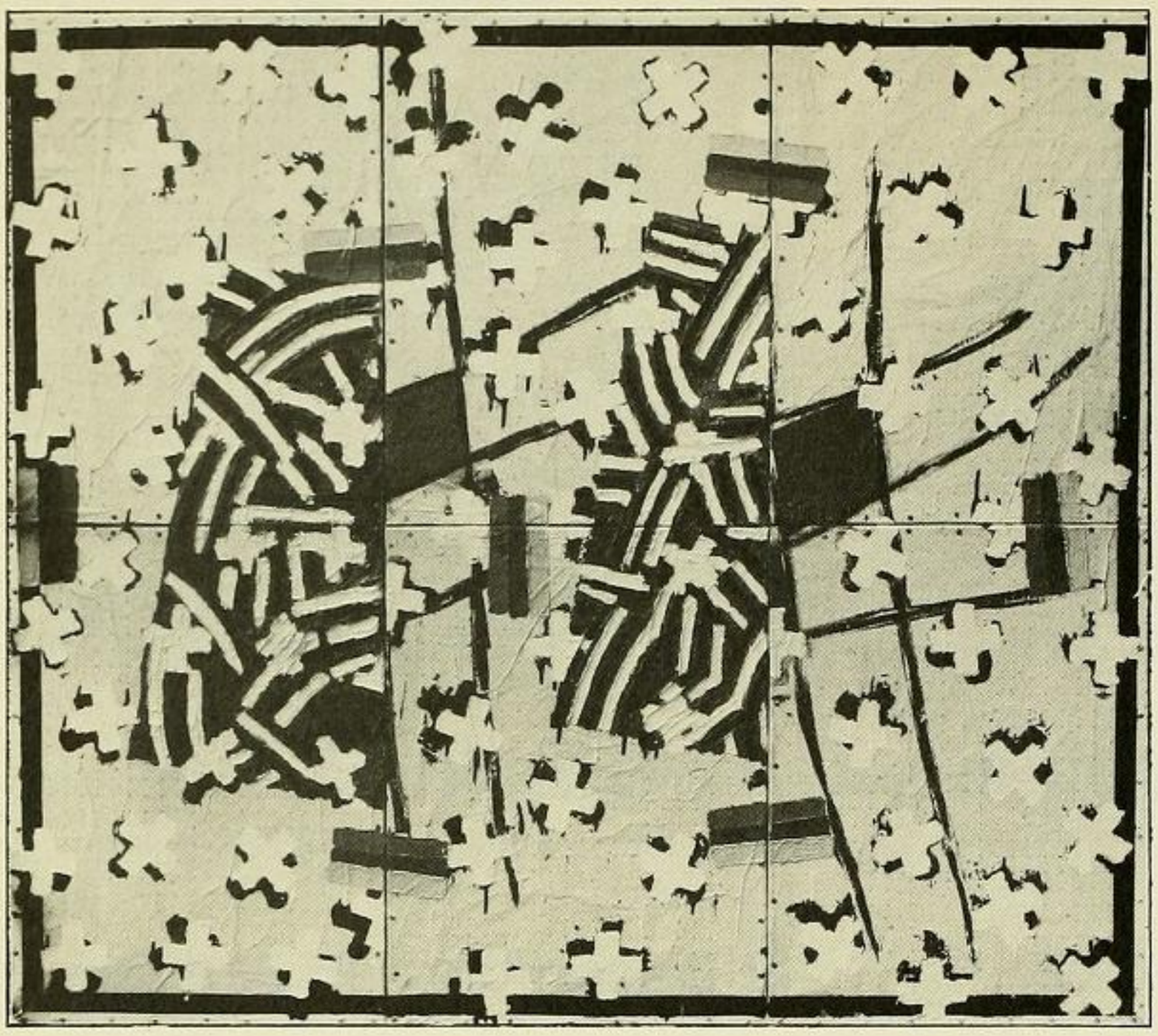

Stephen Buckley / painting "Akenside" 1974 156 x 178cms.

GALLERY

JAN DIBBETS
Selected Works 1971 to 1976

RICHARD LONG
River Avon Driftwood

56 BRACELETS/17 RINGS/2 NECKLACES

23 November to 24 December 1976.

STEPHEN BUCKLEY
Selected Paintings 1968 to 1976
11 January to 26 February 1977.

IAN BREAKWELL
Selected Works 1965 to 1976
11 January to 19 February 1977

MUSIC & DANCE

Arnolfini music and dance covers a wide spectrum of contemporary developments. Important past events include visits by Steve Reich, John Tilbury, the Phillip Glass Ensemble, Welsh Dance and Penta Theatre from Holland.
Forthcoming events include:

NOV. 7	GEMINI concert directed by Arnolfini visiting composer Peter Wiegold.
DEC. 9	JOHN WARREN BAND
DEC. 14/15	DANCE PRISM
JAN. 8	MATRIX
FEB. 2	LONDON SINFONIETTA

CREATIVE MUSIC WORKSHOPS taken by Peter Wiegold, Monday nights at 8.00pm.
CONTEMPORARY DANCE CLASSES
Saturday mornings, beginners 11.00am, advanced 12.15pm.

Midland Group
NOTTINGHAM

ALAN DAVIE - paintings & prints
GEOFFREY DOONAN - ceramics

October 9 - November 6

CHRISTMAS SHOW - mixed exhibition

November 12 - December 24

Forthcoming exhibitions -

PECHWAI - folk art from Rajasthan
FOUR PHOTOGRAPHERS
GISHA KOENIG - sculpture

Open Monday-Saturday 10.30-5.00
Admission Free

Midland Group Nottingham/11 East Circus St./Nottingham NG1 5AF
Tel. 0602 42984/48981

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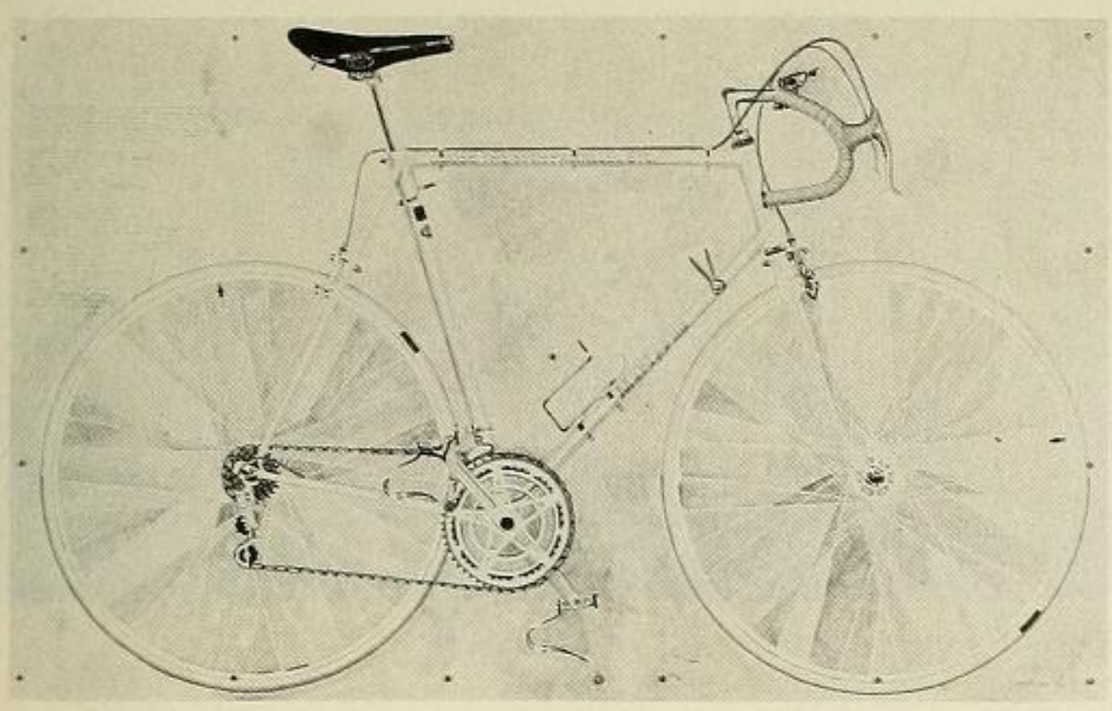
THE NATIONAL GALLERY OF CANADA, OTTOWA



Greg Curnoe
Mariposa Ten Speed, 25 March - 25 April, 1973
watercolour on paper, 44½ x 72½ inches
Coll: The National Gallery of Canada, Ottawa

CANADA HOUSE GALLERY
TRAFALGAR SQUARE LONDON

24 November 1976 - 4 January 1977

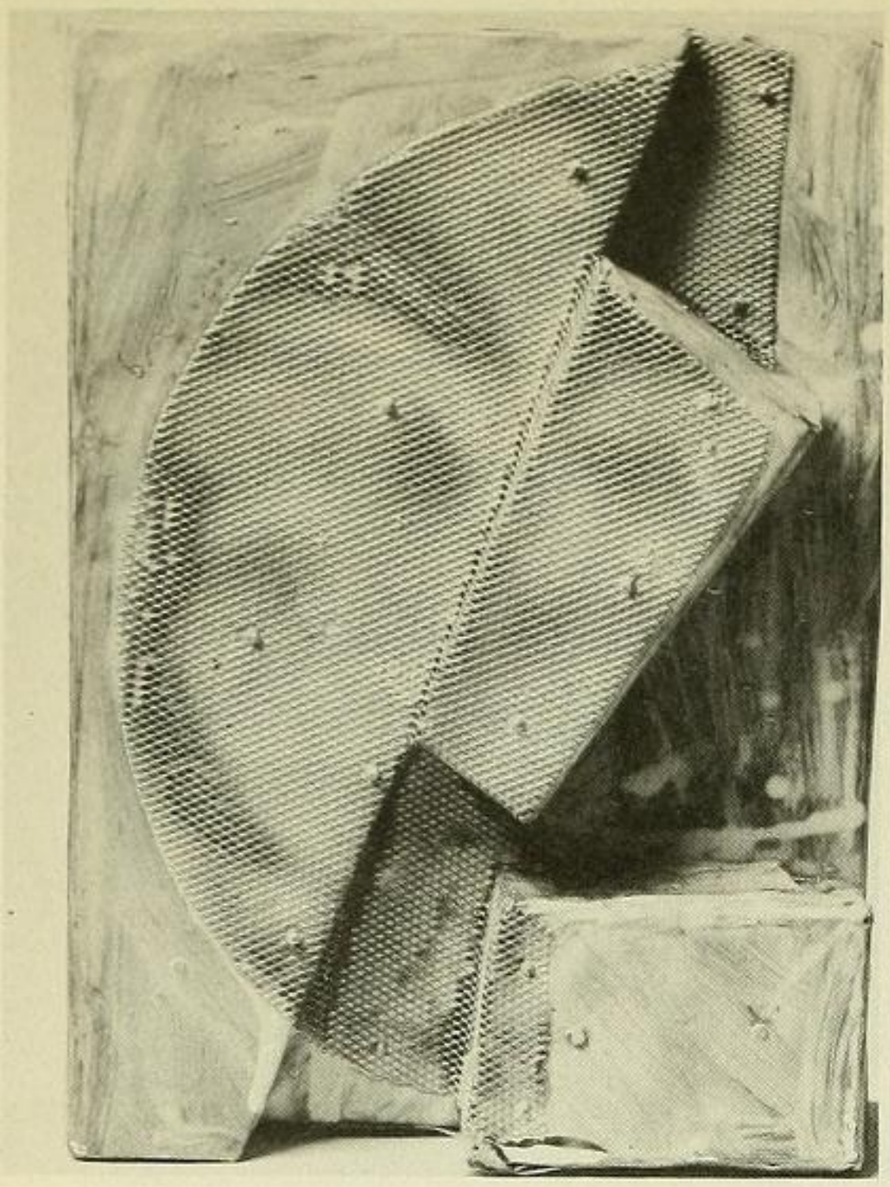
GREG CURNOE
(Canada, born 1936)

8 paintings from XXXVIIe Venice Biennale
7 watercolours

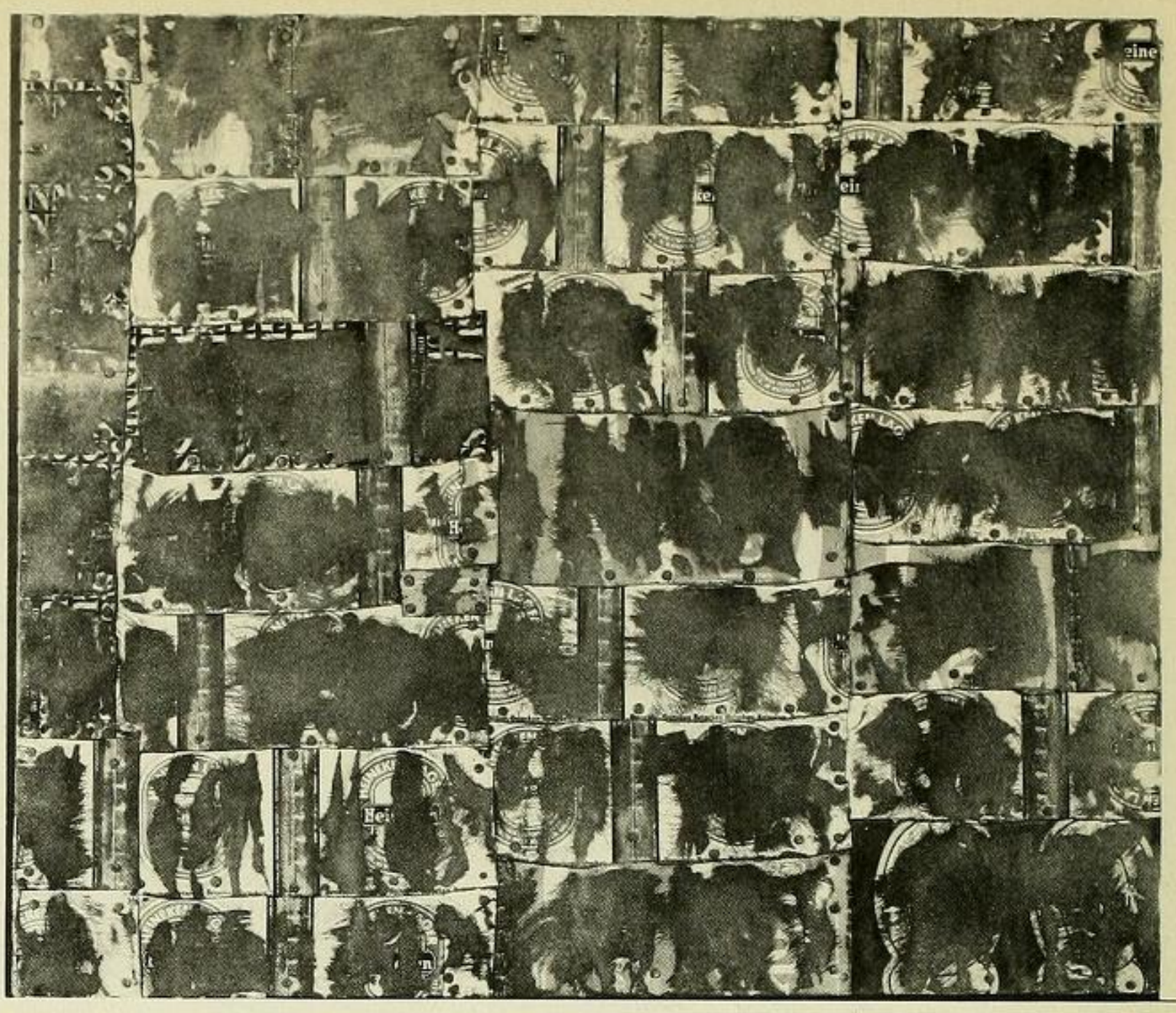
BETTY PARSONS GALLERY, NEW YORK

Nov. 30 – Dec. 23

JAN GROTH



David Holt: Construction 1975



Eric Moody: Bidonville

Kettle's Yard Gallery

Northampton Street/
Castle Street, Cambridge
Cambridge (0223) 52124

30 October—18 November 1976

Between Sculpture and Painting
An exhibition of recent constructions and/or paintings by **David Holt** and **Eric Moody**, arranged by Eastern Arts

20 November—16 December

Eduardo Paolozzi
Sculptures, graphics, drawings and collages.
An Arts Council exhibition

Newlyn Orion Galleries 8-27 Nov.76

jigsaw

an exhibition of design work by students
of Cornwall Technical College.

Department of Design & Visual Studies

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John Armstrong a retrospective selection of paintings

Phyllis Pearsall small landscapes

Small is Beautiful sculpture from the Angela Flowers gallery

9 January - 6 February

openTuesday to Saturday 11.00 to 5.00, Sunday 2.00 to 6.00, closed Monday

TATE GALLERY
3 November-12 December

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Maquettes and drawings
for constructions

THOMAS GAINSBOROUGH
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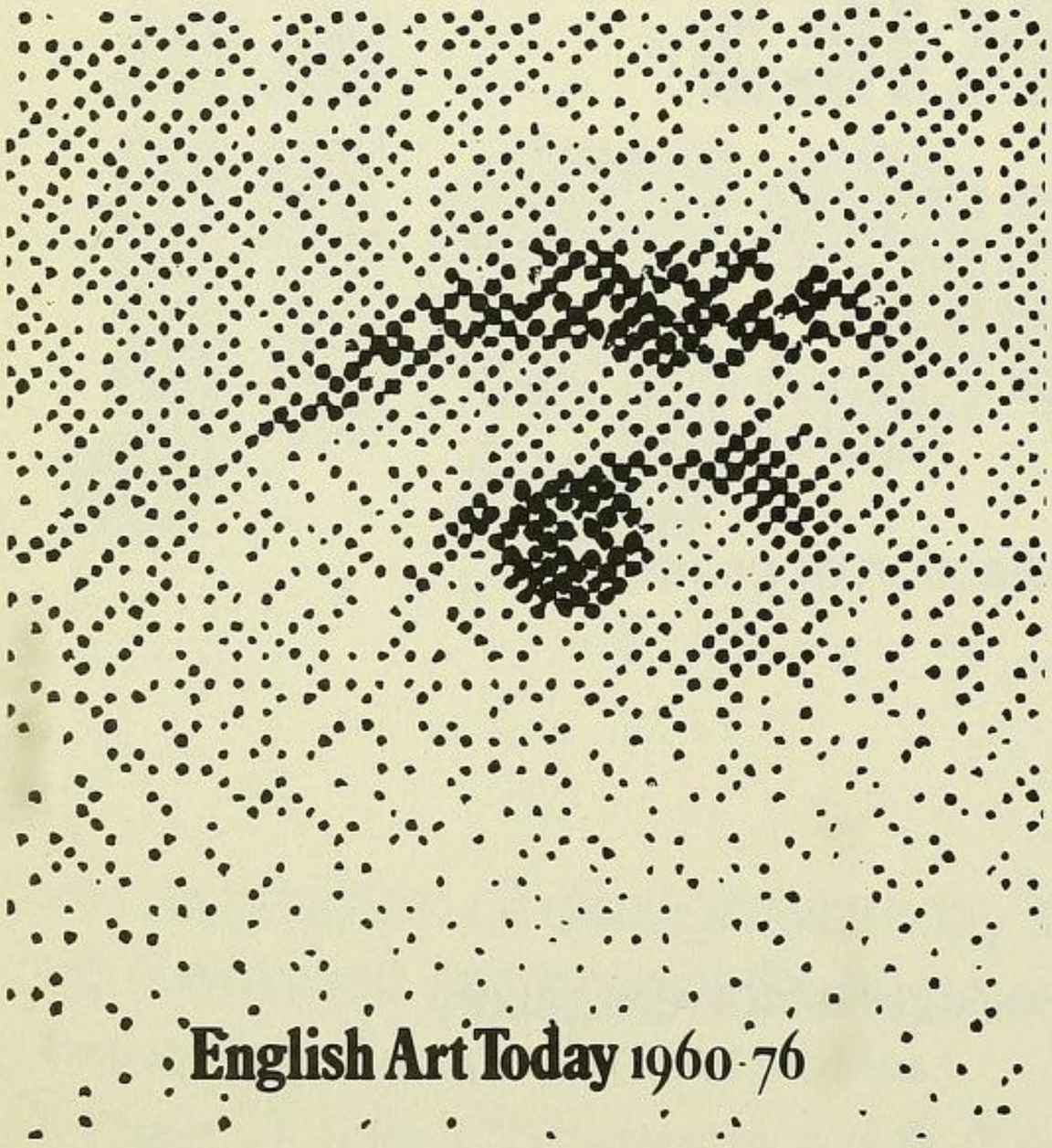
12 November 76 to 29 January 77
A Welsh Arts Council touring exhibition

IDEA BOOKS 49 ENDELL STREET WC2



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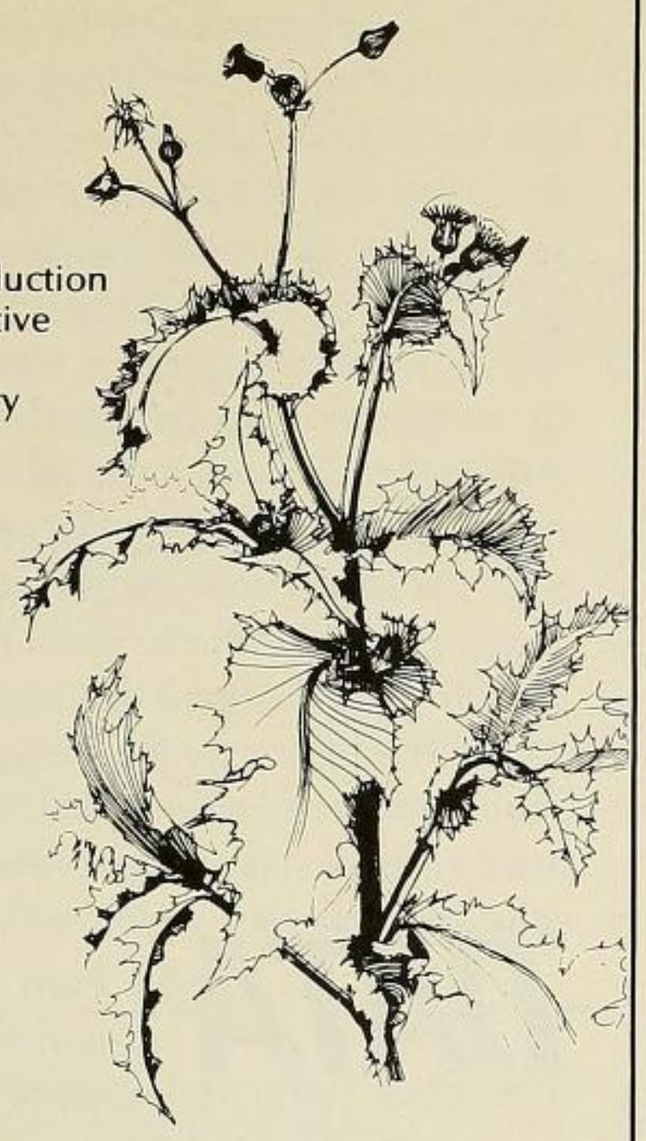
The Art of Print Making

A comprehensive guide to graphic techniques

Erich Rhein



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£5.95 net

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Evans

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ARTISTS' BOOKSLIST

The Arts Council is intending to publish twice a year a bibliography of artists' books.

Artists and publishers who wish to have their books included in the first issue should send details to Richard Francis, Arts Council of Great Britain, 105 Piccadilly, London W1V 0AU, by December 31, 1976.

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31a Bruton Place, Berkeley Square
London W1X 7AB 01-493 3727
Daily 10 to 6, Saturdays 10 to 1

TIM HEAD
November 5 — December 10

GALLERY ARTISTS
through December

MICHAEL CRAIG-MARTIN
Cartwright Hall, Bradford
until November 20

ANTHONY GREEN
Galerie Brusberg, Hanover
November 28 — January 18

BRIDGET RILEY
Coventry Gallery, Sydney, Australia
November 16, December 4

ANNELY JUDA

FINE ART

11 Tottenham Mews
London W1P 9PJ (off Charlotte Street)
tel: 01-637 5517/8

EDWINA LEAPMAN

Paintings and Drawings
until December 4

PAINTINGS, DRAWINGS AND SCULPTURE

from December 8

abramovic accardi acconci adami agnetti albers alfano ansel mo antonakos arcelli&comini art&language askevold asnag hi bagnoli baldessari balzarro baruchello barre battaglia bay beckley bendini beuys bioules bochner boetti bohen boltans ki brecht burden buren burgin calzolari cane carolrama car pi carrino cavellini ceroli charlton chiari christo ciam cleme nte claura coleman colombo cummings dadamaino dali darb oven dealexandris dechirico dedominicis defilippi defreitas delre devade devalle dezeuze dias dibbets dibello dimitrievic duchamp esposito faietti fabro filliou fluxus fujiwara futuri smo gallizio gastini gaul george&gilbert glass griffa grisi haa cke hafif hutchinson jaccard job kaprow keller kirili klosso wski kosuth kunz larocca legac levine lewitt madella maes tri marchegiani martin martini marzot matarrese mauri mel otti merz meurice morales moretti morris nagasawa neuhaus nigro olivieri ontani opalka oppenheim oshima paolini pale stine paradiso pardi parmiggiani patella penone picabia pin cemin pisani pistoletto pozzi ray rainer reynhardt reich rist ori ronconi rockburne ryman sadun salvo santoro sarkis say tour schum serra sonfist sottsass spalletti spagnulo staccioli skuber tanger tonello toroni trotta vago vangogh valensi va utier vaccari venet verna villalba salvadori zappettini zaza zehr zorio warhol welch weston wilson . . . ecc . . . . . .

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Sunderland
Tel: 0783-41214

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TOURING EXHIBITIONS

OUR AMERICA

Sketches by Abraham Rattner and comments by Henry Miller of their journey down the east coast of America in the winter of 1940/41.
Available from January to September 1977.

JACK SMITH - RETROSPECTIVE

Paintings and drawings.
Available from mid-April 1977.

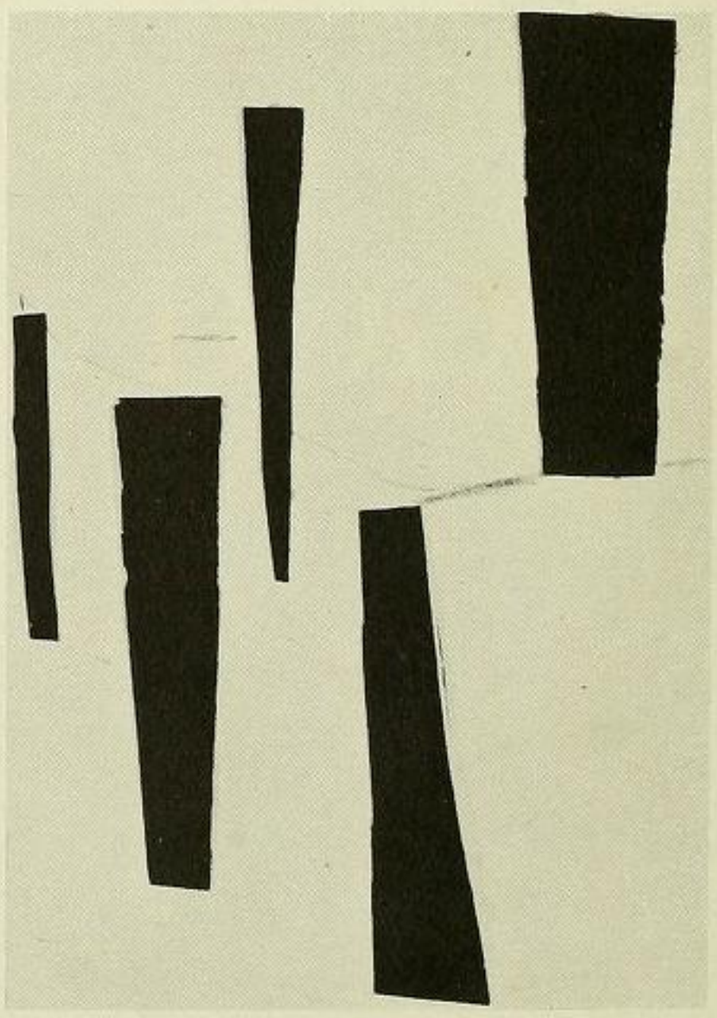
ART & MATHEMATICS

A look at the inherent mathematical basis of all patterns.
Available from April 1977.

AMERICAN SCULPTORS -ATTITUDES TO DRAWING

What function does drawing play in the work of contemporary American Sculptors.
Available from June 1977.

For further information contact Richard Padwick.



Terry Frost

Paintings, drawings and collages

Plymouth City Museum & Art Gallery
6 November – 5 December 1976

Royal West of England Academy, Bristol
21 December 1976 – 22 January 1977
(Closed 24, 25, 28 December and 1 & 3 January)

South West Arts/Arts Council of Great Britain

AIR GALLERY, 125–9 SHAFTESBURY AVENUE, LONDON WC2

air gallery

November 2–5 1976
Rothko Memorial Portfolio

December 1 – January 4 1977
AIR Open Show – an exhibition of work by AIR artists

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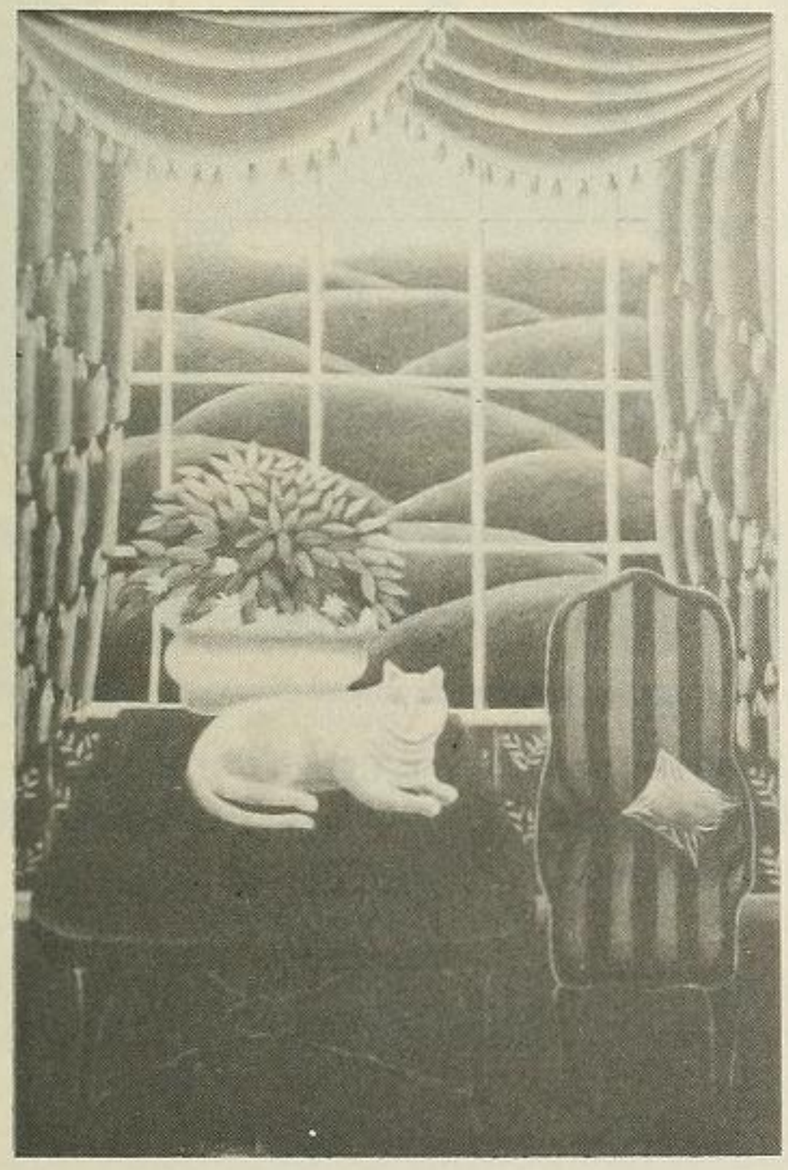

Just Sitting
by Jerzy Marek

ABBOT HALL ART GALLERY
Kendal, Cumbria

CONCEPTS OF SPACE:
sculpture and spatial constructions by
Paul Cooper, Brian Cowper,
Tony Longson, Joanna Morland and
Terence Pope

PAGES AND FUSES
by Robert Rauschenberg (Arts Council)

16 October-14 November 1976

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artists with the "innocent eye"

also Paintings by
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20 November-19 December 1976

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tape cassette magazine
volume 3 number 2

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Michael Nyman
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No. 12 Winter Issue, December 1976:
THE HISTORY OF PHOTOGRAPHY IN MEXICO.
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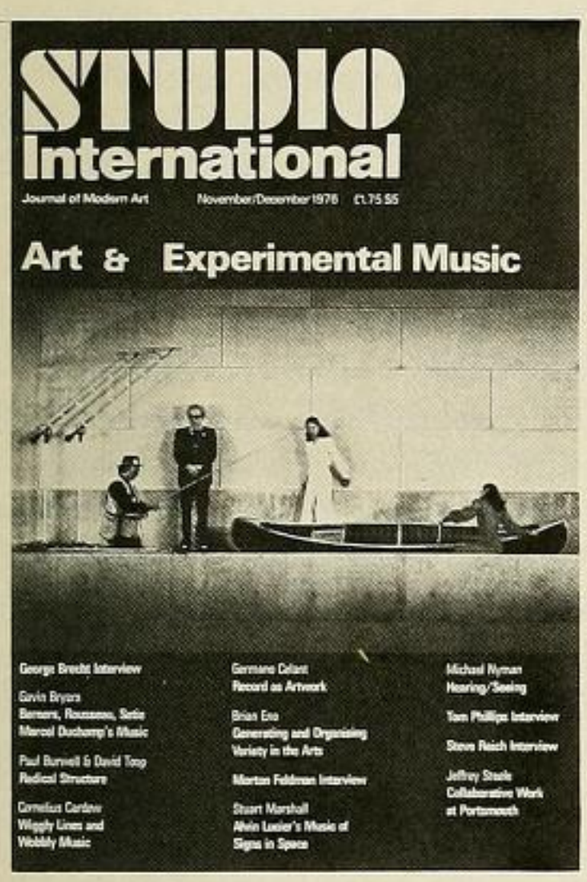

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EDITORIAL

Ever since Walter Pater trailed a notorious red herring across the then unpainted canvases of modernism by declaring in 1873 that 'all art constantly aspires towards the condition of music,' recurrent attempts have been made to put his dictum into practice. Fundamentally, they all centre on the idea that art should be able to rely on its own intrinsic properties, and not have constant recourse to illustration or description in order to justify its existence. It is a question both of dignity and liberation: painting in particular ought to stand or fall by its autonomous characteristics and, as Pater went on to explain, free itself from the need to represent by 'always striving to be independent of the mere intelligence, to become a matter of pure perception, to get rid of its responsibilities to its subject.'

One of the earliest and most literal bids to realise this ideal was made by Whistler, who in 1867 changed the title of his *Two Little Girls* to *Symphony No. 3* and thereby announced, for the first time in public, his painting's overt links with music. Today, after more than a century of further experimentation in this direction, it is easy to see how Whistler actually resisted the full implications of his *Harmonies* and *Nocturnes,* which always retained pictorially identifiable references to falling fireworks, winsome women or the Thames at night. But the French critic Théodore Duret commented in 1881 that 'Whistler's Nocturnes make us think of Wagnerian music where the harmonies, freed from melody and rhythm, become a kind of abstraction and give only an indefinable musical impression.' And although this connection between Whistler and Wagner might now seem too far-fetched to withstand closer scrutiny, Duret's remark is a valuable indication of how writers were even then equating art's moves towards abstraction with music's ambitions in a similar direction.

At the same time, Duret also helps give the lie to Pater's rash assumption that music's 'condition' was, in some oddly automatic manner, untrammelled by the snare of representation. The truth is that experimental composers have been just as exercised by the prospect of shedding music's 'descriptive' associations as have artists during the same period. Pater did succeed, nevertheless, in obscuring the parallelism of this joint effort: defenders of avant-garde painting in the early years of this century often argued as if music was by definition an abstract medium, and as such to be both envied and emulated. When Roger Fry championed Cubism, for instance, he claimed in 1912 that because the Cubists 'do not seek to imitate form, but to create form; not to imitate life, but find an equivalent for life,' the 'logical extreme of such a method would undoubtedly be the attempt to give up all resemblance to natural form — a visual music; and the later works of Picasso show this clearly enough.' The concept of a 'visual music' can, in this usage, be seen merely as a sloppily considered tag adequate only for critics unwilling to analyse the meaning of Cubism with any exactitude. Picasso and Braque may have encouraged such speculation with the consistent employment of musical subject-matter, but the Cubists' guitars, harps and violins reveal more about their purist concentration on still-life material than about their yearnings for a spurious musical nirvana.

All the same, Pater's legacy to the leading proponents of abstraction in art was potent and long-lasting. Whether or not Kandinsky was aware of the Pater pronouncement, the fact remains that *On the Spiritual in Art* — one of the most respected of all abstractionist apologia — leans very heavily on musical analogies. Whenever he discusses the relative merits of 'melodic' and 'symphonic' composition in vanguard art, or refers to 'the timbre of the abstraction, ' Kandinsky's language is permeated with the syntax of music. And in one of the passages which expound the 'Inner Necessity' of emancipated form, Kandinsky insists that 'one must think here of the simile of the piano, but apply "form" instead of "colour". The artist is the hand, which, through this or that key (= form) makes the human soul vibrate appropriately.' Argued in terms of an almost mystical awareness, and deeply influenced by theories of the subconscious, Kandinsky's ideas lead straight on to the still prevalent notion that, as Clive Bell maintained in 1914, 'to appreciate a work of art we need bring with us nothing from life, no knowledge of its ideas and affairs, no familiarity with its emotions. Art transports us from the world of man's activity to a world of aesthetic exaltation...It is a world with emotions of its own.' In other words the way was opened up, via a widespread misunderstanding of music's supposed essence, to the damaging doctrines of Formalism, with its belief that an art work is a self-sufficient entity divorced from the content of everyday existence.

It should be clear by now to readers of *Studio International* that this magazine would never devote an issue to Art and Experimental Music based on the formalist hypothesis. Indeed, if this Editorial provides the chance to knock Formalism's art-music equation firmly on the head, then so much the better. For the entire thrust of the present issue is informed by the belief that there is little point in searching for a futile and destructive marriage between the respective 'conditions' of art and music. Rather should they be regarded as two distinct activities, so that their undoubted and manifold interrelations can be clarified without being confused by the bogey of a putative union. From Russolo's pioneering, if rather banal, restatement of Futurism's glorification of the machine age with his *Intonarumori* or 'noise organs', to Dada's evenings at the Cabaret Voltaire and the more recent manifestations of Fluxus, a 20th-century tradition of art and music joining forces in a complementary relationship has been established. It continues today not only in the growing discography of artists' records, usually produced by men and women who find that an aural medium constitutes a useful extension of their predominantly visual concerns, but also in the work of artists like Giuseppe Chiari, Charlemagne Palestine and Mauricio Kagel, all of whom have in varying ways transposed their involvement with music to an art-gallery context.

Although several contributions to this issue deal with aspects of music from the viewpoint of art, the main emphasis rests on experimental music in its own right. (We are happy to publish simultaneously with a new Audio Arts cassette conceived as an accompaniment to the articles printed here). Connections with art are highlighted in many different respects, and acknowledgement is duly given to the moments when the interests of music coincide with those of art and end up positively reinforcing their practitioners' convictions. But on the whole, the pages of the November/December *Studio* have been opened to a discussion primarily about music, and even when Michael Nyman devotes his wide-ranging article to the subject of 'Hearing/Seeing,' he is justifiably at pains to stress that 'to align (unnamed) music "movements" with (named) art movements...is both an impossible and dangerous game to play — the more so since there *are* parallels and connections (Cage/Rauschenberg, for example).' If this editorial decision manages to dismiss the misconceptions fostered by Pater, and to replace them with a more realistic anti-formalist assessment of how music stands in the overall context of the contemporary arts, then an important aim of *Studio's* current programme will have been fulfilled.

HEARING/SEEING

Michael Nyman

'Max Ernst, around 1950, speaking at the Arts Club on Eighth Street in New York City, said that significant changes in the arts formerly occurred every three hundred years, whereas now they take place every twenty minutes.

Such changes happen first in the arts which, like plants, are fixed to particular points in space: architecture, painting and sculpture. They happen afterward in the performance arts, music and theatre, which require, as animals do, the passing of time for their realisation...

Observe that the enjoyment of a modern painting carries one's attention not to a center of interest but all over the canvas and not following any particular path. Each point on the canvas may be used as a beginning, continuing, or ending of one's observation of it. This is the case also with those works which are symmetrical, for then the observer's attention is made mobile by the rapidity with which he drops the problem of understanding structure...

The tardiness of music with respect to the arts just mentioned is its good fortune. It is able to make deductions which arise from its special nature. First of all, then, a composer at this moment frees his music of a single overwhelming climax. Seeking an interpenetration and non-obstruction of sounds, he renounces harmony and its effect of fusing sounds in a fixed relationship. Giving up the notion of *hauptstimme,* his "counterpoints" are superimpositions, events that are related to one another only because they take place at the same time. If he maintains in his work aspects of structure, they are symmetrical in character, canonic or enjoying an equal importance of parts, either those that are present at one instant, or those that succeed each other in time.'

(John Cage, 'Happy New Ears!', 1963, in *A Year from Monday,* Calder and Boyars, 1968).

'I think experimental music is much closer to art than to mainstream music. I think that if one's producing single entity works, then it's very much like doing a picture, it's less like following an argument. In a way it has that sort of snapshot effect, the whole thing is encapsulated as a single statement rather than following the strands of developmental logic, and contrasts, and recapitulations, and how things are pitted one against another, contrasting sections, and so on. I think that it's not necessary, really, to view experimental works in time, whereas I think that with all other music it is. Obviously it's a necessary condition of music that it's experienced *in* time, but I think that time isn't a factor which governs its course in experimental music.'

(Gavin Bryars, in conversation with John White and Michael Nyman, July 1976. All Bryars and White quotes in this article are from this conversation).

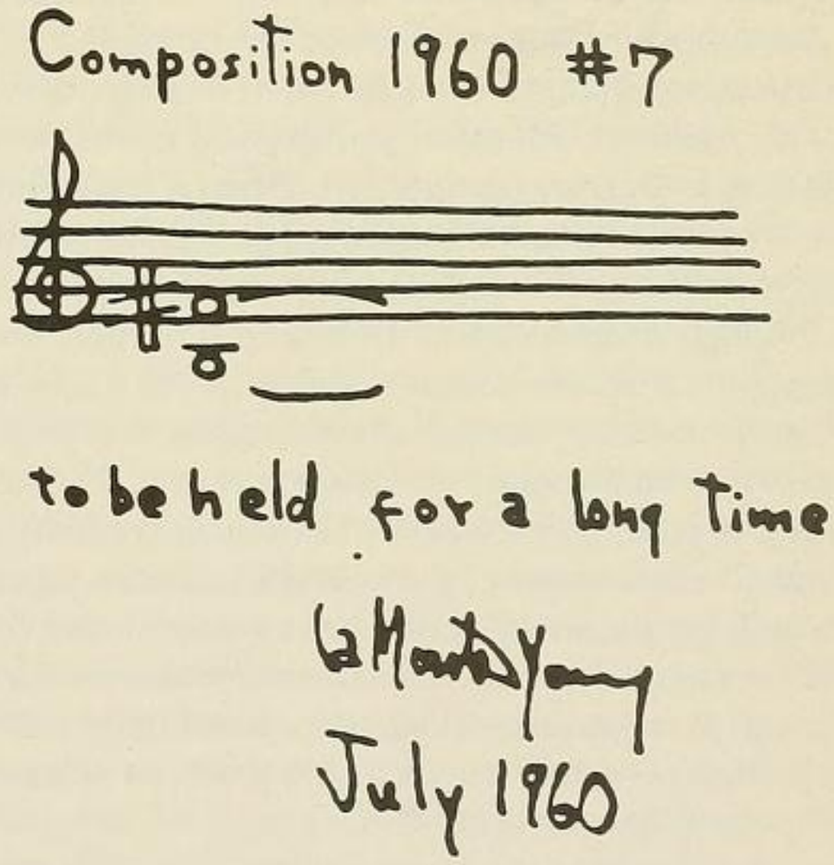
'Because of the difference of medium, there can be no exact equivalence between individual music and visual works on the material and perceptual level. Sounds are experienced differently from visual forms, and specific analogies are generally misleading. It is on the basis of common theoretical principles and their underlying attitudes that the association between musicians and Systems artists has been developed.'

(Michael Parsons, 'Systems in Art and Music', *Musical Times,* October 1976).

Points and Lines

Setting aside the paradoxical condition of 'blankness'[1] I suppose the most reductive visual 'event' would be a single point. A literal translation of this point into sound, if that point was the sole content of some ludicrously minimal graphic score, would consist of a single note. As far as I know such a puny piece does not, nor ever will exist, although I do remember somebody suggesting a kind of microdot version of Wagner's *Ring* cycle, to be realised by speeding up a complete recording of the opera so fast that it would be all over in a second or so.[2]

But there is one graphic score that consists of a single horizontal line, 3 1/10 inches long, printed on a white card 5 by 3 inches and placed in an envelope on which is printed 'the enclosed score is right side up when the line is horizontal and slightly above centre'.[3] This is La Monte Young's *Composition 1960 No. 9.* If a performer realised this score ignorant of Young's interests at the time, or simply chose to disregard them, he might be inclined to treat the line simply as a visual metaphor for a melody, since one conventionally speaks of a melodic line, a bass line (in traditional music based on tune and accompaniment) or of the interweaving of lines (in contrapuntal music). But in 1960 (and to a modified extent ever since) Young was 'more interested in concurrency or simultaneity than in sequence...



La Monte Young *Composition 1960 No. 7*

I was really interested not only in a single note, but in chords while other musical systems have placed great emphasis on melody and line or sequence';[4] he wrote (and re-wrote a number of times), 'Draw a straight line and follow it'; composed a 'musicalised' version in the form of two notes, B and F sharp, 'to be held for a long time' *(Composition 1960 No. 7);* and performed *Composition 1960 No. 9* at one sustained pitch.

Whether we speak of reduction (the musical composition to a single sustained line or chord, the painting to a single stripe) or, more correctly, of beginning from zero[5], how are these visual and musical fundamentals articulated, or perhaps re-articulated if you view the line piece in terms of reduction? The painting is on a canvas as large as or maybe larger than, a traditional size canvas; the line piece could go on for as long as, or longer than, a traditional symphony (*how* long is 'long' in 'to be held for a long time'?)

In comparison with the complex profile of the traditional musical work, the Young line piece might be said to fall in line with Lawrence Alloway's definition of hard-edge painting: 'The whole picture becomes a unit; forms extend the length of the painting or are restricted to two or three tones. The result of this sparseness is that the spatial effect of figures on a field is avoided'.[6] Alloway also remarks that the surface of hard-edge painting is 'immaculate'. But can the 'surface' of the sustained note, or drone, or chord, be described as immaculate? Conceptually and as it appears on paper it is immaculate, uninflected, flat — call it what you will. But once you begin to listen to the musical stripe, you immediately perceive that musical 'tones' (to adopt Alloway's word) act differently on the ear from the way visual tones do on the eye.

Listening to this seemingly unvarying persistence of sound induces perceptual changes of a different order from, say, standing in front of a Frank Stella painting from the same amount of time.[7] This is even the case where the drone is produced electronically with sine-waves (no overtones) or with wedged-down notes on an organ (no articulation). You might hear your own melodies, apparent decorations being produced, harmonics being reinforced — a whole host of psycho-acoustic effects — or you may become aware that the drone is merely serving as a background to the sounds of the environment. The work thus becomes open-ended or open-sided, open-profiled, so that the supposed hard edge is softened or rather, added to; but this vertical and horizontal accumulation that the drone 'attracts' is of a totally different order from conventional musical linearity.

Even, or especially, in an electronic realisation with a 'perfect' surface, the apparent stasis of the continuous line produces movement, singularity produces variety. This is the purpose behind *Composition 1960 No. 7* and, especially, Young's *Drift Study:* 'Sine waves have the unique characteristic among sound wave forms of having only one frequency component. All other sound wave forms have more than one frequency component. When a continuous frequency is sounded in an enclosed space such as a room, the air in the room is arranged into high and low pressure areas. In the high pressure areas the sound is louder, and in the low pressure areas the sound is softer. Since a sine wave has only one frequency component, the pattern of high and low pressure areas is easy to locate in space. Further, concurrently sounding sine waves of different frequencies will provide an environment in which the loudness of each frequency will vary audibly at different points in the room, given sufficient amplification. This phenomenon can rarely be appreciated in most musical situations and makes the listener's position and movement in the space an integral part of the sound composition.'[8]

In a live performance, say by string instruments, the mechanics of bowing, with their inherent unevenness, introduces a wide range of other unpredictables. In a letter to John White in 1971,[9] Cornelius Cardew wrote that 'In the old days (La Monte Young, etc.) a bow could last a minute and all kinds of things could happen in it. So much could happen *within* it that it didn't seem terribly important how it began or ended (anyhow, usually at the end of the bow one would simply just turn around and come back again).' Cardew was speaking of the performance of White's *Tuba and Cello Machine* which they were preparing for the Queen Elizabeth Hall performance. In an earlier letter he'd written: 'These two big large instruments have very over-loaded spectra, especially in the higher reaches, and the partials in these high reaches are all out of tune because of the actual dimension of the column of air, and the calibre of the string that is vibrating...So as the piece progresses attention focuses more and more in the conflicts and resolutions amongst these upper partials, so much so that we as players lose our capability of tuning the actual fundamental notes we are bowing or blowing. So — all Machine music representing a decay process anyway — we start with the two worlds in reasonably good alignment as far as most ordinary criteria go, and gradually drift apart.'[10]

This 'drift' obviously links *Tuba and Cello Machine* with the Young *Drift Study* superficially. More fundamentally, although White's piece is not strictly linear since it is not a single (sustained) line, it does repeat the same melodic information in different permutations and combinations throughout its potentially considerable length, and is therefore a 'version' of Young's line piece. This 'interpretation' is not as loose or fanciful as it seems. Howard Skempton recently remarked to me that he considered his *Waltz* (1970) to be related to Young's 'open 5th' score, even though it is a melodic, tonal, modular piece and is thus a totally different experience. For Skempton it is simply a decoration of the line piece. In fact Skempton went so far as to say that 'all "systems music" is a version of "Draw a straight line and follow it" ' (Young's *Composition 1960 No. 10).* The point I am making is not that Young should be credited with the composition, or at least the conception of most experimental music since 1960,[11] but that the musical and perceptual consequences of the fundamental concept/image 'line' in music are of a totally different order from the function of a line in the visual arts.[12]

And of course there are the social consequences of performance which self-evidently distinguish music from the visual arts: the nature of the sounds employed to realise the line, the receptiveness or lack of it, of the audience, as we find in Al Hansen's account of a performance at the Cooper Union of Young's tape of *2 Sounds:*[13] 'one, a contact mike on a tin can whose open end was being rubbed in a circular movement on a pane of glass; the other a contact mike on a cymbal with a drum stick or drum stick head or brush stick being moved about in a circular motion on a cymbal. This made a sound not unlike a wagon wheel creaking, which was repeated for at least fifteen or twenty minutes and it seemed like three hours. Members of the audience became quite distressed. Many people started stamping their feet and chanting.'[14]

Music and Movements

So although the line piece may be related to Minimal Art conceptually, musically it appears to cross a lot of frontiers, while chronologically and stylistically it was performed in the atmosphere of Happenings and Fluxus. Although it is tempting to align (unnamed) music 'movements' with (named) art movements, it is both an impossible and dangerous game to play — the more so since there *are* parallels and connections (Cage/Rauschenberg, for example). For instance Happenings — in Allan Kaprow's hands at least — grew out of, and away from, the same Abstract Expressionism that Minimal Art is said to reject. Kaprow was influenced in this shift from objects to environments and performance by Cage in his New School class in the late 1950s. Young began composing in California in the mid-1950s, developing sustained-note music out of the very pitch-oriented serialism that Cage himself had rejected in favour of rhythmically-structured 'noise music' in the mid-1930s. Cage adopted chance methods, developed various forms of indeterminacy and new notions of time, accepted the sounds of the environment, conceived of music as theatre acting in some intersection between art and life, etc, from 1950 onwards. Young's reductive serialism, purely musical, could be seen to be a reaction against Cage in the same way as Barbara Rose considers the so-called ABC artists' 'reserved impersonality and self-effacing anonymity as a reaction against the self-indulgence of an unbridled subjectivity, as much as one might see it in terms of a formal reaction to the excesses of painterliness.' Very neat; but Young did not discover Cage till 1958.[15] And it would be wrong in another sense, too, since it implies an equation of Cage with Abstract Expressionism — whereas Cage adopted chance procedures and indeterminacy precisely in order to bypass his own personality, his 'tastes, memories and desires'. Additionally one could not call Cage's own pre-chance music self-indulgent, let alone subjective or unbridled. But from another angle George Brecht sees

a close connection between Cage and Pollock in their use of chance methods. And if 'painterliness' is to be equated with Morton Feldman's desire for a 'sound world more direct, more immediate, more physical than anything that had existed heretofore' and with Cage's attempts to 'let sounds be themselves', then one should speak of a continuous, unbroken tradition of experimental music from Cage/Feldman/Brown/Wolff of 1950 right through to the present day, since whatever structural concerns, whatever iconography, whatever seeming contradictions between one 'movement' and another, there remains this consistency: that composers 'treat sound not as material to be ordered and put into meaningful symbolic forms as a medium for human expression, but as something autonomous and impersonal.'[16]

To return to La Monte Young: his discovery of Cage in 1959 did have a decisive influence on his music, especially in the use of chance procedures and visual/theatrical materials in *Vision* and *Poem*. His association with Fluxus did have an influence on the way that he presented his work: in the form of reductive verbal scores. His preoccupation with sustained sounds was obviously part of his Fluxus work, but it survived Fluxus and, coupled with a growing interest in precise intonation, Indian chanting, a permanently-installed sound continuum and a very un-composerly exclusivity, has continued with his Theatre of Eternal Music, to the present.

It is possible to see Cage's work, like that of Rauschenberg, as being able to cross over what seem to be mutually-exclusive media, aesthetic, material, external forms. What remains consistent, of course, what unifies everything he does is his unflinching adherence to various chance procedures, mainly the *I Ching,* which means that all his works are informed with the same spirit, the same attitude to materials, whatever they are, the same *style.* Thus while he was indulging in the 'environmental abundance', of *Musicircus* and *HPSCHD* in 1969,[17] he was also composing the highly reductive *Cheap Imitation,* in which multiplicity was superseded by singularity, as Satie's melody line, stripped bare of its harmonic, expressive and textural context *(Socrate)* was transformed intervallicly by means of chance procedures. Thus the rhythm remains the same, the melodic profile is retained, but the distances between one note and the next are altered. This is 'minimal music' done in Cage's terms and difficult to place in any particular aesthetic area (apart from Cage's own).

Certain younger composers like Reich and Lucier would not cross frontiers in this way, since like many of their contemporaries and associates in the visual arts, they have, after a period of experimentation, clearly defined their aesthetic stance, their preferred materials, and the procedural area in which they choose to work. With English experimental composers, what would be seen (in the art world) as a radical and perplexing shift of position, in music appears to be just a change of emphasis. Michael Parsons has admirably summarised this position: 'Whereas in the Scratch Orchestra situation we were interested in going beyond established limits and conventions, I think now all four of us[18] are interested in working within strictly defined limits, and even in imposing much greater restrictions on what we do than is usual in traditional music. I don't see any contradiction or reversal of attitude here, just a change of emphasis. Writing pieces for the Scratch Orchestra was essentially a process of establishing restraints and controls in an otherwise free situation; without these restraints the freedom was meaningless. Conversely, if one works within defined limits, differences and variations become more apparent.'[19]

What is interesting here is the parallel with, say, Reich's violent rejection of Cage in the 1960s[20] — that is, if one takes, as one should, the Scratch Orchestra as being the most developed form of English Cageianism. In England the transition was accelerated, so that the 'changeover' happened in the space of two or three years.[21] This radical 'shift of emphasis' was accomplished in the hands of the same composers who then went on to write what might be loosely termed as various kinds of 'systems music'. Not only that, but the two compositional approaches indicated by Parsons were being used at the same time — the shift from one to the other was gradual and phased. In fact such a shift is more concerned with materials than processes: among the Scratch Orchestra 'Improvisation Rites' one finds a quasi-system from Michael Parsons: 'Before playing jump up and down 25 times. While playing, jump once for each sound you make. You may save up your jumps, up to 25, but not more *(ie* you can play up to 25 sounds without jumping and then do your jumps all at once). When you've had enough, make it clear that you're not doing this rite any more'.[22]

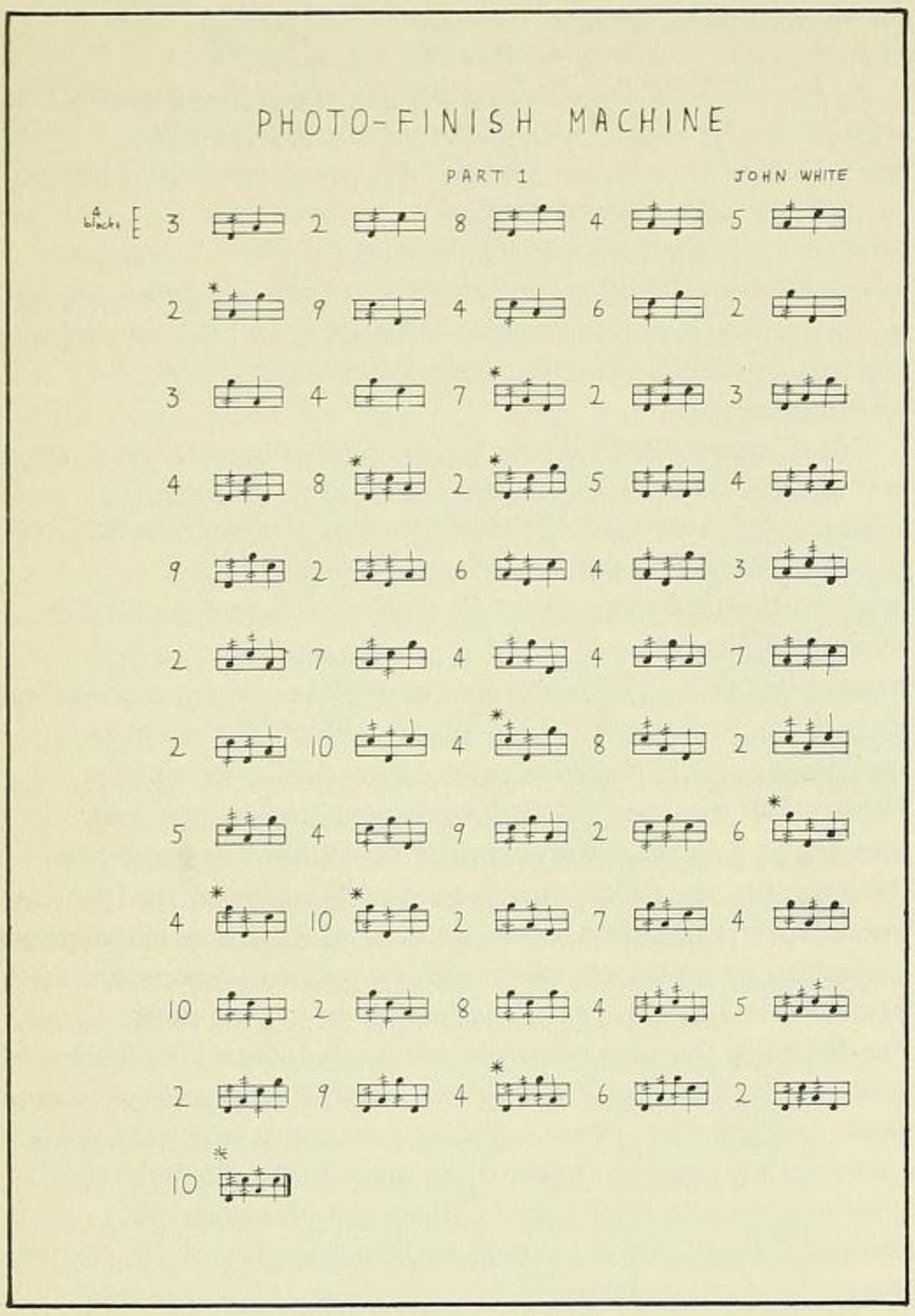
As the materials become more *musically* defined and refined, so the demands made on purely musical skills increase and the systems employed become somewhat more complex and specialised. English systemic music, in principle, is closer to American systems art than is Reich's 'process' music (though the condition of adapting procedures and materials to the sometimes limited capabilities of performers and instruments is one that must be unknown to visual systems artists).

Significantly, Reich wrote to me that 'to me the term "systems art" is something unknown. So I leave it to you to make analogies between that (British) movement and "process" art'. In his statement 'Music as a Gradual Process' Reich distinguished between the older (basically European) serial music[23] where the series itself is seldom audible, and the newer (basically American) art, 'where the perceived series is usually the focal point of the work'. (Reich was thinking specifically of Sol LeWitt's open white cube grids of the 1960s). Mel Bochner's definition of serialism is especially relevant to English systems music: 'Seriality is premised on the idea that the succession of terms (divisions) within a single work is based on a numerical or otherwise predetermined derivation (progression, permutation, rotation, reversal) from one or more of the preceding terms in that piece. Furthermore the idea is carried out to its logical conclusion, which, without adjustments based on taste or chance, is the work', adding that 'When numbers are used it is generally as a convenient regulating device, a logic external to both the time and place of application'.[24] Compare this with what Michael Parsons has written of English systemic music: 'As in the visual work described,[25] the use of numerical systems in this kind of music is objective, in the sense that once the elements to be used in a piece have been chosen, it can give a detachment which makes it possible to find ways of combining them not dependent on aesthetic preference. A musical system is not conceived abstractly, but is embodied in the form of a specific sound or instrumental technique. It may emerge gradually through investigation of the character of the sound; once chosen, it is not modified by free choice, but involves a willingness to accept the unforeseen.'[26]

Three Musical Systems in Action

Reich noted that whereas Cage has used compositional processes, random systems, there is no audible connection between the process and the sounding music: obviously, since their intended purpose was to create maximum *dis*order rather than any perceived order amongst materials of maximum variability. When random procedures are used where the limits of material are precisely fixed, chance becomes perceptible and the variety of the piece is a by-product of chance. In the percussion duo music by Christopher Hobbs and John White, numbers, both in series and in random distribution within specified limits, are used to determine bar-lengths, the rate of expansion or contraction of a figure, the number of repeats, and so on.[27] Against a regular, but by no means fast, pulse, Hobbs and White deploy the rather dry sounds of a very limited, rather gentle palette — small drums, bells, woodblocks, cymbals; the number systems ensure that, on a stable, often severe surface, these sound-points are presented as a gently implacable procession of small, but perceptible, shifts of lengths, ordering and

combination. Since these sounds are predominantly dry, and the number of instruments used somewhat restricted, they tend to simply combine rather than mix to produce an overwhelming, or any sort of sensory appeal.[28] They are, like much English systems music, concerned merely with the clear and perceptible articulation of time, as Michael Parsons has pointed out: it is possible, quite often, to 'hear' the numerical system as it is directly translated into sound.



John White *Photo-Finish Machine* 1971 (first player's part for four low-pitched woodblocks). The numbers between notations are multiples of crotchet's silence. Asterisks indicate the simultaneity of attack between the two players.

Where, however, a developing rather than permutative system is used (the gradual growth of points into ever-lengthening 'lines' of reverberation of a large number of sonorous metal percussion instruments), the perceptual consequences are unexpected – especially since the notation appears to notate *lines,* but in fact only indicates the length of a vanishing line, as the sound decays. When four independent, but systemically related, sets of these rhythmic patterns are superimposed (each set contains short figures to be repeated a number of times, all but one beat in each figure one unit longer than the previous one), the gradual transition from points to lines which you would expect if the system were a purely visual one, does not happen. Instead, predominantly fast motion, suddenly and unexpectedly at a given point some seven minutes into the piece, becomes slow. The cause is obvious: whereas with a single augmentation set the elongation process is more or less perceptible (not at every step, since with such short increments a 12-beat note is not distinguishable from a 13-beat note), when all four sets are combined the effect of a phenomenon that does not exist in the *static* visual arts takes over – that of contrapuntality, which is a more complex, unpredictable phenomenon than superimposition.[29] Some three-dimensional serial objects appear to present a similar contradiction between conceptual order and perceptual chaos. Witness Mel Bochner's description of possibly the same LeWitt work that Reich referred to in 'Music as a Gradual Process':

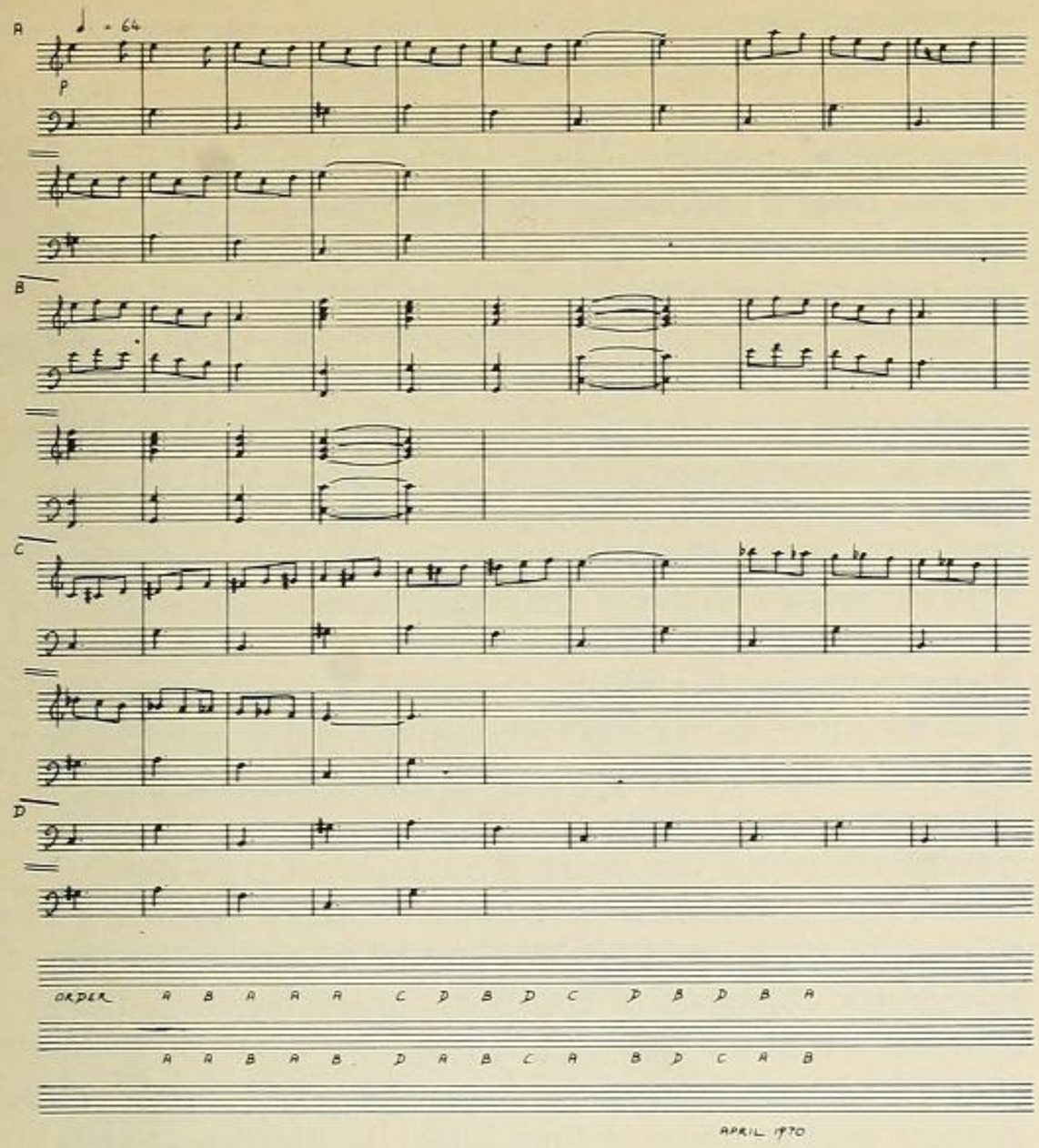
'When one encounters a LeWitt, although an order is immediately intuited, how to apprehend or penetrate it is nowhere revealed. Instead one is overwhelmed with a mass of data – lines, joints, angles. By controlling so rigidly the conception of the work and never adjusting it to any predetermined ideas of how a work of art should look, LeWitt arrives at a unique perceptual breakdown of conceptual order into visual chaos.'[30]

In Gavin Bryars' *Jesus' Blood Never Failed Me Yet*, 1971 (Obscure 1) we find what amounts to a curious reversal of this order/chaos phenomenon. A found tune, a tramp singing a sentimental religious song, is initially presented unaccompanied; made into a tape loop it repeats without break or variation. Since the tramp is not a trained singer, there are certain deviations, in time and tuning, from the sophisticated norm, so that during the opening four minutes or so of unaccompanied repetition, your ear becomes accustomed to accepting these 'deviations'. The overall plan of the piece is simple: while the tune continues to repeat unvaryingly (since it's on a loop), the instruments are introduced, individually or in groups, at stages during the piece. When the first instruments are brought in, with a 'correct' harmonisation of the tune, one experiences a sudden shock, since the tune suddenly shifts gear as it's 'straightened out', slightly cramped into the standard container of traditional harmony. (Only as far as the tuning of the melody is concerned, since rhythmically the situation is still flexible, if not unpredictable, as the accompanying musicians have to follow the slight rhythmic vagaries of the absent tramp). The found object is gradually 'accepted' into the increasingly sensuous setting – though the earlier instrumental additions obviously have a stronger effect on one's perception of the tune than the later ones, even if on another level one hears the piece as a gradual increasing of instrumental richness, and the original tune loses its initial central focus.

Discussing *Jesus' Blood* with Gavin Bryars, John White said that: 'Listening to *Jesus' Blood* I suppose one goes through several phases of identifying familiarity, and then alienation of some sort and then with any luck one plunges in over the top, rather like waking up after half falling asleep at 3 o'clock in the morning, talking with people, and having second wind. Are you deliberately interested in that process of the second wind of listening?' Bryars replied: 'Certainly, and of playing in that piece. I've never played it for longer than 35 or 40 minutes but I'm not averse to the idea of playing it a lot longer. The durations of the performances have been conditioned by external factors – the length of a spool of tape, the length of a reel of film, the length of a cassette – all those things have conditioned how long a performance is, rather than questions of how long the duration ought to be, given the material, the question of exploiting the material, making use of it to full advantage. Questions of that kind have never arisen with that piece at all.'

This attitude towards time and form/content, not only sets English experimental music apart from traditional music but also from its American counterpart, say the music of Reich. It does, however, show that it is part of the heritage of Cage, who stated that Christian Wolff's *Duo II for Pianists* was: 'evidently not a time-object, but rather a process the beginning and ending of which are irrelevant to its nature. The ending, and the beginning, will be determined in performance, not by exigencies interior to the action but by circumstances of the concert occasion. If the other pieces on the programme take forty-five minutes of time and fifteen minutes more are required to bring the programme to a proper length, *Duo II for Pianists* may be fifteen minutes long. Where only five minutes are available, it will be five minutes long.'[31]

Again, by analogy with the visual arts, one is tempted to call *Jesus' Blood* a modular structure. One finds a more developed, modular procedure in Howard Skempton's *Waltz* for piano (Audio Arts Cassette). Where Bryars' structure consists of the same module repeated over and over again, in an increasingly



Howard Skempton *Waltz* 1970

rich setting, with no potential time limit, *Waltz* is both more varied (there are four distinct modules) and fixed (the ordering is ABAAA CDBDC DBDBA AABAB DABCA BDCAB). Like a three-dimensional structure, *Waltz* is both modular and (to stretch a point) serial. Modular in that the sets are each of 16 bars, each falling clearly into two 8-bar halves, each half ending with the same chord sustained for two bars; thus each module contains two exact, near-exact or symmetrical repeats. It is serial in that three of the sets are identical — the bass line (D), and its harmonic implications, is the foundation of A and C. The harmonic variable has been controlled, therefore, while melodically A,C and D are differentiated: D has no melody, admittedly, but it is possible to hear it as having either *no* melody or merely *absence* of melody, since we've become familiar with D from A.

In terms of traditional formal relationships one could view B as an 'answering phrase', a dependent clause of A (Skempton said 'it came naturally' after writing A); to view, but not to hear, as the random repetition and re-ordering of the sets is such that it separates itself from any hint of phrase functionalism. It's not only this whole-set permutation that creates, over an 8-10 minute period, non-directional movement, but the fact that all four sets stabilise themselves, both at their half-way point and at the end, on an identical tonic chord. This is the 'home' chord of traditional tonal music, a chord which can only assert its 'homeness' by also proclaiming 'awayness', which Skempton's *Waltz* does not do.

No traditional piece of music would, could, ever have allowed itself to short-circuit in the way that *Waltz* does. To hear the piece as a classical paradigm is wrong (and, with its modular extension, impossible), but the C major chord does give the clue as to what *Waltz* is about. For Skempton *Waltz* was simply a method of extending a single sound, the sound of that C major chord, or, rather, the interval of the 10th (17th): the notes C and E heard in the first bar. Not only in the first bar, but all through — since the whole structure is merely a melodic extension of this interval — and in this sense *Waltz is* a 1970 'updating' of Young's 1960 'hold a fifth' piece. So set A is a simple melodic decoration of C/E, a simple going-away and return (the bass line too), while set C presents two chromatic 'directional signs' approaching the chord from different directions.

Thus *Waltz* is the temporal extension of a single sound, different only in method and result from all the other procedural devices for objectifying sound that have been developed since Cage's chance methods of the 1950s. But if, as Michael Parsons rightly maintains, systems are 'another way of making the music objective, so that, not being used to express anything, the musical material is free to be expressive as sound', then *Waltz* admirably demonstrates that musical modular structures, unlike visual ones, do not necessarily preclude lyricism, and that constructivism is not automatically synonymous with severity.

The Cageian experience of allowing sound to be 'occupied with the performance of its characteristics' has, of course, altered the way one perceives the particles of a musical structure. John White, very much consistent with Skempton's conception of *Waltz,* remarked that: 'One thing that struck me about every performance of (Bryars') *The Sinking of the Titanic* (Obscure 1) was that there was one point I could relate to very strongly as a listener; that whatever the associations, whatever the foreknowledge of what the piece is about, there was one spacing of a chord in the original tape — I think it's a chord of A flat major with the Cs doubled in the upper parts. There's just that incredibly pregnant quality about that particular sound, so that whether it had been about "The Titanic" or whether it had been about some completely other subject, that particular contact with the piece, and the way it recurred, made me focus and lose myself as a listener in considerations other than that of the extra-musical parts of the piece.'[32]

White notes that this is the way that many people experience music: 'As far as I'm concerned many people listen to a lot of classical music just from phrase to phrase, waiting for the really good bit to come up, more or less switching off after the 18th Variation of Rachmaninov's *Paganini Variations,* until the exciting bit towards the end comes up.' And he also pointed out that when new, but non-experimental modern music crops up in concerts quoting familiar or older source material: 'These are made to seem so novel; but in fact possibly the objective should have been to please people with some nifty keyboard work, so that one could just go straight to the thing instead of all this messing around. This sets up a rather strange kind of antagonism to conceptual music.' This 'messing around' occurs because 'in those kind of pieces there's this welter of contemporary acceptable dissonance and a-rhythmic context, and it just seems an awful shame to drown these good sources, when in fact one's intuition, one's way of expressing oneself, probably transforms the sources anyway. These composers seem to be very diffident about expressing some sort of passion for the materials.'

This kind of attitude — White has written that 'My compositions are all about obsession with particular sounds and rhythms' — informs the whole of his output, whether using systems or not, pitched musical sounds or unpitched percussion sounds. How such an approach cuts across seemingly contradictory categories is best illustrated by quoting the following statement that White wrote specially for this article: 'The systemic pieces[33] present the "obsessional units" and the "spreading" of them without any supplementary "scene-setting" material. The PTO-style pieces[34] present larger basic groups of "obsessional units" and less stringent, less dissecting styles of treatment. The feeling is towards "furniture music". The so-called "intuitive" music[35] presents "obsessional units" and their treatments (transformations) in a landscape of possibly contrasted or unrelated material. The action is of "setting" the units to their best advantage from a theatrical point of view.[36] The experience of the new kind of musical structures (post-Webern) makes for some unorthodoxies in forms applied to apparently traditional melodic and harmonic material. (Snapshots rather than cinematographic developments).'

These 'cinematographic developments' are found in traditional music, such as the Brahms F sharp minor *Piano Sonata* which White says is 'full of these noises of development, it's *the* development noise, the pedal notes, the sequences, and the kind of rumbling angry sound that developed and

always hangs about in German works. But not a single statement or single sense of obsession with an actual sound, with those kind of obsessive moments.'[37]

Listen to this space

The drift away from systems and processes to intuitive may or may not be of significance; Alvin Lucier would say not since he sees all types of performed music as imposing systems in some way or another: 'What composers of the past did — this is a funny idea — was to have those sounds sort of locked in instruments and then treat them abstractly, or not abstractly, but treat them with another system on them.' More specifically he draws attention to Cage's use of systems: 'Now, I've had experience with John Cage where he was doing a speech piece and I was doing the panning and the equalisation just to give it some electronic qualities — and he was content to look at the dials and look at the numbers on the dials and by *I Ching,* by using chance procedures, determined what the values should be. That's composition and that's imposing one system on another, a chance system on a Vernier system...John Cage looks at all the possibilities and then subjects them to chance operations. That to me is artifice and I don't want to do that. I know that's where art is but now I'm thinking of the physical sounds, I just want to understand how they will hit an object and reflect around or diffract around and I want to use that. So while I'm not dealing with sounds in superimposed systems, which makes composing hard, I'm trying to deal with physical realities of sound which is the hardest thing of all.'[38]

Lucier's composing-as-real-time-research is made clear in Stuart Marshall's article. It is a social and environmental project, qualitatively different from other environmental art (from both musical and art fields) in that Lucier's purpose is to explore, experience and discover the environment, rather than just 'use' it.[39] Younger, especially New York composers have recently taken Lucier's lead (as an alternative to repetitive, systems music) but have reduced the social/ environmental event to the private event of researching the musical instrument as bodily extension, with a thoroughness previously unknown — articulating a 'pure' acoustic system with little or no imposition of any other musical or structural system.[40]

Lucier's music research of the sounding, non-sounding, sound-reflecting environment, raises some interesting questions of spatial perspective, its musical simulation and one's perception of it. Lucier has said: 'I always seem to fail in thinking up an idea if it's two-dimensional or if it's a linear idea. All the music that you know, from Gregorian chant to Stravinsky, is two-dimensional in conception. I mean it's perceived by the ear but it's sort of a flat perception. Now when you went from chant to polyphony, you had that illusion of some kind of depth or another dimension, but it's only an illusion just as with a painting you can paint perspective in but it's really not there, you're still on a flat two-dimensional surface, and I think I don't succeed very well when I'm thinking in two dimensions, only when I'm thinking in a third dimension in space.'[41]

In a recent letter Lucier amplified this idea: 'Most music until now has been conceived two-dimensionally up and down across the page, even though sound moves out in all directions. Harmony, like perspective, only gives the illusion of space, of depth. I have learned how to make perceptible these spatial characteristics of sound.'

Most of the music I have considered so far has tended to reduce two dimensions to one, spatially, while increasing emphasis on and awareness of the temporal dimension. In traditional music, in a symphony for instance, various quasi-spatial devices, which act as a kind of perspective, were used. Some examples: on the small scale you find simple devices, or rather *facts* of the harmonic system, especially melody and accompaniment with various kinds of decoration, textural emphasis; contrasts of instrumental groupings (woodwind/ strings, solo/tutti) again with various degrees of gradation. On a larger scale there are structural devices, which also draw attention to the primary and the secondary — the 'main theme', transition, etc. The main structural, quasi-architectural force is of course tonality itself, with its hierarchies of tonal (key) areas, with its consequent emphasis on past, present and future. Only the opposition of instrumental groups could be considered spatial in a genuinely physical sense.[42]

Both the instrumental hierarchy and listener-location are at one with the 'harmoniousness' of tonal music: except in special cases, one is intended to hear the symphony orchestra more or less as if issuing from a single source, and one listens to music from a fixed position. Cage, of course, sought to remedy this situation in the 1950s: 'In connection with the physical space of the performance, where that performance involves several players (two or more), it is advisable for several reasons to separate the performers one from the other, as much as is convenient and in accord with the action and the architectural situation. The separation allows the sounds to issue from their own centres and to interpenetrate in a way which is not obstructed by the conventions of European harmony and theory about relationships and interferences of sound. In the case of the harmonious ensembles of European musical history, a fusion of sound was of the essence, and therefore players in an ensemble were brought as close together as possible, so that their actions, productive of an object in time, might be effective. In the case, however, of the performance of music the composition of which is indeterminate of its performance so that the action of the players is productive of a process, no harmonious fusion of sound is essential. A non-obstruction of sound is of the essence.'[43]

The paradox with Cage's 'Assemblage' music is that though his de-organising compositional method ensures non-differentiation, the distribution of sounds, and of musical, visual and gestural events in space destroys the traditional central focus, and enables the listener/viewer to form his own hierarchies and relationships as he wanders physically or perceptually around the sound-space. In this way, as Cage has said, the listener can chart his own course around and through a piece of music in his own time, as one is able to do with a static visual art work, which can be similarly altered by its environment — lighting, placement, etc. With the traditional musical work, the composer can get side-tracked from his chosen path; but the listener is obliged to follow this track, and its return to the main (linear) route — it is impossible for him to opt out, even though in a work of maximum (composed) variety the listener (as John White pointed out) *is* able to switch off and wait for events to occur that are more interesting and involving. There is a lot of 'wastage' in traditional music which explains why, in a repetitive permutative systemic/process work one can take a preferred 'image', a mere fragment, and extend it for a long duration without any provision or need for variety.

But in at least one respect Cage's de-focused time/space music shares one 'disadvantage' with traditional music: that once a particular event or configuration is passed, then it has ceased to exist. A traditional work-as-object can of course be repeated, but in a Cage work-as-process — where the music's audible (as distinct from conceptual and procedural) identity, can differ radically from realisation to realisation — the experience is unrepeatable, which of course was Cage's intention. (I'm speaking of live, rather than recorded, performances). The dancer Ann Halprin saw the temporariness of dance as a disadvantage: 'I remember thinking that dance was at a disadvantage in relation to sculpture in that the spectator could spend as much time as he required to examine a sculpture, walk around it, and so forth — but a dance movement — because it happened in time — vanished as soon as it was executed. So in a solo called *The Bells* I repeated the same seven movements for eight minutes. It was not exact repetition, as the sequence of the movements kept changing.'[44] I'm not aware of a comparable statement or attitude towards repetition by composers, but repetition or

Play

Play, make sounds, in short bursts,
clear in outline for the most part;
quiet; two or three times move towards
as loud as possible, but as soon as you
cannot hear yourself or another player
stop directly. Allow various spaces
between playing (2, 5 seconds, indefinite);
sometimes overlap events. One, two,
three, four or five times play a long sound or
complex or sequence of sounds.. Sometimes
play independently, sometimes by co-ordinating:
with other players (when they start or stop
or while they play or when they move) or a player
should play (start or, with long sounds,
start and stop or just stop) at a signal (or
within 2 or five seconds of a signal)
over which he has not control (does not
know when it will come). At some
point or throughout use electricity.

Color version:

red; blue; white; green; yellow; black;
silver; sharp, short sound; flat; silence;
simpler relationships (1:2, 2:3, 3:4)
mixed with less simple (5:6, 7:8); with
breath or air; soft; long; thin or
flourished.

Variable shades.

Colors need not be symbols for sounds, nor
sounds for colors.

Consider making, sometime, a fabric with
some design in it, but not in two
dimensions.

Or, allow for the possibility of periodicities
appearing, and disappearing (for instance,
shortly on being identified, or immediately
on being imitated, or within 3 or 7 seconds of a signal).

At some point drop two of the colors and two
of the descriptions listed above; and shortly
before finishing introduce five new ones.

Are musical sounds to other sounds as
black and white is to color?
Are the colors necessary? Lights, painting
confetti, the colors already there.
What about texture? Smooth, lumpy, gritty;
streaks, powdered, smeared, even edged,
trailing.

Colors are not to objects one sees as a
sound quality to sounds one hears.
Or are they?

Christian Wolff *Play* 1968

near-repetition does have the effect of creating stasis, an entirely non-traditional emphasis and concentration on the here-and-now (very little happening for a comparatively long period). Persistent repetition is both a method of amplification of 'hidden' details in short figures, and also a method of seemingly 'freezing' time, making sound as tactile and object-like as it has ever been in the history of music.

Pop Art Parallels?

I indicated earlier that it is a mistake to attempt to mate music with the vast array of mutually-exclusive art movements. Not merely a mistake, but also, in some cases, impossible. What, for instance, is the musical equivalent of Pop Art, if there is one? Cage has remarked that 'What is so interesting about modern art and Pop Art in this country is that it has more and more trained our eyes not on the most noticeable things, but on things generally overlooked.'[45] In his open and indeterminate music Cage allowed of and allowed for the use of environmental sounds and noises, in fact the qualitative/quantitative equivalence of musical and non-musical sounds; and the equivalence of sound events of a visual, theatrical, non-sounding kind. He, and others, also welcomed electronic technology into music. Fluxus continued the 'theatrical' tradition, reducing multiplicity to singularity.

The work of George Brecht runs on a continuum, in dealing with observed 'facts', from poetry, through musical scores, proposals for art works, to musical performances and three-dimensional objects. Fluxus (and the Scratch Orchestra) also introduced common objects as musical instruments — not only natural objects (made of wood, stone, metal, etc, as traditional musical instruments are) but toys, toy instruments and other commercial artefacts.

Given these sound sources scores could either take the form of processes realisable by any sound producers, or specific scores, such as Brecht's *Comb Music,* could be written for instruments which were overlooked by Beethoven and Co. But if you want to play traditional instruments, what then? Brecht replied as follows when I asked about a particular performance in which Fluxus artists and their friends had played traditional instruments: 'If you're trying to play a piece with people who aren't trained, you're bound to use something known. And what are you going to use? If you try to use a Mozart symphony, you aren't going to get very far; or if you try to play *Atlas Eclipticalis,* you're not going to know what's happening either — you won't get the point. So you really have no choice but to use something that was more or less known, and if it's known it's by definition been around a while, so you fall back on popular favourites.'

History repeated itself only a few years later when the Portsmouth Sinfonia was first formed. A group of art students at Portsmouth Art School, having previously been concerned with the 'abstract' music of Cage and Cardew, bought some classical instruments, and, searching around for a piece to play, they hit on Rossini's *William Tell Overture,* since everybody knew the tune — not, significantly, from hearing it at concerts, or on records, but as the signature tune to the Lone Ranger series on TV. Starry-eyed aping of their classical 'betters' was also a factor in the Sinfonia's attitude. But the 'commodity' aspect of serious music is in a way a reversal of what happened in Pop Art, where specialist 'high' artists took over the imagery and methods of specialist 'low' artists. For in music non-specialist 'low' musicians adopted in a limited way the material and mode of behaviour of 'high' musicians. And today it is not only the familiarity but especially the respectability of the classics that is played upon by the makers of Radio and TV commercials. The evident equation with ad-men is of 'classic' with classiness.[46]

Earlier manifestations of a Pop Art spirit in music (some Ives and Satie, for instance) put 'common' music from outside the concert tradition — hymns, popular and nationalistic songs, dance tunes in Ives' case, cabaret and musical hall songs in Satie's — into a 'serious' context. With the following results, as far as Ives was concerned: 'Some nice people, whenever they hear the words"Gospel Hymns" or "Stephen Foster", say "Mercy Me!", and a little high-brow smile creeps over their brow. — "Can't you get something better than that in a symphony?" The same nice people, when they go to a properly dressed symphony concert under proper auspices, led by a name with foreign hair, and hear Dvorak's *New World Symphony,* in which they are told this famous passage was from a negro spiritual, then think that it must be quite proper, even artistic, and say "How delightful!" But when someone proves to them that the Gospel Hymns are fundamentally responsible for the negro spiritual, they say, "Ain't it awful!"..."I tell you, you don't ever hear Gospel Hymns even mentioned up there to the New England Conservatory." '[47]

For Ives these materials were neither banal nor even iconic images since they were, as near as possible, representations of the natural, spontaneous musical expression of *real*

people who were not 'musicians', but whose music performed a useful function in their daily lives. This differs both from Pop Art in the 1960s and also from Cage's deliberate adoption into his 'abstract' music of what he termed 'banal sounds', when discussing his *Water Music* of 1952: 'I was already interested at that time in avoiding the exclusion of banal elements. In the development of 12-tone music there was an emphasis on dissonance, to the exclusion of very careful treatment of consonances. Octaves as well as 5ths and particularly dominant 7ths and cadences became things that one shouldn't do. I've always been on the side of things one shouldn't do and searching for ways of bringing the refused elements back into play. So I included sounds that were, just from a musical point of view, forbidden at that time. You could talk to any modern composer at the time and no matter how enlightened he was he would refuse to include banal musical sounds.'[48]

These were the sounds from musical history that had been excluded not only by Schoenberg but also by Cage in his percussion, noise, prepared piano and modal music of the 1930s and 1940s. The forbidden chords and individual sounds that Cage began introducing in the 1950s gradually elongated, as he replaced discontinuity with continuity, and in his sound collages a vast range of familiar material would appear, not, Cage would say, for its referential or symbolic qualities, but just to fill an allotted time-space. Christopher Hobbs has said that the inclusion of these materials, along with the use of the transistor radio as a musical instrument, guaranteed that indeterminate and improvisatory performances were full of melody and familiar music during the 1960s.

Cage's attitude to the use of past art simply as 'material' was clear: 'There are oodles of people who are going to think of the past as a museum and be faithful to it, but that's not my attitude. Now as material it can be put together with other things. They could be things that don't connect with art as we conventionally understand it. Ordinary occurrences in a city, or ordinary occurrences in the country, or technological occurrences — things that are now practical simply because techniques have changed.'

In a way, the return to melody could be seen as a parallel to Pop Art's reintroduction of a quasi-representational iconography — not naturalism since it was evidently filtered through attitudes towards the painting surface and modes of presentation that could not have happened without Abstract Expressionism. The same goes for the Cage experience and the re-introduction of melody, harmony, tonality, harmoniousness, etc. But the differences in the origins and symbolism of the respective iconographies is interesting, since experimental music has not drawn on that area of music that could be seen as being closest to commercial art, comics, etc — namely pop music. There was no reason why pop should not have been used in live and tape collage-type performances, but identifiable occurrences are few — Gavin Bryars did use Barry Ryan's hit *Eloise* in one of his pieces, for what John Tilbury called 'the sheer beauty of its sound', but it was significantly combined with a section from Schubert's *String Quintet.* (The only true 'pop' work that comes readily to mind is James Tenney's treatment of Elvis' *Blue Suede Shoes).*[49]

By 'significantly' I mean that the images that music drew on were, by and large, taken from musical history rather than current daily life. Except of course that the classics, through almost continuous presentation in concerts and on records, radio, TV etc, *are* part of almost daily life. (This demonstrates to what extent contemporary music is primarily a *museum* culture: the largest, most powerful and most anachronistic media — the symphony orchestra and opera — still dominate musical life, as they have for the past 200 years and still receive the most money from public funds). Various methods and approaches,degrees of respect and disrespect, have been found in the experimental attitude towards the classics, from the seemingly destructive disrespect of the Scratch Orchestra to the evident love of the Portsmouth Sinfonia, whose renditions would have appeared highly disrespectful to the seasoned music-lover, if he'd heard them. Cardew's prescription for the Popular Classics category of the Scratch Orchestra's repertoire runs as follows: 'A qualified member plays the given particle, while the remaining players join in as best they can, playing along, contributing whatever they can recall of the work in question, filling the gaps of memory with improvised variational material. As is appropriate to the classics, avoid losing touch with the reading player and strive to act concertedly rather than independently.'[50]

Numerous systemic re-articulations of patterns, fragments, etc, from traditional music have been used, though rarely are whole melodies the main focus of the work, filling the whole 'frame' in the way that, say, Jasper Johns' targets do. There have been 'untreated' performances, however, of a poor relation of symphonic music — that is, English salon music of the period 1900 — 1930.[51] These are pieces which appeal to English experimental composers for a number of reasons: lyricism, directness and modesty of scale and scope. John White feels that a descriptive piece by Albert W. Ketelby, for instance, 'is very factual. I suppose his definition of his compositional state would have been getting straight to the point...compression is the name of the game, which I think is a very respectable and archetypal way of going about it.' Gavin Bryars observed, however, that such a sectional descriptive piece is not necessarily proto-experimental: 'Although it doesn't actually *go* anywhere, I don't think that a piece like *Bells Across the Meadow* is a single-entity piece I think Ketelby's pieces are close but I don't think they're intended that way, and I don't get that sense from them.'

Be that as it may, the low-key unambitiousness of salon music does serve as a paradigm for English experimental music at least. Both avoid what the avant-garde composer, Harrison Birtwistle, once referred to as the *' "9th Symphony* syndrome", the striving towards the big statement, the final solution. If you look at Matisse's drawings, you'll see that they appear to have been done by a single stroke of the pen. They are intuitive drawings, but not only that, they are complete. You don't feel that colour is missing. But in music you can't do this. The composer finds himself in the predicament of always being expected to make his pieces "fully worked out", or "important" or "interesting".'[52] This striving for bigness, the overwhelming statement, the inevitable 'improvement' from one work to the next, is perhaps one of the most dangerous legacies of the musical tradition, a problem which experimental music, both in England and in the States, has solved by simply ignoring its existence.

Where the 'large-scale' is attempted, as in, say, Cage's *Concert for Piano and Orchestra* (1958), Cardew' s *The Great Learning* (1968-71) or Bryars' *The Sinking of the Titanic* 1970 —) methods are found to avoid, to torpedo, the conventions and demands of the *'9th Symphony* syndrome'. *The Sinking of the Titanic* is a unique example, combining ongoing research, both musical and otherwise, interest in 'found', mainly salon, music, a form of indeterminacy and a return to music with a 'subject' other than its own materials. When talking to Bryars I noted that the recording of the piece in a way defined a work that is not susceptible to definition. Bryars replied: 'I've defined that sounding version of the piece. Getting that particular sound out is a bit of a relief because that's now a single element, whereas before it was the assemblage of a lot of elements, so that now it can be taken as a datum for some future performance without having to assemble the elements that it comprises.'

And when asked about the musical, visual and conceptual levels of the work Bryars said: 'It's visual in the sense of there being slides to look at in some performances, and also in the sense that the manner in which it's performed live is a little bit different from other pieces on a programme. When Christopher (Hobbs), John (White) and I performed it in Antwerp this year, we did it in quite short sections which were characterised by dealing with different sounding aspects of the realisation. We used a pre-recorded tape to guarantee absolute continuity despite the discrete sectional

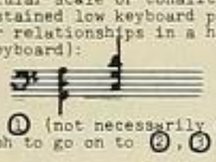
30'S Jon Gibson

For any number of performers.

Each performer has two pitches, timbres, chords or sonorities.

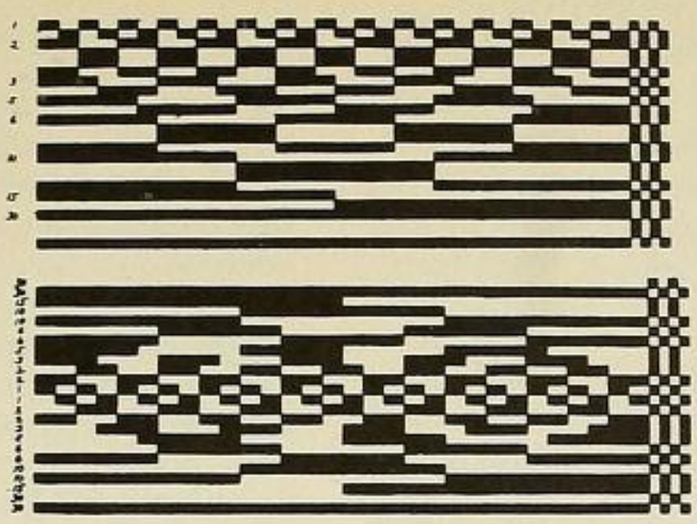
Percussion instruments, such as drums, cymbals, wood blocks and marimbas play the score as written - that is, rhythmically, or at times just the first quaver of a tied grouping (the notes marked with ×) may be played.

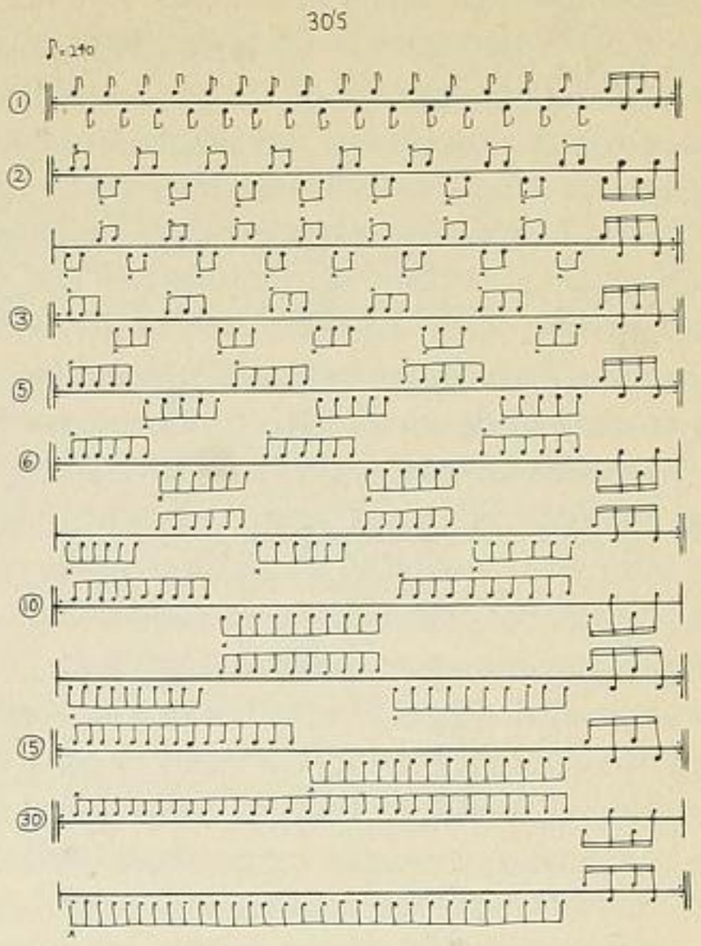
Sustaining instruments, such as organs and winds, also play as written, or may play the notes of a particular tied grouping as one note. For instance in section (5) the grouping may be played as dotted minims (𝅗𝅥.) instead of six separated quavers (♪♪♪♪♪♪).
In addition with keyboard instruments each hand may play of chord rather than a single pitch, and more than one performer may play at one keyboard.
If chords are used their notes should be chosen with discretion. Octaves, perfect fifths and fourths should predominate. Dissonant relationships become irritating to the ears very quickly in this piece so that a generally sonorous, consonant sound, utilising voicings within a particular scale or tonality, is recommended.
Here is one possible sustained low keyboard part. (These notes can be repeated in other relationships in a higher part by another performer on the same keyboard):



All performers start at (1) (not necessarily all at once) and repeat it until they wish to go on to (2), (3), etc., successively down the page.
Sections should not be changed by everyone at once. One performer can still be on (1) while other performers are on (2), (3), (5), (6) and even (30).
However it is necessary to stay together in the sense that everyone must always play the last two beats (the semiquaver figure) at the same time at all times.
As the piece progresses it is possible to skip section or go back to previous sections and replay them, bearing in mind, however, that in general the various juxtapositions should be repeated enough times to be reasonably heard and appreciated.
Proceed at a leisurely pace, taking your time with each section. The piece can last for any length of time from twenty minutes to an hour or so - perhaps longer.
When all performers have reached (30) and repeated it to their satisfaction, the piece should end abruptly (on cue) at the thirty-second beat of the cycle (the semiquaver figure).

Explore other ways of performing the piece.





John Gibson *30's* 1972
a. Performance instructions
b. Gibson's graphic representation
c. *The Score*

way of playing, and these sections were footnotes to other parts of the music. For example, at one point the three of us, on bassoon, tuba, and cello, played a series of short slow fragments of music, the titles of which are *Autumn* (the hymn tune), *Aughton* (another hymn tune) and *Autumn* (a piece of light music by Cecile Chaminade) and the confusion between these pieces which I did not name, is an integral element of this 'footnote' — a sort of rebus.

'At other times we would be doing things which may have appeared odd — John was winding up an alarm clock, I was playing a music box and Chris was tapping out Morse messages and none of these elements is at all arbitrary. And at other times we'd be playing instruments — tuba, bassoon and cello. So that given the title of the piece, given the slides and the restrained, slightly stoical manner in which we performed, there emerges a sense of something other than the music going on, and in that sense it becomes not a musical piece but a conceptual piece in the terms you mean. But further than that, I also consider that reading the score, or rather reading the published notes,[53] is a hermetic performance — you're doing some sort of reconstruction as you go along and this is an aspect of the piece that I'm interested in developing in other works.'

Music is music is music

I have deliberately emphasised the *differences* between the visual and sounding arts because it seems to me that there is no point in making generalisations about inter-connections and influences, since these tend only to oversimplify the essential nature of music and musical life, of sounds and structure, of scores and performance. Music's processes and materials, and its social, cultural and historical contexts, are entirely its own, if only because the transmission and reception of sound is subject to its own (natural) laws and (cultural) organisation. Ultimately music — for better or worse, and no matter how beneficially it seems to be affected by the conceptual, aesthetic, philosophical, and procedural attitudes of the climate that the visual arts have created[54]— essentially stands alone, feeding off itself (as I hope I have shown in the case of experimental music's Pop Art parallels).

That is not to say that music *ignores* this artistic climate. Edgar Varèse, for instance, was highly sympathetic to the Futurists' iconoclastic desire to glorify the machine age in music, and to close down the 'hospitals for anaemic sounds' — the concert halls. Yet how did Varèse react? In the fifth issue of Picabia's *391* he asked: 'Why is it, Italian Futurists, that you slavishly imitate only what is superficial and most boring in the trepidation of our daily lives', adding, at other times, that 'The Futurists imitate, an artist transmutes'.[55] He reacted as a specialist, a musician (as does, just to confuse the issue, Stockhausen to experimental music!)

Cage remarked that he was not surprised that so many painters turned up at his composition class at the New School of Social Research in the late 1950s 'because I had, before that, in the late '40s and the early '50s, been part and parcel of the Artists Club. I had early seen that musicians were the people who didn't like me. But the painters did. The people who came to the concerts which I organised were very rarely musicians — either performing or composing. The audience was made up of people interested in painting and sculpture.'[56] Yet despite the impression given by performances of some of his works, that anybody could participate, no matter how unskilled[57], the ideas behind and contained in his indeterminate works were difficult to grasp, the process of making the parts from the given 'score' was a complex one, and performance required dedication and highly developed musical skills.

And why was it that the Scratch Orchestra, the most flexible, least specialised musical group that has probably ever existed, felt so aggressively out of place when asked to participate in a multi-media Chicago Conspiracy Trial event at the Round House in 1970? They objected to the proceedings not because of the nature of the cause the event was celebrating, but because it wasn't sufficiently like a concert, even though the Scratch Orchestra's own concerts took on many bizarre forms. Their concerts on Regent's Park boating lake or by the seaside remain, nevertheless, *concerts.*

Why, also, does Steve Reich now wish to be judged by his peers, by musicians rather than by artists, to try to make the grade alongside Bach rather than, say Richard Serra? And why did John White feel the need to 'sneak' back into the concert world some four or five years ago? He said recently that: 'There seemed to be this terrific need to escape from anything that seemed like a proper concert, and yet one used some devious way of getting back into something approaching the concert hall, like an art gallery.' Now he welcomes 'the stuffed-shirt kind of concert again because I've had enough of concerts on bomb sites and it's quite nice to see people dressed up again.'

Perhaps this is a sign of creeping conservatism in today's experimental music; more likely it is the pernicious conservatism of music itself. It is possible to make a graph

that would indicate that as the material (but not the ideas) of experimental music gets closer to that of traditional music, so it becomes more specialised and cocooned from the art world, even though artists may still 'turn on' to it. Steve Reich's music has developed in sophistication from *Pendulum Music* (which non-musicians could, and did, perform) so that he will soon have to phase himself out of his performances simply because he will not be able to cope, as a performer, with the technical facility which his music will demand. (I wonder whether visual artists' appreciation of his music has developed in the same way too).

With Cornelius Cardew's music during the 1960s the opposite was the case: his early scores were only suitable for musicians, his later ones available to an alternative class of performers. He found that the most rewarding performances of his totally graphic score *Treatise* had been given by people who, by some fluke, had a) acquired a visual education b) escaped a musical education and c) have nevertheless become musicians, *ie* play to the full capacity of their beings.[58] Hence the outcrop of music in art colleges, which still continues, but mainly in the form of small instrumental groups, playing traditional music.[59] Because of the very special nature of Alvin Lucier's music, a piece like *Vespers* is also more successful when performed by untrained musicians. Lucier has said that: 'Often I find that people who have never played a musical instrument before – people I just get off the street, so to speak, before the concert – do the best job on it because they don't have any pre-conceived ideas about how to make something interesting. You see I want to make the space be the interesting thing and not the personalities of either myself or the people who play the piece.'[60]

Nor should one deny the importance of art galleries as concert halls. (Reich and Co. have now moved up market, but younger composers in New York still find that most of their performances take place in lofts and in the art environment in general). Galleries and museums may recently have tended to emphasise music-as-art (or as an extension of art), but their enlightened openness and independent funds do give composers the opportunity to develop without the creative restrictions that the 'stuffed shirt' concert ritual imposes. A music which is dependent for patronage, interest, finance and approval (by large audiences and music critics who are really at home only in the opera house) eventually has to succumb to the dulling conservatism of the musical establishment, or still be considered élitist, freakish or just plain inadequate technically. This will continue as long as the musical education system remains totally consumed with permanently reproducing itself in its own image. It is inconceivable that a music college should employ painters and sculptors, in the way that art colleges employ specialist music teachers. Why, you couldn't even learn the banjo at the Royal Academy of Music if you wanted to...

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1 Musical blankness: John Cage's so-called silent piece, ***4'33"***, a time-frame in which to observe the sounds of the environment; visual blankness: Rauschenberg's white paintings. Cage quotes Rauschenberg's 'A canvas is never empty' ('On Robert Rauschenberg, Artist, and his Work', ***Silence,*** Wesleyan University Press, 1961, p.99) and notes that 'The white paintings came first; my silent piece came later.' Still in 1964 Cage felt that 'Whether or not a painting or sculpture lacks a centre of interest may be determined by observing whether or not it is destroyed by the effects of shadows. (Intrusions of the environment are effects of time. But they are welcomed by a painting which makes no attempt to focus the observer's attention). Observe also those works of painting, sculpture, and architecture which, employing transparent materials, become inseparable from their changing environment.' ('Happy New Ears!'. ***A Year from Monday,*** Calder and Boyars, 1968, p.31.

It's worthwhile perhaps dwelling a little on Cage, since he appears to have had a more liberating influence – both in terms of technique and sensibility – on visual artists than any other composer in the last 25, or maybe 75, years. He has himself noted that the music/art, art/music influence works in different directions at different times: 'When starting to be abstract, artists referred to musical practices to show that what they were doing was valid, so, nowadays, musicians, to explain what they are doing, say "See, the painters and sculptors have been doing it for quite some time now." ' ('Lecture on Something', 1952, in ***Silence).***

Questions of influence are so difficult to pinpoint exactly, and so generalised in effect, that I shall make no further reference to the influence of one art form on another. Cage himself acknowledges the influence of the very much younger Rauschenberg (at the time he was writing 'Lecture on Something'), not only in that the white paintings gave him 'permission' to realise the silent piece he had conceived some four years earlier, but also, for instance, by opening his mind to the possibility of including historical musical objects in his own music. Speaking of his distaste for certain aspects of the music of Charles Ives he said: 'What had put me off Ives was all the American business. I didn't like that. You see, in modern painting I was devoted to Mondrian; just as I had chosen Schoenberg in music so I had chosen Mondrian in painting (during the 1930s). And it was not through my own inclinations but through the excitement and work of Robert Rauschenberg that I came to be involved in representational work. If, then, I could accept representation in painting I could of course accept the Americana aspects of Ives'. (Alan Gilmour, Interview with John Cage, ***Contact,*** 14, Autumn 1976, p.19).

This puts in a rather different light the suggestion that Cage allowed Rauschenberg and Johns 'to consider a wider choice of materials and approach. As with Cage's "sounds", anything and everything was possible through his "Theory of Inclusion" ' (Mario Amaya, ***Pop as Art,*** London, 1965, p.51). There is no reference to any such 'theory' in Cage's writings, and this is a mild indication of the way in which the ideas and music of Cage (and of other composers) can be so easily misrepresented and misinterpreted. I have therefore included only quotations from composers, musicians or artist-participants in this article (though musicians, myself included, may be equally prone to misinterpret the visual arts, even if they can at least clarify the 'purely' musical issues).

Since writing this article I encountered a comment by Robert Morris which reinforces the position I have adopted: 'There may indeed be a general sensibility in the arts at this time. Yet the histories and problems of each, as well as the experiences offered by each art, indicate involvement in very separate concerns. At most, assertions of common sensibilities are generalisations which minimize differences.' Space ('Notes on Sculpture,' 1966, reprinted in ***Uber Kunst,*** DuMont Schauberg, 1974, p.19).

2 Cf. the pre-electric proposals in Marinetti's 'The Variety Theatre' manifesto of 1913 ***(Futurist Manifestos,*** ed. Umbro Apollonio, Thames and Hudson, 1973, pp. 129-130): 'Play a Beethoven symphony backwards, beginning with the last note. – Boil all of Shakespeare down to a single act'; and 'we unconditionally endorse the performance of ***Parsifal*** in forty minutes, now in rehearsal in a great London music-hall.'

3 In Jackson Mac Low and La Monte Young, eds, ***An Anthology,*** Heiner Friedrich Gallery, Munich 1970, unpaginated.

4 Young, ***Selected Writings,*** George Wittenborn, 1970, unpaginated.

5 'The most important point for me in your book is the distinction you make between "avant-garde" and "experimental" music (and, by implication, musicart, art...). The origin is at zero'. (George Brecht, letter to MN, 18 June 1976).

6 ***Minimal Art,*** ed. Battcock, Studio Vista, 1969, p.45.

7 I made the comparison with painting because of the visual presentation of Young's musical idea; a better analogy might have been a Flavin fluorescent fixture (for its 'persistence'), or a LeWitt wall drawing (for its 'roughness' – 'Imperfections of the wall surface are occasionally apparent after the drawing is completed. These should be considered a part of the wall drawing', ***Arts Magazine,*** April 1970); or 'badly finished' boxes by Robert Morris; or the reflective and transparent art works Cage refers to in note 1. But all such comparisons are of little real value.

8 Young, (op.cit.)

9 Programme notes for the Queen Elizabeth Hall concert performance of White's ***Tuba and Cello Machine,*** 17 May 1971, published as two booklets of 'Machine Letters' – Cardew to White and White to Cardew.

10 Such acoustic details make one appreciate the ultimate simplemindedness of the various attempts in the past to find analogies between sounds and colours. What colour is middle C on a flute; what colour is that same note on a tuba, etc? And if a 'blue' chord is combined with a 'yellow' chord, is the result a 'green' chord? Or if the equation is colour = key, then the subtle and often rapid changes in even a short musical piece would need to be paralleled by an impracticable number of changes of shade.

11 Once you have decided, as Young did , that a line 'is a potential of existing time', you could claim that almost all music, usually perceived ***linearly,*** is a realisation of Young's line pieces, or the line pieces are reductions of all previous music.

12 Not that all graphically notated music was necessarily realised 'naturalistically' – see a line, play a line, see a circle, play a circular sound/a circular instrument, etc. Earle Brown's ***December 1952*** consists of 31 horizontal and vertical blocks, of different lengths and thicknesses spaced over a single sheet. (See score reproduced in Cornelius Cardew's article in this issue). A naturalistic

realisation would consist logically of chords, clusters, sustained sounds, etc. A more 'symbolic' but not unrelated realisation made by John Tilbury during the 1960s, treated the horizontal rectangles as melody with thickness representing intensity, and length, duration; the vertical blocks are harmony, with width again representing intensity and height frequency.

13 Also used in Merce Cunningham's ballet ***Winterbranch*** (1960).

14 Al Hansen. ***A Primer of Happenings & Time/Space Art,*** Something Else Press, 1965, p.35.

15 ***Minimal Art,*** p.280

16 Michael Parsons, 'The Contemporary Pianist', interview with John Tilbury, ***Musical Times,*** February 1969.

17 See Richard Kostelanetz, ed., ***John Cage,*** Allen Lane, 1970, pp.171-2, and 173-7.

18 Christopher Hobbs, Parsons, Howard Skempton and John White.

19 Unpublished communication, 1973.

20 See Reich interview in this issue.

21 See Rod Eley's 'A History of the Scratch Orchestra 1969-72' in Cardew's ***Stockhausen Serves Imperialism,*** Latimer 1974 for an account of the contradictions, musical and otherwise, that developed in the Scratch Orchestra.

22 ***Nature Study Notes,*** Experimental Music Catalogue, 1969.

23 Such as Schoenberg, Webern, etc., based on the permutation of a 'row' of all twelve semitones. 'Music as a Gradual Process' 1968, reprinted in Steve Reich's ***Writings on Music,*** Universal Edition, 1974.

24 ***Minimal Art,*** pp.100 and 101.

25 That of Malcolm Hughes, Michael Kidner, David Saunders, Jeffrey Steele etc.

26 'Systems in Art and Music', ***Musical Times,*** October 1976.

27 See White's note for his ***Photo-Finish Machine*** in the Audio Arts ad in this issue.

28 Unlike the music of their American near-counterparts — Reich, Riley, Glass, etc.

29 I refer here to a piece of mine, ***Bell Set No. 1*** (Obscure 6) which was composed as a 'rationalisation' of the 'imperfect' system of Steve Reich's ***Four Organs.*** The contrast between the two pieces illustrates very succinctly that sound has an 'uncontrollable' force that transcends the 'logic' of numerical or other systems. (Its own logic is more powerful, more resonant, than paint, for example). Although Reich's additive numerical system, applied to a genuine 'points becoming lines' process, contains several 'leaps', ***Four Organs*** sounds seamless; the additive system of ***Bell Set*** is numerically seamless, but the music 'leaps'. See also Interview with Steve Reich in this issue.

30 ***Minimal Art.*** p. 101.

31 ***Silence,*** pp. 38-9. The difference is also important: each performance of ***Jesus' Blood*** contains the whole process (the staggered introduction of the instruments) no matter how short, or long, the performance is; with the music of Wolff (or Cage) only that amount of the process that fits the allotted time will be played. For Reich's attitude towards duration see interview in this issue.

32 Alvin Lucier defines the role of the single chord in traditional music when he says that...'the better the piece is, the better the composer is, the more meanings one chord or one sonority has in the piece. The idea of the chord functioning one way in one key and functioning another way in another key, and that it's at that point where you don't quite understand what the chord is going to do, makes the very interesting points. Or when the theme comes back, but the orchestration and the accompaniment and any other parameter might not be the same — that's when the symbolism is very strong because the one item symbolises so many different things. It's very powerful — it's like an image in a poem that you can take a look at from many, many angles.'
Lucier, unpublished interview by Douglas Simon.

The best known example of the different functions of a single note occurs in the 10th note of the first theme of the first movement of Beethoven's ***3rd Symphony*** which, in the exposition, is a C sharp which proceeds in one tonal direction, but which is 'altered' to a D flat (the same note on the piano) in the recapitulation and goes in a different direction. Needless to say experimental music has removed this plurality of meanings.

33 ***Eg Photo-Finish Machine*** on the Audio Arts cassette.

34 ***Eg*** Christopher Hobbs' ***Aran*** on the Audio Arts cassette.

35 ***Eg*** the piano duets by White (and Hobbs) on the Audio Arts cassette.

36 Rather more developed examples of Skempton's chromatic scales in ***Waltz,*** perhaps.

37 The kind of music that has led to disturbing avant-garde attitudes such as the following: 'Sounds, then, are not part of music, however essential they are to its transmission. And neither are paint, pigment, or canvas parts of paintings, nor masses of bronze parts of sculptures, nor pages and letters parts of poems. Sounds, in fact, are not even what musical notation specifies...What scores do specify is information about music-***structural*** components, such as pitches, relative attack-times, relative durations, and whatever other quale-categorical information is functionally relevant.' (Benjamin Boretz, 'Nelson Goodman's Languages of Art from a Musical Point of View,' in ***Perspectives on Contemporary Music Theory,*** ed. Boretz and Cone, Norton, 1972, p.34).

38 Lucier interview by Douglas Simon.

39. The equivalent would be for Earth Artists to study the principle of geological faulting, etc. Again artists are obliged to use static phenomena as their raw material, although they have the advantage of dealing with physical size: three-dimensional objects are more immediately impressive than their musical 'equivalents', notes of extremely long duration. Monumentality in music can be achieved by the employment of more than normally large numbers of performers (19th-century 'Monster Concerts', Cage's ***Musicircus,*** etc). What is the equivalent to human body-size as a reference point in assessing musical scale?

40 For instance, Joan La Barbara's ***Hear What I Feel*** which is a search for new sounds. Last season during a series of concerts with poets and writers I discovered some unusual sounds by reacting emotionally to the words and letting the emotion rather than the intellect direct the sound. Continuing my experiments in finding new ways to inspire unorthodox sounds, I decided to delve into the area of psychology and place myself in an extraordinary situation. The visual sense is one of my strongest senses and therefore one of my strongest needs. Perhaps because I'm near-sighted I've always been very aware of what I'm able to see — and how my perceptions of objects differ when aided by corrective glass. I chose to block that sense, depriving myself of visual stimulation and/or information in order to heighten the reactions of my other senses. For concert situations I try to spend one hour in isolation with my eyes taped shut, also denying my hands any sensation other than that of air and dust. I prefer to spend that hour in a space outside the concert room in order to include the discovery of new surroundings as part of the piece's sound and to experience the shock of suddenly bringing the solitary state of mind, created by being alone with one's own thoughts, into a space occupied by other people and respond to this without the advantage of visual information. The piece involves vocalising my immediate responses to touching a variety of unknown substances, chosen by persons other than myself. I do not know what the materials are until the end of the experiment when I remove the tape from my eyes.' (Programme note).

41 Lucier interview by Douglas Simon, ***Big Deal,*** Summer 1976.

42 The best account of traditional 'hierarchic-tonal' music is given by the avant-garde composer Gyorgy Ligeti (in ***Die Reihe*** 7, Universal Edition, 1960, p.16): 'The individual moments of hierarchic-tonal music were not restricted to maintaining their mere 'presence', they also included the 'just past' and at the same time pointed forward to the immediate 'future'. That they were able to do this was a consequence of the — historically conditioned — 'cadential' successive ordering of the harmonies. The music was, thanks to this faculty for embracing the immediate future, able to negotiate points, as it were, and even fork off into several parallel lines of events, but the formal course of the music was limited to a single direction of movement in time. The onward flow of the music was further protected by the generally even pulse of the music's metre. If unexpected events did occur — as for instance interrupted cadences or sudden modulations — they would immediately be confronted in the hurrying imagination of the listener with the hoped-for and expected, not experienced as any hesitation in the flow of time, but rather as a diversion or branching off, always of course in the same direction as the general current. This sort of successivity gave an aura of logic to the tonal forms, hence their "similarity to language".'

43 ***Silence,*** p.39.

44 ***Minimal Art,*** p.240.

45 Michael Kirby and Richard Schechner, 'An interview with John Cage' in ***The (Tulane) Drama Review,*** vol.10, no.2, Winter 1965, p.61.

46 Some pop musicians and groups have also attempted to 'legitimise' their music by performing with symphony orchestras.

47Charles Ives, ***Memos,*** ed. Kirkpatrick, Calder and Boyars, 1973.

48 Kirby, op.cit.

49 The young English composer John Lewis has based some recent repetitive systems music on reggae.

50 Cardew, 'A Scratch Orchestra: Draft Constitution', ***Musical Times,*** Nov. 1971.

51 The reworking of classical and light classical sources is a specifically English phenomenon.

52 Michael Nyman, Interview with Harrison Birtwistle, 1973 (unpublished).

53 In ***Soundings,*** 9, 1975.

54 Louise Varese ***Varese, A Looking-Glass Diary,*** Vol.1: 1883-1928, Davis-Poynter, 1973, p.106.

55 Kirby (op.cit) p.67.

56 There are some that are suitable for non-musicians, such as ***Musicircus*** and ***33 ,*** but these reflect a relaxation on Cage's part after the severe, restrictive works of the late 1950s and early 1960s.

57 See Nyman, ***Experimental Music;*** Studio Vista, 1974, pp.97-107

58 See my article in ***Studio International,*** May/June 1976, pp.282-4.

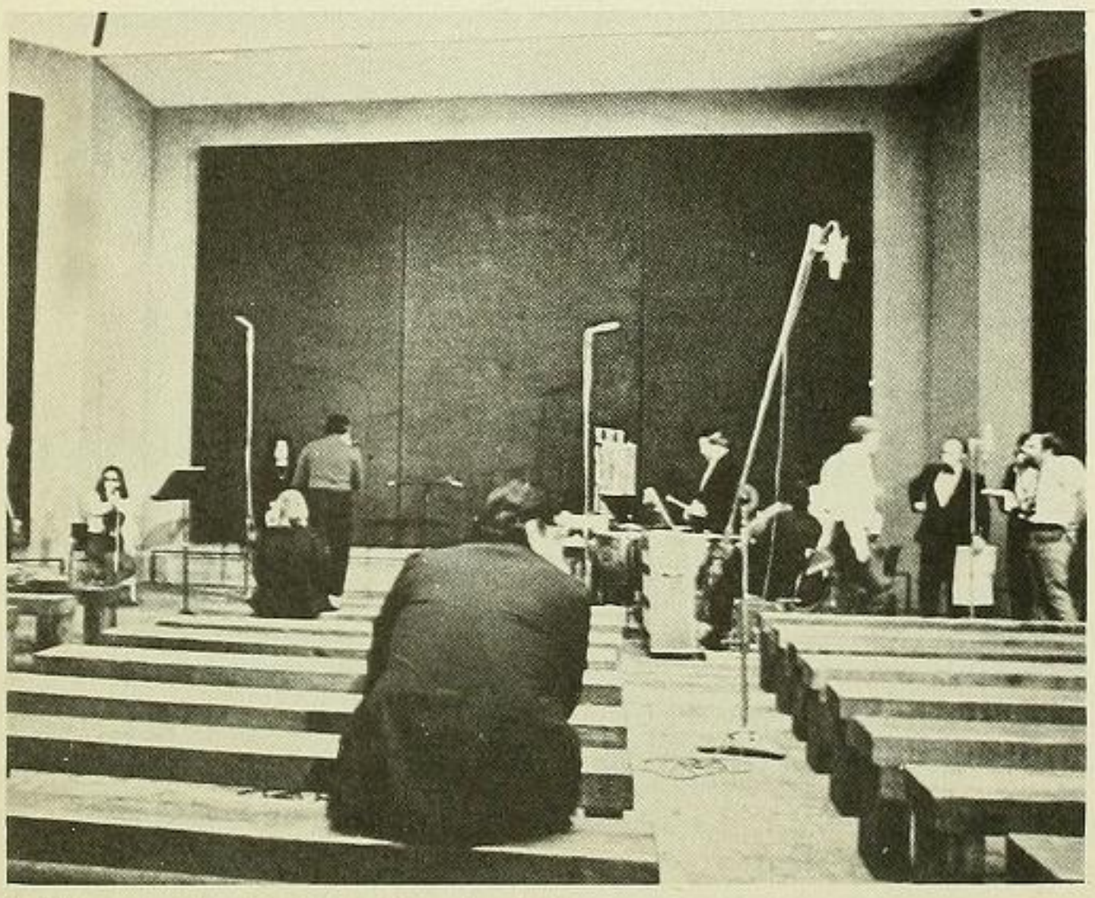
59 Lucier, interview by Douglas Simon in ***Arts in Society,*** Summer 1972.

60 Lucier (op.cit).

MORTON FELDMAN

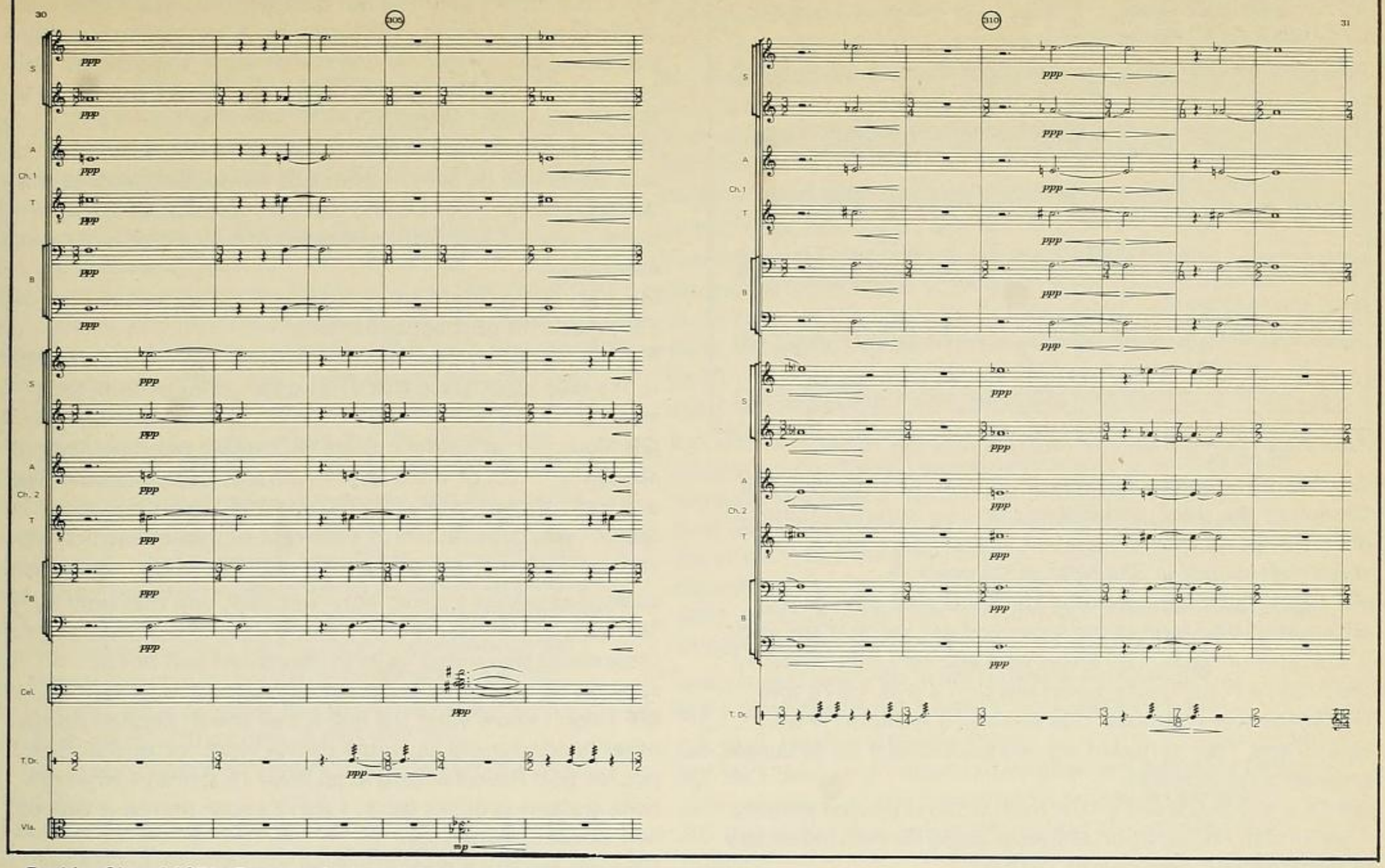
Interview by Fred Orton and Gavin Bryars

FO Do you see much of Rauschenberg now?
MF No. For me to look at art now would be like Lenin coming back and seeing that everything had become 'radical chic' when they talk revolution. And when Bob wants to do some kind of funky cardboard box it just does not look good on those expensive walls. Don't like it.
FO You collaborated with him once, though, for the Cunningham ballet *Summer Space* in 1966.
MF If you call it a collaboration. It was the most incredible collaboration I've ever been involved with in my life. I didn't see the dance. I just asked Merce to tell me the time structure which I then decided to regulate in various ways, in other ways, and change the structures like oilcloth. If the dance was taking a little longer he would be a little slower. You know Cage's lecture on 'Indeterminacy' [1]...so it's like an oilcloth but with plenty of material to work with, to either shorten or lengthen. The image of the dance really came from Bob, a conversation I had with Rauschenberg on the telephone, rather than getting it from the dance. Bob told me that the set was pointillistic and that he would use the same colours to paint the costumes. That gave me an idea also: rather than having three scenes going – Merce, Bob and myself – I decided to melt into the décor. So the score is pointillistic.[2]
FO So that's a direct motivation from an idea of Rauschenberg's?
MF Yes, he was responsible for me having to decide, should I be more characteristically Feldman, like a kind of velvety back-drop? So I decided to go for sets and costumes. And so it's not a characteristic score of mine. But the ballet looks very beautiful, just perfect, like you get a little speck in your eye and you wipe it away. It makes it even more frontal because you are having all this thing, vibrating there, and then out in front there's the band going. And it wasn't until the dress rehearsal that I actually saw what was going on.
GB That's fairly characteristic of Cunningham working with musicians and other people: there is this amount of freedom.
MF The dance is learned first, and it's absolutely fantastic to work in that way. Rather than find people who psychologically depended on the music for their source material. So I was very happy to be the accidental matchmaker.
GB Quite a number of your pieces which have artists' names in the title, or are dedicated to, for example, De Kooning, Philip Guston and the Rothko Chapel, all seem to be very particular references.[3]



Feldman in the Rothko Chapel, 1971

MF Well, let's start a little late in time. The Rothko Chapel piece was a very interesting commission because it was the only score where other factors determined what kind of music it was going to be. For example, it leaned very heavily on me that the first time I met Rothko, which must have been around 1952, I remember him standing against the wall talking to me about Mendelssohn. He liked the combination of the youth and the lyricism of Mendelssohn, all the fantastic pieces he wrote as such a young man. Rothko got a big kick out of that. So when I wrote the *Rothko Chapel* I remembered that Rothko did a lot of paintings with the WPA, social realist, and then I saw the whole life of this guy. So what I decided in the *Rothko Chapel* was to treat it very – not biographical, but my identity was such that I decided to write an autobiographical piece. The piece begins in a synagoguey type of way; a little rhetorical and declamatory. And as I get older the piece gets a little abstract, just like my own career. Then in the middle of the piece there is one thing that is really at odds with the other parts but which makes the piece a very interesting trip: where I just have the same chords, and I'm tripping for a long time, and it's very monochromey.
GB Are those the vocal harmonies?[4]
MF Yes, that is a very monochromey section. It's going on for a long time and that's where I reach this degree of abstraction. Not that I'm imitating Rothko but I'm certainly closer to the late pictures that are in the Chapel in that kind of one hue of a colour, and the piece ends with the memory of a piece that I wrote when I was fourteen.[5]
GB There are a few features about that ending which are strange: for example, that very tonal extended tune with a very steady, vibraphone accompaniment.
MF Then there is a tune in the middle of the piece, a dialogue between a soprano and timpani and viola,[6] which was a little Stravinskyish on purpose: I wrote that tune the day Stravinsky[7] died. So it was Stravinsky, Rothko, dead. It was the only piece – and it will never happen again – when all kinds of facts, literary facts, reminiscent facts, came into the piece.
FO You wrote it for the chapel.
MF I think the orchestration was to some degree affected by the fact that I was writing it for a big production at the chapel. I went down there and I just walked around the chapel. It is built in a kind of glamorous idea of his studio. Actually the studio was bigger than the chapel, and it just cried out – the octagonal situation – to do something at the sides. That's where the antiphonal chorus came in, and something in the middle, and then they had the benches in the middle and they could bring in others. Visually too the whole battery or percussion looks nice.
GB I was wondering about that antiphonal use of the choir, especially at the end, which would seem to have a reference to something connected with the space.
MF It was a reference and also another metaphor, in the sense of the interrelationships of all the panels which go from one to another. I used an antiphonal idea to give an overall hue of one thing, using an antiphonal device to make you get involved with the totality. The effect was absolutely stunning. That was for me the first and last performance.
GB You've written pieces entitled *Piano Piece (to Philip Guston),* and *De Kooning.* These are not the same thing as the *Rothko Chapel.*
MF No.
GB The De Kooning piece is an ensemble piece, the Guston is a solo piano piece, but there are not the same kind of



Rothko Chapel 1971. Courtesy Universal Edition, London.

references?

MF No, there are no references.

GB So these are more like dedications, then?

MF Yes, but with the *De Kooning* there is a little bit of a tragic flavour which Bill still has. Remember, he is the most European.

FO Maybe the most concerned with history as well.

MF Yes, and he was always a little uncomfortable in abstraction. It was just part of his repertoire in the same way that abstraction was part of Matisse's repertoire. And I think he worked very much like Matisse. One day he'd paint landscapes, another day still life, another day he did calligraphy. The fourth day he'd put them all together and get 40,000 dollars. Closer to a kind of European idea.

FO With regard to referentiality and Guston, it seems to me that there is acertain kind of hesitancy about the Guston piano piece which is implicit in Guston's pictures.

MF A little bit I think. Also the touch. It's a piece that's involved very much with touch if you play it.

FO But also no matter what you put down, whether it's on the keys of a piano or on the canvas, there are thousands of other possible notes or other marks to choose from. And there seems to be that kind of hesitancy in it.

MF Yes, that's pretty good.

FO The two people who were really important to you were Guston and Cage in different ways.

MF Yes, Guston and Cage. I don't see Guston any more, things kind of cooled off. You know there is a great line of Frank O'Hara's where he says 'I'm the most reasonable of men: all I want is unbounded love', some fabulous remark like that. And Guston was always like that in my life. He was very reasonable but, boy, was he demanding! When his work started going into this new period I saw it the first time in his studio. I looked at it a long time and just couldn't say anything about it. He was a little upset that I didn't give him this instant enthusiasm.

GB You think it was a crucial point for him that he should have had that enthusiasm?

MF Yes. But I mean every ten years. I couldn't. I met him right after he got back from Italy and did a whole series of red paintings. That was a very important show, a big abstract show in 1950, just when I met John Cage at the Modern. I went to see the show with Cage and I came across a red painting. I looked at that picture and it knocked me out. My eyes are lousy and I walked over to see who the name was. John Cage knew everybody and said 'He's a marvellous person, we'll have to have him over', which he did about a week later.

FO What do you think you got from the Abstract Expressionist painters? Their lack of predetermined structure?

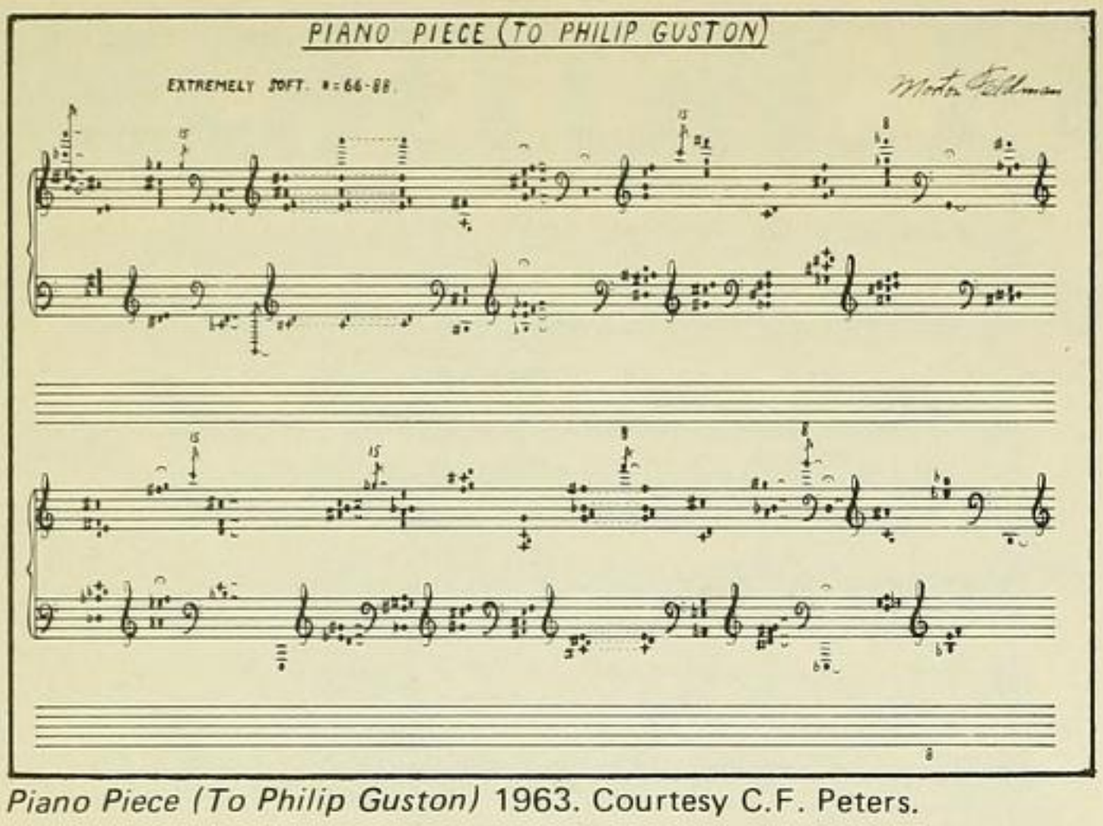
MF Maybe the insight where process could be a fantastic subject-matter.

GB You once pointed out that Boulez had said he was not interested in how a piece *sounds,* but only in how it is made, and you compared this with Philip Guston's observation that when he sees how a painting is made he becomes bored with it.[8] The implication was that you held Guston's view for music, too.

MF By process what I really mean is maybe not the way younger people use it now but that Pollock is doing a beautiful choreographed dance around the canvas, measuring, and as the paint falls it becomes the painting, it becomes indistinguishable. There are no other allusions to get in the way of the action of what has happened. I don't want to use 'action' in terms of 'action painting'. It's just very clear what he is doing and what he's doing is in a sense what the thing is. And it's not only true of Rothko, it's true of people like Jasper Johns especially. So maybe that's what I really mean.

GB Pollock's not a bad example because you did the music for the Hans Namuth film.[9]

MF What I really got from the painters even though they all worked differently is...Well, you know a lot of young people today they take the edge and they work from it. And I think the 1950s had a sense of scale and then forgot about it, like Philip. You don't get a feeling of the edge because it's all-over. How one finished the picture was another story, which was one of their favourite conversations: 'When is the damned thing finished?' So what I did musically was that music had its edge in terms of a lot of pre-compositioned setting up. I didn't think about it, I just wrote, bleeding out some place and then...



Piano Piece (To Philip Guston) 1963. Courtesy C.F. Peters.

GB Where the graph delineates the time, the beginning and the end of the piece, and within that you interject things in different locations which are not entirely dependent, like seven **high** sounds in *The King of Denmark*.[10]

MF Right, but what happened there was that each page is different. If you look at the score you will see that the grid is the same on each. You know who was very influenced by that? Larry Poon's' early pieces were on a grid. Larry told me he was very into that.[11] He was also a musician — went to Juilliard. That period of my work affected a lot of people, architects, for example.

GB In a way that's one of the most often discussed periods. That kind of composition is seen as being very revolutionary in terms of your own output, isn't it?

MF It seems to be. I can understand why.

GB It does give a lot of freedom to a performer.[12]

MF Not only that, but what I really did was to break down the whole notion of close passage work. That was something I learned from the painters, but it didn't necessarily have to be from the Abstract Expressionists. The early Mondrians were very important to me in terms of their asymmetric rhythm, and they were very important to a lot of painters. There was a big Mondrian show in 1950. Mondrian influenced me tremendously.

FO Mondrian has the same kind of hesitancy that Guston has.

MF Yes.

FO Putting down a mark and then half erasing it.

MF I don't even know if it's hesitancy. Another good word is 'pregnant', but also a key word among my own generation — those of my age like Joan Mitchell and Mike Goldberg — would be 'ambivalence'. They liked the ambivalence of, you know, 'where's the turning, where is it going?' I think of it as another thing, as a sense of something that has been very influential in my life, which made me realise there's something 'fishy' about me as a composer. In an article I once wrote — a little high-flown but certainly true — that the tragedy of music is that it begins with perfection. You can see all the time, while you are looking at a terrific picture, where the artist changes his mind. I love those Mondrians where you can see it's erased. He doesn't even bother to erase it: just as long as it visually gets out of the way, that's enough. There's nothing like that in music, as you know.[13]

GB In some of your pieces you have little appoggiaturas which actually don't go anywhere that might be during a chord. Is that the kind of thing? A little sound...

MF A little bit, a little bit.

GB Normally, an appoggiatura would jump to an emphasis.

MF But it becomes something else in music. Recently, for example, in my Frank O'Hara piece[14] when I got the two drum guys, now it seems dramatic in the context of the musical composition. I didn't think of it as dramatic at the time. If there was an aeroplane coming over here we would talk a little louder and we are not even conscious how we are affected. But in music we demand other kinds of priorities.

FO I remember reading about an experience you had in Philip Guston's studio. You wrote in 'After Modernism' how you called on Guston. He was still at work, so you took the opportunity of having a sleep in the studio, and you woke up.[15]

MF And he said: 'Where is it?'

FO Your waking up seemed to have some effect on him. You said 'as though he himself awoke to the sudden sense of the danger of what he was doing was that collision with the instant which I had witnessed is the first step of the abstract experience.'

MF Very Kierkegaardian.

FO What's the abstract experience?

MF It's that other place that is not an allegory. Rothko had it. It's that other place that's not a metaphor of something else.

GB You refer to a similar thing with music when you talked about the effect of the work of yourself, Cage, Christian Wolff and Earle Brown between 1950 and 1951. You said that each of you contributed to a concept of music in which various elements such as rhythm, pitch, dynamics, previously controlled within a piece, were 'unfixed', and that only by 'unfixing' the elements traditionally used to contruct a piece could the sounds exist in themselves and not as symbols or memories. Is that at all related?

MF I don't know what the hell it's all about, because on the other hand why did an empty canvas work for Rothko but not for Bob Rauschenberg as an idea? In terms of what I'm talking about it didn't work. I don't know, maybe it needed half a coat of gesso more.

GB Cage has had a great effect on younger artists, at least in some of his ideas more than his music, but at some point your music clearly does diverge from John's quite a long way.

MF I think now more than ever. I don't know where it meets. It meets in the sense that we are both extremely ourselves now. I think that we've both to some degree become caricatures of what we stand for. About three years ago I wrote a piece called *Pianos and Voices.*[16] John played in the premier in Berlin, and afterwards he was angry with me. He said: 'You're an extremist! You're a poetic extremist!' I thought that was kind of far out, John yelled at me that I'm an extremist.[17]

FO What do you think he meant?

MF I have no idea but I think about it all the time. What might explain our different points of view is that I once told Cage: 'John, the difference between the both of us is that you opened up the door and got pneumonia and I just opened up a window and got a cold.' It is just a question of how much you're going to let in. One of the big problems that everybody has with Cage, people that are working, is to what degree you want to believe in the material as a kind of truth because it's there.

GB You've always worked much more closely with the sounds themselves than he has.

MF Right. It's not a big ideological difference. I think what happened with John was that he became much more all-embracing in terms of what kind of shots the camera would take. Remember his very beautiful idea where he invented a camera for other people to take the picture, which in a sense pinpoints his whole consciousmess of where he's at. I'm not into that.[18] I just don't know what the hell I invented. I think the big important difference is not that I glorify myself, which would be his criticism of Varèse, for example. I think that I ended with the medium and never went into the environment.

FO Which means that you didn't move towards a social view of things?

MF Then into a more social view.

GB You compose in a very private way, working directly at the piano onto a final score with little or no revision — working directly with the sounds themselves. And Cage

seems to have stopped doing that some time shortly after you met.

MF What is fantastic about Cage is that it's always the great artist that defines the age. In other words if you're just going to use normal instruments, no matter how revolutionary, no matter how beautifully you do it, you are still an easel painter. Cage separated the genre. I'm in the old genre. I think that John also was brought up in another kind of tradition, not the Bauhaus but a tradition of experimentation with materials. And remember he studied with Schoenberg, who was one of the few composers of our century who really didn't have that much vested interest. He was always into research. I think it's that research aspect that has got off on John, even though you may ask what relationship he has to Schoenberg. If you think about Schoenberg's life, it's quite unique that he would leave things and go on to others and be interested in materials, and so in Cage. Both of them, the student and the teacher. Rauschenberg and Cage is also a terrific parallel because they are interested in materials too, and always doing different things. There are times where their work almost coincides. John's transparency scores, the plastic sheets were made just about the same time Bob was doing the plexiglass things.[19] While Jasper is closer to me. Jasper just keeps on going.

GB He is still 'easel painting' and demonstrating that it's possible to do something new in that way too?

MF Yes. There's only one me and there's only one Jasper, obviously.

FO But I get the impression that you feel closer to Johns now than when you first met him in the early 1950s.

MF Yes I feel very, very close to Jasper Johns. Very close to his work.

FO Very close to his recent paintings?

MF It's another aspect of experimentation. I feel very close to Jasper and I feel very close to Rothko's last pictures. A few months before he killed himself, when he was very upset about his work, Rothko kept on saying to me: 'Do you think it's there? Is it really there?' When he had one thing there and one thing over there, and it's art, then you can talk about it. But those last pictures, what is there to talk about? Those pictures are very close to Jasper Johns in certain ways — poetry.

FO Is poetry, then, synonymous with questioning? That's one of the things Johns' work does, and I suppose Rothko's does in the sense that it poses questions. Perhaps one can articulate the questions Johns poses better in terms of vocabulary.

MF Well, the thing is: what is the discovery in embracing materials? What I'm really asking myself is: what am I going to learn now with a laser beam? What am I going to learn now? It's nature.

FO Those being the materials?

MF Yes. Remember I went a long way. The question that one would ask is a very interesting pedagogical question about Beethoven: since he could knock the hell out of a piano, why isn't his own piano music like that? So you can't use words like control. I'm too old to fall for this whole business that I'm 'getting tired' and I 'want to assert too much control', that I 'want to control what I am doing'. I couldn't care less. But I think a new word might come. You know all the old words of the early 1950s and 1960s are finished: 'responsibility', 'control', they're no longer catchwords, they're not important words.

FO So if you don't control the materials, what do you control when you're setting about making a piece?

MF What I'm really trying to get at is: just what is the nature of experimentation now? Both in music and the visual arts if you want to tie this up, what is it? I mean, most of the music of my students is out of Cage. The problem is that in the early 1950s I could have a conversation with my teacher Wolpe — 'What's going to happen? It's all a big mystery' — and you could count on your fingers the whole idea of an experimental tradition. What's an experiment today?

GB How do you view, then, younger composers working in America since yourself and Cage's work in the 1950s, like Riley, Reich, Budd, Glass, Young, and others who may have benefited from the kinds of freedoms that were instigated then, but who have moved in quite different directions both from you and Cage, and from each other?

MF Well. John Cage was at a forum once at which I was a moderator between two young composers, and one was a kind of Phil Glass orientation and the other was a George Rochberg, with this kind of quotes-but-they're-not-quotes. Certainly if you go down in New York to the SoHo scene and hear the music that's being done, you see that it's quite assessable.[20] Steve Reich is very assessable, and so is La Monte Young. I'm not being defensive about my own music and the way it's been going the past few years, but just what the hell is the experimental tradition? It's interesting that the experimental tradition is carried on by someone like Cage in America and Stockhausen in Europe. And we certainly don't have an experimental tradition in the visual arts. I think it's kind of frightening. What would you consider the radical work being done today?

GB I certainly would not have thought now that either Cage or Stockhausen were radical, and I certainly wouldn't have bracketed Cage with Stockhausen as you just did.

MF I think that Stockhausen's work parallels Cage.

GB Well, that's a different thing.

MF He's been very influenced by Cage and certainly he's taken up many of the directions that Cage has gone in.

GB But he has manipulated them into his own way of thinking.

MF Yes, but it's into research. It's idea-orientated. Cage doesn't have to be idea-orientated. He told me last summer — it was so charming the way he put it, I couldn't have put it that way — he said: 'So many people tell me what to do next, I don't have to think any more.' Very cute. I don't know what to tell you. I'm doing a lot of teaching these days and I find everything so conservative. You can't tell a student today, and you could never tell a student: 'Why don't you just work and maybe you'll get an idea?' All my most important work was done that way. I never had an idea when I sat down to work. I was reading something in one of those conversations where it turned out that Stravinsky never thought about his work unless he was working, which I thought was very interesting.[21] It's like the analyst joke, you know, a guy calls his analyst and says: 'Doc, I'm going to be ten minutes late, why don't you begin without me?' It's just too incongruous to say: 'Work and the idea will come.' Kline began with an 8, that's what he told me, unless he came in and he really had something. Guston just looked out of the window, made a little mark.

GB So what kind of teaching do you do? What sort of thing would you do with a student?

MF I don't do anything.

GB You would give him the time and freedom to do some work, then, and see what resulted?

MF I take the terror out of some idea, the idea of a finished piece. They come to me, I'm well-known and the only guy they've ever brought a piece to, and I don't ask them: 'Where did you get your intervals?' That alone is tremendous.[22]

FO What would be the terror inherent in a piece? The finishing of a piece?

MF The terror of a piece? That it's good. Harrison Birtwhistle was telling me that he had a commission, and of course they want a piece where they play, where they show off. But I'm not into that.

FO You once referred to the 'terror' inherent in the teachings of Boulez and Stockhausen.[23]

MF Yes. The terror is that you have to have an idea, while with me my ideas came out of the piece. 'Idea' became the new myth for that old word 'inspiration'. If I was going to wait for an idea to write a piece I'd go out of my mind, I'd

commit suicide. But it's a very important terror that the piece has to be good, that it has to make sense, that it has to go somewhere, it has to exploit the materials, you have to use up its potential, it has to feed on itself, that it has to *be* something.

Interview conducted in London, 27 May 1976

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1 Cage's lecture, first performed in Brussels, September 1958, consists of a number of stories each lasting one minute in an aural delivery, a short story being spread out by speaking slowly, a long one spoken quickly in order to fit it into the available time. A recorded version (Folkways Records FT-3704, 1959) has a simultaneous performance of material from ***Concert for Piano and Orchestra*** given by David Tudor, using elements from ***Fontana Mix*** for some parts, and which partly obliterate Cage's voice at times. A similar idea, that of fitting stories within a minute's duration, is used for the Merce Cunningham dance, ***How to Pass, Kick, Fall and Run*** (1965) being the 'irrelevant accompaniment' (Cage) to the dance, some minutes passing with no stories included at all.

2 Feldman's piece, ***Ixion*** (1966) was commissioned by Cunningham for his dance, ***Summer Space,*** and was written for ten instruments (three flutes, one clarinet, one horn, one trumpet, one trombone, piano, cello and double-bass) and was to be played in the high registers of the instruments except for a brief section in which the low registers were used. The piece is notated in graph form, with numbers in boxes indicating the number of sounds to be made within the duration of the box, each being equal in time, approximately MM 92. This is the same type of notation as that employed in ***The King of Denmark*** (see footnote 10). The piece is published by Peters Edition, New York, and is available only on hire, though Feldman made a version for two pianos for general usage. It is because the sounds are notated as numbers in boxes that a 'pointillistic' result ensues.

3 The following pieces in Feldman's output to date refer directly to artists: ***Piano Piece (to Philip Guston)*** for solo piano, composed 3 March 1963, published by Peters Edition, New York.

De Kooning for horn, percussion, piano, violin and cello, composed 10 March 1963, published by Peters Edition, New York. Feldman was unaware of the close proximity of these two works in his output and could not recall any reason for it. In ***De Kooning,*** the strings are muted throughout and a disjunct melody is passed from instrument to instrument with, periodically, chords played in ensemble – 32 in all. The time is free within the piece and each instrument enters when the preceding sound begins to fade, and there are five short precisely-timed sections, one of which controls the duration of the last chord.

For Franz Kline, similar instrumentation to the above, composed 26 May 1962, published by Peters Edition, New York, uses a graph notation.

Rothko Chapel, for viola, celesta, choir, percussion, solo soprano and alto, composed May 1971, commissioned by the Menil Foundation, duration 30 minutes, published by Universal Edition, London.

4 ***Rothko Chapel,*** bars 302-313, 360-371, 416-427 (end of piece).

5 ***Rothko Chapel,*** bars 314-359, 372-415.

6 ***Rothko Chapel,*** bars 243-301.

7 6 April, 1971.

8 In ***Composer,*** vol. 19, Spring 1966, p.4.

9 ***Jackson Pollock,*** produced by Hans Namuth and Paul Falkenberg, 1951.

10 ***The King of Denmark,*** for solo percussionist, composed August 1964, is a graph-notated piece in which the three lines of graphs indicate high, middle and low-pitched sounds, each box being equal in time. So, for example, the number seven in an upper box would indicate seven high-pitched sounds played within that unit of time. The instruments are played without sticks or mallets, the performer using fingers, hand or any part of his arm, thus producing extremely low dynamics which are as equal as possible, a characteristic feature of Feldman's music.

11 See S. Tillim, 'Larry Poons: the dotted line,' ***Arts Magazine,*** February 1965, pp. 16-21.

12 John Cage, 'Lecture on Something', 1959, in ***Silence,*** Wesleyan University Press, 1961, p.128; 'On paper, of course, the graph pieces are as heroic as ever, but in rehearsal Feldman does not permit the freedom he invites to become the occasion for license. He insists upon an action with the gamut of love, and this produces...a sensuousness of sound or an atmosphere of devotion.'

13 See Morton Feldman, 'Some Elementary Questions', ***Art News,*** April 1967, p.54: 'There is nothing in music, for example, to compare with certain drawings of Mondrian, where we still see the contours and rhythms that have been erased, while another alternative has been drawn on top of them. Music's tragedy is that it ***begins*** (author's italics) with perfection.'

14 ***For Frank O'Hara,*** composed 19 August 1973, published by Universal Edition. The part that Feldman refers to is where the two percussionists simultaneously play a drum roll on the same snare-drum.

15 See Morton Feldman, 'After Modernism', ***Art in America,*** Nov-Dec 1971, pp.74-76.

16 ***Pianos and Voices:*** There are two works of this title, each composed in Berlin, the first on 31 January 1972, the second 13 February 1972. Both use five pianists in all. The pieces are published by Universal Edition.

17 John Cage, 'Lecture on Something,' 1959, in ***Silence,*** Wesleyan University Press 1961, p.128: 'There never was and there is not now in my mind any doubt about its (Feldman's music's) beauty. It is, in fact, sometimes too beautiful...' Cage also notes (p.128): 'Feldman's tendency towards tenderness, a tenderness only briefly, and sometimes not at all, interrupted by violence.'

18 John Cage, 'Experimental Music.' 1957, in ***Silence,*** pp.10-11: 'The total field of possibilities may be roughly divided and the actual sounds within these divisions may be indicated as to number but left to the performer...to choose. In this...case, the composer resembles the maker of a camera who allows someone else to take the picture.'

19 Robert Rauschenberg, ***Shades,*** a lithographic object, 15" x 14" x 12", comprising six plexiglass panels, aluminium frame and light, 1964, predates John Cage and Calvin Sumsion, ***Not Wanting to Say Anthing About Marcel,*** silkscreen and plexiglass panels on a wooden base, 20" x 13½", 1969.

20 By the 'SoHo scene'. Feldman presumably refers to the art community in the South Houston district of New York and the musical developments within and around it. This includes the work of Steve Reich and Philip Glass, as well as various composers association with the Kitchen, a regular performance venue for younger musicians.

21 Robert Craft, ***Conversations with Igor Stravinsky,*** 1958, published as ***Stravinsky in conversation with Robert Craft,*** Pelican 1962, p.30: 'Ideas usually occur to me while I am composing, and only very rarely do they present themselves when I am away from my work. I am always disturbed if they come to my ear when my pencil is missing and I am obliged to keep them in my memory by repeating to myself their intervals and rhythm.'

22 Feldman's observations on his own teaching method is remarkably close to his account of his first meetings with Cage: 'At this first meeting I brought John a string quartet. He looked at it a long time and then said. "How did you make this?" I thought of my constant quarrels with Wolpe and also that, just a week before, after showing a composition of mine to Milton Babbitt and answering his questions as intelligently as I could, he said to me, "Morton, I don't understand a word you're saying." And so, in a very weak voice, I answered John, "I don't know how I made it." The response to this was startling. John jumped up and down and with a kind of high monkey squeal, screeched. "Isn't that marvellous. Isn't that wonderful. It's so beautiful and he doesn't know how he made it." Quite frankly, I sometimes wonder how my music would have turned out if John had not given me those early permissions to have confidence in my instincts.' (Notes on recording of ***Durations,*** Morton Feldman, Time Records 58007, reprinted on covers of Feldman's scores published by Peters Edition.)

23 See Morton Feldman, 'The anxiety of Art', ***Art in America,*** September-October 1973, p.88.

WIGGLY LINES AND WOBBLY MUSIC

Cornelius Cardew

Without wishing to turn this article into a personal statement, I have to say at the outset that I was engaged throughout the 1960's in writing — I should say drawing — and performing so-called 'graphic music'. I also wrote articles which contributed to the speculation that grew up around the genre (on which academics and students are still feeding) and attempted to provide it with theoretical justification or at least interest. Then in 1971 the ripples of a new revolutionary political movement upset this fragile coracle (as far as I was concerned) and tipped me out into the maelstrom of the class struggle. A period of 'settling accounts' with my avant-garde activities followed, and I detected (as have previous generations of artists who wanted to serve the people) a clear antagonism between the bourgeois (artistic) avant-garde and the proletarian (political) vanguard, *ie* the revolutionary party of the working class. In 1972 I was asked to speak at a conference on problems of notation in Rome, and spoke of my own composition *Treatise* as a particularly striking outbreak of what I diagnosed as a *disease* of notation, namely the tendency for musical notations to become aesthetic objects in their own right. Today, four years later, such problems have been largely displaced (as far as I am concerned) by more pressing ones, such as how to produce and distribute music that serves the needs of the growing revolutionary (political) movement.

I may as well confess that this article springs from no 'inner necessity'. I was asked to write it, and accepted because of a certain 'external necessity' with which I am sure most readers are familiar. My opinions on graphic music are no longer those of an active participant, in fact they are quite detached, in that I attempt to view it as a phenomenon (among other phenomena, all interrelated) of a particular historical juncture. I want to go beyond opinions and arrive at an objective assessment of the role played by graphic music as one strand among many in the post-war musical avant-garde. And because the artistic avant-garde is a component — and an ideologically active (should I say virulent?) component — of the superstructure of western imperialist society (it's no accident that many of the composers I'll be talking about are American), and hence helps to protect that society against radical social change, the assessment is bound to be negative in the overall political sense. What it boils down to is that graphic music 'proper' (we'll go into that in a moment) was a constellation of misconceptions and mystifications that contributed to confusing the basic issues facing musicians in bourgeois society, namely: the question of content in music, how music expresses and embodies ideas, and whose interests does it serve.

* * * *

Casting about for a point of entry to the subject: What do people mean by the term 'graphic music'? Can one draw a picture of a sound? Are there aural equivalents of visual effects? What led people to think of 'drawing' music instead of writing it? What is the importance of the graphic aspect of ordinary musical notation? What does it mean when visual artists and critics talk about drawings and paintings in musical terms (loud colours, etc)?

All our sense organs transmit information to the brain. The very fact that the brain can *distinguish* visual from aural from tactile from olfactory stimuli implies that it can also *relate* them to one another. Any new stimulus is also related to the stored experience of a lifetime of social practice. So there can be no purely aural, or purely visual let alone purely musical (as Stravinsky would have us believe) or purely aesthetic experience. Even though there are areas of the brain that specifically deal with certain stimuli (visual, aural, etc) these areas are not closed off from one another. They often interfere with one another. 'Synaesthesia' is the name for a condition where the brain jumbles up stimuli of different sorts. If a man watching a solar eclipse finds it so loud that he blocks his ears instead of closing his eyes, then his eyes may be damaged, and we would consider this a result of a malfunction of his brain. But some degree of 'synaesthesia' is present in everyone, and can be developed from a less conscious to a more conscious level. It's this faculty that allows us to experience 'rhythm' in paintings, 'light and shade' in orchestral 'colour', the 'smell' of decay in a photograph, or 'personality' in an abstract painting. (Closely observed, each of these examples would present special features and problems, unique contributory factors, etc, but the general gist of what I'm saying is clear, I hope). All these parallelisms, whether intuited ('felt'), inducted, deducted, constructed, cannot amount to equivalence. In my view, any correlation of the different varieties of, for example, 'blue' notes with the various shades of the colour blue would be arbitrary.

Many such parallelisms boil down to problems of social etymology: what social conditions, cultural milieu, linguistic confluence gave rise to the expression 'feeling blue', for instance? But there are some cases where the idea of the equivalence of qualitatively different phenomena forces itself upon us. One such case is the similarity between acoustic 'beats' and visual 'moire'.

Acoustic beats are produced when two notes of nearly the same frequency are sounded together. A string producing 440 cycles (vibrations) per second and another producing 441 cps cannot be distinguished by the ear as producing different notes. What the two strings *do* produce sounds like a single note waxing and waning in intensity in cycles of one second (441 minus 440 equals one). Sound is transmitted through a medium (generally air), with the result that all sounds occurring simultaneously in the same location combine into a single waveform, a single complex shape of disturbance in the air (although this shape will be different in different parts of the room depending on the proximity of different sound sources, for example). The ear analyses this waveform back into its components, thus distinguishing the different instruments playing, etc. (Hence the practicability of reproducing music from the single groove of a record). In our case the nodal points of the two sound waves coincide once every second, so that the resulting waveform repeats itself once a second (rather than 440 times per second as would be the case if both strings were tuned to 440 cps). If the difference between the two frequencies was two (440 and 442) the nodes would coincide twice every second. This is a physical phenomenon occurring in the air, independent of any listener.

With moire effects the situation is different. A simple moiré effect (kinetic art enthusiasts be patient) can be

achieved by drawing the same pattern of concentric circles on two transparent plastic sheets and superposing them. If the centres of the circles are made to coincide the image appears still; if the centres are slightly displaced the combined image appears to rotate. This is an 'optical' effect, in the sense that it is not the image that moves, but the eye of the beholder that creates the effect of motion. The structure of the combined image obliges the eye to rotate.[1]

So these apparently similar aural/visual effects are not equivalent in fact, and if one were to make a graphic score composed of such moiré patterns the process of converting them into accurately corresponding patterns of acoustic beats would have to be governed by a complex series of arbitrary rules and conventions.

But such a score can quite easily be converted into sound (or even music) 'intuitively' or semi-intuitively. Such intuitive reading of the score is a fundamental aspect of graphic music. Rather than serving as notations, many graphic scores were intended rather as an 'inspiration' to the musicians, or as an aid to improvisation. In this sense graphic music (or musical graphics) represents a reaction *against* musical notation — though often preserving relics of musical notation — as opposed to graphic notation which represents a *development* of musical notation.

At this point it is worth looking at the history of musical notation. That will give an idea of what is implied in the term notation, and then we can see to what extent graphic music either functions as or departs from musical notation.

* * * *

Musical notation as schoolchildren learn it today has been in existence broadly unchanged since about 1600, but the fundamental inventions that brought it into existence go back much further. Guido d'Arezzo, a monk born in AD 990, is credited with the general introduction of the 'staff', a bundle of equally spaced horizontal lines on which notes could be placed so as to indicate their relations to one another in pitch (high/low) and in time (left/right as in our script). It would be interesting to research the whys and wherefores of how the need for notation arose — the social/political/ideological matrix that gave rise to Guido's revolutionary contribution — but it lies outside the scope of this article. Assuming that notation was designed to *preserve* musical forms by putting them on accurate written record, the actual effect of its introduction was to pave the way for a great *diversification* of musical forms. It was also the chute down which a new-type professional, the composer, the person who designs and manages the musical activity of executant musicians, was catapulted into the arena.

This type of notation — staff notation — shows the shape of the music as it is to be heard. It coexisted and frequently had to compete with systems of notation called tablatures, which depicted what the musician was supposed to *do,* rather than showing what was to be *heard.* Such tablatures were prevalent, particularly for keyboard instruments and lutes, from about 1450 to 1800. They consisted usually of a kind of picture of the fingerboard or keyboard of the instrument, with numbers or letters placed on it to show the position of the fingers. New ones are still being invented today: for example, a tablature is often used for teaching recorders in schools. Their disadvantage is that if the instrument which is being 'tabulated' becomes obsolete, so does the tablature. Guitarists who today unearth old lute music cannot try it out directly because the guitar is built, strung and tuned differently from the lute. So they have to convert the particular tablature into the general staff notation.

The history of staff notation is a history of increasing differentiation, increasing precision. In the service of this increasing precision a wealth of data accumulated around the basic notational parameters of pitch and rhythm. Tempo indications, at first rough and ready (andante, vivace, etc) were later supplemented by a notation of the precise number of beats per minute, made possible by Mälzel's invention of the metronome in the early 19th century. Dynamics, or nuances of loud and soft, were indicated with more and more precision and supplemented by expression marks (dolce, energico, etc). The more differentiated and precise the notation became, the stronger the hegemony of the composer over the art of music. Elements of improvisation and ornamentation, *ie* independent contributions from the interpreter, were gradually eliminated.

The main use of this refined and flexible compositional instrument, musical notation, was of course to enable the composer to communicate to the executant musicians what they were to play. With the development of electronic music in the 1950s an area opened up in which notation could not play this main traditional role of providing performance material for the sounding composition. Electronic music was composed once and for all in the studio; thereafter it could be reproduced from tape. Therefore no score and parts for musicians were required; hence no notation was necessary as far as performance was concerned.

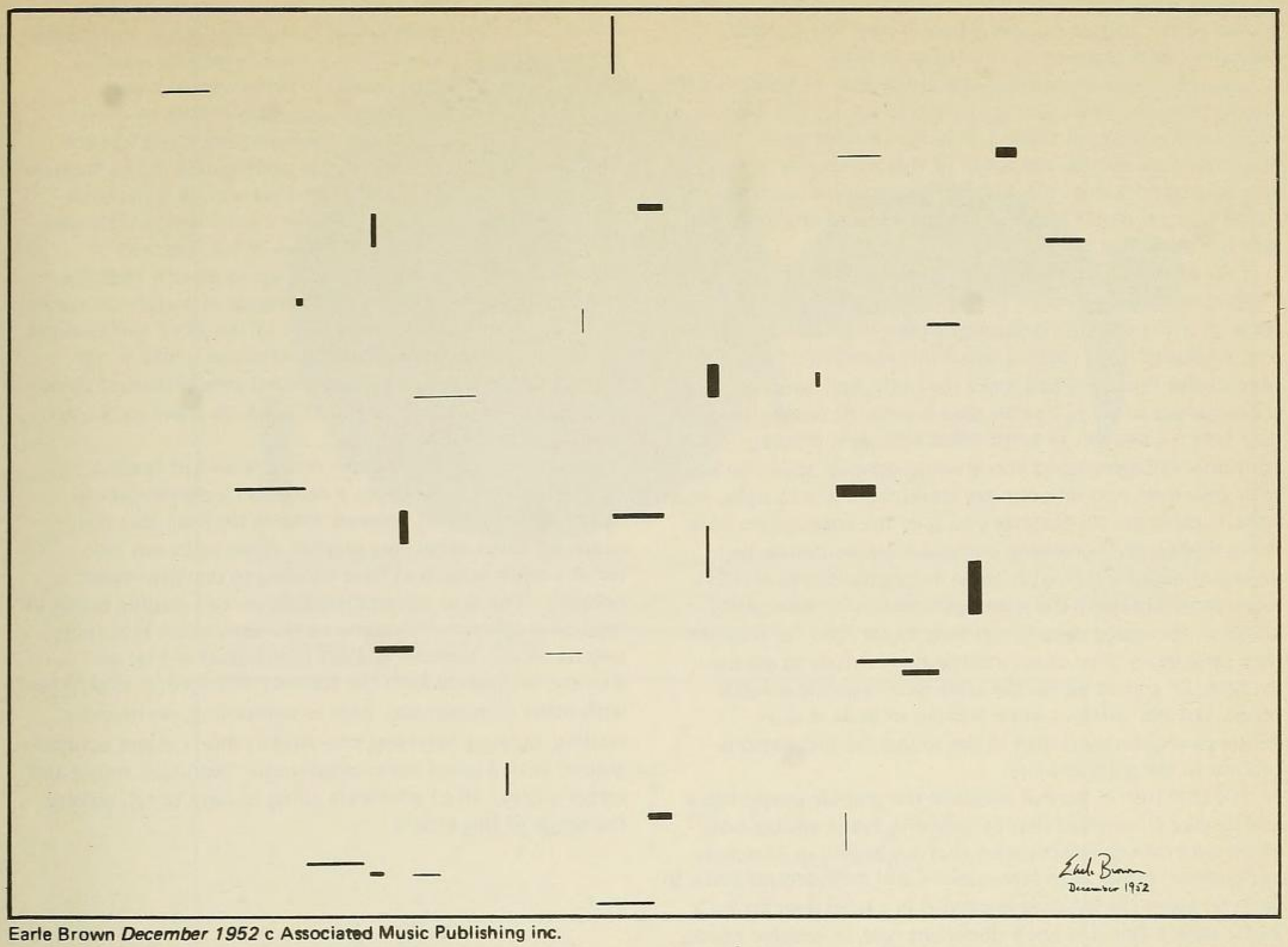
But many electronic composers still felt the need to score their works — either before or after composing them — and in the early 1950s many different types of notation on graph paper began to appear. The score of Stockhausen's *Study 2* serves mainly to elucidate, or at least present in readily surveyable form, the formal characteristics and layout of the piece.

Cage scored his *Imaginary Landscape No 5* on graph paper for purely practical reasons, and the notation functions in the traditional way as an intermediary between composer and performer. The instruments in this piece are mechanical reproducers — record players — and to play them is a matter of starting them and stopping them and adjusting the volume controls (it's like an orchestra of DJs). There is no need to notate the sound, for that results automatically if the indicated starts and stops are carried out.

When the technique of combining pre-recorded electronic tapes with live performance began to develop, notation again became necessary for the parts of the live performers — and also for the electronic parts, as a point of reference for the players. In cases where the players were expected to synchronise or accurately accommodate their parts to the electronic part, certain modifications of traditional notation were almost unavoidable (were in fact avidly desired[2]), since electronic music of that time tended to be measured decimally in seconds rather than in crotchets and quavers, bars and beats, etc. So for instance a proportional notation of time became a virtual necessity, with a regular timespan allotted to each line of the score.

In notating the electronic parts, some composers contented themselves with indicating points where the tape should start or stop (as in the Cage example described above), but others developed a shorthand to give the players a rough and ready impression of the types of sound they would hear and their relative pitch, loudness and length. This sketching-in of a rough picture of the sound developed its own conventions, drawing where appropriate on the conventions of traditional notation. An example is Stockhausen's *Kontakte,* where the sketched-in notation of the electronic part is a perfectly adequate guide to the performing musicians.

An approximate notation of this type, which represents music already composed in every detail, is very different from an approximate notation that is intended as a score for musicians to play from. Logothetis' *Odyssey* is a piece of graphic music that differs visually very little from the *Kontakte* example, except that it is tangled up into a kind of labyrinth with a superimposed red line running through it to indicate the 'path' to be followed by the musicians.



Earle Brown *December 1952* c Associated Music Publishing inc.

Composers who adopt such approximate graphic indications of what their music is to sound like have lapsed ideologically into the fallacy that music can consist solely of a series of doodles, textures, outbursts, stops and starts. Never mind how artfully arranged, this amounts to adopting the attitude that your score can be used by anyone, to express any ideas, in any context.

These rough and ready graphic composers abandon all musical discipline, and if they are to cover their nakedness at all it is only by applying a certain amount of graphic discipline to their scores — which then become 'aesthetic objects in their own right, regardless of whether or not they are used for making music', *ie* they become fully-fledged musical graphics.

Such activity is a safe refuge for the musically incompetent. And a fair number of young composers turn to it. About 25% of the scores I had to read in a recent contest were wholly or partially graphic, and about half of these were of this type, which may be described as the cheapest variety of graphic music. It is a far cry from the type of graphic music established by Earle Brown in his *December 1952.*

December 1952 is sharp and clear. Brown was fascinated by the constructivist movement in art, by Calder's mobiles and 'action' painters such as Jackson Pollock. This score is a single rectangular sheet with black lines and rectangles floating on it. The white space predominates; the impression given is of precise little dashes (horizontal and vertical) of different weights on a white ground. The instrumentalists — any number and kind of instruments — all read from copies of the same sheet, but they may read it any way up. I think that originally interpreters were expected to measure the coordinates of any rectangle and locate a sound correspondingly in the overall range of his instrument. This measuring later became softened. Of a 1964 performance in Darmstadt, Erhard Karkoschka says that it was Brown's conducting rather than the score that stimulated the performers, for some of the effects produced were irreconcilable with the appearance of the score. So geometrical and precise in appearance, what the notation of *December 1952* amounts to is an exhortation to be geometrical and precise in your playing. It is a frequent characteristic of graphic music that it seeks to suggest an *attitude* or quality of playing to the performer. In Brown's case this exhortation is generally disregarded. When Brown himself conducts it, one has the impression that the score is merely the starting-point of an improvisation which unfolds under Brown's control.

Assuming for the moment, however, that *December 1952* was intended to be a musical score rather than an inspiration to improvise, it raises one of the big problems of graphic music: its two-dimensionality. Whatever the limitations of staff notation, it is an instrument designed to describe and serve the needs of a musical continuum, with its host of interwoven dimensions. In *December 1952* you've got the opposite: the music has to be designed to imitate a two-dimensional black and white drawing or diagram. However conscientious your measuring, a score like this uses only a tiny fraction of a trained musician's ability and initiative (which may account for the fact that it is sometimes more rewarding playing this music with untrained people); and the rest is likely to come out in horseplay, improvisation, etc, of a friendly or antagonistic kind depending on the particular social and human relations. When composers and musicians are engaged in harmonious collaboration and share common preoccupations all goes 'well'. But when the musicians feel they are being conned or exploited by the composer, you get the type of horseplay that led to the vandalisation of electronic equipment by orchestral musicians in Cage's New York performance (1964) of *Atlas Eclipticalis.*

Cage wrote *Atlas* in 1961. It is a good example of that type of graphic music which comes under the proposition: Anything in the universe that has been or can be given a graphic representation is a possible notation for musical activity. Star maps provide the material for the notations of *Atlas.* Cage traced the constellations on tracing paper and then used chance methods to decide some aspects of how they are to be translated into sound. The orchestral parts

retain the basic features of staff notation — the 5-line staff is used where applicable, and progress from left to right regulates the disposition of the events in time.

A practice which contributed considerably to preparing the way for graphic music was the proportional (as opposed to symbolic) notation of time. The factors leading up to this innovation are outside the scope of this article, but it can be appreciated how this innovation gave a 'graphic' appearance to the musical scores in which it occurred and changed the way the musicians had to 'read'.

Take a page of an ordinary book: 'graphically' it is what a typographer would call a 'grey page'. 'Literarily' it is the sense of the words in the context of the language and culture that produced it. In reading music one normally 'reads' the symbols for how long and short the individual notes or chords are supposed to be. but when time is notated proportionally (say 1cm = 1 second, or some other arbitrary, or even arbitrarily changing unit) you are supposed to 'scan' the page with your eye. You let your eye travel from left to right, and when it picks out an obstacle you play the appropriate note. It is a slightly dehumanising method, because it aims to replace thought (reading) with an automatic physical reflex (scanning). Normally the speed with which we experience events in the world depends on how much food for thought they provide, or how much attention we decide to devote to them. Of course we do the same when reading graphic music, but not without some feelings of guilt at our failure to accurately reflect in the sound the proportions laid out in the graphic score.

It's true that in normal notation the graphic aspect has a role to play (I've heard that people who select educational music take care to select pieces that are largely in crotchets and quavers, rather than semiquavers and demi-semiquavers, in order to avoid the hysteria produced in young learners by a 'black page'). But it is not a dominant role. In graphic music, the graphic aspect of the notation has become dominant.

It's appropriate here to spend some time on graphic notation, as opposed to graphic music. Graphic notation is a perfectly justifiable expansion of normal notation in cases where the composer has an imprecise conception. And I don't mean merely a failure of musical sensibility, because his conception may be quite precise as to its overall characteristics but imprecise as to the minutiae. For example, if a composer wants a string orchestra to sound like a shower of sparks, he can interrupt his 5-line staves and scatter a host of dots in the relevant space, give a rough estimate of the proportion of plucked notes to harmonics, and let the players get on with it. This is graphic notation in the best sense of the word — vivid and clear. Such methods are used by many relatively established avant-gardists, from Ligeti to David Bedford to Penderecki, and have proved their viability [3].

Graphic music proper, on the other hand, tends to be conceptual rather than pragmatic. One graphic score I looked at recently consisted of that classic series of split-second photographs which shows a bullet passing through a soap bubble. Such a score obliges the interpreter(s) to make strange decisions: what aspect of the score should one use to determine the type of sound to be used? Bubbling sounds and rimshots (naturalism?) is one possibility. Or you might decide that slow motion is the crucial aspect of the score.

To 'compose' such a piece no musical training or experience is necessary (which may account for the fact that conservatories often take an over-resolute stand against it). This is a contradictory phenomenon and has its history. Cage's ideas had a considerable influence on the development of American avant-garde painting of the 1950s and 1960s, particularly Rauschenberg and Jasper Johns. Other visual artists became so interested that they took up composing themselves. George Brecht was one, and he developed a neat kind of conceptual music often employing musical events in a visual context and vice versa (like piling bricks inside a grand piano). Brecht popularised the expression 'Intermedia' to denote twilight zones between the various traditionally defined arts. My contribution to Intermedia was the graphic score *Treatise* (1963-67): it's a cross between a novel, a drawing and a piece of music. In performance it was sometimes more of a 'happening' than a piece of music.

Another visual artist who took up composing was the English painter Tom Phillips. He participated in the Scratch Orchestra, so when I was asked to get a book of Scratch Music together I wrote to Tom for a contribution. He sent eight picture postcards as examples of his *Postcard Compositions Opus X1.* The idea was to assume that the postcard image depicts the performance of a piece of music. Then you have to deduce the rules of the piece and perform it yourself. There were a number of visual artists in the Scratch Orchestra, and between them they produced a host of compositions of this type, all of which come under the heading of graphic music.

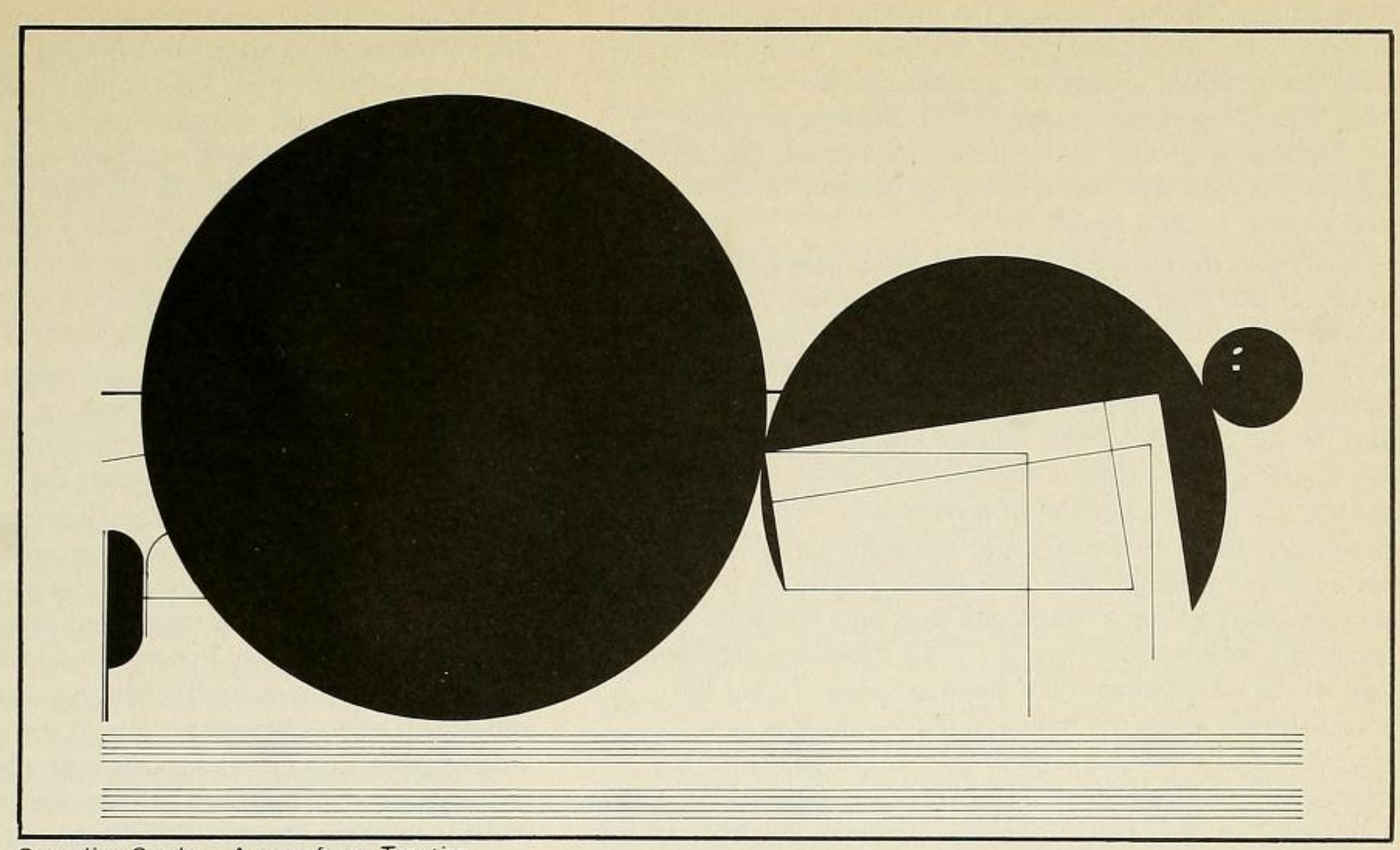
In the last analysis graphic music *is* part of musical notation, in that it conveys a composer's conception to executant musicians, however loosely defined. But the examples given show how graphic music leaks out into various other areas that have nothing to do with music notation. The type of notation that we call graphic music (or musical graphics — I've come to the conclusion that these two terms are interchangeable) is characterised by an element of *juggling* with the *concept* of notation, and indeed with other concepts too, such as composing, performing, reading, playing, listening, etc. And in this it shares common ground with a lot of conceptual music, 'intuitive' music and verbal scores - all of which are going to have to fall outside the scope of this article.

* * * *

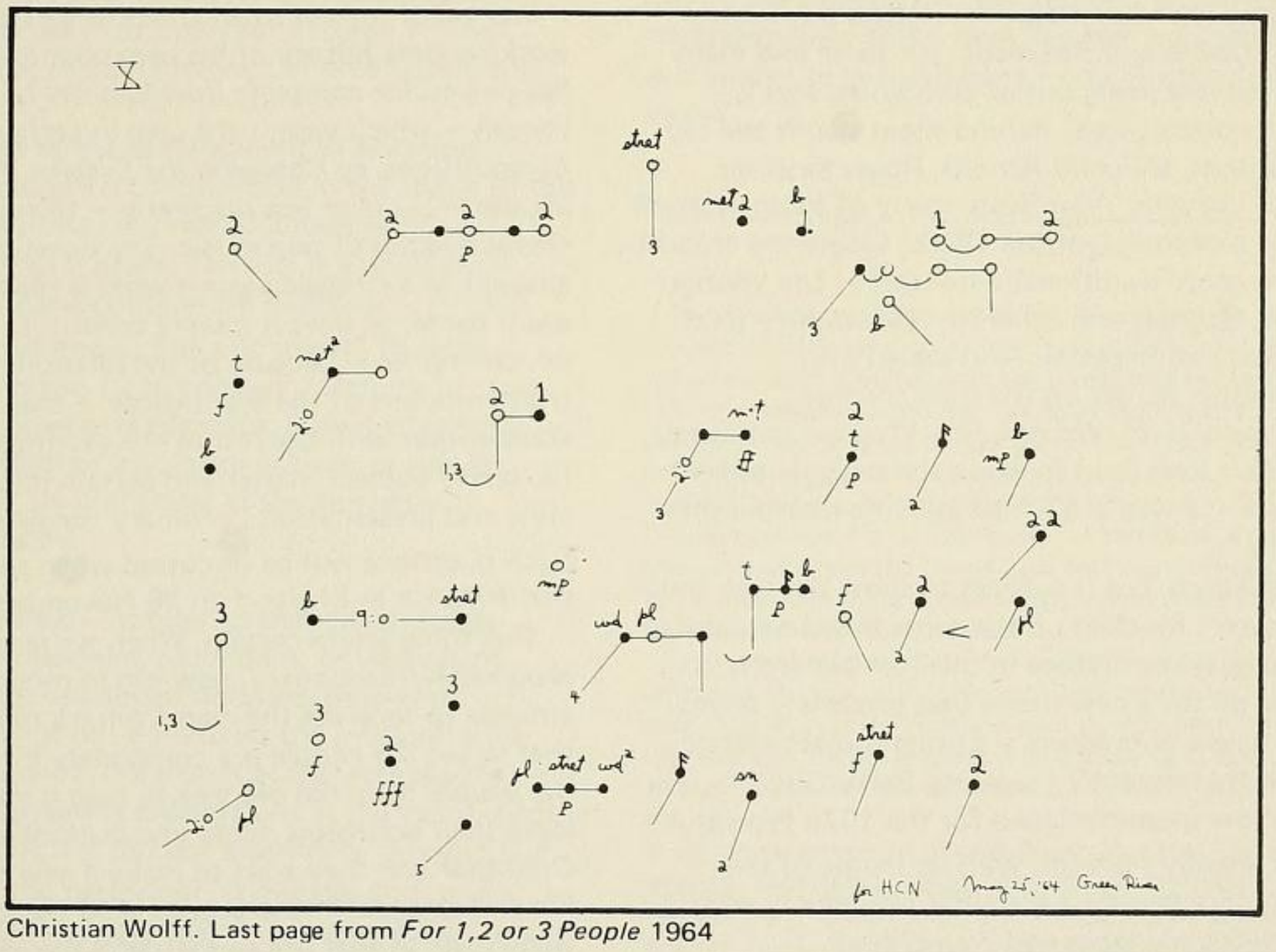
A word on the economics of graphic music. Because the service that composers perform for the bourgeoisie is primarily ideological, we tend to overlook the economic aspect, which though secondary is not negligible. For instance, certain music publishers played a role in consolidating graphic music as a definite genre. Peters Edition brought out works of Cage, Feldman and Wolff in 1962 (a single part of Cage's *Atlas Eclipticalis*— and there are 86 in all — now costs over £7). Associated Music Publishers (NY) printed Brown's graphic scores. In Europe Universal Edition has dominated the genre, though many smaller publishers have also got involved. One of these — Moeck Verlag of West Germany — brought out Erhard Karkoschka's book on *Notation in New Music* (which deals quite thoroughly with graphic music) in 1966. Universal published an English translation in 1972. Something Else Press (NY) published Cage's anthology *Notations* in 1969. Exhibitions of graphic music have been organised on a number of occasions as a means to publicise avant-garde music in general. Publishers' showrooms are often decorated with enlargements of graphic scores. I don't think a graphic score has yet appeared in a Coca-Cola ad, but at the Venice Biennale this year all the posters and programmes for concerts were liberally sprinkled with graphic scores. Almost all of them date from the 1960s. Almost none of them was actually scheduled for performance in the festival.

While it's clear that publishers cannot *create* a genre, they can influence considerably the extent to which it becomes established. They determine whether or not a genre — and this applies particularly to graphic music, where the score, the printed object, has such pre-eminence - passes into musical history in the sense of becoming a subject for study in colleges and universities.

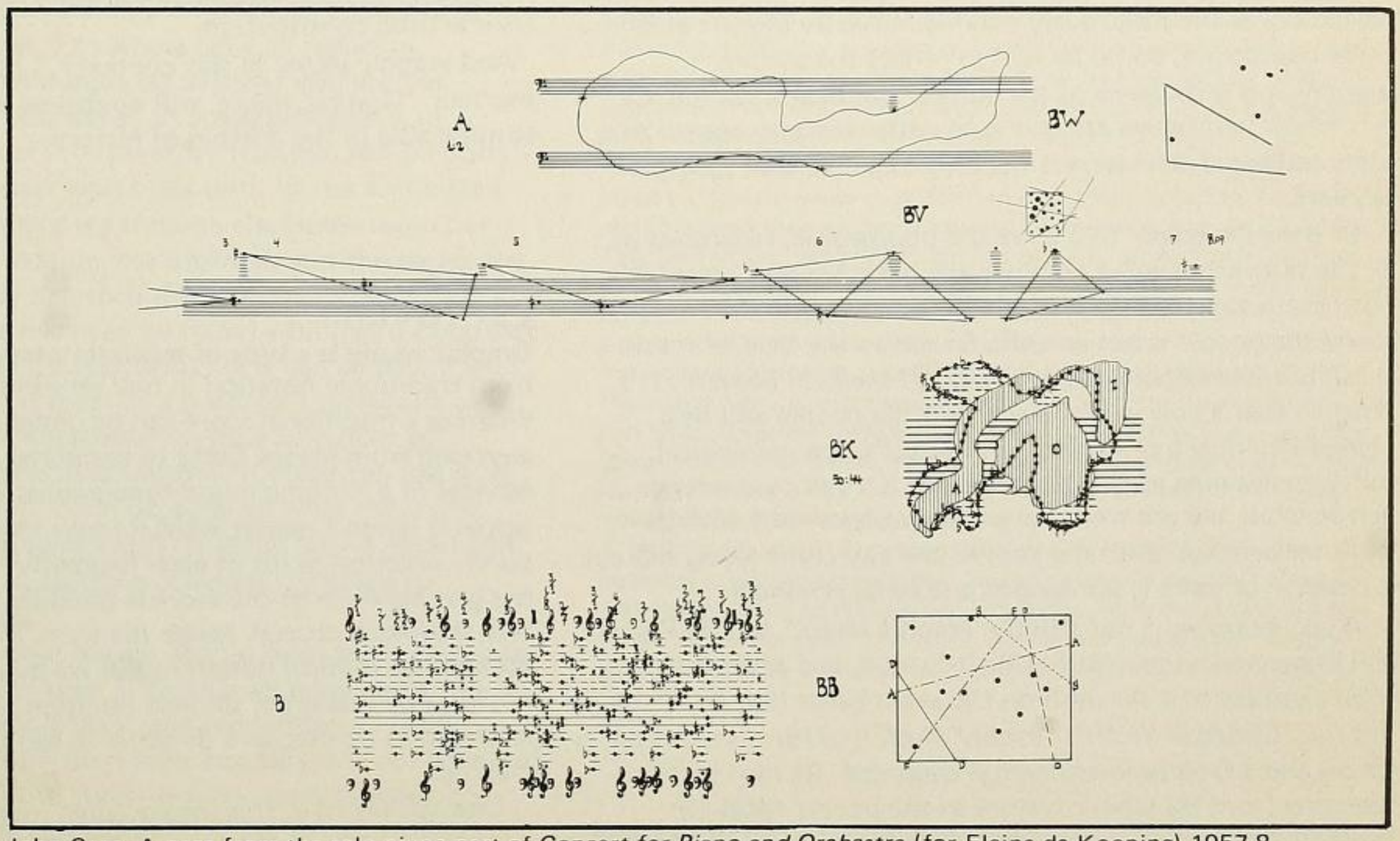
While researching this article I was sobered to find that graphic music and related phenomena occur these days in university curricula. Our carefree fancies of the 1960s are



Cornelius Cardew. A page from *Treatise*



Christian Wolff. Last page from *For 1,2 or 3 People* 1964



John Cage. A page from the solo piano part of *Concert for Piano and Orchestra* (for Elaine de Kooning) 1957-8

now doing a 'fine job' wasting the time and confusing the minds of the next generation of composers. While this is no place for remorse, it does bring home the necessity of revolutionizing music education and throwing out the formalist garbage that has accumulated over the last 70 years or more. It may well take another 70 years to do it, so we should start in right away!

One hears the view that Cage exerted a 'liberating' influence. on the intellectually musclebound musical avant-garde of the Darmstadt period (the 1950s), dominated by the theories and products of Boulez and Stockhausen. Cage's work certainly led to an explosion of irrationalism in the 1960s. But neither of these directions gave any serious thought to the question of the role of new music in western imperialist society. Certainly a number of people with relatively progressive ideas were swept into the avant-garde and dallied for a shorter or longer time with the manipulative techniques and pseudo-intellectual ideologies that were currently on show. But where could they go? Their subjective rebellion against the establishment left them in limbo. Today the establishment holds the field and the avant-garde is in retreat. To be sure it's a slightly updated establishment, expanded to include many erstwhile rebels: people like Nono, Feldman, Bussotti, Ligeti, Xenakis. However, the body of the new music establishment is composed of people who played a minor role, if any, in the avant-garde: Henze, Berio and in England Maxwell Davies and Birtwistle. All these and many others make a reputable living out of composing and are well-stocked with commissions. Behind them stands the old establishment: Britten, Malcolm Arnold, Roger Sessions, Copland, Petrassi, Lutyens, Alan Bush, many of them veterans of the anti-fascist movement of the 1930s. Clustering around their skirts are the more traditionally-minded of the younger generations: Maw, Bennett and others in this country (and a crowd of university composers). And seated over everything, the mythic heroes on the their thrones: Schönberg, Stravinsky, Ives, Webern, Stockhausen and Cage, who have given their lives (and souls) in the struggle to find — for the bourgeoisie — a way out of the stiffling moribundity of bourgeois music[4].

This is a rough sketch, but it suffices to show the tree and its branches (I haven't touched on the roots this time), and to ask the crucial question: Where in this vast hierarchy is the struggle going on for a new music that genuinely serves the people? Is it where composers are using subject-matter that is more 'socially relevant'? I suppose Barry Guy's *Songs for Tomorrow* (commissioned for the 1976 Proms) would qualify as socially relevant, with its theme of the pathos of poverty. So would Cage's *HPSCHD* which, with its 52 tracks of electronic tapes and 7 amplified harpsichords simultaneously playing music by Mozart and other composers, could be said to reflect the surface anarchy and turbulence of the current political situation. Or is it where composers are trying to write music to appeal to a mass audience? Bernstein is the only example that springs to mind.

Or does the *whole* tree serve the bourgeoisie, regardless of all the skirmishes going on along the branches and twigs? It's possible in fact that the struggle for a new music that serves the people is not actually fought in the field of music at all, but somewhere else (and I don't mean in heaven). It's possible that a new music that serves the people will be a completely new tree, springing from different ideological roots, developing leaves, branches and a trunk over a long period while the old tree rots away, overburdened with its 'cultural heritage' until the people one day come along and cut it down — or leave it standing as a skeletal reminder.

A last example — not strictly 'graphic music', but its lean and elegant notation justifies its inclusion, and provides a good example of a skirmish on the avant-garde branch of the old tree. Christian Wolff's *Wobbly Music* (1975) is scored for voices and a 5-piece instrumental ensemble. Its four sections use texts from US labour history in the period 1908-13: the first is a setting of the Preamble to the Constitution of the Industrial Workers of the World (known as the 'Wobblies'); the second a setting of 'John Golden and the Lawrence Strike' (by Joe Hill); the third contains excerpts from Arturo Giovanitti's speech from the dock (an indictment of wage slavery); and the fourth is a setting of part of a speech by Bill Haywood beginning 'It was a wonderful strike'. Wolff's settings are sparse and quite monotonous, so that the content of the text determines any dynamism in the work. In the first and last sections words and syllables are passed between different groups of singers creating a sense of sensitive interdependence, like walking with linked arms over stepping stones, or passing something delicate from hand to hand. The Joe Hill movement takes the form of a bouncy but irregular monodic song. The Giovanitti speech is mostly declaimed against grumpy chords on electric guitar with altered tuning (a tablature notation is given). The whole is preceded by three labour movement songs of the period, presented quite directly in community sing style.

It's hard to tell what effect all this will have in performance — and how it affects listeners is one of the main criteria for judging whether a piece of music is progressive or not — but certain things can be seen just from the score. First, that Wolff is thinking about *political* subject-matter, and it must be considered positive that he has chosen to popularise (never mind to how small an audience) a passage of the working-class history of his own country. Secondly, that he has striven for complete intelligibility of the texts he has chosen — which wasn't the case in certain other of his recent compositions, *eg Changing the System.* And thirdly, he alludes — more or less discreetly — to sounds and characteristics of pop music. The question is: does all this amount to a struggle against what is reactionary in the avant-garde, or does it merely constitute an 'alternative', which implies — because of the relations that prevail amongst the composers of the avant-garde — that it is simply in *competition* with the rest of the avant-garde on the basis of its 'novel' subject-matter and certain idiosyncrasies of its style and presentation ('ordinary' singing at the outset, etc)? Such questions will be discussed when the piece has its first performance in England on 28 November at the ICA.

One thing seems certain. When we're thinking of progressive/reactionary, new/old in modern music we have to struggle to separate the man from his music. If the new music that serves the people is a completely different tree, we need the *people* from the old tree to help it grow, but they have to leave their bourgeois *music* and outlook on the old tree. Only then can they start to make a new music out of the life and struggle of the people. And the more they participate in that life and struggle the more vivid will be their artistic contribution.

'And graphic music in this context?' I hear an editorial murmur. 'Graphic music' will doubtless curl up and get comfortable in the dustbin of history.

LEFTOVERS

Graphic music is a type of musical notation. But it differs from traditional notation in one very important respect. Whereas a traditional score can be designed to look like anything from Magna Carta to computer print-out (given the services of a cunning music typographer/designer), in other words it doesn't matter what it looks like except from a purely practical point of view (legibility), in graphic music the graphic form of the score is fixed by the composer — the way it looks is crucial, hence the term 'musical graphics' as opposed to musical notation. But we must keep to the broadest definition of musical notation, as anything used or intended to be used as a directive in the activity of music-making.

One can say of a 'free improvising' musician that he uses

the world as a directive, however. And of Indian musicians or jazz musicians that they use established, orally transmitted norms or forms such as specific modes or the 12-bar blues as directives in their music-making. But although these things direct such a musician in his playing, he does not have to *read* them. The *written* directive is the characteristic development that led to the separation out of the composer as a distinct type of musician; as one who works with his head and hence dominant (in bourgeois society) over those who work with their hands (the players).

The composer of graphic music sets himself against this separation, but only succeeds in heightening it. How? By composing 'graphically' he tries to re-appropriate a manual role; he no longer just writes, he develops graphic skills. He also tries to remove the 'reading' aspect from playing a score (to a greater or lesser extent). But in liberating the player from the domination of the written score, he liberates (divorces) himself from the activity of music-making.

It's the same with his newly-acquired manual (graphic) skill: there is no conventional framework for linking his new skill with the skill of the players. To take two extremes (and such things do actually happen in the arcane world of avant-garde music): Enormous playing technique can be deployed in giving a musical rendering of a child's scribble; and conversely, someone who has never before played a violin can nevertheless use it to interpret a highly refined graphic score (assuming certain intellectual predispositions).

The role of idle fancies in the development of notation.
A renaissance monk designs a composition in the shape of the Virgin Mary, or a Valentine card manufacturer bends a melody into the shape of a heart. The one is a devotional meditation and the other a commercial gimmick — neither has anything to do with music. For a composer to lapse into such conceits amounts to an apology, a failure to grasp or recognize music's expressive capacity, how it conveys ideas. What decides whether a notational form or system survives is its viability, its usefulness in the currently developing musical praxis.

It is a quite mistaken view — similar to that which holds that computers make reasoning redundant, or equivalent bullshit — that a highly developed notation (however mechanical in its conception) eliminates the interpretative function of the performers. It's true that the complexity of notation reached intimidating proportions in the avant-garde music of the 1950s, but this did not essentially threaten the interpretative role of the performer. It *reduces* this; and a case can be made out for saying that such reduction in the area of interpretative flexibility makes the area remaining that much more crucial. The whole issue of reducing interpretative 'freedom' hinges on whether you see the composer/performer relation as an antagonistic one, in which case each inch of interpretative freedom will be hotly contested. The composer won't rest until he has eliminated the performer completely (*eg* through electronic music, or mechanical or self-activating instruments), and the performer won't rest until he has banished the composer (free improvisation). Performers can be found who hated electronic music (it devalued their skills), and others can be found who welcomed it (it relieved them of a burden). Composers can be found who despise improvisation (as a surrender to subjectivism) and others who welcome it (they can use it to put pep in their music). Much depends on what electronic music and what free improvisation is being talked about and who is talking about it. Nothing conclusive is going to emerge from anecdotes.

Since composed music has existed (*ie* since there have been composers as a separate type of musician), composers and performers have *collaborated* in the production of music. Within this collaboration there have been all kinds of head-on collisions, ideological and stylistic disagreements, walk-outs and sit-downs, but the collaboration is the primary thing. Just as the production of a jet-plane is inconceivable without design and management skills, so a complex orchestral form communicating a definite ideology is inconceivable without composition skills. Naturally it doesn't have to be a single, individual composer, or one who is not also a performer, but the act of 'composition' is a necessity.

To compose is to have an overall conception of what is to be communicated combined with the knowledge and experience — and on this base also the searching-out and inventing — of the musical means necessary to convey that. This embodies the fundamental tenet that it is new content that calls new forms into existence, and that without new content all formal novelties reduce to trivia and decoration.

Since composers and interpreters primarily collaborate, the division of labour between them is not a hard and fast line. In the crisis of extreme formalism that occurred in the post-war avant-garde (the titles are indicative: *Structures, Kontrapunkte,* etc) a reaction was inevitable. Catchwords like 'Open Form' and 'Indeterminacy' that drifted over from the States in the mid-1950s were eagerly welcomed by young avant-gardists who felt stifled by the dominant determinism of the European scene. Under these catchwords the genre of graphic music flourished. It not only reinstated the interpreter as an active participant in a non-mechanical way in the musical process, but also enabled improvising musicians (who often have not learned traditional notation) and amateurs to participate in the production of avant-garde music.

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1 In acoustics too there are effects created in the ear; the ear has its own acoustic properties like everything else. If the ear is overstimulated it will distort the sound just as a microphone will.

Other phenomena common to both hearing and seeing are the ability to hear and see things 'inside your head', both as a result of just listening and looking (as it were at the back of your closed eyelids), and as a result of projecting them in your imagination (thinking through a familar tune, for instance). Then there are those phenomena where the image you 'see' in your head is provoked by a non-visual stimulus, ***eg*** the stars you see when a policeman's truncheon lands on your head.

Again sounds can be transmitted to the brain through the bone structure of your skull. This accounts for the fact that you can never hear your own voice as others hear it. You hear it simultaneously as vibrations in the air picked up by the ear, and as vibrations transmitted through bone — whereas everyone else hears only the vibrations in the air.

2 Many composers in the 1950s felt that traditional notation imposed restrictions. It imposed certain rhythmic relationships and certain pitch relationships, and composers exercised their initiative to try and break out of these restrictions (see remarks on proportional notation for time). Electronics was one way, graphics was another. We tried to ***simplify***, for the sake of flexibility, and ***complicate,*** for the sake of control and precision. It was possible to break out of the established rhythmic and pitch relationships by relaxing the tension between performer and score (graphic music), by saying to the performer: 'This is not an obligatory exam paper that you have to fill in, but a flexible guide to action'. In electronic music the established relationships could be overthrown quite mechanically. Or could they? The 'restrictions' referred to did not actually ***spring*** from notation, but from the accumulated practice of centuries of music-making. The notation merely embodied them in a handy conventional form.

3 I can't hold it against such cultural workers that they battle on in the 'struggle for production', even though it's our duty to inform them that every new technique and invention that they come up with will be used against them (against the people, I should say, because the inventors themselves may well come in for some greater or lesser material reward) until the obsolete, fettering social system under which we all labour has been thrown over.

4 What is the place of graphic music in this hierarchy? Graphic ***notation*** is an integral part of it, in the sense that new techniques and new procedures require new notations and these are bound to have a certain 'graphic' character as long as they are new. 'Graphic music' as a genre is already in its grave, however.

GEORGE BRECHT

Michael Nyman

MN You've said that in England you're known as a composer rather than as an artist. You were associated in the late 1960s with Cardew and Tilbury and with the Scratch Orchestra in its early days.[1] *Water Yam*[2] is obviously the centre of this musical focus. Some of the cards in the box are self-evidently

COMB MUSIC (COMB EVENT)

For single or multiple performance.

A comb is held by its spine in one hand, either free or resting on an object.

The thumb or a finger of the other hand is held with its tip against an end prong of the comb, with the edge of the nail overlapping the end of the prong.

The finger is now slowly and uniformly moved so that the prong is inevitably released, and the nail engages the next prong.

This action is repeated until each prong has been used.

Second version: Sounding comb-prong.

Third version: Comb-prong.

Fourth version: Comb. Fourth version: Prong.

G. Brecht
(1959-62)

Comb Music (Comb Event) 1959-62

INCIDENTAL MUSIC

Five Piano Pieces,
any number playable successively or simultaneously, in any order and combination, with one another and with other pieces.

1.
The piano seat is tilted on its base and brought to rest against a part of the piano.

2.
Wooden blocks.
A single block is placed inside the piano. A block is placed upon this block, then a third upon the second, and so forth, singly, until at least one block falls from the column.

3.
Photographing the piano situation.

4.
Three dried peas or beans are dropped, one after another, onto the keyboard. Each such seed remaining on the keyboard is attached to the key or keys nearest it with a single piece of pressure-sensitive tape.

5.
The piano seat is suitable arranged, and the performer seats himself.

Summer, 1961. G. Brecht

Incidental Music 1961

CARD-PIECE FOR VOICE

1. There are from 1 to 54 performers. Performers are seated side by side, except for the "chairman", a performer who sits facing the others. They rehearse before the performance to develop common vocables of the four types described below.

2. The chairman holds a deck of ordinary playing cards (four complete suits plus Joker and Extra Joker). He tosses each card into the air so that it is free to fall face up or face down, then re-forms the deck and shuffles it, keeping each card in its face-up or face-down direction.

3. He then deals one card at a time to each performer in turn, including himself, until all cards have been dealt.

4. There is a second stack of "phoneme cards", blank cards on each of which a single phoneme from one or more languages familiar to all performers has been written. These are shuffled and dealt, face up, one at a time, to each performer in turn, who keeps them in a stack separate from the playing cards.

5. At a nod from the chairman, each performer takes a playing card from the top of his sub-deck, performs a sound or not, according to the system of cues given below, and discards the card. Unless there is a signal from the chairman to repeat, or stop, the performance, each performer stops at the end of his sub-deck.

6. The Cue System:
Suits: indicate the "vocal" organ primarily responsible for the sound production.
Hearts: Lips
Diamonds: Vocal cords and throat
Clubs: Cheeks
Spades: Tongue
Sounds may be produced in any way, that is, with the breath, by slapping (of the cheeks), etc.
Number Cards: indicate duration of sound, approximately in seconds.
Face Cards (disregarding suit): indicate the speaking of a phoneme, with free duration, pronounciation, and dynamics, roughly as it might be heard in ordinary conversation. Specification and order of the phonemes is as indicated by the phoneme cards, read consecutively.
Card Backs: indicate approximately five seconds of silence.
Joker and Extra Joker: are cues only for the chairman, other performers ignoring them.
Joker: Chairman crosses his arms at the end of his deck, signaling one repeat, and each performer, having reached the end of his own deck, runs through his cards once more, in the order in which they now occur (last card first). Then each performer stops, including the chairman (who ignores the joker during the repeat).
Extra Joker: Chairman raises his arms, signaling an immediate stop to the performance.

George Brecht
Summer, 1959

Card-Piece for Voice 1959

scores for musical performance – such as *Comb Music, Card Piece for Voice, Candle Piece for Radios.* Yet paradoxically those cards that have 'classical' instruments in their titles – such as *String Quartet* and *Flute Solo* – are not 'musical' at all, since no sounds are produced: the string quartet don't play their instruments, they just shake hands; the flautist takes his flute to pieces and puts it together again. After the 'Volo Solo' series John Tilbury said that, as a pianist, he saw *Incidental Music* as being about the piano, about what it's like to be a pianist, rather than about piano *music.*[3] Did you have any awareness of this, did you set out to encapsulate some general 'truth' about musical performance in these events?

GB Not that that was a special aspect of it, or that it was more important than any other. The incidentalness of *Incidental Music* is especially evident with the three dried peas or beans that are attached to the keys with adhesive tape.

MN What do you mean by incidentalness?

GB Because what you're trying to do is to attach the beans to the keys with nothing else in mind – or that's the way I perform it. So that any sound is incidental. It's neither intentional nor unintentional. It has absolutely nothing to do with the thing whether you play an A or C, or a C and a C sharp while you're attaching the beans. The important thing is that you are attaching the beans to the keys with the tape.

MN But because you are attaching them to the keys rather than to the piano frame,[4] there's more likelihood that you might make a sound.

GB Well, if you do it very slowly you can do it silently.

MN There's certainly an exercise aspect to it, but it's not like La Monte Young's opening and closing the piano fall without making a sound[5]–that's a kind of external discipline. Yours is an inner discipline, which the performer can...

GB Yes, I don't tell you what to try for.

MN The performer ought to understand whether sounds are to be produced or not.

GB And I sometimes take La Monte's instructions ironically – that you can hear something anyway (laughs).

MN Sound-producing instruments have been made mute (the violin, in *Solo for Violin,* is polished, not played) and non-sounding instruments, or non-instruments, for instance, combs...

GB ...are made sounding. That's right.

MN There was a lot of this kind of 'reassessment' by Fluxus artists...

GB ...what they were there for and how they were used. Mainly it was putting them onto a more equal level with other sound-producers. All 'instruments', musical or not, became 'instruments'.

MN And the piano becomes a table. Is *Piano Piece 1962,* where a vase of flowers is placed on a piano, necessarily a performance piece?

GB No, because the score says 'a vase of flowers on(to) a piano', so you could just observe a vase of flowers on a piano, and that would be a realisation.

MN So generally you make no distinction between the event-as-performance and the event-as-object?

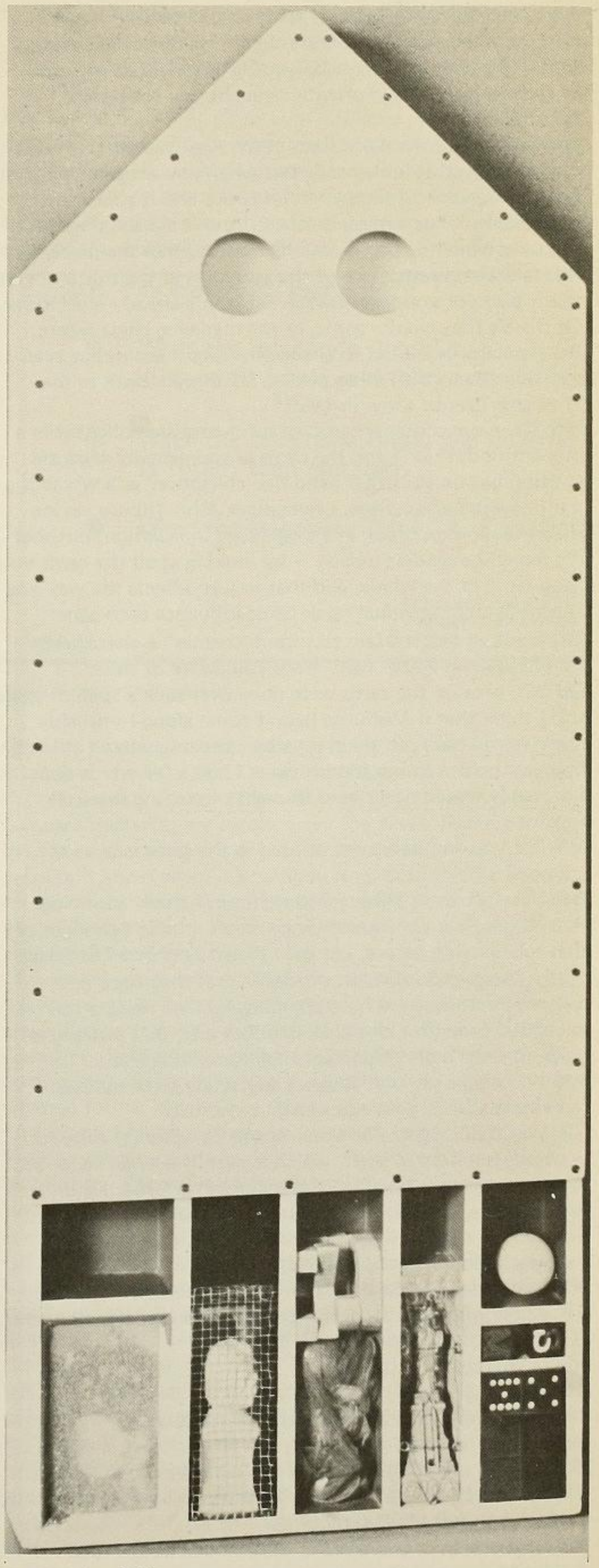
GB I made an object out of *Three Aqueous Events.* It consists of a board with a metal ring (like you use in the bathroom attached to the wall) in the middle with a glass of water in it. And on the upper left there are letters that say 'ice' and in the lower right it says 'steam' and it's all painted white. The letters stand out a little bit so you can still read it. That's an event score realised as an object, so to speak.

And once in a while I would make an object first and then make a card later. I think the ladder with the different colours on the rungs[6] was originally an object and I wrote the card later. So I don't feel very much one way or the other since every object is an event anyway and every event has an object-like quality. So they're pretty much interchangeable.

MN How do you resolve your interest in time with a desire to make objects?

GB For instance, I was making chance paintings during the 1950s. With the sheet-paintings I was making in '56–7, where you crumple a bed-sheet and pour water on and then ink, depending on the quantity and distribution of the water, and the time you leave it till that crumpled mass is practically dry, you'll get hard edges. Whereas if you open it before it's dry you'll get more cloudy edges to the forms.

Also at the time I was very concerned with the philosophy of science and that ties in too, because I was already questioning



Play Incident 1961

the premises in physical science — what does time mean in science, what are the irreducible elements that come into the scientific consideration of time? So I was reading Reichenbach and all those people who were writing about time in science, and relativity, time in relativity, and so forth. All those come together — that's the connection, I think, between the visual arts and time in science which I was already concerned with. I also felt that every object was an event, from physical science; not only from physical science but also from reading Zen thought.[7] It seemed to me that from the viewpoint of nuclear physics you could hardly consider the structure of an atom without feeling that an object is becoming an event and that every event is an object. If you define an electron in an atomic structure there's no object-like quality to it — it's described probabilistically as a field of presence of the electron, and in oriental thought you get similar intuitions.

So you'd have the piece from 1961, *Play Incident.* It's not only an object. It looks static but when you drop the pingpong ball through one of the two holes above and it strikes the nails inside, it has a musical aspect. And it has a time aspect not only while the ball is making music within the piece, but if it falls out through one of the apertures at the side and you put it back, or you leave it where it is, it's already a performance.[8] Or there's the solitaire game, or the medicine chest where the spectator is invited to change the pieces around or even exchange them with other pieces. These were both in the 'Towards Events' show in 1959.[9]

MN The event scores are in card form, and are collected in a box entitled *Water Yam;* the cards are admittedly separate entities, but on the other hand the 'collection' as a whole is a multi-layered assemblage. I remember John Tilbury saying that one shouldn't look at a single card in isolation, but that it's more like reading a book — by looking at all the cards you get a sense of the whole, and that in turn affects the way you approach any individual card: cards influence each other. There are, in fact, certain recurrent 'themes', a characteristic iconography in *Water Yam.* Were you aware of this?

GB No, because the cards were done over such a span of years, and I think that if Maciunas hadn't come along I probably never would have put them together, because when I started, I just sent them to my friends when I had a few cards done. I probably would never have thought of putting them all together.

MN But you had had them printed in the same way as they are now?

GB Yes. But John Tilbury was right on, I think, in saying that *Water Yam* was like reading a book. I hadn't thought of that relationship before, between *Water Yam* and *The Book of the Tumbler on Fire.* But it seems that they have in common that they are field phenomena, that there is no hierarchic order, for example, in either one, that nothing is made to seem more important than something else.

MN You might say that whereas any single piece by Cage represents a field, your *total* output is a field.

GB Yes, that's right. *The Book of the Tumbler on Fire,* for example, is a field in itself, which is part of a larger field. So, for example, once I had started the *Book* in 1964, I didn't hesitate to put into it pieces that were done before that time, and presumably it will go on forever, too. So that's true, each piece is part of a field.

MN What does *The Book of the Tumbler on Fire* consist of?

GB Boxes with objects, event scores, performances, all kinds of assemblages, pieces I did...

MN In what sense is it a book?

GB What is a book?

MN One knows what a book is conventionally...

GB A book is a field too.

MN But it is physically arranged in such a way as to make it difficult to appreciate as a field, because it's a linear continuity, unlike a box full of separate cards.

GB So it seems. It seems more like an object but if you think about it, you don't enter a book even on the first page without your past, your mind, coming into it, and your mind has memories, too. So even your reading of the first page is conditioned by your previous experience. And once you've finished the book your experience goes on; your idea of the book from a later point will be different, will change as your memory of it changes, or the experience of the book will change your later experiences. So any book is also a part of a field.

And when I think of field situations, I think again of field in physics, the probabalistic field of presence of an electron, and also field in semantics. In the 1950s I was very interested in semantics, as I still am. There was a very interesting book which came out near the end of the 1950s called *The Field Theory of Meaning,* in which it was shown that the meaning of a word, rather than being related to the structure of a sentence, for example, was related to a field. So, as I recall — it's a while back, actually — the author did psychological research to try to see how individuals related certain words to other words, and then he would place these in a three-dimensional field. For example, the word 'father' would be at the centre of, let's say, a sphere, and somewhere near the word 'father' would be, semantically, the word 'mother' for someone, according to the testing that had gone on, and a little farther away would have been 'house', a little farther away would have been 'money'...[10] And so the importance to me of that way of seeing semantics was again the field approach.

MN But to return to the *Water Yam* cards: is there any significance to be attached to the different sizes of the cards: two cards often differ in size even though they contain the same amount of, or lack of, information.

GB It does have something to do with it, and the way that the printing is put on the cards, too — the margins and the space between the words, it all comes into it. But there are no rules for it. I guess it's like objects in boxes — there's no reason why a tooth is a certain distance from...

MN We're getting back to graphic notation, perhaps, where spaces between things are often of importance. Would you say that this spacing and layout should have some effect on the way you realise the event?

GB Yes, I'd think so. They're never squeezed, there's usually enough space around, a kind of emptiness.

MN But then some are pretty dense.

GB *The Motor Vehicle Sundown (Event),*[11] which was the first notated event, is pretty dense. *Two Definitions* looks pretty dense, but then the definitions are printed something like they'd look in a dictionary. So there was a reason for it.

MN I suggested in my book that you weren't responsible for

TWO DEFINITIONS

- **1. Something intended or supposed to represent or indicate another thing, fact, event, feeling, etc.; a sign. A portent. 2. A characteristic mark or indication; a symbol. 3. Something given or shown as a symbol or guarantee of authority or right; a sign of authenticity, power, good faith, etc. 4. A memorial by which the affection of another is to be kept in mind; a memento; souvenir. 5. A medium of exchange issued at a nominal or face value in excess of its commodity value. 6. Formerly, in some churches, a piece of metal given beforehand as a warrant or voucher to each person in the congregation who is permitted to partake of the Lord's Supper.**

- **(a cup and saucer)**

Two Definitions

those 1966 Fluxversions of some of your events.
GB Yes, you were right about them. Some of those realisations were very much Maciunas – like the orchestra with their arms through the holes, and also the clarinet piece with the boats.[12]
MN Would you dissociate yourself from those realisations?
GB No, because it's implicit in the scores that any realisation is feasible.
MN Any and every?
GB Any and every. I wouldn't refuse any realisations.
MN You'd admit that these 1966 versions are gag-like. Was it Maciunas who listed 'gagging' as one of the backgrounds to Fluxus?[13]
GB Yes.
MN Were there any Fluxus events which you would consider were pure gags?
GB I can't think of any. Compared to the total number, I think there were very few which could be considered gags.
MN Did they exhibit some other form of humour then, or were they totally serious and deadpan?
GB The kind of humour I most appreciate is...Take the example of putting the vase of flowers on the piano. Some people think that's humorous and some people might think it wasn't humorous, that it was critical of the concert situation, or other people might say it was a kind of *hommage* to the piano, right? Like you give flowers sometimes to the woman you love. There are so many different ways you could take it, but if somebody saw it as humorous then I'd appreciate the fact that you weren't quite sure. It wasn't obviously a gag, but it was possible to take it as one if you wanted to. That's the kind of humour I liked – 'borderline' humour.[14]
MN From what I've read I can't imagine you and your Fluxus associates sitting round in a café or bar discussing the 'problem' of the function of traditional musical instruments.
GB Never, never. Usually it was...Maciunas would come and say 'I'm going to nail the piano keys down tonight. Would you mind bringing in the nails?' So he would go and sit down at the piano and I'd put out a handful of nails for him to use.[15] It was all very flat, very practical.
MN But presumably, though you talk of the various ways of interpreting the 'significance' of putting a vase of flowers on a piano when you wrote the card, you didn't see it in all those different ways.[16]
GB No, not in any one particular way.
MN It was just a fact...that you noticed.
GB I don't know whether I did in that particular case, I don't know whether I'd seen someone do that or whether it just came to mind. I think it just really came to mind.
MN It's surely a question of context. If someone gives a recital in a concert hall, puts a vase on the piano, then that has one kind of effect because the audience has been culturally conditioned as to what to expect in that sort of place. But if it is done in an art gallery or loft just after someone has nailed the keys down or fed it with hay,[17] then it may be interpreted as being 'about' the piano as a musical/cultural object, or some such.
GB Yes, it's changed by its context. I never think about this, but there seems to be a certain relation – in the context of this conversation – between putting a vase on the piano and a Duchamp ready made. But let's hypothesise that putting a vase of flowers on a piano, or seeing one there, is equivalent to noticing a bottlerack, the Duchamp bottlerack. In what sense would they be equivalent? Well, that the context would change the situation. So a frequent point has been made that a bottlerack in the back room of a cafe in France is not the same as a bottlerack in the Musee d'Art Moderne in Paris. So would you say I've given more emphasis to that distinction or have contributed to wiping it out?
MN Do you distinguish in your own work between a common - or - garden chair and an art object that you've created?
GB Some, not others. Like the *Chair with a History*. This is a chair with a book on it, and in the book is written everything from the time I bought the chair and book up to the present. I went out to buy a wooden chair in Nice – and that was quite a piece, because it turned out not so simple to get a simple wooden chair. Then I bought a leather-bound red notebook in which I noted where I'd found the chair, and I think I glued in the receipt. Anybody who sits in the chair can write in the book. So the chair and the book kind of go together, and it wouldn't seem right to substitute another chair somehow.
MN But presumably the process has come to an end now.
GB Oh no, it's still going on. I think Schwarz still has it with the same book as far as I know. And in principle the book can be replaced by another one when it's full. It just keeps going on. So it's open. But in other cases the chair was lost or thrown away; another chair could be substituted and it wouldn't make any difference.
MN The dating of the *Chair with a History* is in a way the opposite of Duchamp's suggestion to 'inscribe, on a precisely indicated day, hour, minute, a ready made which could be looked at for any time before that moment.' I would assume that this approach also differs from your observation, and subsequent notation of events.

THREE TELEPHONE EVENTS

- When the telephone rings, it is allowed to continue ringing, until it stops.
- When the telephone rings, the receiver is lifted, then replaced.
- When the telephone rings, it is answered.

Spring, 1961

Performance note: Each event comprises all occurrences within its duration.

Three Telephone Event 1961

GB He's putting the emphasis on dating. So you say there's an ashtray on the floor and I'm going to date that tomorrow the first of August 1976 at 10am. Whereas if you wanted to compare that with my pieces – say the *Three Telephone Events* – you could the next time the telephone rings, but you don't know when it's going to ring. Conceivably you could call somebody up so you'd know, but even then you wouldn't know if they're there unless you'd prearranged it. And that's outside of my...
I would be more interested if the event just happened. If the telephone rings, then it's interesting if that becomes the piece. I'm not interested in arranging it first. It's as though Duchamp, in that note, was more interested in the irony of putting a particular date on a piece which he's already found, whereas for me it's the way things happen naturally that's interesting. Maybe the telephone doesn't ring all day, or maybe in two seconds it will ring.
MN But the *Three Telephone Events* do not happen naturally since you've limited the piece to those three particular occurrences. You are in fact controlling the situation.
GB I'm not just saying 'next time the telephone rings, do what you like', that's true. It's left as open as it could be and still have some shape.
MN So that each realisation of *Three Telephone Events* has the same structure.
GB That's true, and in that sense I'd say focused rather than controlled by the score, but I'm not very interested that it's *my* score. It's been remarked to me that out of all the people who heard water dripping, I'm the first person to make a score out of it, so in a way the score calls attention to the fact that water dripping can be very beautiful – many people find a dripping faucet very annoying, they get very nervous. It's nice to hear it in an appreciative way. But it's not important

that I made it. I can imagine that in China and Japan people have been appreciating dripping water for centuries.

MN Not important to you...

GB It may be important to you as a musicologist, but it's not to me, like those cards aren't copyrighted, and outside of one signed and limited edition I was invited to make for a gallery[18] I've never made any money from *Water Yam* — the various Fluxus editions or John Gosling's edition. It's ironic in the same way as Duchamp's making an edition of a found object, there's a lot of irony in it. It's appropriate that the *Water Yam* scores should be just floating around like the objects I've made, so to speak.

MN Do you prefer to keep the origin of individual events a secret?

GB I don't think it's relevant to the pieces, really.

MN But you have admitted the origins of one or two — the

FLUTE SOLO

- disassembling
- assembling

G. Brecht
1962

Flute Solo 1962

Motor Vehicle Sundown (Event) and *Flute Solo,*[19] and you're not sure about the vase on the piano. But you don't think this is relevant anyway?

GB Well, can you see any relevance?

MN It's not necessarily relevant to the realisation of the event... I think I've discovered the origin of *String Quartet* in the preface to the *Second String Quartet* of Charles Ives, where he describes the string quartet as consisting of four men who, amongst other things, 'shake hands.'[20]

GB Really? I didn't know that (laughs). Fantastic. That's really beautiful.

MN Did *Bach* derive from Villa-Lobos?[21]

GB No.

MN Because if it did, then one possible realisation could consist of a performance of one of the *Bachianas Brasileiras.*

GB If that was the source, I don't think I'd tell anybody. That would take all the interest away.

MN People might be interested in why you make the connection between two apparently unrelated things.

GB But *Bach* would be a very minor piece if Villa-Lobos was the origin. It would put it in the category of a riddle. I've nothing against riddles, but riddles usually only have one answer, whereas *Bach* has a range of answers.

MN But there's no reason why you shouldn't have observed the 'logical' connection between Bach and Brazil that you find in the Villa-Lobos title, and seen that if you juxtapose just those two 'illogical' words in an event score, then a lot of other solutions *are* opened up.

GB (long pause). Yes, I think sometimes the result of the score is beyond the score. It can't be deduced from what's on the card. I think *Bach* is like that, and also the *Christmas Play for Joseph Cornell.*[22]

MN I mentioned this sort of consistent iconography in *Water Yam* — there are certain constants, household fixtures like

A CHRISTMAS PLAY

for Joseph Cornell

Empty snow-covered field, frosted horizon sun glaring through the mist. In the near distance a bathtub lies on its side, open toward us.

FIRST CHILD: Do you see that dark figure behind the crèche?

SECOND CHILD: (Does not speak.)

A Christmas Play (for Joseph Cornell)

chairs, tables, stools...

GB Yes, but that has to do with ordinariness, that doesn't have to do with a special love for chairs.

MN So your use of tables and chairs differed from La Monte Young's?[23]

GB I'm not so sure. Part of the point for me, in using tables and chairs, was that they were about as ordinary as you can get. And sometimes, when I put some in a show, they were really overlooked by people. At the end of an opening, a table that I had put there with some very special objects on would be covered with glasses and there'd be rings on it. So it succeeded pretty well. Whereas it was always evident with La Monte's piece that it was a specifically musical piece. But even so...I remember the first performance at the Living Theatre of that piece...[24] they were ordinary beat-up benches and tables.

MN You said that it's a mistaken idea that your work should be put in Pop Art shows.

GB Well, not especially mistaken, but it's not the point of the work. I think my motive for making a clothes tree that has hats and coats and umbrellas on it, is not the same motive as, say, Jim Dine making a picture with a necktie. It's not wrong, for example, to put my *Clothes Tree* in the Pop Art show at the Hayward Gallery,[25] but it's only one of the possibilities — in other words *all* possibilities are acceptable. Everything that can be done is all right.

Sometimes things go full circle. I once bought a chest of drawers with a mirror on top — like you'd find in a cheap hotel — in the Salvation Army for 10 dollars. And then I painted little rainbow colours round the bottom of one leg, and then I had it in the loft in New York. A guy saw it there and he wanted to have it for a while — he was thinking of buying it, and he paid to have it sent from New Jersey to his apartment in New York City. And then he decided that he didn't want to keep it, so he shipped it back to me and I sold

DRESSER

- mirror above

drawers below

Dresser

it back to the Salvation Army. A lot of my object pieces have been lost in one way or another, lost or stolen, or not returned, simply wandered away.

MN What if some gallery owner wanted to show all your objects from, say, 1959 to 1976?

GB Well, the way they went missing was a natural process, so they only exist anymore in the memory. I don't feel bad about it.

MN So a retrospective would be an unnatural interruption of that process?

GB In my case, yes. I think that would not be in keeping with the works. A lot of works I've tried to open to all circumstances – like making works that people could change, or chairs that people could sit in. So if you leave a work open, why close it all of a sudden? And a retrospective would be a closing in a sense, wouldn't it?

MN The ultimate openness is that the work can be stolen?

GB I had a project once to make a work specifically to *be* stolen.

MN Did you ever realise it?

GB No.

MN You couldn't think of a suitable object?

GB I guess so. I put it in a notebook and never got around to realising it. It was going to be insured for a certain sum and then if it was actually stolen the insurance money would have gone to help finish Gaudi's cathedral in Barcelona.

MN I missed your *Chemistry of Music* lecture at the Arts Lab.[26] I know that you showed the slides but was there any verbal material to accompany or illustrate the slides?

GB Actually, there isn't any. It starts with the music. I used Walter de Maria's tape that runs for about 20 minutes. It starts with drumming – a figure on the drums like boom-biddy-boom-chick, and very very slowly this drum figure becomes crickets chirping, practically imperceptibly, and at the end it's totally crickets. I play that, and then I'm dressed in a white lab coat. The slides are projected on a big square screen that stands on the platform. And then, for example, in the slide where there's a man playing the flute, I attach a firework that makes a whistling sound. I attach that to the place on the screen where the embouchure of the flute is, and I set it off, so that there's fire and a whistling sound. For almost every slide there's a firework that goes with it. And for the final one – Mount Fuji – there's a little rocket set into two wire rings on the top that shoots up into the sky.

MN So the lecture simply lasts the length of the tape?

GB Yes.

MN What's the origin of the tape?

GB Walter had given it to me once, before I left New York, and then years later he asked for it back. It was the only copy.[27]

MN Was the purpose of the *Chemistry of Music* simply to amuse?

GB No.

MN But in a chemical process there has to be some change brought about in and by the elements used, so what about the visual elements you've chosen?

GB It's quite amusing to me the way it works. I guess you could say that if there's something unique about what you might call my 'art', something you don't see in other places, then it probably comes from the fact that I've been a scientist.[28] There's also that I've studied oriental philosophy, plus the art side – it puts these three areas into a common field. So maybe the works are sometimes like art, sometimes they're some way between art and science, like the crystals, or between art and oriental thought, like some event scores, or in the field of all three. So the *Chemistry of Music* is a part of that concern between the relation of art and science. You could look for things that are specifically musical in it – like the Walter de Maria tape – or you could consider the whole time-sequence of the slide images as musical, or you could consider the fireworks as an aspect of chemistry. But none of that was calculated or really conscious, it just came together.

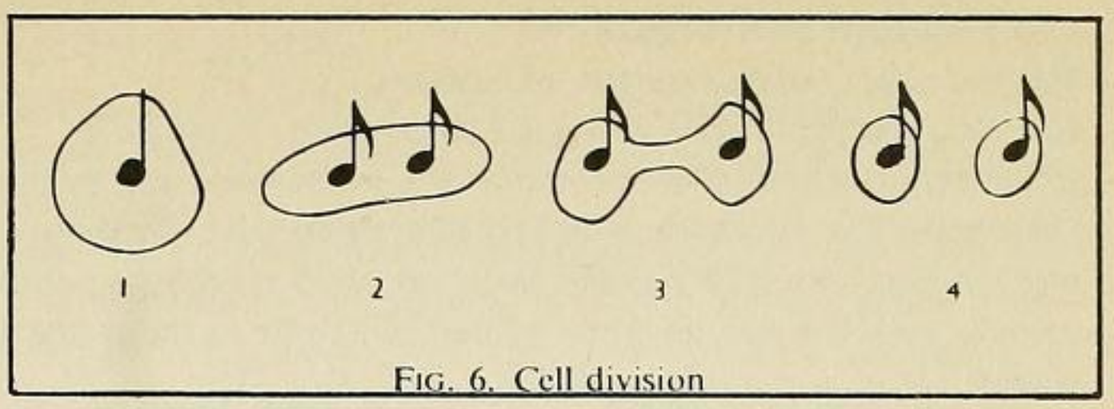
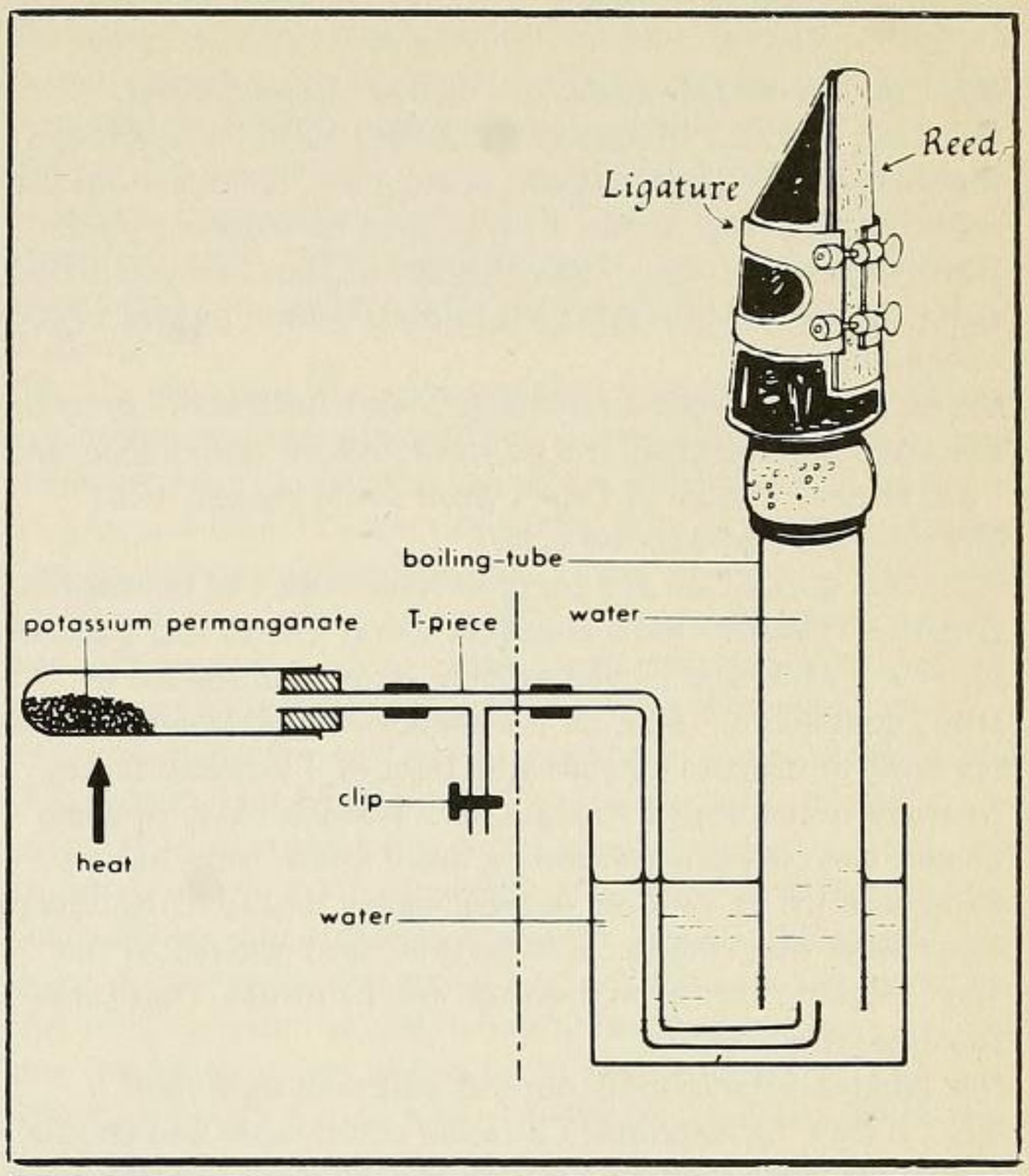
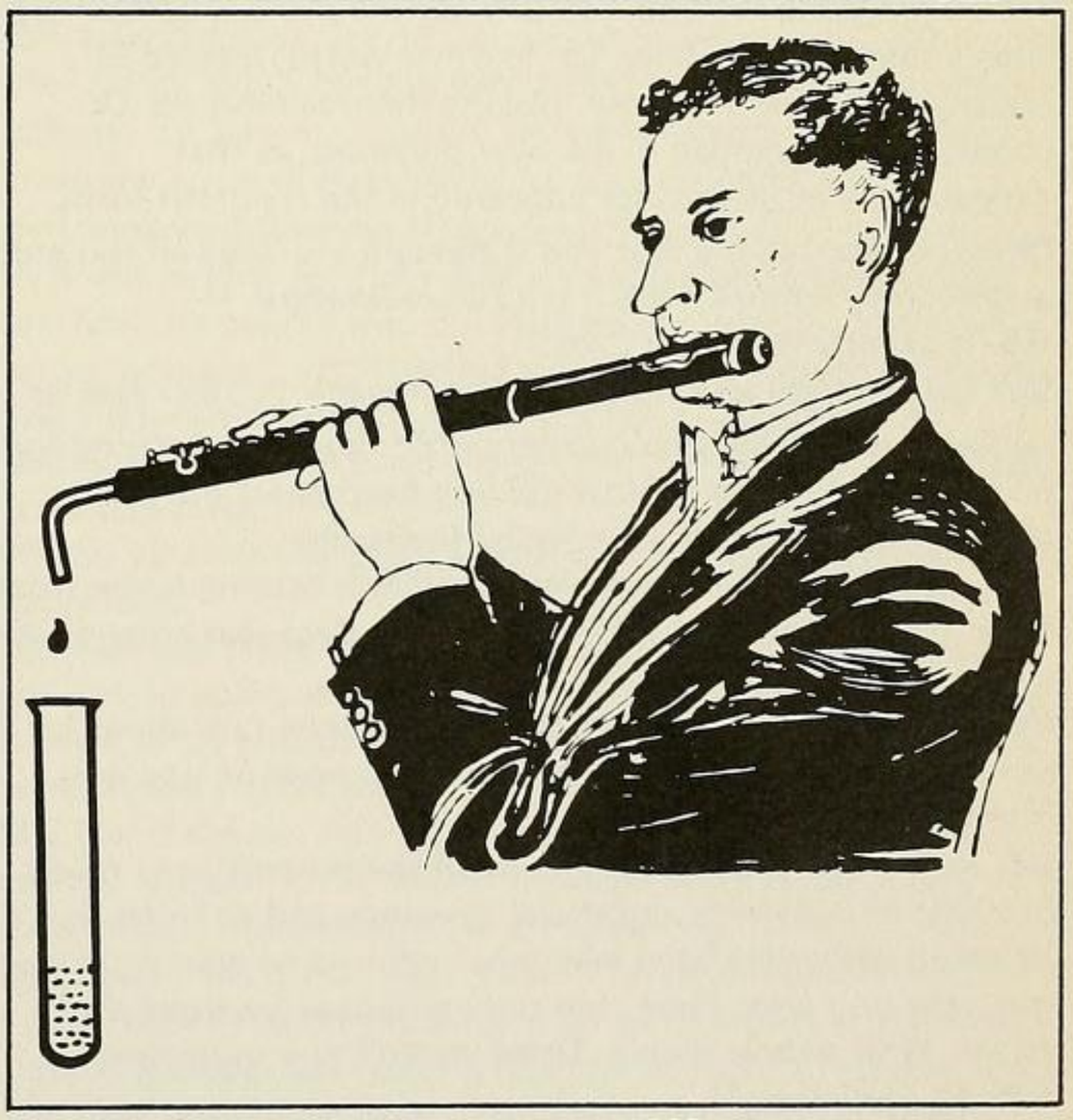


FIG. 6. Cell division





Slides from 'Chemistry of Music' lecture, 1969

MN Does it go beyond visual punning?

GB Oh, I don't think of visual punning.

MN Isn't the Fuji slide visual punning?

GB Whatever you want to take it as. Maybe it's a comment on Japanese art, since it's a slide of a Hokusai print; or maybe it has to do with earth science, because volcanos do blow up sometimes.[29]

MN A comb becomes a musical instrument, a volcano has an aperture like a clarinet, and also becomes an instrument. Is that all right?

GB It sure would do. If you saw a volcano exploding it sure would be a good musical piece. Maybe Gavin Bryars could do

The Explosion of Krakatoa.[30]

MN But again, what changes take place?

GB You see the change when it's performed – there's a pinwheel attached to the mixer on the slide-image and maybe there's another firework attached to another part. So there was a definite kind of process going on. And maybe you could wonder how the slot machine turned out to be in three-quarter time.[31]

* * * *

MN You started painting as an Abstract Expressionist.

GB That was how I began in the early 1950s. For me it was the most exciting way to paint at the time. Pollock's was the most exciting work to me. I never liked De Kooning much; Kline was elegant and so was Motherwell, but he never fitted quite completely into Abstract Expressionism, he was kind of tangential.

MN But you soon got disenchanted with Abstract Expressionism.

GB Well, I realised that the point of Pollock was chance, and I had already known of Cage's work since, I guess, 1951.

MN How did you discover Cage?

GB I met a musician at a party in New York and he mentioned Cage and told me a little about his work. Then I lost track of him for a while and moved to New Jersey and started to study statistics in 1953. So the chance/randomness that I was studying in science, for scientific reasons, I was also trying to apply to painting. I thought, well Pollock's way of using chance was only one possibility, and I knew, from having studied statistics, random number tables, and so forth, lots of other ways that chance could be used. So I applied all the ways I could think of in drawings and paintings. That came together in '55-'56.

MN What did the random number paintings look like?

GB I'd take, for example, Cartesian coordinates and choose the points using random numbers for the x and y coordinates, then connecting the dots. Or, in other works, instead of placing the points regularly, placing them at random. Or rolling marbles dipped in ink over plywood, so that irregularities in the surface appeared in the resultant form.

MN You were saying that you'd thought you'd given too much attention to Pollock's work in *Chance-Imagery.*[32]

GB In comparison with Cage.

MN Between the writing of *Chance-Imagery* in 1957 and its publication in 1966 you'd experienced Cage, his teaching and his music at first hand. How did you hear about the Cage class at the New School for Social Research?

GB I first heard of it from Kaprow. Once, coming home from New York in my car, he mentioned that Cage was going to do a class.

MN How did Cage approach the class? Did he talk about his own work, did he recognise the fact that none of you was a musician?

GB In the first class he talked about the properties of music in terms of dynamics, durations, envelope and so forth. First he asked who everybody was, what your name was, what you did, why you were there, and did you know anything about music. Most people didn't. There weren't any musicians, trained musicians.[33]

MN Did he give you projects to realise individually or collectively?

GB Individually, on some chosen topic. We'd work on it before the next class, bring it back and perform it. Some pieces were made on the spot.

MN But he also provided straight information; the course was part-didactic, part-practical.

GB He often brought new scores; he'd say this is Morton Feldman's latest piece...

MN From what you say, and from looking at your notebooks,[34] it's obvious that there was far more work done in the class than appears from, say, Al Hansen's account.[35]

GB Yes, there was a lot of work done because you figure that there were maybe eight or ten or a dozen people, and each person did a piece practically every week.

MN I remember when Stockhausen graced the Scratch Orchestra with his presence at a rehearsal, and afterwards I asked some of his acolytes what he'd thought about it. They said he was rather dismissive because he felt that it was not susceptible to improvement. The Scratch Orchestra was still in its non-critical phase then and this attitude was itself dismissed as being irrelevant. Was Cage concerned with the idea of improvement?

GB Oh yes. One of the first pieces I did in his class was one where there were three light bulbs – blue, yellow and red, I think – and they were connected to switches, and there was a score which was arranged from a table of random numbers that gave the duration and the colour. And so someone was pushing the switches according to the score and there were three performers, one on piano, one on cellophane and I don't remember the other. So the colour corresponded to the instrument, and the performer on that instrument would do something on that instrument during the time his light was lit. We performed it in the class and everybody was to give their thoughts about the situation and Cage, who had played piano, said 'I never felt so controlled before' or 'Nobody's ever tried to control me so much.' So I learned that lesson there, I realised that I was being dictatorial in that situation, which makes you think of an orchestral conductor.

MN So you moved away from rigid control, but you still retained clock time or some form of counting.[36]

GB There are counts, but they naturally vary, they're not clock time.

MN Later pieces were less clock-like, using candles for instance. Did this reflect a general concern at the time?

GB There was a general feeling that clock time was not the way to do it. But the problem that I'd posed for myself with the *Candle Piece for Radios,* for example, was that the duration of the piece shouldn't be set beforehand but that it should come from within the piece itself. It was done at the Living Theatre and I chose birthday cake candles, or rather halves of birthday cake candles. Whereas when Cornelius arranged the performance at the Round House, rather thicker candles were chosen.[37]

MN Are there other events that are natural processes and that end through no intervention of the performer?

GB *Drip Music.*

MN How does that end, isn't that just an arbitrary decision by the performer?

GB It depends whether you shut it off or whether you let the water run out. If you're using the piece I built with the glass vessel, you could just let it run till it stops. But the *Drip Music* in the bathroom that we're hearing now, that will end when the reservoir fills. I can't hear it so well now because the refrigerator's running.

MN ...performing La Monte's line piece...[38]

GB ...Us old colleagues forever working together...

MN Fluxus seems to have contained, apparently successfully, so many seeming opposites and contradictions. Was there anything that made you uncomfortable? The extreme violence of some activities, for instance, seems completely opposed to your work.

DRIP MUSIC (DRIP EVENT)

For single or multiple performance.

A source of dripping water and an empty vessel are arranged so that the water falls into the vessel.

Second version: Dripping.

G. Brecht
(1959-62)

Drip Music (Drip Event) 1959-62

Postcard from George Brecht to Michael Nyman, 1976. This refers to Nyman's reference, in his *Experimental Music* p.71, to Brecht performing La Monte Young's *Composition 1960 No 2*

GB I never felt embarrassed or disturbed in any of the Fluxus concerts. I understand there was some excitement when Paik snipped off the necktie of a first-row spectator in one of the Canal Street performances. I wasn't there. Watts later told me the spectator was a psychiatrist.[39]

MN You say there was no consciousness that certain performances were 'musical' and others not.[40] So that trained musicians, like La Monte, were in no way tempted to 'pull rank'?

GB In a concert situation? No. The ones who showed up never did, like Phil Corner, for example. He always fitted perfectly into performances.

MN Did you perform only your own pieces or each others'?

GB In a Fluxus concert? Everybody performed each others' pieces if they wanted to. Sometimes if a person made a piece and he was the only one who knew how it went – like Ben Patterson with his piece with the coffee, the interview – he had to do that. But most of the time they were pretty interchangeable and people would perform each others' pieces.

MN So a lot of people were drawing lines?

GB I only saw one performance of that I think, which was done by La Monte. I don't remember anybody else realising that.

MN How did he do it?

GB With chalk and plum bob, I think, or straight-edge – I can't remember. But he did it over and over and the line kept getting wider, of course. It was as controlled as possible, but it should always be in the same place. A question of precision and accuracy.

MN This emphasis on control links La Monte with you. Were all Fluxus activities as controlled as this?

GB I'd say that control wasn't the central concern, if it was any concern at all. But the thing was to do things as simply and as well as possible with no special concern for control – but no unnecessary laxness either.

MN Degrees of discipline...

GB Well, different people have different tastes, different ways of doing things.

MN Cardew saw *Water Yam* as a course of study, a training in performance discipline, with the emphasis very much on control.[42]

GB There's a semantic difficulty here, since I don't like the words discipline and control, or even emphasis. *Water Yam* implies no discipline, no control, no emphasis. On the other hand, I could agree with him – it offers the possibility of changing one's way to go, and if you want to perform those pieces any more, you'd perhaps acquire certain ways to move through life. There's nothing emphatic about them.

MN In Fluxus concerts were any concessions made to the audience, any attempt to 'communicate'; was there any awareness, even, that an audience was there, any attempt to entertain, to perform *for,* rather than just *before* an audience?[43]

GB The situation was pretty relaxed. I don't think it was so much done to entertain anybody or perform for them either, although that is implicit in the scores. But there was a kind of give and take. It wasn't certainly as quiet as a conventional concert hall performance, because after all the ones I'm thinking of were done in a loft, and perhaps the windows were open and you heard the noises outside, and then somebody would leave to go downstairs and come back up. There was a kind of constant coming and going, you know, so you'd move aside if somebody was leaving even if you were performing the piece. For me, while I was performing, there was a total situation which didn't especially have to do with me or with the audience, the people in the room, or with the people going up and down the stairs. And anything that occurred in this total situation would naturally be taken into account and one would act as one would act in any situation.

MN Why wasn't Fluxus taken up as a 'movement', in the way that Happenings were?

GB I don't know. Maybe Jill Johnston wrote now and then in the *Village Voice* but not very much, and she had a dance column anyway, so it was in the performance area. People from the art-as-objects world hardly ever came to the performances. Whereas Happenings were done in galleries, so it was natural for the visual-art people and critics to turn up. And the people who did Happenings were professional artists whereas Dick (Higgins) was a printer, Alison (Knowles) was a housewife and silkscreen printer, I was a chemist, Maciunas did layouts and design, and Al Hansen was a graphic artist and bum.

MN So you felt there was a great divide between you and the happeners.

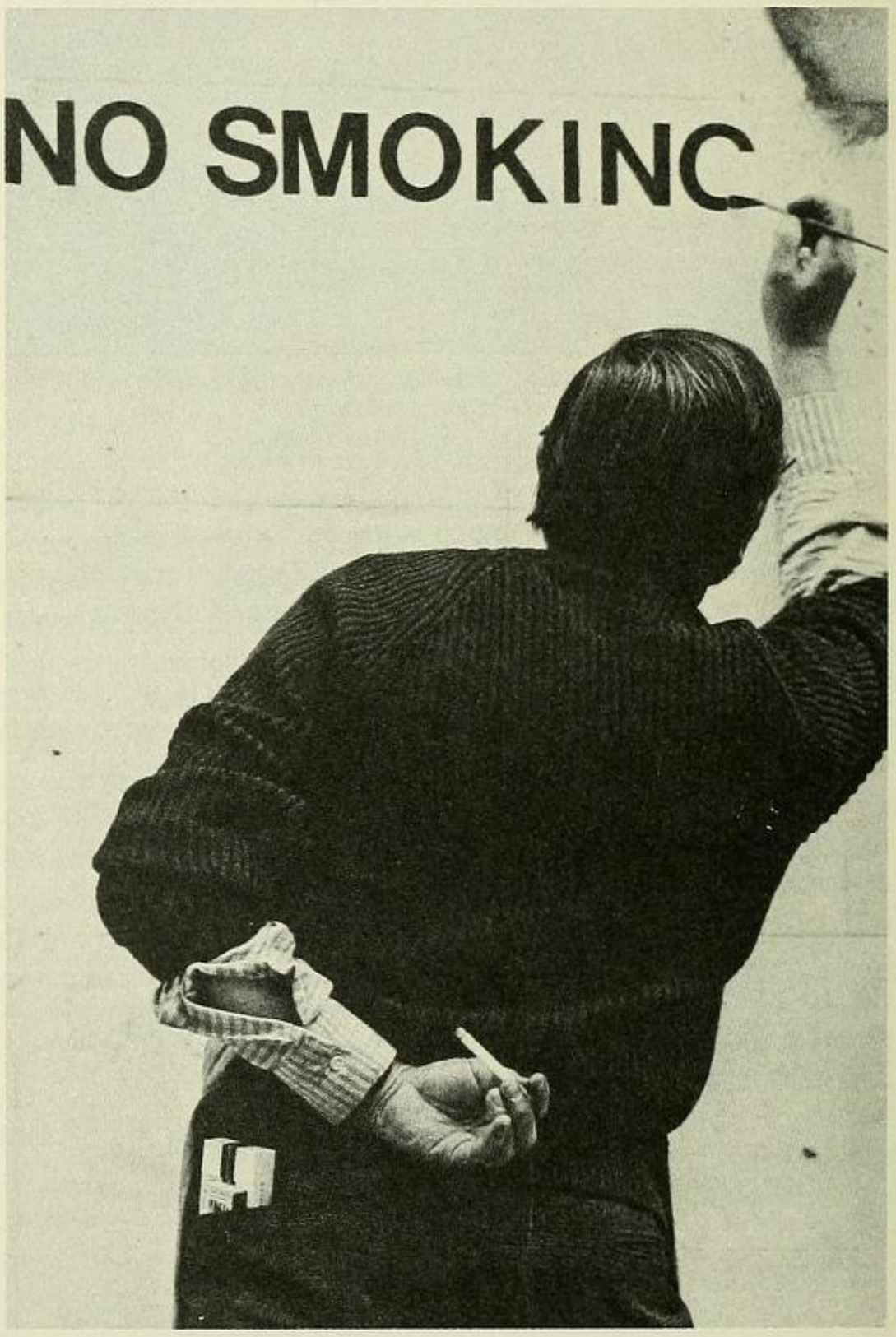
GB Not that there was anything necessarily dividing us, but our way of going about things was different. The Happenings seemed to fit into the gallery/museum system pretty quickly, whereas the Fluxus things never did.

MN Was there any relationship between Happenings and events? Michael Kirby reckons that an event is like a single independent compartment in a Happening.[44]

GB I don't see it that way. There's no relation between them except that I started thinking in terms of events at the same time as Kaprow was starting to think in terms of Happenings, and they both came from a dissatisfaction with the static quality of so much of the work at the time. But beyond that the way they developed was quite different.[45] Thinking of the 'classical' Happenings of the late 1950s/early 1960s – Kaprow's, Dine's, Whitman's, Oldenburg's – they all had a kind of unity and there was really no tendency, at least from my experience, to divide a Happening into smaller parts. They had a kind of total unity.

Of course you could artificially divide a Happening into events, but that seems to me to be a *post facto* thing to do – I don't see any real relationship. It seems to me that events in general are either a viewpoint on life or, in their more objective form, in the form of scores to be realised, notations, they're more personal and they don't even have to be performed outwardly. Some of them can be realised

mentally too, so the whole emphasis seems quite different.
MN How do you distinguish between a piece that you can realise privately, or mentally, and conceptual art?
GB It depends on where you put the emphasis because concept art has to do, by definition, with the conceptualising faculty of the mind, whereas to me the events are total experiences. There is no more emphasis on conceptualising than there is on perception or memory or thinking in general of unconscious association. There's no special emphasis, it's a global experience. I've seen conceptual art pieces that look a lot like my scores in *Water Yam,* so it's possible that these people knew of my event scores and took them as concept pieces, but from my point of view they're not. Calling them conceptual pieces would be using a very narrow view of them.
MN This total experience differs from the Romantic *Gesamtkunstwerk.* In her Joseph Cornell book, Dore Ashton quotes this from Schumann: 'The cultivated musician may study a Madonna by Raphael, the painter, a symphony by Mozart, with equal advantage. Yet more: in sculpture the actor's art becomes fixed; the actor in turn transforms the sculptor's work into living forms; the painter turns a poem into a painting; the musician sets a picture to music.' That's a far cry from Intermedia...[46]
GB Yes it is. Like he always says change something into something. If you really change something into something, it can only be done in a simpleminded way, like painters from time to time try to interpret a Bach fugue: there's a row of blue dots, there's a row of red spots, but that's really so simpleminded. Whereas Intermedia comes from, I think, an awareness that the boundaries aren't any longer there, that you can move anywhere along a continuous line, in a continuous field – a continuum. And what comes out can't be analysed into its component parts, it's continuously variable within a field.
MN You've said that an 'act of imagination or perception is in itself an arrangement, so there is no avoiding anyone's making arrangements'. Cage avoids making perceptual arrangements, leaving it open to the listener.
GB I guess Cage in some cases makes a process for making a process. He tells you how to make the parts for a piece and lets you make the parts, whereas a score like *Two Durations* is already a score, there's nothing else you have to do. In some pieces you do, it's more like Cage – *Motor Vehicle Sundown (Event)* or the *Card Piece for Voice.*
MN In *Motor Vehicle,* as in Cage, there's no central focus as there is in the monostructural events.
GB That was the first event score and it's not typical.
MN Listening to Cage's *Atlas Eclipticalis* in France, I felt that I was almost *forced* to structure, in order to 'survive' the disorientation of totally un-arranged music.
GB If your mind is in the state of Zen meditation or even if you just have a blank mind, then you can experience without structuring, but that doesn't happen very often, that's not a very common situation. Normally when we're in any kind of situation, even a global situation, like a performance of *Atlas*, we notice relationships just naturally. Everyone has a natural way of experiencing and people make connections unconsciously.
MN Would you say, therefore, that that was a good reason for creating an uncontrollable, non-controlled global situation, as against La Monte's almost total control?
GB Yes, the aim is different. The focus is different, as Cage might say. The essential point about a Cage global situation is that it's an unfocused experience, whereas La Monte's emphasis is on control and the focus is on, for example, the overtone interactions – what happens in the interaction between the 5th and 6th overtones, for example. He really goes to great lengths to control as much as possible, and to focus the attention on what remains uncontrolled.[47] Whereas in the event scores the focus isn't on a global situation but on something you've noticed already. It can be pretty marginal. Bird-flight, for instance. Sometimes I'm looking out of the window and a bird just goes by like that, and that's the event. So I notice what's happening during the time the bird's flying. It's a matter of focus. There's no argument between what Cage does in his global situation and what I do in the events, it's just a difference in focus, since you can, in any moment of your experiencing *Atlas,* perceive an 'event'.
MN So your event scores are abstract in the true sense – they are abstractions from the global situation in which we live and perceive?
GB That's right. If you focus on anything it has a limit, just like the total performance of *Atlas Eclipticalis* has a limit – it begins somehow and sooner or later it ends. So you could consider a whole performance is one event if you wanted to. I took care of this apparent distinction in the *Two Exercises,* where there's an object or an event that can become as large... you can keep adding to it as long as you want or reducing it as much as you want. So it's only a difference in focus as far as I can see – it's not a fundamental difference between Cage's work and mine.
MN There are no performance directions in your scores – they



NO SMOKING EVENT

Arrange to observe a NO SMOKING sign.

- smoking
- no smoking

No Smoking Event. Score and found realisation

don't say 'do something', they merely indicate or name.
But there is a kind of control, or a directing as you'd call it...
GB ...but as soon as you say anything you're already focusing. In principle everybody could use the event-scores as paradigms and invent their own whenever they wanted to. You could take them as examples.
MN The only situation in which you don't control is when you don't say anything. Unless you put one overall directive gave an example in the form of an event score, and then say 'go away and find your own.'
GB But even that would be more controlling than not doing it. You could say that even if you did nothing you would still be controlling people's not having anything of yours (laughs).

(Interview conducted in Cologne on 30 and 31 July and 2 August 1976).

1 Brecht came to live in England, for a period, in 1968. In October of that year he performed an event, ***Suitcase Eclipse,*** with Cornelius Cardew, Christopher Hobbs, John Tilbury and Mark Boyle (light show) and in the following month he put on, with Cardew, the 'Evolution of the Soda Fountain 1920-1940' a lecture with slides and musical accompaniment at the Arts Lab, Drury Lane. In May 1969 he took part in the ICA performance of Cardew's ***Schooltime Compositions*** (he was engaged in 'Making A'). In September 1969 he documented the principle of Landmass Translocation, which was put into practice by the Scratch Orchestra in November at the Chelsea Town Hall, in the realisation of the 'Journey of the Isle of Wight Westwards by Iceberg to Tokyo Bay'.
2 ***Water Yam,*** 'the collection of scores for music, events, dance, the play for Joseph Cornell, the movie flip-book, and so forth' (Brecht, ***Art and Artists,*** October 1972), has gone through a number of editions: about 70 cards were published by Fluxus in 1963, who also put out an enlarged edition of 100 cards in 1966. John Gosling's recent edition of the cards is currently sold by the Experimental Music Catalogue (EMC), 208 Ladbroke Grove, London, W.10. Cardew and Tilbury performed Brecht events in the 1960s, and one of Tilbury's 'Volo Solo' concerts of late 1970 was devoted to Brecht's work. Some of the 'musical' events were part of the Scratch Orchestra's repertory and ***Comb Music,*** for instance, is included in the 'Scratch Anthology' (EMC, 1971).
3 An interview I conducted with Tilbury on 12 December 1970 for a Polish magazine. I have no evidence that it was ever published.
4 An obvious reference to the fact that Fluxus artists used not only the 'musical' parts of the piano but also the 'furniture' parts.
5 ***Piano Piece for David Tudor No.2*** (October 1960): 'Open the keyboard cover without making, from the operation, any sound that is audible to you. Try as many times as you like. The piece is over when you succeed or when you decide to stop trying. It is not necessary to explain to the audience. Simply do what you do and, when the piece is over, indicate it in the customary way'. This seems to me to be an exercise for David Tudor's version of Cage's 'silent piece', ***4'33",*** at its first performance in 1952, when the pianist indicated the beginnings and endings of the three 'movements' by opening and closing the keyboard cover. Brecht's final comment perhaps refers to the fact that the purpose of the so-called silent piece was to demonstrate the non-existence of silence.
6 ***'Ladder*** Paint a single straight ladder white/paint the bottom rung black./ Distribute spectral colors on the rungs between'.
7 Brecht's interest in oriental thought goes beyond Zen Buddhism. He said in the interview that 'although probably my attitude could be more easily related to a Zen Buddhist or a Dogon attitude, the Buddhist outlook on life didn't come from nowhere, and if you read the 'Upanishads' you find practically all the themes that you find in Buddhism later with a different emphasis, or if you take Zen Buddhism as related to earlier Indian Buddhism. It's a continuum, there's really no way to separate it out.'
8 The ***Play Incident*** is an upright 'box' built on the principle of the child's bagatelle game. A pingpong ball is dropped into one of the two holes at the top and it falls down past a series of nails nailed into the back board and it gives 'a kind of tinkling music'. The nails are all the same size but not all driven the same depth. The ball falls into either one of the five divisions at the bottom (which contain objects of various kinds) or it falls out of a hole in the side.
9 The 'Towards Events' show at the Reuben Gallery, New York City, held between 16 October and 5 November 1959, was Brecht's first professional show. It was subtitled 'an arrangement'. Brecht told me he used this word in the sense 'of a musical arrangement, and also in the sense that things are arranged rather than made. The poster for the show was also made in a musical way. That is, you had the text running over most of the left hand side, and down the right hand side you had a time notation, so that each line of the poster was to be read over a certain period of time.'
The solitaire game consisted of a special deck of solitaire cards made for playing a special game of solitaire. There was a table in the gallery on which there was a grey velvet cloth, and people would sit down and play. The rules had been adapted from an existing solitaire game 'so that the way you played it you either won the first time or you kept circling, you never ended.'
10 At the 'Strategy/Get Arts' exhibition in Edinburgh in 1970, the contribution of Robert Filliou (Brecht's 'partner' at the 'Cedille qui sourit' at Villefranche-sur-Mer) consisted of what seems to be a participation art version of this psychological test. Those who wanted to 'play' were given blocks, glue and a small wooden board, asked to inscribe the blocks with such words as 'family', 'money', etc, and to glue them on the board with what you considered to be the most important at the centre and the others in some sort of positional relationship. (Some, like me, dropped the blocks from a height and glued them where they happened to fall).
11 ***Motor Vehicle Sundown (Event)*** was Brecht's first (1960), most public and most Cageian event, in that there is no single focus as there is in the later 'monostructural' (George Maciunas' word) events. The score consists of sets of instructions for performance in and on any number of motor vehicles assembled outdoors. Brecht has written that the later events became 'very private, like little enlightenments I wanted to communicate to my friends who would know what to do with them, unlike ***Motor Vehicle Sundown,*** which had more the quality of an elaborate public performance'. Happening & Fluxus catalogue, Cologne, 1970).
12 It was not the realisation of the ***Concert for Clarinet, 1962*** that, in fact, used boats, but the Fluxversion II of the ***Symphony No.3, 1964*** whose text runs: 'at three/from the tree/all night/at home/on the floor/the yellow ball/in the water.' Maciunas' version ('in the water') runs: 'Equal number of wind instrument players seaf themselves opposite each other. A large pan with water is placed between the two groups and a toy sail boat is placed on the water. Performers blow their wind instruments, preferably playing a popular tune, towards the sail of the sail boat pushing it to the opposing group which tried to blow it away from themselves. Piece ends when boat reaches edge of pan.'
13 About gags and art, Maciunas wrote: 'Fluxus art-amusement is the rear-guard without any pretension or urge to participate in the competition of "one-upmanship" with the avant-garde. It strives for the monostructural and non-theatrical qualities of the simple natural-event, a game or a gag. It is the fusion of Spike Jones, Vaudeville, gag, children's games and Duchamp. (Happening & Fluxus catalogue). (Brecht has a particular fondness for the music of Spike Jones and his band).
14 Of Brecht's concept of 'borderline' art: 'Sounds barely heard; sights barely distinguished — borderline art. See which way it goes (it should be possible to miss it completely).'
15 A reference to Maciunas' ***Carpenter's Piano Piece*** in which the performer nails down each key of the entire key board starting with the lowest note and ending with the highest.
16 As regards interpretation (or rather mis-interpretation), I read Brecht a review of his New York show in ***Artforum*** (Feb. 1974) which seemed to want to turn his work into something it wasn't. The reviewer referred to the ***Clothes Tree*** which had three bowler hats hanging on it, and said that the bowler hat linked Brecht 'with the age of Magritte, and in that it stands as a link with the art — or anti-art — of the pre-American dominated avant-garde.' Brecht replied: 'The bowler hat sends people off. That's a misunderstanding because it was really through chance that there were so many bowler hats in the Onnasch show. The ***Clothes Tree*** originally had three different kinds of hats — the second version had one bowler hat but also a deerslayer and a chauffeur's hat. But these disappeared in the meantime, and for the Onnasch show people put other hats on, bowler hats. So it turned out very Magrittian; but the piece has nothing to do with that — it can be any hats. I don't have anything particular about bowler hats, they're not symbolic or anything — they don't mean Wall Street or Charlie Chaplin. The bowler hats are an exception, not the rule. If you looked at a lot of my boxes, you practically never find two similar things. Sometimes you find very common objects like combs more than once, but most of the time they're just things that turn up. Common things by definition turn up more often than uncommon things.'
17 La Monte Young's ***Piano Piece for David Tudor No. 1*** (October 1960): 'Bring a bale of hay and a bucket of water onto the stage for the piano to eat and drink. The performer may then feed the piano or leave it to eat by itself. If the former, the piece is over after the piano has been fed. If the latter, it is over after the piano eats or decides not to.'
18 Brecht was invited to do the signed and limited edition by the Paris gallery owner Daniel Templon and Ben Vautier.
19 'In the Spring of 1960, standing in the woods in East Brunswick, New Jersey, where I lived at the time, waiting for my wife to come from the house, standing behind my English Ford station wagon, the motor running and the left-turn signal blinking, it occurred to me that a wholly "event" piece could be drawn from the situation. Three months later the first piece explicitly titled an "event" was finished, the ***Motor Vehicle Sundown (Event).'*** (Happening & Fluxus catalogue).

When I asked Brecht to provide a note on his 'musical background' for the 'Volo Solo' programme book, he responded 'less evasively than is my natural style' and recounted the following story that his father had told him of his experiences in the Metropolitan Opera Orchestra: 'There is the story of the soprano who was bugging everybody with temper tantrums during rehearsal. At a certain point the orchestra crashed onto a major seventh and there was silence for the soprano and flute cadenza. Nothing happened. The soprano looked down into the orchestra pit and saw that my father had completelv taken apart his flute, down to the last screw. (I used this idea in my 1962 *Flute Solo.)'*

20 The first page of the score of the *Second String Quartet* contains the inscription 'S(tring) Q(uartet) for four men who converse, discuss, dispute, fight, shake hands, are silent and then go up the mountain to contemplate the firmament.' (I was only able to find this translated into French, so my translation back into English may not be exactly the same as the original).

21 Heitor Villa-Lobos was born in Rio on 5 March 1887. His enormous output includes nine compositions entitled *Bachianas Brasileiras,* written between 1930 and 1945, of which the best-known is *No.5,* subtitled 'Aria, Dansa' for soprano and orchestra of cellos.

22 See example. When I asked Brecht why he had written that play for Cornell, he replied: 'I don't know. It seemed to come into his world somehow, the atmosphere of his world'. He sees a connection between his boxes and Cornell's 'but it's very remote. There is so much nostalgia in his work and I have a horror of nostalgia.'

23 The first version of Young's *Poem for Chairs, Tables and Benches, Etc., or Other Sound Sources* (1960) involved dragging, pushing, pulling or scraping these sound sources over the floor according to timings worked out by consulting a random number table or telephone directory. Once a decision has been made as to what size units are to be used to measure the available time — a quarter of a second, hours, days, years — random digits determine the duration of the performance, the number of events, their individual length, the point at which they are to begin and end, and the assignment of each sound source to the selected durations.

24 Probably on Mayday 1962 (at least this is the first mention of *Poem* in the Chronology in the Happening & Fluxus catalogue).

25 'Pop Art Redefined', arranged by John Russell and Suzi Gablik, July-August 1969, included Brecht's *Silence* (1966) *No Smoking* (1966) and two realisations of earlier event scores — *Chair Event* and *Clothes Tree.*

26 Brecht performed *The Chemistry of Music* at the Drury Lane Arts Lab, London, in 1969.

27 Walter de Maria is best-known, in the experimental music world at least, from his contributions to the first edition of *An Anthology of Chance Operations, Concept Art, Anti-art, Indeterminacy, Improvisation, Meaningless Work, Natural Disasters, Plans of Actions, Stories, Diagrams, Music, Poetry, Essays, Dance Compositions and Mathematical Compositions,* edited by La Monte Young and Jackson Mac Low in 1963. (A second edition was published by Heiner Friedrich, Munich in 1970 — for Gavin Bryars' shrewd review of the second edition see *Art and Artists,* October 1972). The second edition includes De Maria's *Art Yard* (1960), the important *Meaningless Work. On the importance of Natural Disasters, Beach Crawl, Piece 1 for Terry Riley, Boxes for Meaningless Work, Surprise Box* (all from 1960) and the 1961 piece *Column with a Ball on Top* ('I have built a box eight feet high. On top place a small gold ball. Of course no one will be able to see the ball sitting way up there on the box. I will just know it is there').

De Maria was, according to Brecht, never part of Fluxus. (It is mistaken to consider *An Anthology* as part of, or representative of, Fluxus). According to Brecht, de Maria was 'a great drummer, very very subtle', and used to play drums with the Velvet Underground rock group. Brecht said that he thought La Monte and Jackson Mac Low 'wanted to put out a book to reflect what was happening at the time and so they asked various people to contribute. So there's no real direct connection between Fluxus and *An Anthology* except that Maciunas did the layout and also collected pieces at the same time.'

28 From 1950 to 1965, when he left America for Europe, Brecht worked as a research chemist. He dates his professional career as an artist from his 'Towards Events' show in 1959, so his two professions overlapped for about six years, even though he had been a practising artist since the early 1950s. He has recently begun growing crystals in his Cologne flat — a continuation of his interest both in chemistry and the 'intermedia between science and art', between object and process.

29 The interview was recorded before the spate of volcanic eruptions during the late summer of 1976.

30 A reference to Bryars' *The Sinking of the Titanic.*

31 Brecht replaced the original three 'images' on the fruit machine with a 3/4 time signature, the *sforzando* indication and a bass clef. Fruit machine and Mount Fuji pieces illustrated in *Art and Artists,* October 1972.

32 *Chance-Imagery* was published as a Great Bear Pamphlet by the Something Else Press in 1966.

33 Apart from Brecht the participants at the New School class included Allan Kaprow, Dick Higgins, Florence Tarlow, Jackson Mac Low, Al Hansen, Scott Hyde and Richard Maxfield. Others just visited: Harvey Gross, George Segal and Larry Poons.

34 Paradoxically, for someone who doesn't know or mind what has happened to most of his art works, Brecht has preserved all his notebooks, certainly as far back as 1958.

35 In *A Primer of Happenings & Time/Space Art,* Something Else Press, New York, 1965.

36 *Eg, Motor Vehicle Sundown (Event)* (1960): 'counting out (at an agreed-upon rate) a pre-arranged duration.' *Spanish Card Piece for Objects* (1959-60): 'the number of five-second intervals within which that number of sounds is to be freely arranged'. *Card-Piece for Voice* (1959): 'duration of sound, approximately in seconds.'

37 See note 15 in Tom Phillips interview in this issue.

38 Young's *Composition 1960 No.10 to Bob Morris,* 'Draw a straight line and follow it' was, in accordance with its own instruction, 're-composed' in an unchanged form 29 times in 1969, each time with a different date.

39 April-May 1964. Was this the concert where 'Paik suddenly leaped down to where Cage was sitting, removed Cage's jacket and slashed his shirt with a wickedly long pair of scissors, cut off his necktie at the knot, poured a bottle of shampoo over his head, and then rushed out of the room' (Calvin Tomkins, *Ahead of the Game,* 1965)? And was John Cage the psychiatrist?

40 In a letter to me (18 June 1976) Brecht wrote: 'Nam June Paik and Joe Jones came straight out of musical backgrounds. Later, too, Phil Corner. I think, too Chieko (now Mieko) Shiomi, naturally Takehisa Kosugi, and Toshi Ichiyanagi. In any case the situation was such that your question whether what occurred was more musical or more performance was simply not the question (nor was there any other — they simply occurred).'

42 'Outside Fluxus, in the hands of a David Tudor (the first person I saw perform *Incidental Music* in the *Water Yam)* or a John Tilbury, and in relation to such period phenomena as James Dean in *Rebel Without a Cause* (from which I cannot disentangle the *Motor Vehicle Sundown (Event)* in the box), the *Water Yam* begins to reveal its real function: a course of study, and following on that, a teaching instrument.' (Cardew in 'Volo Solo' programme, note to Brecht concert at the Royal Court Theatre, London, on 22 November 1970).

43 I was not referring, of course, to those pieces that were composed specifically *for* audience, such as La Monte Young's *Composition 1960 No.3:* 'Announce to the audience when the piece will begin and end if there is a limit on duration. It may be of any duration. Then announce that everyone may do whatever he wishes for the duration of the composition.'

44 *'Compartmented structure* is based on the arrangement and contiguity of theatrical units that are completely self-contained and hermetic. No information is passed from one discrete theatrical unit — or "compartment" — to another...Events are short, uncomplicated theatre pieces with the same alogical qualities as details of Happenings. For example, George Brecht places three glasses on the floor of his "playing area" and then fills them with water from a pitcher: it is his *Three Aqueous Events.* An event is not compartmented. Formally, if not expressively, it is equivalent to a single compartment of a Happening.'*(Happenings, An Illustrated Anthology,* written and edited by Michael Kirby, Dutton paperback, 1966, pp.13 and 21).

45 Interestingly enough some early Brecht performances were done in the context of primarily Happening performances. *Eg* 'An Evening of Sound Theatre — Happenings' at the Reuben Gallery on 11 June 1960 comprised Jim Dine's *Vaudeville Act* (happening), Allan Kaprow's *Intermission Piece* (happening), Robert Whitman's *E.G.* (an opera), Brecht's *Gossoon (*a chamber event) and electronic music by Richard Maxfield. And the 'Environments, Situations, Spaces' at the Martha Jackson Gallery between 25 May to 23 June 1961 consisted of Brecht's *Iced Dice* (event), Dine's *Spring Cabinet* (environment), Kaprow's *Yard* (environment), Oldenburg's *The Store* (environment), Whitman's *Untitled* (environment) and W. Gaudnek's *Unlimited Dimensions* (event). (The bracketed descriptions are taken from the Happenings & Fluxus catalogue and so are presumably authentic).

46 'Much of the best work being produced today seems to fall between media.' (Dick Higgins, in the best survey of Intermedia in his essay of that title in *foew&ombwhnw,* Something Else Press, 1969). Since he has recently taken up the academic study of English literature, Higgins has discovered that the term intermedia was first used by Coleridge: 'This term was first used by Samuel Taylor Coleridge about 1812 and re-applied in 1965 by Dick Higgins to describe art works being produced which lie conceptually between two or more established media or traditional art disciplines.' Higgins, *Some Poetry Intermedia,* Poster 1976.

47 Brecht found that this comment is less relevant to Young's newer work, which 'enters more into traditional Indian music.'

RECORD AS ARTWORK

Germano Celant

In the art of the 1960s the record took its place alongside communications media such as video, the telegram, the photograph, the book and the film as a tool in achieving the objectivity which artists, leaving behind the expressionistic climate of the 1950s, seemed to be seeking. In line with the reductive theories of the period the record contributes to the isolation of one component of art work, sound, while on the other hand it enriches the array of linguistic tools available for the task of exploding the specifically visual and pushing back the limits of the art process. The record thus extends and enhances the precepts of art. It can serve to expand a work acoustically and at the same time contribute to the quantitative diffusion of art.

By focusing on linguistic uses, the record helps to 'document' the sound aspect of art work. Its significance is therefore as part of artistic research: it can amplify the written analytico-conceptual investigation and the actions of body research, or it can be used as an acoustic element to integrate with visual content. Lastly, it can be seen in its banal function of recording musical sounds or as a self-signifying object. As a form of aurally-written page to be perceived through the phonograph, the record is able to amplify writing or reading. As the mechanical extension of the written or spoken word it can release written research from the immobility and passivity of the printed page and restore to communication those qualities of spoken language which printing removes.

Detailed studies by Totino and Belloli show that this restoration of the acoustic effect of speech began at the end of the 19th century when Morgenstern and Scheerbart produced a series of phonetic poems which attempted to restore the sound content of speech. In 1897 Scheerbart published in Berlin a phonopoem consisting solely of 'kikakoku' sounds, while in 1905 Morgenstern documented his interest in the phonovisual aspect of speech by publishing *Galgenlieder,* the verses of which are shown only by metric and phonetic signs. The urge to rediscover an acoustic element in writing was subsequently developed at the start of the new century by the Italian and Russian Futurists.

Having launched in 1913 the manifesto of the 'word for its own sake' with Kruchenikh, Burlyuk, Kamenskii and Mayakovsky, Khlebnikov announced the birth of *zaum* language, in which words became merely sounds. Khlebnikov dissected speech into its phonetic elements and played on the phonovisual structures of the verse, splitting words into phonetic particles to produce a stuttered sequence of sounds. Other Cubo-Futurists were also active. Kruchenikh invented words from nothing, forming a hotch-potch of arbitrary interlinks, using guttural monosyllables which recall the gurgling of babies and the gibberish of sects and cabals, while Zhdavench composed a number of phonoplays in which personages were characterized by different phonetic scales.

The search for the accidental in sound, and the frequent changing of phonetics, formed a strategy shared by the Italian Futurists. All their poetry aimed at rendering more acute the sound substance of language. They were fond of using consonants and truncated vowels to produce chains of clashes and series of verbal fractures. Like the Russian Futurists, artists such as Marinetti, Patronio, Masnata, Buzzi and Cangiullo produced interruptions in the acoustic fabric and grating combinations of vowel sounds. They exasperated the hearing and strained the larynx. With the added influence of Luigi Russolo's theories of sound ('Art of Noise', 1913), which argued that the voice is a musical instrument, the Italian Futurists always gave exaggerated stress to the phonetic complexion of their works. They believed that verbal pronunciation is determined by emotional choice and that aural translation modifies the expressive force of speech, and they sought 'dynamic declamation' (1916) in poetry in order to underline more clearly biological, as opposed to mental, vibrations. This psychophysical charge was evident in their performances, where poems became theatre pieces to accompany body movements.

In 1915 Artur Petronio produced phonetic poetry, while in 1933 Marinetti and Masnata published the 'Radia' manifesto in which they proposed acoustic solutions to the art world: 'reception, amplification and transfiguration of vibrations emitted by living and dead wordless noise dramas of the mind. Reception, amplification and transfiguration of vibrations emitted by materials...'. In that same year, on 24 November, Depero and Marinetti made the first phonetic art broadcast on Radio Milan. Unhappily, all that remains of this phonic work is a late recording in Marinetti's voice of *La Battaglia di Adrianopoli* (1926) produced by *La Voce del Padrone* in Milan.

In Dada poetry the restoration of pure phoneticism was undertaken by Ball, Huelsenbeck, Hausmann and Schwitters. They mainly used pure relationships and contrasts of units of syllables and consonants. In their poems, of which records fortunately survive, there reappear some of the expedients of alliteration and constant repetition for acoustic effect which were dear to the Futurists, but which were used here with no semantic value. In 1918 Raoul Hausmann published

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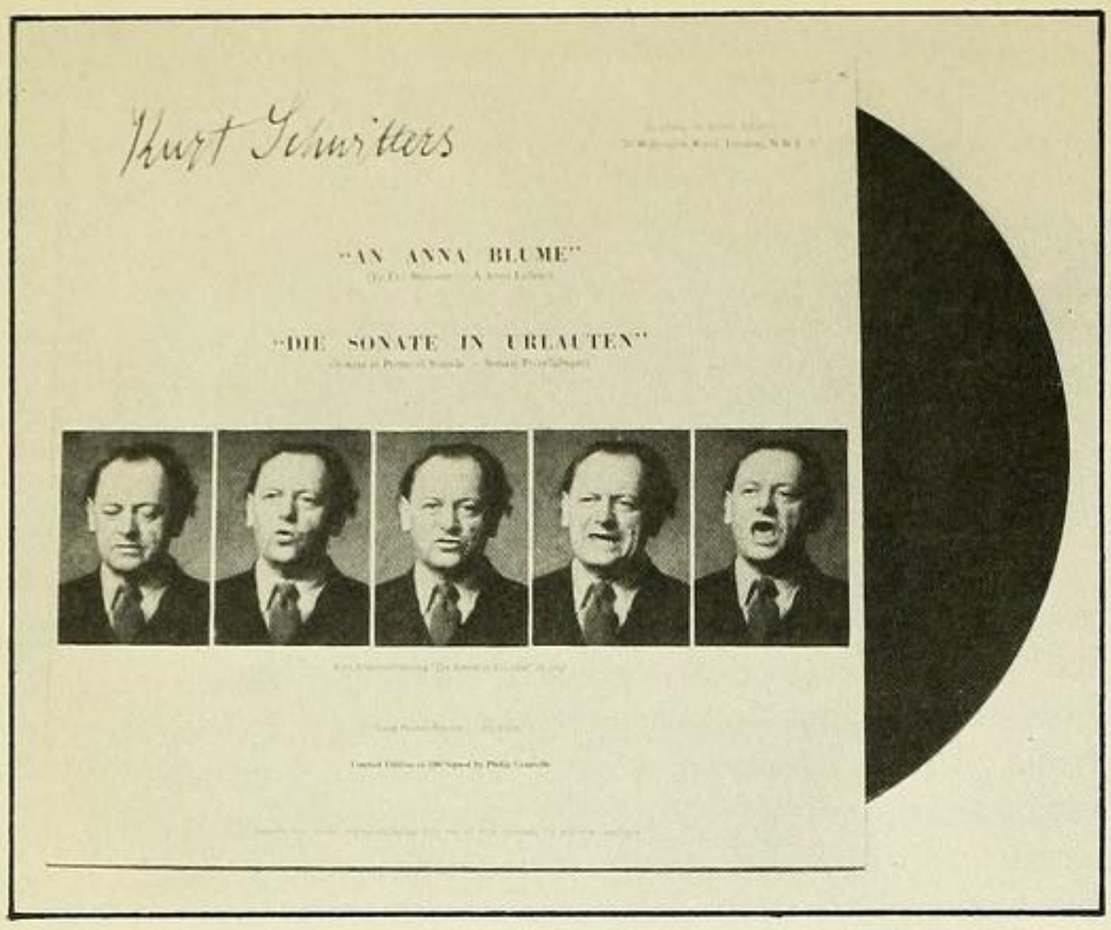
Raoul Hausmann *Poèmes Phonétiques 1919 - 1943* in *OU,* 25 - 26, Paris, 1966, 45 RPM



Kurt Schwitters *An Anna Blume — Die Sonate in Urlauten, 1919-1932,* Lords Gallery, London, 1958, 33 RPM.

in van Doesburg's magazine *Mecano* and in *Der Dada,* prior to recording, his *bbbb et fmsbw, k'perioum* and *offeah,* monosyllabic and consonantal poems made up of invented sounds. The fundamental value is that of the voice, 'an organ which represents,' writes Ball, 'the soul, the individual embarked on an odyssey among demoniacal companions. Noises form the background, the inarticulate, the fatal, the decisive. The poem attempts to show the disappearance of man in the mechanical process. In a typical finale it shows the conflict of the *vox humana,* which the world threatens, uses and destroys.'

Huelsenbeck also ventured into phonetic poetry. In 1916 he read one of his poems at the Cabaret Voltaire with Tzara providing an accompaniment by beating on a kettle. His voice whistled, murmured and sang. Later, with Tzara and Janco, he delivered at the same Zurich club a long roll of vowels, accompanied by a series of noise imitations of shrieks, sirens and whispers. Absurdities of sound and vocal analogies are taken up by Kurt Schwitters in his *An Anna Blume* (1919), a declaration of love made during a *merz* evening at his home in Hanover and in his *Sonate in Urlauten* (1927) recited on the local Sud-Deutsche Rundfunk radio. This latter poem displays some analogies with a phonopoem by Hausmann, even though it is based on a process of improvisation which gives the poem its dynamism and causes it to change continually.

From the 1920s to the 1950s a series of cultural events spread phonetic research beyond art and poetry. In 1928, as a result of work by Jacobson, Trubetskoi and Karchevskii, 'Proposition 22' was published, announcing the birth of a new philological and semiological discipline: phonology, or the scientific study of the sounds produced by human speech. A series of poetic and artistic experiences immediately followed the lead given by science. In particular, analysis of signs was undertaken in the Bauhaus, where artists like Arp, Doesburg, Seuphor, Bryen and Kandinsky himself composed many phonovisual poems in the wake of abstract theory. Among the Futurists, Fortunato Depero proposed in *Libro Imbullonato* (Bolted Book) his 'Onomolingua, or abstract verbalization', in which he used the voice to reproduce the noise of motor cars or trains on the move, while at the same time Artur Petronio laid the theoretical foundation for 'verbophonie', a method of reciting which lets external noises mingle with spoken syllables and consonants.

With the advent of the tape recorder around 1950 research into sound was renewed. Diction and declamation, as well as sounds, could now be recorded not only in their natural state but also enhanced by technology. The use of reverberating sound and the mixing of a montage of different acoustic

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elements were introduced. At the same time the clash between mechanical and electronic tools became more acute. The traditional search, built on the wish to revive primitive man, to pronounce and shout inarticulate, amorphous words and based on principles akin to black magic, witchcraft and esoteric research, also re-emerged in the 1950s, coupled with materialisation ranging from action painting to *art brut.*

It is in the work of Dubuffet, the greatest exponent of *art brut,* that music, like painting, becomes a kind of *impasto* in sound, with clots of sound and formless vibration. Starting in 1960, Dubuffet produced six agglomerates of informal sounds. In a series of phonic-instrumental sessions he made experiments using saucepans, lengths of pipe, whistles, tympani, cymbals, violins and violas, alternating them with words and poems. The effect is brutal music in which the approximation of sounds forms an extremely concrete and sensual phonetic collage. In these 'musical experiences', which were later repeated with Asger Jorn in attempts at concrete music, Dubuffet produces an animal and visceral effect. The noises intersect commonplace sounds, producing an interplay vaguely recalling primitive music, but with a human accent. 'It is music which can express,' writes Dubuffet, 'a person's moods, the movements which animate him, together with the sounds, the envelope of sounds, the awareness of sounds which make up the familiar elements of our everyday life...Privately I call this kind of music "music which is made" as opposed to the other completely different kind which, with equal force, excites my thoughts and which inwardly I call "music which is listened to", meaning by this music which is completely outside ourselves and our inclinations, which is in no way human but is capable of making us hear (or imagine) the music which might be made by the elements themselves, untouched by human hand.'

One of the records, *La Fleur de Barbe,* contains a recording of the title poem read by Dubuffet. The piece is, however, interrupted and accompanied by a performance in several voices (still by Dubuffet), in which use is made of acoustic aids like glasses, whistles and frying pans. Another, *Humeur Incertaine,* has the metallic sound of hoeing, interspersed with mewing and vocalizations which vaguely recall human melodies, while in *L'Eau* the patter of rain on sheet metal is heard against the rising current of a river. The assertion of acoustic enhancement of the written word was still a concern of artists and poets working in the 1950s. A fundamental role in this movement towards translating speech from normal expression to recordings and records was played by the magazine *Cinquième Saison,* which from 1958 put out a series of records with works by Rotella, Heidsieck, Kriwet, Dufrene and Henry.

In 1962 the founder and editor of the magazine, Henri Chopin, produced a 'Vibrespace' record in which he collected the sound of his breathing distorted and transformed by acoustic superimposition. The idea of mechanisation of speech met with an immediate response from De Vree, Kriwet and Garnier, who began in 1962 to produce records and tapes in which sounds and words converge in audio poetry. The same magazine, which later took the name *OU,* also published the phonetic poems of Mimmo Rotella who wrote in the 'epistaltist manifesto' that 'the inclusion in epistaltist composition of "sound effects" taken from life corresponds to what polymaterial art is to sculpture and to what collage is to painting — epistaltic language means freeing all the words from their utilitarian values and turning them into tracer rockets aimed at the decrepit edifices of syntax and vocabulary...the human voice must not be limited to the monotony of articulate language — it is an inexhaustible source of natural musical instruments.' Simultaneously, in the climate of *nouveau réalisme,* Yves Klein published, in 1959, his lecture at the Sorbonne entitled 'l'Evolution de l'art et de l'architecture vers l'immateriel' and, with C. Wilp, produced *Concert of Vacuum,* a soundless record in which the sensation of the void is reinforced by musical silence.

The conceptions emerging from mass culture and in

Köpcke *Music while you work* 1958 - 1964, Edition René Block, Berlin, 33 RPM.

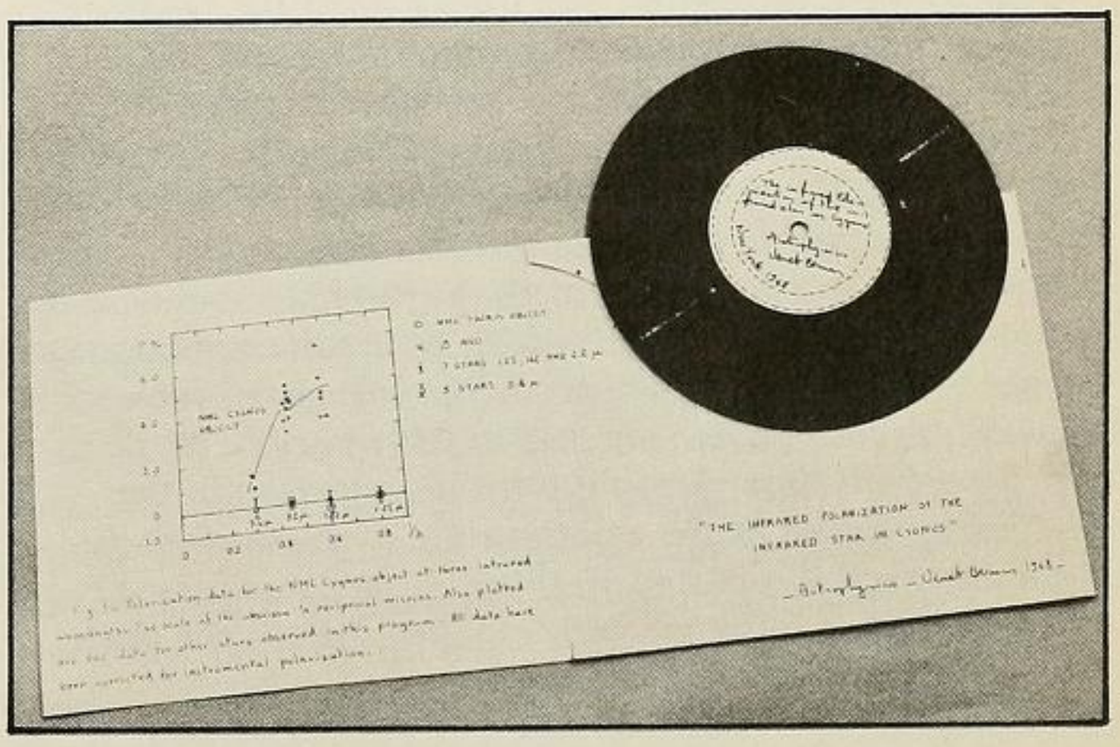
particular from the analysis of the consumer society have implications for art by reducing it to the level of consumer goods, which is why, in the 1960s, with Pop art and Fluxus, records developed into a common means of artistic communication. Artists like Ben and Warhol took up and produced commercial music, the former with demystification as his object, the latter with economic and musical aspirations. Warhol also started a group, the Velvet Underground, and with it ventured into the field of sound rock. In Pop art the record was even used as a document (*Giant Size $1.57*) while in Fluxus it assumed the function of disturbance: Köpcke made *Music while you work,* in which the grooved surface of the record is crossed by plastic drips which produce continual interruptions aimed at annoying the listener. The material damage accentuates one of the banal meanings of the record, variation in use. By damaging and cracking the record, Köpcke attempted to stress imperfection and disturbance as a sound. This means that it is possible to see it as a functional and material sign, so that the conclusion can go beyond material modification and play it at different speeds, as Ben does in a Fluxus publication when he offers the reader a record of May Casablanca singing *Mon dieu ne l'abondonnez pas,* a great popular success in France, to be played at 78 rpm instead of the required 45.

The equation of the record as a physical product with weight, substance, diameter, shape and thickness brings the linguistic medium back to the level of its function as an object: *Saffa* by Håins is a tautological record. The recording 'describes' it as an object made by an author, with a title and place in history. The way it is used is also determined by the simple recording, in which the record becomes a historic document of working statements and speeches. In this sense the record can provide either an account of the theories of artists, or of works resulting from their theories.

Examples of the first are *Giant Size $1.57* by Billy Kluver and *How to Make a Happening* by Allan Kaprow, 1964. Kaprow describes in the record, published by the Something Else Press, what a happening must *not* be, in order to produce a manifestation which is at the same time both free and organised, while *Giant Size* is a collection of statements, recorded live in studios and galleries, by the major exponents of American Pop art from Johns to Rauschenberg, from Wesselman to Oldenburg, from Dine to Lichtenstein. An extremely interesting instance of the second category is the recording of work dictated by telephone for the 'Art by Telephone' exhibition at the Chicago Museum in 1969. Following the precedent set in 1922 by Moholy-Nagy, who dictated over the telephone instructions for a picture in sheet metal and enamel, the curator of the exhibition, Jan van der Marck, collected the descriptions by telephone of the individual works to be executed in Chicago. The art work done in the absence, rather than the presence, of the artist does not turn out to be homogenous, as expected, but gives contrasting end-products. The record includes a request from Sol LeWitt for pencil drawings to be done on museum walls. Bruce Nauman telephones instructions to a member of the museum staff to perform a jump to be recorded on video, the jump to be repeated until the tape runs out. Morris and Serra both ask for films to be made, while Hamilton and Baldessari give instructions for the production of paintings. Arman asks for a quantity of different objects to be piled in a corner of the museum, and Ian Baxter of the N.E. Thing Co describes his intention to produce a work on information via cable by telephoning from time to time with a word for the guards to say out loud in response to requests from the public. A few artists like Kosuth, Lee Byars and Huot work on linguistic and phonetic manipulation of the show's title, and Kosuth in particular sets his investigation against his conceptual research into the 'art' context.

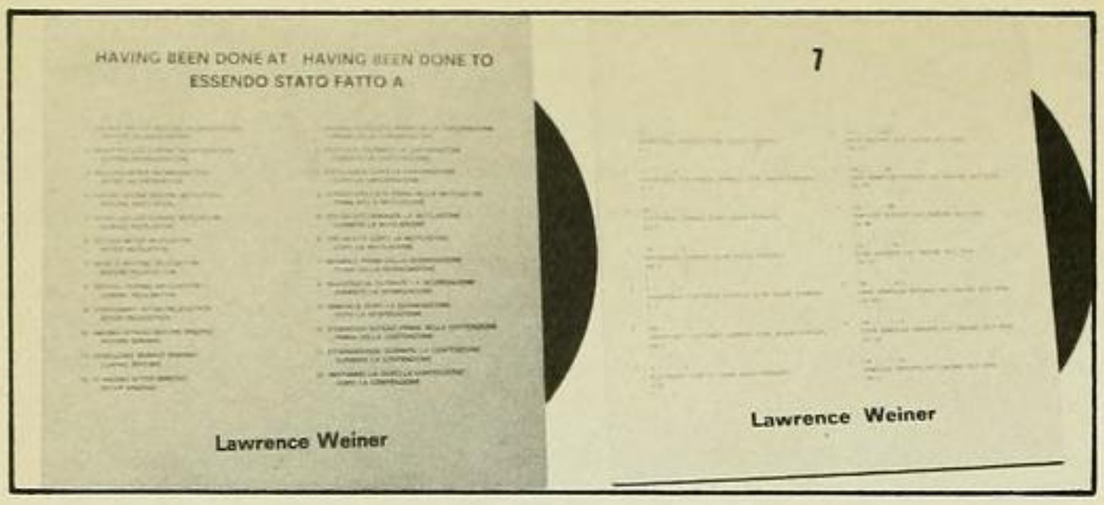
The infinite variety which characterizes the use of the record is documented by the fact that so many artistic movements have adopted it as a means of expression. Still in the 1960s two representatives of Op art, Shoeffer and Agam, used sound material to mark variations, in the same way as they had used permutations and changes in fields of light and colour. Agam's *Transformes musicales* consists, in fact, of a series of sound combinations of various musical instruments (flute and percussion). The sounds are structured like the French artist's optical work: first the sounds appear in their elementary states following their melodic lines, and then follow combinations of equal and varied entrances, so that in their various forms (1,2,3,4,5) they create a series of complexes in which other instruments like the bass violin, the clarinet, the piano and the trombone can intervene. The musical surface so formed is extremely articulate, with premeditated rounds and several variants of tone, becoming an almost audio-chromatic pattern. More literary and narrative in nature, however, is the 'phonic discourse' of Fahlström, who as early as 1961 was researching with the Swedish national radio; while Robert Whitman apparently attempted a description in sound of his performances when he produced a record for the Chicago Museum which includes recordings of street sounds, footsteps in his loft and the nocturnal sounds of animals.

From 1966 to 1968, with the advent of conceptual research, the record is used to 'objectify' processes of phonic and sound analysis relating to speech or, better, to language. The development of a methodical knowledge brings Venet to use, both visually and phonically, the mental process associated with analytical diagrams in mathematics, physics, economics and astronomy. Data and diagrams produced with detachment by separate sciences are transmitted through graphic representation or lectures. As Venet takes over a subject, all personal or individual contributions are excluded. The objectification of scientific diagrams or economic tables is achieved by photocopying, while recordings of lectures are enclosed in tapes or discs. Among these, as part of



Maria Grazia Chinese

Berner Venet *The infra-red polarization of the infra-red star in Cygnus* 1968, Letter Edged in Black Press, New York, 33 RPM.



Maria Grazia Chinese

Lawrence Weiner (Left) *Having Been Done At/Having Been Done To/ Essendo Stato Fatto A* 1973, Edizione Sperone-Fisher, Rome, 33 RPM. (Right) A( ) C *Sharpened Carried Done Again Perhaps...* AC( ) 1972, Yvon Lambert Editeur, Paris, 33 RPM.

his 'Astro-physics' research, there appeared in 1968 *The infra-red polarisation of the infra-red star in Cygnus, a* recording of observations made at the astrophysical laboratory of the University of Arizona.

More 'personal' use of the medium is made by Lawrence Weiner who, in 1972 and 1973, produced *A ( ) C Sharpened Carried Done Again Perhaps...AC( )* and *Having Been Done At/Having Been Done To/Essendo Stato Fatto A,* two recordings in which the reciting of permutations of vowels, adverbs, verbs and phrases mingle with the sound of a wind instrument. The records expand acoustically his research into verbal assonance between words taken from various languages or from a single language, and he adds the record to his research tools, which hitherto were based largely on the written word and the book (and more recently on the photograph and film).

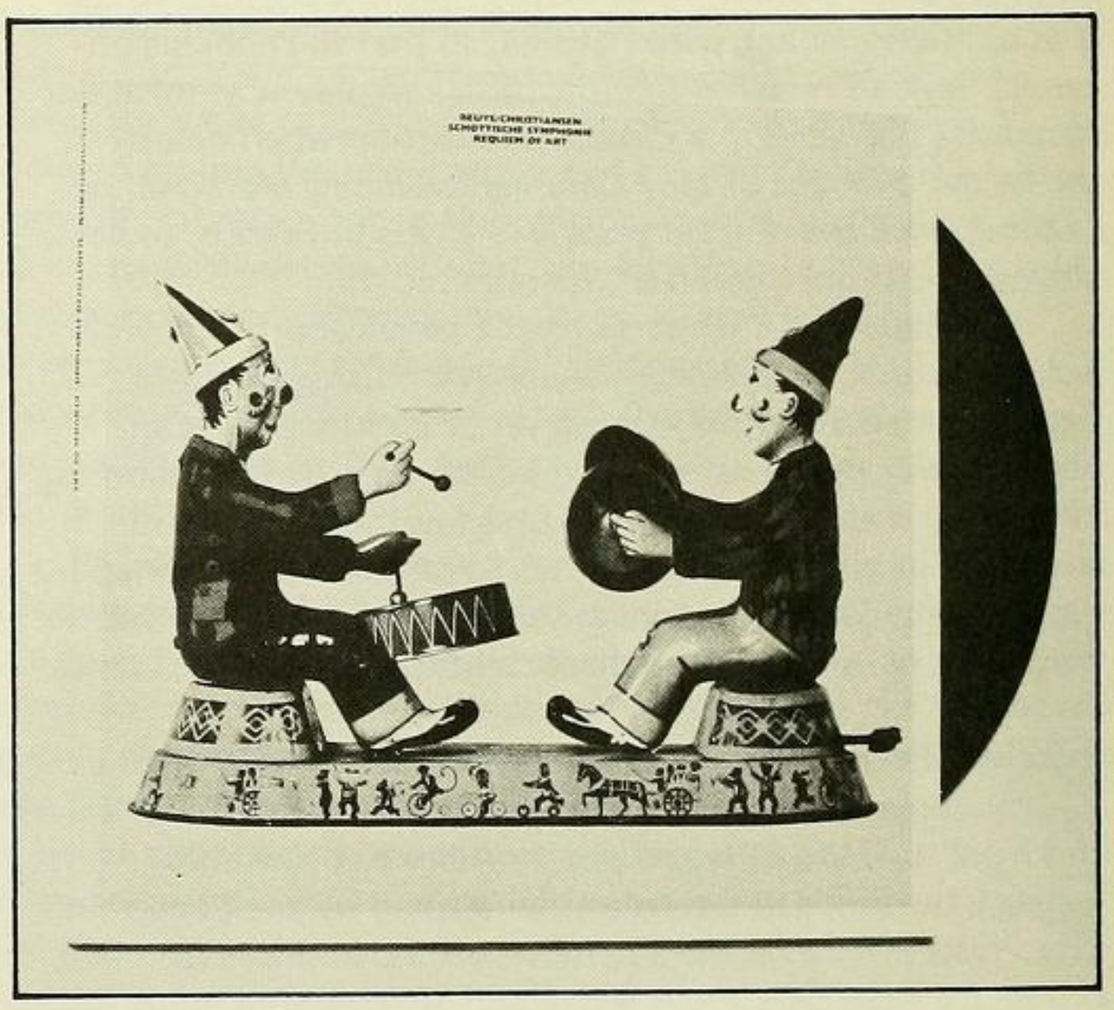
An analysis of the permutations of the phonetic components — the vowels and consonants — of a noun is undertaken by Sandro Chia. The word *pietra* is transformed as its syllables are permuted every two minutes: *etrapi, trapie, rapiet, apietr.* The intention is to begin to consider spoken language as an object which can be moulded and built into another, different object by altering its physical components, in this case the vowels and consonants. Analogous in this sense is the music research of Eliane Radiguez, who uses not words but sounds. The varying speed of her records, from 16 to 78 rpm, varies the aural possibilities of the music. The piece can also be combined by using both sides of the record together at different speeds, so that it is then heard as a single unit (a = b) at different speeds, or as the sum (a + b) of different units at different speeds. In music Meirelle and Snow do something similar by using electronic instruments to compose spatial and quantic music, a fact which may be linked to their respective interests in astronomy and film. In addition there are the lifeless concerts by Schnitzer and vocals by Engels, performances in sound with instruments invented by the individual artists.

Structural investigation into the sound of the syllabic components, phonetically divisible into infinite palatal, guttural and dental variations, has been carried out by Jacobsen's syllabic articulation experiments and taken up again in the 1970s by Notargiacomo in his variations of phonemes and words as, for example, *Variazioni del fonema /r/.* In this work he records the different sounds made by someone pronouncing the syllable 'r' in different languages (Italian, French, English, German). The analysis of spoken language, however, is documented in *Affermazioni,* a record in which Notargiacomo turns his attention to the variation produced by the emotive state of the speaker. A single statement is repeated 15 times by the same person, each time using a different 'tone'. Finally there is the poetic analysis of the sentence 'I like Ike' into 'ay/layk/ayk', where the scansion of accents and rhythms causes, to a predictable degree, different poetic meanings. The Czech artist Filko works in this way. His records contain different pronunciations and combinations of words like 'Futur', 'Cosmos', 'Atom'. The voice is the dominant feature and the changes in pronunciation or scansion form the object of his research.

By faithfully reproducing actual sounds or noises, the record extends the dimensions of aural writing and offers something closer to the physical and tactile experience which is lost when actions, performances or environmental productions are reported only in documents or visual recordings. The sensation that performers and events are sharing the same space as the listener is a step towards audio-tactile integration in art work.

The record directly 'touches' almost everyone, in that it presents a collection of noises and acoustic communications between the performer and the hearer which can recreate part of the psychophysical experience of the event itself. Thus immediately the art product is refined by the addition of the record, a sensorial, acoustic/aural component is re-achieved. In 1972 Marina Abramovic reproduced on record the sounds and noises of her physical environment, while De Maria combined the music made by the waves of the Pacific and Atlantic Oceans and, using drums, turned it into a crescendo.

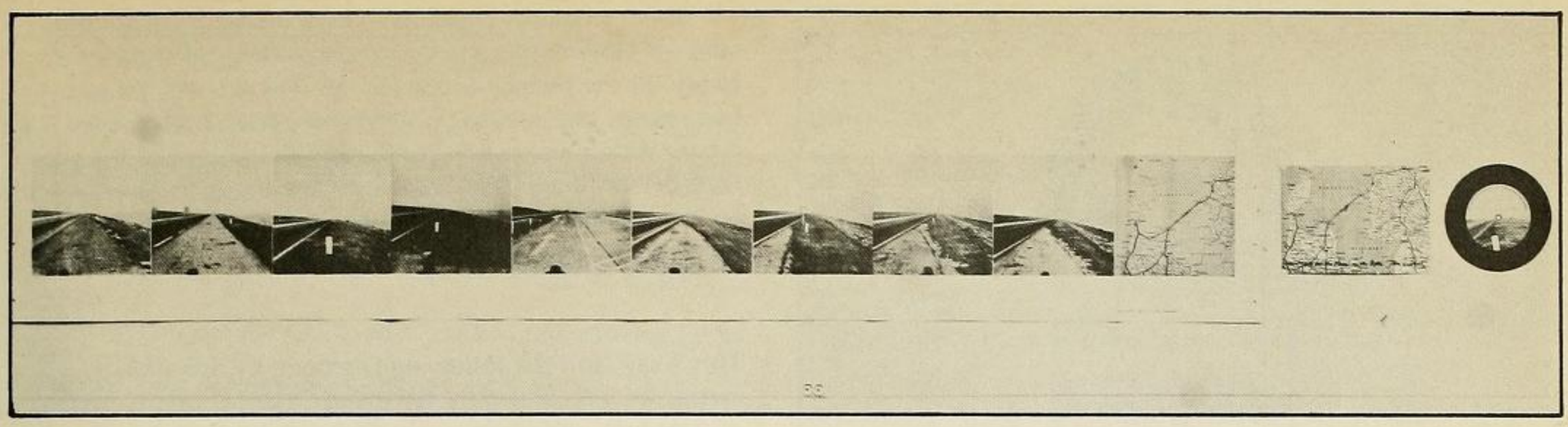
The idea of using the record to amplify a performance was used by the publisher Mazzotta when he produced an LP of Joseph Beuys's work for the show 'When Attitudes Become Form' at the Berne Kunsthalle. The result is *Ja Ja Ja Ne Ne Ne,* a record of the sing-song cadences, in various tones and styles, which accompanied the depositing of grease in the corners of the room or the setting-out of pieces of felt and objects like rope, tape recorders and shoes to form the soft and hard, organic and inorganic whole of Beuys' work. Isolating a component of a performance in no way means dismembering the work, but rather underlines the emphasis of the acoustic over the visual. For this reason records and tape are tools which Beuys uses systematically, both with Terry Fox and Henning Christiansen.



Maria Grazia Chinese

Beuys/Christiansen *Schottische Symphonie Requiem of Art* 1973, Edition Schellmann, Munich, 33 RPM.

Schottische Symphonie is a record produced by Christiansen and Beuys on the occasion of a joint production at Edinburgh College of Art in 1970. While Christiansen performs a series of musical passages on the piano, Beuys moves through the room with large paces, gradually organising his objects, blackboard, stick and grease. He describes aloud, and in diagrams on the floor and walls, his society based on the individual and a system of education centred on creativity. The other record documents the last 20 minutes of an hour-long event which Beuys and Terry Fox performed at the Düsseldorf Kunst Akademie in November



Publifoto

Jan Dibbets *Afsluitdijk* 1969, Museum Haus Lange, Krefeld, 33 RPM.

1970. On each side of the 45 rpm record there is a different sound. The first is of Fox striking two steel pipes of different lengths and widths. The noise of the pipes is aimed at a window frame containing four panes of glass. The vibrations of the beats are repeated by the echo of the glass, which reveals dead spots in acoustic vibration. When no sound is emitted a non-acoustic frequency is found and the glass breaks. Behind the window frame stands a lighted candle. When all four panels of glass are broken, the wooden frame is smashed and Fox tries to put out the flame by using the air movement produced by the vibration of the pipe. At this point Beuys starts to eat a pomegranite, spitting the pips, one by one, into a silver bowl. The record ends with these two sounds intersecting one another until the fruit is all gone.

Sarkis too uses the record as a physical recording of a series of actions: in *Une lettre à déchiffrer,* a stereo LP, he reproduces the sound made by the 13-minute writing of a letter to Turkey, while in *Le Chien aboyant courait derriére 'X'* he records the sound of a dog barking after a running man. Sarkis himself is the barking dog and the running man.

The Top Song by Murray is more musical. Here the Canadian artist collects 100 hit pop songs of the last ten years, playing ten seconds of each. On its two sides the record covers the most famous snatches of tunes from the Beatles' *Hey Jude* to *Windy Hill* by the Association, from *I Wanna Hold your Hand* by the Beatles to *Cherry Hill Park* by Billy Joe Royal. The record plays on the sound memories of its listeners, conditioned by the international hit parade, and on the way disc jockeys work. As one of them (D. Smith) says: 'When you have over 300 45's coming in a week, you don't have time to listen to them all, or even half of them. Generally a disc jockey will play about ten seconds, and he usually can tell if it is a good song or not.'

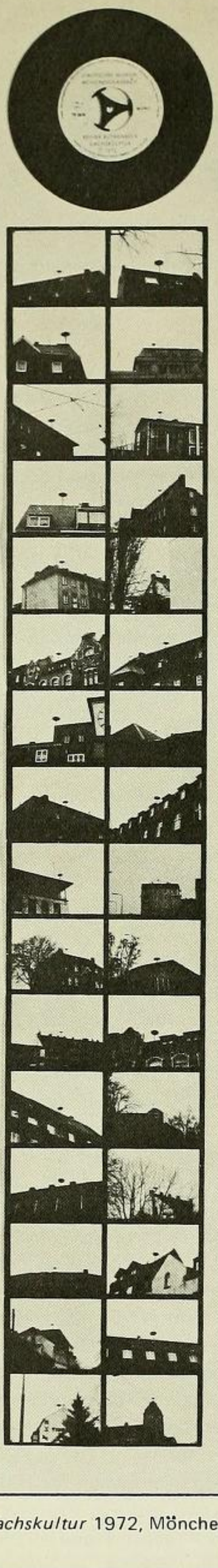
While Murray builds a historical archive of music, De Filippi takes a more anthropological interest in the restoration of primitive tribes, from the Hopi to the Celts. He undertakes a continual physical and cultural reassessment of the myths and customs of these peoples. Among these, the Narcissus myth has taken various concrete forms including a sound recording on disc. Here the representation of the myth comes from the echo made by De Filippi's voice at Passo di Bocca Tribaria on 5 January 1973, when he shouted the word echo itself four times every three minutes.

Antonio Dias and Robin McKenzie use the record as sound documentation of acoustic entities structured according to a conceptual scansion set out beforehand. *The Space Between,* an album published by Dias in an edition of 180 copies, is the recording of the intermittent, and then continuous, scansion of two sounds: an alarm clock and breathing. First the record has three seconds of sound followed by three seconds of silence, observing a pre-established pattern in order to stress the acoustic effect of the full and the empty, or sound and silence. In the second part attention is focused on the continuum of breathing with its natural drawing and expelling of breath, again positive and negative.

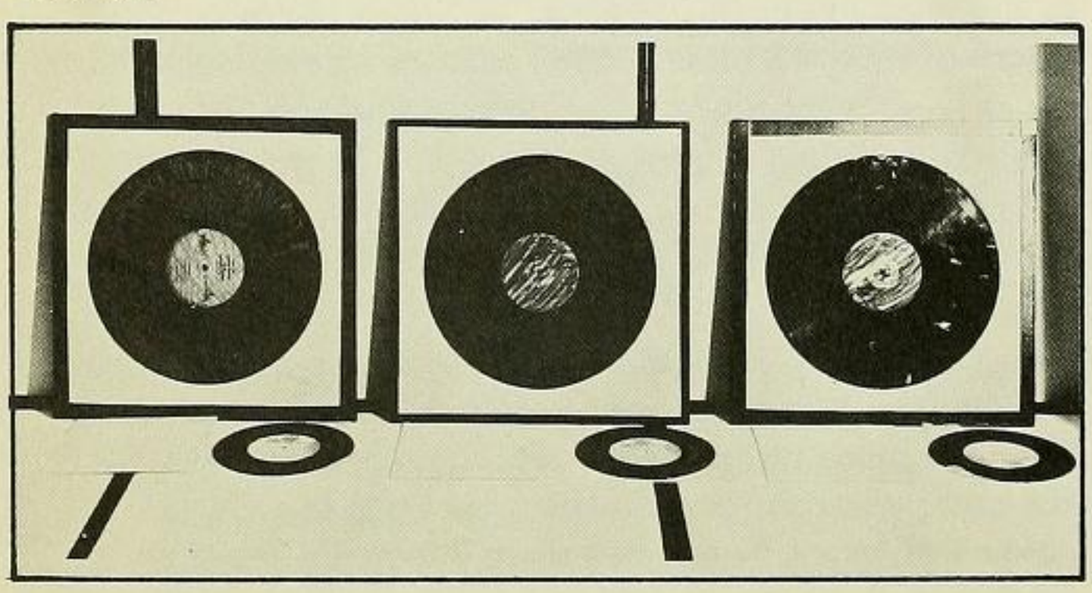
McKenzie used the record to complement a visual piece produced in a clearing in a Canadian plain. The photographic documentation which makes up the cover is accompanied by *A sound work to accompany:* the record documents in sound the effect of the wind. It is, in fact, a recording taken simultaneously with the photographs of the wind sweeping the bare earth. The wish to provide audio-visual documentation to correct perspective caused Dibbets to produce his *Afsluitdijk* record in 1969, recording the sound of a five-kilometre journey in a straight line along the causeway enclosing the Usselmeer in Holland, and joining Den Oever to Makkum, at a constant speed of 100 kph. Dibbets' record goes with a series of visual works set up along the road, works which formed the basis of his one-man show at the Krefeld Museum.

Of a more intimate and personal nature, like all his work, is Boltanski's record, a reconstruction in sound of the nursery songs he heard in childhood such as *Fais Dodo Cilas mon petit frère* or *Il était un petit navire.* Ruthenbeck's record *Dachskultur* has more physical sounds, collecting, with photographic documentation, the technological wailing of Düsseldorf factory-hooters. Their drawn-out blasts resound through the air to great acoustic effect, giving a tactile dimension to sound which, as a sculptor, Ruthenbeck sees as complementing his objects in rubber and steel.

These artists seem intent on integrating iconographic documentation with the sound of the image, but they fail to realize that the record itself has a presence as an image which is all its own. The image is one of the various tools which can be used in the codification of records. Theoretically, the record can follow on from its image, or vice versa. Both these processes, from negative to positive and back again, are reproduced in Sarkis's most recent records *The Drama of the Tempest* and *Pastel couleur no...sur l'Histoire sonore de la Guerre Mondiale.* This is how the artist describes them: *la Deuxième Guerre Mondiale.* This is how the artist describes them: 'I drew the grooves of the record on paper for 18 minutes, 35 seconds. Throughout this time a microphone recorded the sound of the work: that is, the sound of the pencil drawing on the paper (as well as the noise of my sharpening the pencil from time to time). When the pencil record had its grooves (its memory) down on the drawing paper, I had a record made of the tape recording to the same size as the drawing, 12 inches and lasting the same length of time, 18 min. 35 secs, with a single side and in a single copy. Even the word copy here is wrong since the record was linked directly to its subject, its memory, and so it can only be unique. *Pastel couleur no...sur l'Histoire sonore de la Deuxième Guerre Mondiale* consists of three records. In a shop I bought three records entitled *Histoire de la Deuxième Guerre Mondiale.* I took one of these records and drew on it in a camouflage-coloured pastel, recording the noise made by the pastel over the record grooves. On the other two records I did the same thing in different colours of camouflage. I had three 7-inch 45s made, in single copies, of the sound I had made. On the record a voice can be heard saying: "Pastel couleur no...sur l'Histoire de la Deuxième Guerre Mondiale, face I...et le bruit..."'



Reiner Ruthenbeck *Dachskultur* 1972, Mönchengladbach Museum, 45 RPM.



Sarkis *Pastel couleur no...sur l'histoire sonore de la 2e Guerre Mondiale* 1973, Paris, 3 records.

Sarkis's records build up a visual image of the record, whereas Dimitrijevic's is the practical result of drawing in pencil on the surface of the record. The grooves are not continuous but circular, which is why *His pencil's voice* is a record which makes no sound other than those of the tape recorder while the point runs over the paper. In this way the reversal becomes total and art becomes a concrete record.

(Translated by Brian Collinge)

This essay, and the following Discography, have been revised and expanded by Germano Celant from his *Record as Artwork,* published by the Royal College of Art, London, in 1973. Celant is now preparing a large show and radio transmission on records produced by artists. All artists who have produced a record not included in the Discography are invited to send a copy to Celant at: Salita Oregina 11, Genoa (Italy).

DISCOGRAPHY

- M. Duchamp, ***Some texts from 'A l'infinitif,' 1912-1920.,*** in ***Aspen*** magazine, 5, New York, Nov. 1967, 33 RPM.
  R. Huelsenbeck, ***Four Poems from 'Phantastiche Gebete 1916',*** in ***Aspen*** magazine 5, New York, Nov. 1967, 33 RPM.
- R. Hausmann, ***Poèmes Phonétiques 1919-1943,*** in ***OU,*** 25 - 26, Paris, 1966, 45 RPM.
  F.T. Marinetti, ***La Battaglia di Adrianopoli 1926,*** La Voce del Padrone, Milan.
  H. Nouveau, ***Quatrième trio pour violon et violoncelle, 1926-27,*** Paris, 15 copies, LP 33RPM.
- K. Schwitters, ***An Anna Blume-Die Sonate in Urlauten, 1919-1932,*** Lords Gallery, London, 1958, 100 copies, LP 33RPM.
  M. Rotella, ***Poemi fonetici,*** 1949-1975, Plura edizioni, Milano, 1,000 copies.
  N. Schöffer, ***Spatiodynamisme,*** 1954, Edition du Grifon, Neuchatel, LP 33 RPM.
- M. Duchamp, ***The creative act,*** 1957, in ***Aspen*** magazine, 5, New York, Nov. 1967.
  B. Heidsieck, ***Poème-Partition D2,*** 1958, ***OU,*** 3, Paris, 1958, 33 RPM.
  F. Dufrene, ***Crirythmes,*** 1958, in ***OU***, 23-24, Paris, 1965, LP 33 RPM.
- Y. Klein - C. Wilp, ***Concert of Vacuum,*** 1959, Sight Sound Production, London-Düsseldorf, LP 33 RPM.
- Y. Klein, ***Sorbonne,*** 1959, CNAC, Paris, LP 33 RPM.

- J. Dubuffet, ***La Fleur de Barbe,*** 1961, De Luca Editore, Roma, LP 33 RPM.
- J. Dubuffet, ***Esperienze Musicali,*** 1961, Edizioni del Cavallino, Venezia, LP 33 RPM, 6 records.
  B. Heidsieck, ***Poème Partition D3Z,*** 1961, in ***OU***, 3, Paris, 33 RPM.
- J. Dubuffet, ***Musique Phenomenale,*** 1961, Edizioni del Cavallino, Venezia, LP 33 RPM, 4 records.
- J. Dubuffet, ***La Fleur de Barbe,*** 1961, Intersonor, Paris, 1965, LP 33 RPM.
- O. Fahlström, ***Fylkingen and Sveriges,*** 1961, Stockholm.

  B. Heidsieck, ***Exorcisme,*** 1962, Vaga Group, Paris.
- Y. Agam, ***Transformes Musicales,*** 1962, Edition du Grifon, Neuchatel, 45 RPM.

- J. Dubuffet, ***Musical Experiences,*** 1963, Atlantic Recording, New York, 1973, LP 33 RPM.
  Ben, Casablanca, ***Mon Dieu ne l'abandonnez pas,*** 1962-3, 45 RPM (played 78).
  M. Rotella, ***Poèmes Phonétiques, 1943-1963,*** in ***OU***, 23-24, Paris, 1965, LP 33 RPM.
  K. Appel, ***Musique barbare,*** 1963, The World's Window Bearn, Holland, LP 33 RPM.
- ***Giant Size $1.57*** (Dine, Brecht, Johns, Lichtenstein, Wesley, Watts, Wesselman, Warhol, Oldenburg, Rosenquist, Rauschenberg) edited by B. Kluver, in 'Popular Image' exhibition, Washington Gallery of Modern Art, Ap/June 1963, LP 33 RPM.
- Tinguely, ***Sound of Sculpture,*** 1963, Minami Gallery, Tokyo, 45 RPM, 100 copies.
- B. Lacey, ***Morse Code Melody,*** 1963, Parlophone, London.

- Köpcke, ***Music while you work,*** 1958-1964, Edition René Block, Berlin, 33 RPM, 30 copies.

Dufrene, *Crirythme,* 1965, Achele, Paris, 45 RPM.
- B. Lacey, *Blaze Away,* 1965, Parlophone, London.

F. Dufrene, *Triptycrirythme,* 1966, in *OU,* 28-29, Paris, 1966, LP 33 RPM.
- A. Kaprow, *How to Make a Happening,* 1966, Something Else Press, New York, LP 33 RPM.

P. Henry, Spacanga, *Messe de Liverpool,* 1967, Philips, LP 33 RPM.
- A. Warhol, *Wedding of Lucy,* 1967, Velvet Underground, New York, LP 33 RPM.

F. Dufrene, *Crirythme dedié à Chopin,* 1967, in *OU*, 33, Paris, LP 33 RPM.
F. Dufrene, *Haut Satur Crirythme,* 1967, in *OU*, 34-35, Paris, LP 33 RPM.
P. Henry - F. Dufrene, *La noire à soixante + Granulométrie,* 1967, in *OU*, 36-37, Paris, LP 33 RPM.
P. Henry - F. Dufrene, *Fragments pour Artaud,* 1967, Phillips, LP 33 RPM.

Fogliati - Totino, *11 liquimofono-Poesia Liquida,* Scheiwiller, Milano, 1968.
- B. Venet, *The infra-red polarization of the infra-red star in Cygnus,* 1968, Letter Edged in Black Press, New York, 33 RPM.
- R. Whitman, *Sound for 4 Cinema Pieces,* 1968, Museum of Contemporary Art, Chicago, 45 RPM.

- W. de Maria, *Two Oceans,* 1969, New York.
- *Art by Telephone,* (Arman, Armajani, Lee Byars, Cumming, Dallegret, Dibbets, Giorno, Grosvenor, Haacke, Hamilton, Huot, Higgins, Hompson, Jacquet, Kienholz, Kosuth, Levine, LeWitt, Morris, Nauman, Oldenburg, Serra, Oppenheim, Smithson, Uecker, Van Der Beek, Venet, Viner, Vostell, Wegman, Wiley) 1969, Museum of Contemporary Art, Chicago, LP 33 RPM.

- J. Dibbets, *Afsluitdijk,* 1969, Museum Haus Lange, Krefeld, 33 RPM.
T. Bruynel, *Signs,* 1969, Stedelijk Museum, Amsterdam, LP 33 RPM.

- J. Beuys, *Ja Ja Ja Ne Ne Ne,* 1970, Mazzotta editore, Milano, LP 33 RPM, 500 copies.
H. Paris, *Untitled,* 1970, Oakland (California).
- T. Fox - J. Beuys, *Performance,* 1970, KunstAkademie, Düsseldorf, 45 RPM.
- Artschwager, *Hedendaagse Kunst,* 1970, Sonsbeek 71, 45 RPM.
AHAHAHA8, (Gils, Nannucci, De Vree, Doesburg) Verbosonic, Amsterdam, 1970.

P. Struycken, *Image and sound programme,* 1970/71, Stedelijk Museum, Amsterdam, 33 RPM.
S. Filko, *Atom,* 1970-71, Bratislava, LP 33 RPM.
S. Filko, *9 - 1,* 1970-71, Bratislava, LP 33 RPM.
T. Bruynel, *Sound Block,* 1971, Stedelijk Museum, Amsterdam, 33 RPM.
D. Rajjmakers, *Ideofon 11,* 1971, Stedelijk Museum, Amsterdam, 33 RPM.
S. Filko, *Futur,* 1971, Bratislava, LP 33 RPM.
R. Hains, *Disque Bleu pour Saffa,* 1971, Galleria Blu, Milano, 45 RPM.
C. Meirelles, *Mebs,* 1971, Rio de Janeiro.
- Sarkis, *Une lettre à déchiffrer,* 1971, Düsseldorf, 33 RPM
- Sarkis, *Le chein aboyant courait derrière 'X',* 1971, Düsseldorf, 33 RPM.

M. Abramovic, *Sound Environment Sea,* 1972, Belgrade, 45 RPM.
R. Ruthenbeck, *Dachskultur,* 1972, Mönchengladbach Museum, 45 RPM.
- J. Depuy, *Aero-Air,* 1972, New York, 16 RPM.
- J. Dine - Mc Even, *Songs, poems,* 1972, Museum of Modern Art, New York, LP 33 RPM.
K. Schnitzer, *Meditation,* 1972, Edition René Block, Berlin, LP 33 RPM. 33 RPM.
P. Engels, *Fabulous Oldest Hits,* 1972, Engels Third Institute, Amsterdam, 45 RPM.
A. Dias, *The space between,* 1972, New York-Milan, LP 33 RPM.
R. Mckenzie, *A sound work to accompany,* 1972, Carmen La Manna gallery, Toronto, LP 33 RPM.
V. Adami - H. Martin, *Concerto per un quadro di Adami,* 1972, Studio Marconi, Milano, LP 33 RPM.
- C. Boltanski, *Reconstruction de chansons qui ont eté chantées a Christian Boltanski 1944-1946,* 1972, Paris, 45 RPM.
- L. Weiner, *A ( ) C Sharpened Carried Done Again Perhaps...AC( ),* 1972, Yvon Lambert Editeur, Paris, LP 33 RPM.

K. Schnitzer, *Jupiter,* 1973, Edition René Block, Berlin, LP 33 RPM.
- L. Weiner, *Having Been Done At / Having Been Done To / Essendo Stato Fatto A,* 1973, Edizioni Sperone-Fisher, Roma, LP 33 RPM.
- J. Murray, *The top song,* 1973, Nova Scotia, LP 33 RPM.
F. De Filippi, *Narciso,* 1973, Roma, 33 RPM.
Roth, Ruhm, Wilger, *3 Berliner Dichterworkshop,* 1973, Edition Hansjörg Mayer, London-Stuttgart, LP 33 RPM, 1000 copies.
S. Chia, *Pietra,* 1973, Roma, LP 33 RPM.
- Sarkis, *The Drama of the Tempest,* 1973, Paris
G. Notargiacomo, *Variazioni sul fonema 'p',* 1973, Roma, 33 RPM.
- Sarkis, *Pastel couleur no...sur l'Histoire sonore de la 2e Guerre Mondiale,* 1973, Paris, 3 records.
G. Notargiacomo, */ay/ / layk/ / ayk/,* 1973, Roma, 33 RPM.
- J. Beuys, H. Christiansen, *Schottische Symphonie/Requiem for Art,* 1973, Edition Schellmann, Munchen, LP 33 RPM, 500 copies.
J.M. Delavalle, *Une demi-heure,* Quebec, 1973, 33 RPM, 100 copies.
B. Dimitrijevic, *His pencil's voice,* 1973, ITD, Zagreb.

- Sarkis, *The Drama of the Tempest,* 1974, Edizioni la Salita, Roma, 60 copies, LP 33 RPM.
J. Hidalgo, *Tamaran,* 1974, Cramps, Milano, 33 RPM, LP.

- M. Snow, *Music for Piano, whistling, microphone and tape recorder,* 1975, Chatham Square, New York.
- Sarkis, *De l'enquête sur l'arsenal-atelier de la rue V.,* 1975, Salle Patino, Geneva, 116 copies.
Poesia sonora (Cobbing, Chopin, De Vree, Dufrene, Gysin, Hanson, Heidsieck, Jandl, Totino, Mon, Nannucci, Petronio) CBS, Sugar, Milan, 1975, 33 RPM.

- Art & Language, *Music-Language / Corrected Slogans,* 1973-76, BMI, New York / Banbury, Oxford, 33 RPM.

NOTES ON MARCEL DUCHAMP'S MUSIC

Gavin Bryars

Although I've always felt that John Cage's text, *26 Statements re Duchamp,*[1] is one of the weakest ones that he wrote, it has for me one memorable line: 'One way to write music: study Duchamp.' The story of Cage's friendship with Duchamp towards the end of his life is a very moving one, interestingly outlined in the interview with Moira and William Roth, an interview in which he also talks about his response to Duchamp's work as a whole.[2] There are at least three major pieces in Cage's work that are directly linked with Duchamp: the prepared piano piece *Music for Marcel Duchamp* 1947, written for the Duchamp sequence of Hans Richter's film *Dreams that money can buy* 1948; *Reunion* 1968, in which Cage and Duchamp (then Cage and Teeny Duchamp) played chess on a board specially constructed by Lowell Cross, which contained circuits to allow the various moves to modify, transmit or interrupt the sounds made by musicians David Tudor, Gordon Mumma and David Behrman;[3] and *Not Wanting to Say Anything About Marcel* 1969, a piece of visual work made in collaboration with Calvin Sumsion, printed on layers of plexiglass mounted in a frame, on which texts are fragmented through chance operations, these being described in an accompanying booklet.[4]

In many ways, these three works show the ambivalence of any attempts at drawing up relationships between Cage and Duchamp, although both are cited as being in part responsible, for example, for a shift away from an emphasis on the finished art-object/piece of music in performance and so on. Cage himself points to this difficulty in the interview with the Roths, and again in a recent interview with Michael Nyman. To the Roths, Cage said: 'A contradiction between Marcel and myself is that he spoke continuously against the retinal aspects of art, whereas I have insisted upon the physicality of sound and the activity of listening. You could say I was saying the opposite of what he was saying.' But Cage is well aware that the position is more complicated than this, as his observations on *Etant Donnes...* (1946-66) make clear. Cage had always enjoyed what he felt were the 'freedoms' offered by the *Large Glass* in, for instance, the way the environment was allowed to interact with it through the use of a transparant material and points to the 'uncomfortable' nature of *Etant Donnes...:* 'the imprisoning us at a particular distance and removing the freedom we had so enjoyed in the *Large Glass.'* However, it is plain from Richard Hamilton's work, and from that of Reg Woolmer, that the *Large Glass* imprisons the viewer in precisely the same way and that there is a uniquely 'right' view for that work too, even if Duchamp does not prescribe what it is. Cage hoped that the contrary aspects of his work and Duchamp's are resolved by this last work: 'with *Etant Donnes...* we feel his work very physically...' In the interview with Nyman, Cage points out how 'Feldman has complained that my friendship with Duchamp was false because of this contrary...but I think the contrary was the same. It was just that the arts changed. In other words that being physical in music was the same as having ideas in painting...'[5]

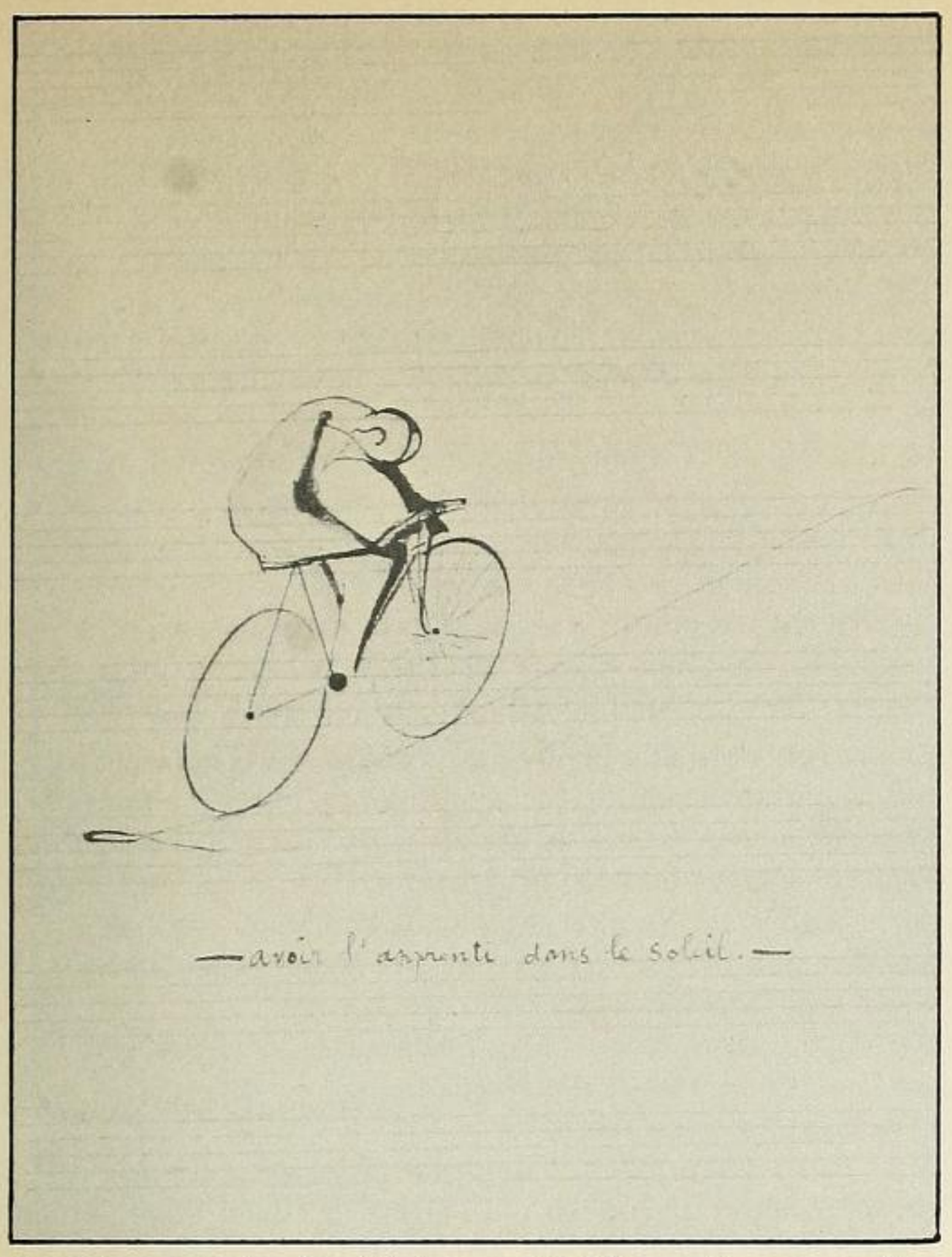
I can understand the historical point that Cage is making, that introducing ideas into art stops the retinal rot — according to Duchamp dating from Courbet — and that the emphasis on the physical nature of sound and the musical experience of the listener shifts focus away from the presence of ideas in music (from allegories, from programmes, from systems etc). But I cannot imagine that Duchamp would have concurred with it. The parallel seems to be more that the physical emphasis, the tympanic I suppose, mirrors the Courbet/Impressionism heresy of retinal painting, and that the re-introduction of ideas into music by younger composers today represents the Duchampian alignment. Certainly both retinal art and tympanic music are necessary in a sense which Cage might appreciate, in that they fulfil the function of 'studying Zen' in the story that Christopher Hobbs once quoted to the effect that studying Zen may involve many deprivations, ascetic diet and so on, but after having achieved enlightenment, the monk may well feel free to eat anything, including lamb chops.[6] The 'physicality' of sound, about which Feldman especially talks, the retinal art that Duchamp deprecates, may all constitute this temporary and necessary asceticism so that one may go back to descriptive music, to figurative painting, with one's feet 'a little off the ground' — Duchamp's ironic distance.

Among all the various Duchampian hermeneutics, the least known, and the most attractive, is that put forward by Gary Glenn, an interpretation only casually hinted at in the letter columns of *Artforum.*[7] His thesis is that 'Duchamp was merely aping the thoughts and gestures of the greatest artist of all times, Sherlock Holmes'; and substantiates this in outline by pointing to the Queen Bee/Bride relationship and the frequent appearances of waterfalls and gaslamps at key points in their respective work. Later he developed this further in correspondence with me and, resting as it does on the complete absence of direct reference to Holmes in all Duchamp's known utterances, it is a good deal more plausible than the alchemic version which originates in a tentative negation on Duchamp's part.[8] A further piece of armour for Gary's arsenal can be found in the importance of musical and sounding experimentation in their work; and — although Duchamp never attempted a monograph on the scale of Holmes' treatise on the Polyphonic Motets of Lassus — notes on sound-making, musical references in notes, musical notations, the occasional presence of manuscript paper and the one or two intrusions of sounds into his iconography, are sufficiently considerable to form a body of perhaps peripheral but, in sum, significant probings into musical realms.

As an outline, let me list these as a kind of catalogue of Duchamp's music:

(Box of 1914)

1. 'One can look at seeing;
   one cannot hear hearing.'
2. 'Make a painting of *frequency.'*
3. *Avoir L'apprenti dans le soleil* (To have the apprentice in the sun). Executed in ink and pencil on music paper, this is the only drawing Duchamp included in the *Box of 1914* and considered of sufficient importance to think about including in the bottom panel of the *Large Glass* (see 7) as a photographed 'commentary'. The idea of photographing this work does not necessarily mean that he would have



Avoir l'apprenti dans le soleil. January 1914, Rouen (incorporated in *The Box of 1914)*

printed the photograph on the Glass in the area of the Slopes. It is more likely to mean that having a photograph made of *Avoir l'apprenti...* would in itself be a 'commentary' on this section, an unusual and interesting move that may have been executed. The continuous line, moving up across music paper, may equally comment on the note on precision musical intruments (see 14), the notation for a continuous tone, unrealisable by the mechanical means he suggests in the note itself.
(The Green Box, 1934)

4. 'The number 3 taken as a refrain in duration — (number is mathematic duration)'. The occurrence of the number three in the scheme of the *Large Glass* has been commented on many times, most notably by Richard Hamilton, and its use is so frequent as to constitute an almost invariable echo rather than the more optional refrain.

5. *'Musical Sculpture.* Sounds lasting and leaving from different places and forming a sounding sculpture which lasts.' This idea anticipates the much later three-dimensional musical pieces using continuous tones by Alvin Lucier.

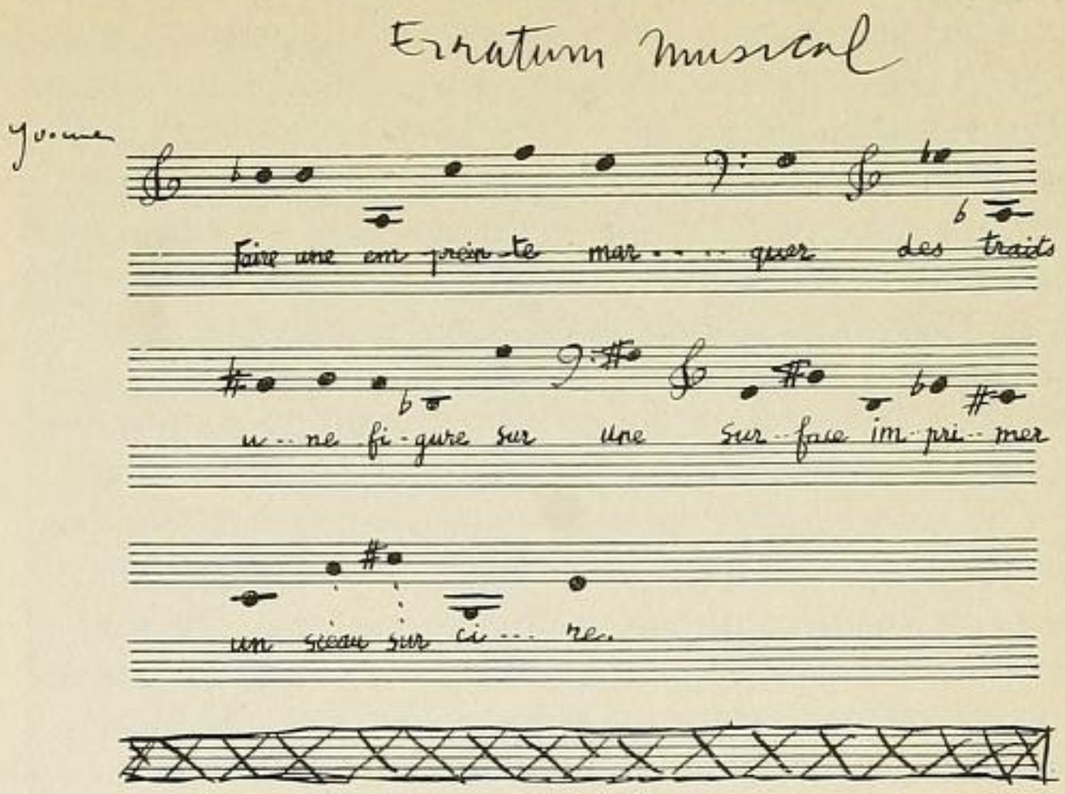
6. 'To lose the possibility of recognising 2 similar objects — 2 colours, 2 laces, 2 hats, 2 forms whatsoever to reach the Impossibility of sufficient visual memory, to transfer from one like object to another the memory imprint.
— Same possibility with sounds; with brain facts.'

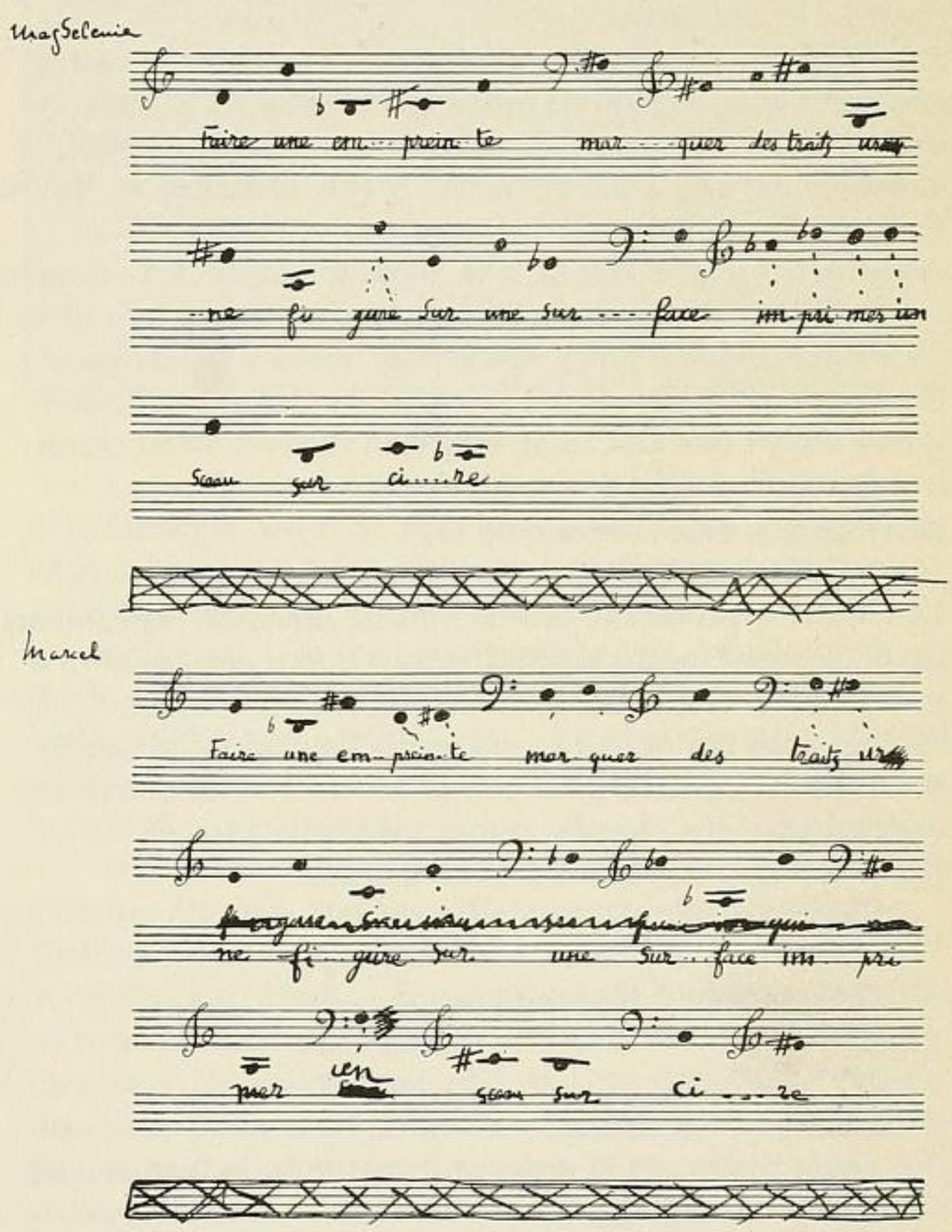
This note is one of the three 'academic ideas' which Jasper Johns says he has found particularly useful. [10]

7. 'As a "commentary" on the section Slopes. = have a photograph made of:
to have the apprentice in the sun' (see 3).

8. 'Expose' of the Chariot (in the text = litanies of the chariot).
— Slow life — Vicious circle — Onanism — Horizontal — Buffer of life — Bachelor life regarded as an alternating rebounding on this buffer — Rebounding — Junk of life — Cheap constructions — Tin — Cords — Iron Wires — Crude wooden pulleys — Eccentrics — Monotonous flywheel.'

9. 'By eros' matrix, we understand the group of 8 uniforms or hollow liveries destined to receive the illuminating gas which takes 8 malic forms (gendarme, cuirassier, etc). The





Erratum Musical 1913, Rouen (facsimile in *The Green Box* 1934)

gas castings so obtained, would hear the litanies sung by the chariot, refrain of the whole celibate machine...' These two notes (8 and 9) taken in conjunction, give a sort of soundtrack to the workings of the Glass and amplify what Duchamp meant when he told Pierre Cabanne that calculations and dimensions were the important elements of the work and that he was 'mixing story, anecdote (in the good sense of the word), with visual representation, while giving less importance to visuality, to the visual element, than one generally gives in painting...' [11]

10. *'Song;* of the revolution of the bottle of Benedictine. — After having pulled the chariot by its fall, the bottle of Benedictine lets itself be raised by the hook...it falls asleep as it goes up; the dead point wakes it up suddenly and with its head down. It pirouettes and falls vertically according to the laws of geometry.'

11. *'Rattle.* With a kind of comb, by using the space between 2 teeth as a unit, determine the relations between the 2 ends of the comb and some intermediary points (by the broken teeth).'

12. *'Erratum Musical.* Yvonne/Magdeleine/Marcel: "To make an imprint mark with lines a figure on a surface impress a seal in wax."' It is worth noting that, although the musical score is composed by chance — picking the notes out of a hat — Duchamp evidently knew enough about music to pitch the voices within their respective ranges: his own tenor voice from C below middle C to B above it, and his two sisters having alto voices from F below middle C to E at the top of the treble stave. The changes of clef within each part are a little odd: he allows his own voice to go only to G in the bass clef before changing to the treble clef (A flat), and his sisters' voices come down to G in the treble before changing to the bass clef for F sharp; all of which, while being internally consistent, is not conventional. The text itself is a dictionary definition of the verb 'to print' and the title of *Erratum,* having the sense of 'misprint' (Musical Misprint) gives it an odd flavour, the more so when the whole range of meanings for 'print' are looked at, many of which have a more than casual significance for the procedures involved in the Glass.

13. *'Piggy Bank (canned goods).* Make a readymade with a box containing something unrecognisable by its sound and solder the box — already done in the semi Readymade of copper plates and a ball of twine.' [12] The realisation of this note, *With Hidden Noise* 1916, was co-authored by Walter Arensberg in that it was he who chose the object for inclusion inside the ball of twine, and the secrecy element may reflect his interest in the cryptic. The phrase 'make a Readymade' has a curious flavour, and it seems likely that the childishly simple cipher that Duchamp wrote on the two metal plates is only the first stage of a more extended one. (To be developed, as Duchamp would say).

(A l'Infinitif 1966)

14. 'Construct one and several musical precision instruments which produce mechanically the continuous passage of one tone to another in order to be able to record without hearing them sculptured sound forms (against "virtuosism" and the physical division of sound which reminds one of the uselessness of the physical colour theories)'. (See 3).

15. 'A thing to be looked at with one eye
" " " " " " with the left eye
" " " " " " " " right "
What one must hear with one ear
" " " " " the right ear
" " " " " " left "
to put in the Crash-splash.
One could base a whole series of things to be looked at with a single eye (left or right).
One could find a whole series of things to be heard (or listened to) with a single ear.'

While *To be looked at (from the other side of the Glass) with one eye, close to, for almost an hour* 1918, probably Duchamp's most underrated work, was a realisation of this note as a self-contained piece, serving in part as a study for the right hand side of the lower panel of the *Large Glass,* the notes relating to listening were not realised. The concern for determining what, exactly, should be the point and manner of perception of a piece relates both to the *Large Glass* and to *Etant Donnes...,* as well as to many other manifestations of this, such as the exhibition installation of the Exposition Internationale du Surrealisme, Paris 1938; 'First Papers of Surrealism', New York 1942; *Anemic-Cinema* 1926; *Hand Stereoscopy* 1918-19; *Tu m'* 1918; the unfinished *Cheminee Anaglyphe* 1968; and the lost films in anaglyphe and stereoscopy. It is also worth recalling the installation by Frederick Kiesler of the *Boite-en-Valise* in the Peggy Guggenheim gallery, New York, 1942, in which the Box was observed through a fixed viewer.

(Miscellaneous Works)

16. *Erratum Musical (La Mariee mise a nu par ses celibataires, meme),* a musical composition not included in the collections of notes. (See below for discussions of this piece).

17. *Flirt* 1907. An inscribed early drawing, with the following caption written below, of a woman sitting at a grand piano talking to a man: 'She: "Would you like me to play "On the Blue Waters"? You'll see how well this piano renders the impression suggested by the title." He (wittingly): "There's nothing strange about that, it's a watery piano."' (Piano aqueux = watery piano, piano a queue = grand piano).

18. *Musique de Chambre* 1909-10. Another captioned picture of a woman at a piano, this time being given a music lesson. The woman says 'Button your jacket, here's the maid...'

19. *Sonata* 1911. Duchamp said of this painting that it was his 'first attempt to exteriorize (his) conception of cubism at that time.' And the painting shows that, just as chess had been a constant activity in his family circle at home and became the subject for a series of exploratory drawings leading to *The Chess Players* 1911 and *Portrait of Chess Players* 1911 (painted by gaslight), so too music played a similar role both as a family pastime and as the subject for this important painting. It's worth noting that his choice of Magdeleine and Yvonne as the other two participants in the *Erratum Musical* (see 12) originates in their already existing musical abilities, Yvonne as a pianist and Magdeleine as violinist, and the humour of *Flirt* and *Musique de Chambre* could well stem indirectly from observation.

20. *With Hidden Noise* 1916. The realisation of the note in the Green Box, there called *Piggy Bank* (see 13).

(Texts with musical sense)

21. 'Parmi nos articles de quincailleries paresseuses, nous recommandons un robinet qui s'arrete de couler quand on ne l'ecoute pas.' (Amongst our articles of lazy hardware, we recommend a faucet which stops dripping when no one is listening to it).

22. 'Calecons de musique (abreviation pour: lecons de musique de chambre)' (Musical shorts (abbreviation for: chamber music lessons)).

23. 'Il faut dire: La crasse du tympan, et non le Sacre du Printemps' (One should say: Eardrum grease, and not The Rite of Spring).

24. 'Une boite de Suedoises pleine est plus legere qu'une boite entamee parce qu'elle ne fait pas de bruit.' (A full box of matches is lighter than an opened box because it does not make any noise).

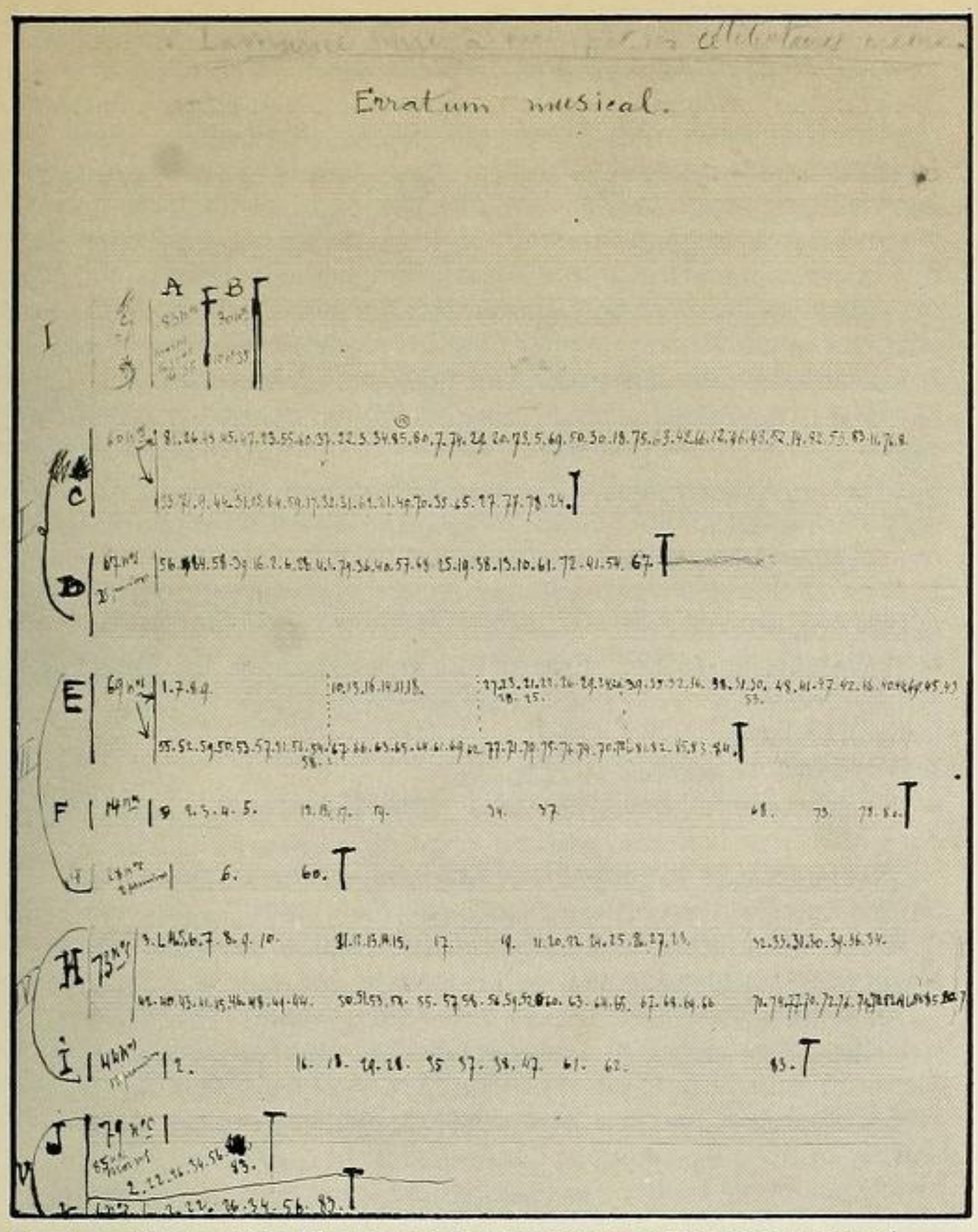
25. 'Mi Sol Fa Do Re' (phonetic equivalent for Michel Cadoret).

26. 'apres: 'Musique d'ameublement' d'erik SATIE
voici: 'Peinture d'ameublement' de YO Savy (alias Yo Sermayer).
Rrose Selavy (alias Marcel Duchamp).'
(after 'Furniture Music' by erik SATIE
here is: 'Furniture Painting' by YO Savy (alias YO Sermayer)
Rrose Selavy (alias Marcel Duchamp)).

27. 'A transformer designed to utilize the slight, wasted energies such as: ...laughter...sneezing...the sound of nose-blowing, snoring...whistling, singing, sighs etc...'

28. 'The sound or the music that corduroy trousers, like these, make when one moves, is pertinent to infra-slim...'

The various texts not linked directly to elements in the *Large Glass* itself, but nevertheless included in the collections of notes associated with it, are largely researches of a speculative nature — not unlike the kind of researches undertaken by Leonardo into musical areas, such as the invention of possible musical instruments (often of a mechanical nature), especially in two pages of the Madrid notebooks that appeared in 1967. The comments that Winternitz makes about those drawings and notes seem, in part, to be appropriate to the musical ideas in Duchamp's collections of notes: 'they add considerably to our comprehension of (Leonardo's) restless, indefatigable mind, so overwhelmed by new ideas, associations, and technological imagination that he could cope with this onslaught only by jotting down passing thoughts, often so sketchily that important details, which he evidently took for granted, are



Erratum Musical (La Mariee mise a nu par ses celibataires, meme)
c 1913. Collection John Cage

neither delineated nor explained in his comments.'[13] In the Madrid notebooks we find designs for a bell using a damper mechanism to produce four distinct tones, a system of bellows for 'continuous wind' with a three-piped instrument, string instruments played by elbow action, a keyed string instrument, and so on. The mechanical nature of Leonardo's speculations compares very well with that of much of Duchamp's musical writing, for example the 'musical precision instruments' (see 14) that 'produce mechanically the continuous passage of one tone to another' and which have the effect of supressing the virtuosic role of the performer.[14] This effect is equivalent to his concern for eliminating the manipulation of paint which, as Hamilton says, had 'become repugnant'[15] to him but which he was obliged to overcome in painting the 'blossoming' in the top panel of the *Large Glass.*

It was from Brisset that Duchamp found that a concern for the sounding aspect of language, what might seem superficially to be *its* retinal aspect, could lead to a new dimension of meaning. Brisset's system of finding new relations of meaning through a network of alliteration and pun, corresponded to his own developing sense of 'infra-mince',[16] through which minute shifts produce large-scale change. The pun itself is an example of this concept, in that it is the shift of focus *by the hearer* which induces new meanings. Clearly, sound is necessary for the pun (and for its extension, the strict rebus) and several of the puns themselves (see 21-28) deal with sounding elements as though to emphasise this fact. One of them, 'Lazy Hardware' (see 21), occurs so often that it must have had additional significance for Duchamp. It is one of the discs in *Anemic-Cinema* 1926; it is included in the Andre Breton *Anthologie de l'Humour Noir* 1940; it is reprinted in the *Boite-en-Valise* 1941; it is written on a photograph of Duchamp working on the window display at the Gotham Book Mart, New York 1945, where he fixes a tap to the mannequin's thigh; and it also appears on a 1965 etching of the *Fountain* entitled *An Original Revolutionary Faucet: Mirrorical Return?* Again this text throws the onus of artistic activity onto the spectator (listener), in a sense closely related to Berkeley's idealist philosophy in which existence is conditional on being perceived. Duchamp emphasises this ih his conversation with Cabanne, when he maintains that, even if some 'genius were living in the heart of Africa and doing extraordinary paintings every day, without anyone's seeing them, he wouldn't exist.' On the other hand he felt, mistakenly I think, that Walter Arensberg's Baconian studies were only 'the conviction of a man at play', whereas Arensberg is really a very good example of the creative spectator (here decoder) completing the artwork.

It is in the musical works themselves, the two sets of *Erratum Musical,* that the difference between Cage and Duchamp's attitudes to chance are most apparent. In the vocal *Erratum Musical,* Duchamp wrote the notes on pieces of paper, put them in a hat, and then pulled them out again. Cage says: 'I wouldn't be satisfied with that kind of chance operation in my work...there are too many things that could happen that don't interest me, such as pieces of paper sticking together and the act of shaking the hat.' On the other hand, it is very clear that this very feeble (a frequent term in Duchamp's work) use of chance is very appealing to Duchamp. The *Large Glass* is full of similar pieces of puniness: the 'feeble-cylinders' and the 'timid-power' of the Bride,[17] the falling metre of thread for the *Standard Stoppages,* the air-currents used to form the *Draft Pistons,* the toy cannon shooting painted matchsticks for the *Nine Shots* and so on.

The other *Erratum Musical,* the manuscript of which was given to Cage by Teeny after Marcel's death, is another example of a use of chance which would be quite alien to Cage. For this, a vase containing 89 numbers, each one indicating a note, has an opening at the base which allows the balls to drop into a series of small wagons, like a miniature goods train, which travel at a variable speed so that each wagon receives a number of these balls. When the vase is empty, the notes are recorded and this indicates one period of the composition. It is odd that Duchamp says *89* notes since in all the transcriptions of the numbers he only ever uses 85, and, in fact, 85 is the number of notes on a 7-octave piano from A to A, and even a piano having the extra high C would only have 88. (Although he notes the possibility of there being more notes – using quarter tones he does not mention using less). Given what Richard Hamilton feels is the improvisatory nature of the original

composition of the *Large Glass* in plan view, working outwards from the stem of the Chocolate Grinder,[18] it seems feasible that the measurements in that plan, especially the overall width of 170 centimetres, gave Duchamp the idea of the piano's width (2 x 85). The coincidence of the one generates the parenthetical research of the other and, given also that at this time the Ninth Malic Mould had not been added to the scheme, the limitation of the number of periods in Duchamp's transcription to eight may not be arbitrary. As in the note 'precision musical instruments' (see 14), he again indicates his preference for 'a designated musical instrument (player piano, mechanical organ or other new instruments for which the virtuoso intermediary is suppressed).'[19]

It is when examples like this come to light that Duchamp's debt to the stage performance of Roussel's *Impressions d'Afrique* becomes even more apparent. The third of the 'tableaux vivants' announced by Carmichael in *Impressions d'Afrique* is the one where the actor Soreau plays the part of Handel as an old blind man 'composing the theme of his oratorio, *Vesper,* by a mechanical process.' Granted that Roussel's wonderful conception of Handel composing the work by selecting one from the seven sprigs of holly in his left hand, each indicating a note on the diatonic scale, and noting it on the balustrade of a winding staircase, is far in excess of Duchamp's piece of mechanical music, it is sufficiently striking in the context of all other half-remembered elements from *Impressions d'Afrique* that filter through into his work. (Only the consummate skill of the aging composer prevents chance selection of notes from the diatonic scale from becoming tedious, a fear that Duchamp feels for his own piece when he adds that it would be 'a very useless performance in any case').[20] Of the five possible Rousselian examples that leave traces in the *Large Glass,* three deal directly with music, of a mechanical nature, and of these three, two involve performance within glass containers.[21]

Apart from his friendship with John Cage in the last years of his life, we know that Duchamp previously had other connections with the world of musicians, though of a more tangential kind. We know Varese, having met him at the Arensbergs' and he took part in a performance of Satie and Picabia's *Relache* in 1924, appearing as Adam, wearing a false beard and a fig leaf, with Brogna Perlmutter as Eve (and made an etching, one of *The Lovers* series of 1967-8, based on the photograph of this tableau, *Selected details after Cranach and 'Relache'* 1967), as well as appearing in the film *Entr'acte* with Satie, Picabia and Man Ray. Duchamp lived in the Hotel Istria in Paris from 1923-26, during which time Satie moved there during his last illness before being finally moved to hospital. And, though even more fleeting than this previous example and absolutely of no use for any historical connection to be made, he was a regular visitor to Katherine Dreier's home in the 1930s where he reassembled the broken *Large Glass,* in West Redding Connecticut, the place where Charles Ives had retired to live. Such remote and passing-in-the-street acquaintances apart, it is worth noting the curiosity that *To have the apprentice in the sun* 1914, the two examples of *Erratum Musical* and the set of puns *Poils et coups de pied en tous genres* included in the *Boite-en-Valise,* were all done on music paper. Given Duchamp's extraordinary care about the choice of the different papers in the edition of the *Green Box,* what was he doing with all that music paper?

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1 John Cage, '26 Statements re Duchamp.' 1963, first published in ***Mizue,*** Sept. 1963, reprinted in ***A Year from Monday,*** Calder and Boyars, London 1968, pp. 70-72.

2 Moira Roth and William Roth, 'John Cage on Marcel Duchamp: An interview'. ***Art in America,*** November-December 1973,pp.72-79.

3 See also, Shigeko Kubota, ***Marcel Duchamp and John Cage,*** Tokyo 1968, a limited edition of 500 copies, being a photo-essay of ***Reunion,*** including ***36 acrostics re and not re Duchamp*** by John Cage, and a recording of the piece by David Behrman.

4 John Cage, ***To Describe the Process of Composition Used in Not Wanting To Say Anything About Marcel,*** Cincinnatti, 1969. The booklet itself, which details the compositional method, is a much more impressive work than the eight plexiglass constructions and it is ridiculous to maintain, as Barbara Rose does in her oft-reprinted but uncritical essay on the work, that they represent 'another extension of a multi-dimensional personality defying the limitations of a one-dimensional world.' In fact this imbalance between the realisation of the work and the composition is something that characterises Cage's music of the last 20 years. For Barbara Rose, the 'feeling of 3-dimensional forms floating in free space' inevitably recalls Duchamp, although I fail to find that fragments of words in superimposition give any feeling of three-dimensionality. But certainly Cage's choice of a transparent material is odd if, as he says, he wanted to 'not say anything about Marcel', for few things are more likely to bring Duchamp to mind.

5 Michael Nyman, 'Interview with John Cage,' August 1976 (not yet published).

6 In Christopher Hobbs, 'English Music', programme for John Tilbury's series of concerts 'Volo Solo', Macnaghten Concerts, October - December 1970.

7 ***Artforum***, November 1972, pp.6-7.

8 'If I have ever practised alchemy, it was in the only way it can be done now, that is to say, without knowing it.' (Marcel Duchamp, quoted by Robert Lebel in ***L'Art Magique,*** ed. Andre Breton and Gerard Legrand (Paris: Club Francais de l'Art, 1957, p.98).

9 Richard Hamilton, 'The Large Glass', in ***Marcel Duchamp,*** Museum of Modern Art and Philadelphia Museum of Art, 1973.

10 Quoted in John Cage 'Jasper Johns: Stories and Ideas,' first published in catalogue of Jasper Johns exhibition at the Jewish Museum, New York 1964, reprinted in ***A Year from Monday,*** pp. 73-84. The other two 'academic ideas' Johns refers to are 'what a teacher of mine (speaking of Cézanne and cubism) called "the rotating point of view"... and Leonardo's idea...that the boundary of a body is neither a part of the enclosed body nor a part of the surrounding atmosphere.'

11 Pierre Cabanne (trans. Ron Padgett), ***Dialogues with Marcel Duchamp,*** Thames and Hudson, London 1971, pp.38-9.

12 The linguistic twist involved in using 'twine' would have appealed to Arensberg: ***ficelle*** (twine) in French is also a colloqualism for 'pal' or 'chum'.

13 See Emanuel Winternitz, ***Strange Musical Instruments in the Madrid Notebooks of Leonardo da Vinci,*** Metropolitan Museum Journal, vol. 2. 1969.

14 Erik Satie in 'Propos a propos de Igor Stravinsky,' published in ***Les Feuilles Libres,*** October-November 1922, wrote in support of Stravinsky's then-current interest in theories of mechanical interpretation. Although Satie did not favour them himself, he pointed out that while the virtuosity of the mechanism could never be equalled by the performer, it did not take his place. He added that the player piano differs from the piano not so much as a photograph from a drawing, but more like a printer making a reproduction from the original drawing: 'the lithographer as it were plays the pianola, while the draughtsman plays the piano.'

15 Richard Hamilton, op. cit., p.63.

16 The term ***infra-mince,*** often translated as 'infra-slim', first appears on the back cover of ***View*** magazine, March 1945, an issue devoted to Duchamp who designed the cover. The text, in translation, means 'when the tobacco smoke also smells of the mouth which exhales it, the two odours are married by "infra-slim".' ***Mince*** means either 'slender' or 'slim', what Duchamp called 'human or affective connotations', and it also has the sense of insignificance when used, for example, with a word such as 'argument'. The alliance of this imprecise term with 'infra', a precise preposition with scientific overtones (as in 'infra-red', 'infra-mammary', etc), mirrors the conjunction of precision and inexactitude found in the various examples of it. Duchamp said to Denis de Rougemont, in 1968, that the concept of ***infra-mince*** was 'a category which has occupied me a great deal over the last 10 years.'

17 Ironically, these so-called 'feeble' elements are the most efficacious sources of power and energy in the ***Large Glass's*** mechanics.

18 Richard Hamilton and Reg Woolmer, in redrawing the plan and elevation of the ***Large Glass*** to scale with absolute precision — that is, not allowing any gaps in the procedure to be filled in by information only knowable after the existence of such a drawing, not copying the existing one, and not making any guesses, however intelligent — both found it very striking that the only point from which it is possible to begin, clearly the starting-point for Duchamp too, is the central stem of the Chocolate Grinder, and that there is a definite and fixed sequence of moves from this outwards. Richard Hamilton said, in conversation, that he sensed a kind of freedom in the drawing process that may not be apparent from the finished result, but which is found in re-drawing it.

19 Recently a number of realisations of this piece have been made, taking it as an indeterminate piece of music, by Petr Kotik of the SEM Ensemble, Buffalo. A recording of this has been made for West German Radio in Cologne, and for the Gallery Multipla, Milan. A percussionist, Donald Knaack, also of the State University

of New York at Buffalo, is making a realisation, which he has recorded on Finnadar Records, New York. He plans to perform it in London in May 1977.

These 'realisations' of Duchamp's work seem to me to be as awkward an enterprise as the vogue, early in the days of graphic notation, for taking extant paintings, especially systemic ones, and treating them as musical scores — the obverse of transcribing Bach fugues into multi-coloured grids, or making hazy impressions of Sibelius' *Swan of Tuonela.* If, as a cursory glance would seem to confirm, the second *Erratum Musical* is directly concerned with the *Large Glass,* then it is an important element in the body of notes that accompany it and is an integral part of that work; and it makes no more sense to make 'realisations' of this piece than to do the same for the *Large Glass* itself. Clearly anything can be used as a notation — at one time it was said of David Tudor that he could play the cross-section of a currant bun — and, as an exercise, it is harmless enough. But it does seem odd that Cage, who rightly tries to ensure that his own music is played within the spirit of its composition, should be much less careful with the work of others whom he respects. His argument that a response to other people's work should take the form of creation rather than criticism begs the question, especially when he finds the highly creative Duchampian criticism of no interest — he says that although he has the books, he never reads them.

The problem seems to be that, for someone with a powerfully defined position of their own, like Cage, it is difficult to see someone else's work without it being subsumed within that philosophy. And Cage's thought inevitably colours his view of Duchamp, so that he sees the *Large Glass,* for example, as allowing the environment to interpenetrate the art work just as, in Christian Wolff's early music, performed sounds have no greater value than incidental ones and, in *4'33",* our attention is drawn to these incidental sounds alone, but this has little or no place in Duchamp's thought. On the other hand, although Cage's text is weak on the Readymades (and even to use a single unqualified term blurs their complexity) he reveals, in the Roth interview, a sensitivity to the fundamental difference between himself and Duchamp, pointing out that: 'When we think of the Readymades we think of something other than what Duchamp did.' And Cage's 'blurring of the distinction between art and life' is, as he indicates, only remotely related to Duchamp.

20 The other examples which appeared in the play and that relate strongly to the *Large Glass* are: 1. The performance on the zither by the miraculous worm held in a glass (mica) casing filled with a liquid as heavy as mercury; 2. The statue made from corset whalebones resting on a chariot which moved from side to side on rails of calf's lights; 3. The painting machine of Louise Montalescot; and 4. The thermodynamic orchestra of Bex, which was housed in a glass case.

21 It is clear from the interview with Cabanne that, although the initial impact was the play's presentation, he did follow this up by reading the book soon afterwards. Hence, it is worth conjecturing a further, possibly remote, connection much later in Duchamp's oeuvre when he specifies that one of the rotoreliefs is of 'a soft-boiled egg', recalling a striking image in the story when Balbet, the crack marksman, shot away the outside of a soft-boiled egg to reveal the yellow, but without disturbing the inner content. Although this was not portrayed in the stage version, Duchamp had by then, in 1935, read the novel. And the specification 'soft-boiled' is so peculiar, in view of the fact that the spectator sees the exterior form of the egg, that it draws attention to its Rousselian parallel and, further, reinforces the connections that can be drawn earlier.

GENERATING AND ORGANIZING VARIETY IN THE ARTS

Brian Eno

A musical score is a statement about organization; it is a set of devices for organizing behaviour towards producing sounds. That this observation was not so evident in classical composition indicates that organization was not then an important focus of compositional attention. Instead, the organizational unit (be it the orchestra or the string quartet or the relationship of a man to a piano) remained fairly static for two centuries whilst compositional attention was directed at using these given units to generate specific results by supplying them with specific instructions.

In order to give more point to the examination of experimental music that follows, I would like to detail some of the aspects and implications of the paradigm of classical organization, the orchestra. A traditional orchestra is a ranked pyramidal hierarchy of the same kind as the armies that existed contemporary to it. The hierarchy of rank is in this pattern: conductor, leader of the orchestra, section principals, section subprincipals and, finally, rank and file members. Occasionally a soloist will join the upper echelons of this system; and it is implied, of course, that the composer with *his* intentions and aspirations has absolute, albeit temporary, control over the whole structure and its behaviour. This ranking, as with military ranking, reflects varying degrees of responsibility; conversely, it reflects varying degrees of constraint on behaviour. Ranking has another effect: like perspective in painting, it creates 'focus' and 'point of view'. A listener is given the impression that there is a foreground and background to the music, and cannot fail to notice that most of the 'high responsibility' events take place in the foreground, to which the background is an ambience or counterpoint.[1] This is to say that the number of perceptual positions available to the listener is likely to be limited. The third observation I would like to make about the ranking system in the orchestra is this: it predicates the use of trained musicians. A trained musician is, at the minimum, one who will produce a predictable sound given a specific instruction. His training teaches him to be capable of operating precisely like all the other members of his rank. It trains him, in fact, to subdue some of his own natural variety and thus to increase his reliability (predictability).

I shall be using the term variety frequently in this essay and I should like to attempt some definition of it now. It is a term taken from cybernetics (the science of organization) and it was originated by W.R. Ashby.[2] The variety of a system is the total range of its outputs, its total range of behaviour. All organic systems are probabilistic: they exhibit variety, and an organism's flexibility (its adaptability) is a function of the amount of variety that it can generate. Evolutionary adaption is a result of the interaction of this probabilistic process with the demands of the environment. By producing a *range* of outputs evolution copes with a *range* of possible futures. The environment in this case is a

variety-reducer since it 'selects' certain strains by allowing them to survive and reproduce, and filters out others. But, just as it is evident that an organism will (by its material nature) and must (for its survival) generate variety, it is also true that this variety must not be unlimited. That is to say, we require for successful evolution the transmission of *identity* as well as the transmission of mutation. Or conversely, in a transmission of evolutionary information, what is important is not only that you get it right but also that you get it slightly wrong, and that the deviations or mutations which are useful can be encouraged and reinforced.

My contention is that a primary focus of experimental music has been towards its own organization, and towards its own capacity to produce and control variety, and to assimilate 'natural variety' - the 'interference value' of the environment. Experimental music, unlike classical (or avant-garde) music, does not typically offer instructions towards highly specific results, and hence does not normally specify wholly repeatable configurations of sound. It is this lack of interest in the *precise* nature of the piece that has led to the (I think) misleading description of this kind of music as 'indeterminate'. I hope to show that an experimental composition aims to set in motion a system or organism which will generate unique (*ie* not necessarily repeatable) outputs, but which, at the same time, seeks to limit the range of these outputs. This is a tendency towards a 'class of goals' rather than a particular goal, and it is distinct from the 'goalless behaviour' (indeterminacy) idea that gained currency in the 1960s.

I would like to deal at length with a particular piece of experimental music that exemplifies this shift in orientation. The piece is Paragraph 7 of *The Great Learning*[3] by Cornelius Cardew, and I have chosen this not only because it is a compendium of organizational techniques but also because it is available on record (DGG2538216). In general, I shall restrict my references to music which has been recorded.

→ sing 8 IF
sing 5 THE ROOT
sing 13(f3) BE IN CONFUSION
sing 6 NOTHING
sing 5 (f1) WILL
sing 8 BE
sing 8 WELL
sing 7 GOVERNED
hum 7
→ sing 8 THE SOLID
sing 8 CANNOT BE
sing 9(f2) SWEPT AWAY
sing 8 AS
sing 17(f1) TRIVIAL
sing 6 AND
sing 8 NOR
sing 8 CAN
sing 17(f1) TRASH
sing 8 BE ESTABLISHED AS
sing 9(f2) SOLID
sing 5 (f1) IT JUST
sing 4 DOES NOT
sing 6 (f1) HAPPEN
hum 3(f2)
→ speak 1 MISTAKE NOT CLIFF FOR MORASS AND TREACHEROUS BRAMBLE

NOTATION
→ The leader gives a signal and all enter concertedly at the same moment. The second of these signals is optional; those wishing to observe it should gather by the leader and choose a new note and enter just as at the beginning (see below).
"sing 9(f2) SWEPT AWAY" means: sing the words "SWEPT AWAY" on a length-of-a-breath note (syllables freely disposed) nine times; the same note each time; of the nine notes two (any two) should be loud, the rest soft. After each note take in breath and sing again.
"hum 7" means: hum a length-of-a-breath note seven times; the same note each time; all soft.
"speak 1" means: speak the given words in steady tempo all together, in a low voice, once (follow the leader).

PROCEDURE
Each chorus member chooses his own note (silently) for the first line (IF eight times). All enter together on the leader's signal. For each subsequent line choose a note that you can hear being sung by a colleague. It may be necessary to move to within earshot of certain notes. The note, once chosen, must be carefully retained. Time may be taken over the choice. If there is no note, or only the note you have just been singing, or only a note or notes that you are unable to sing, choose your note for the next line freely. Do not sing the same note on two consecutive lines.
Each singer progresses through the text at his own speed. Remain stationary for the duration of a line; move around only between lines.
All must have completed "hum 3(f2)" before the signal for the last line is given. At the leader's discretion this last line may be omitted.

Cornelius Cardew *The Great Learning*

I should point out that implicit in the score is the idea that it may be performed by *any* group of people (whether trained to sing or not). The version available on record is performed by a mixed group of musicians and art students, and my experience of the piece is based on four performances of it in which I have taken part.

A cursory examination of the score will probably create the impression that the piece would differ radically from one performance to another, since the score appears to supply very few *precise (ie* quantifiable) constraints on the nature of each performer's behaviour, and since the performers themselves (being of variable ability) are not 'reliable' in the sense that a group of trained musicians might be. The fact that this does not happen is of considerable interest, because it suggests that *somehow a set of controls which are not stipulated in the score arise in performance,* and that these 'automatic' controls are the real determinants of the nature of the piece.

In order to indicate that this proposition is not illusory, I now offer a description of how the piece might develop if *only* the scored instructions affected its outcome. I hope that by doing this I will be able to isolate a difference between this hypothetical performance and a real performance of the piece, and that this difference will offer clues as to the nature of the 'automatic' controls.

HYPOTHETICAL PERFORMANCE: The piece begins with a rich sustained discord ('choose any note for your first note'). Since the point at which singers move onto their next line and next note is governed by individual breath-lengths ('sing each line for the length-of-a-breath'), it is probable that they will be changing notes at different times. Their choice of note is affected by three instructions: 'do not sing the same note on two consecutive lines', 'sing a note that you can hear', and, if for some reason neither of these instructions can be observed, 'choose your next note freely'. Now, let's propose that there are 20 singers, and that by some chance they have all chosen different first notes. Presumably one of them reaches the end of his first line before any other singer. Since he cannot repeat his own previous note, he has an absolute maximum of 19 notes to choose from for his 'next note'. He chooses one, and reduces the 'stock' of notes available to 19. The next singer to change has a choice of 18 notes. By a continuation of this procedure, one would expect a gradual reduction of different notes in the piece until such time as there were too few notes available for the piece to continue without the arbitrary introduction of new notes in accordance with the third of the three pitch instructions. With a larger number of singers, this process of reduction might well last throughout the piece. So, in this hypothetical performance, the overall shape of the piece would consist of a large stock of random notes thinning down to a small, even, occasionally replenished stock of equally random notes (since they are either what is left of the initial stock or the random additions to it).

REAL PERFORMANCE: The piece begins with the same rich discord and *rapidly (ie* before the end of the first line is reached) thins itself down to a complex but not notably dissonant chord. Soon after this, it 'settles' at a particular level of variety which is much higher than that in the hypothetical performance and which tends to revolve more or less harmonically around a drone note. This level of variety is fairly closely maintained throughout the rest of the piece. It is rare that performers need to resort to the 'choose your next note freely' instruction, and, except in the case of small numbers of singers, this instruction appears to be redundant.[4] This is because new notes are always being introduced into the piece regardless of any intention on the part of individual performers to do so. And this observation points up the presence of a set of 'accidents' which are at work to replenish the stock of notes in the piece. The first of these has to do with the 'unreliability' of a mixed group of singers. At one extreme, it is quite feasible that a tone-deaf singer would hear a note and, following the primary pitch-instruction to 'sing any note that you can hear', would 'match' it with a new note. Another singer might unconsciously transpose a note into an octave in which it is easier for him to sing, or might sing a note that is harmonically a close

relative (a third or a fifth) to it. A purely external physical event will also tend to introduce new notes – the phenomenon of beat frequency. A beat frequency is a new note formed when two notes close to each other in pitch are sounded. It is mathematically and not harmonically related to them. These are three of the ways by which new material is introduced.

Apart from the 'variety-reducing' clauses in the score ('sing a note that you can hear', 'do not sing the same note on two consecutive lines'), some others arise in performance. One of these has to do with the acoustic nature of the room in which the performance is taking place. If it is a large room (and most rooms that can accommodate performances on the scale on which this piece normally occurs are large) then it is likely to have a 'resonant frequency'. This is defined as 'the pitch at which an enclosure resonates', and what it means in practice is this: a note sounded at a given amplitude in a room whose resonant frequency corresponds to the frequency of the note will *sound louder* than any other note at the same amplitude. Given a situation, then, where a number of notes are being sounded at fairly even amplitude, whichever one corresponds to the resonant frequency of the room will sound louder than any of the others. In Paragraph 7, this fact creates a statistical probability that the piece will drift towards being centred on an environmentally-determined note. This may be the drone note to which I alluded earlier.

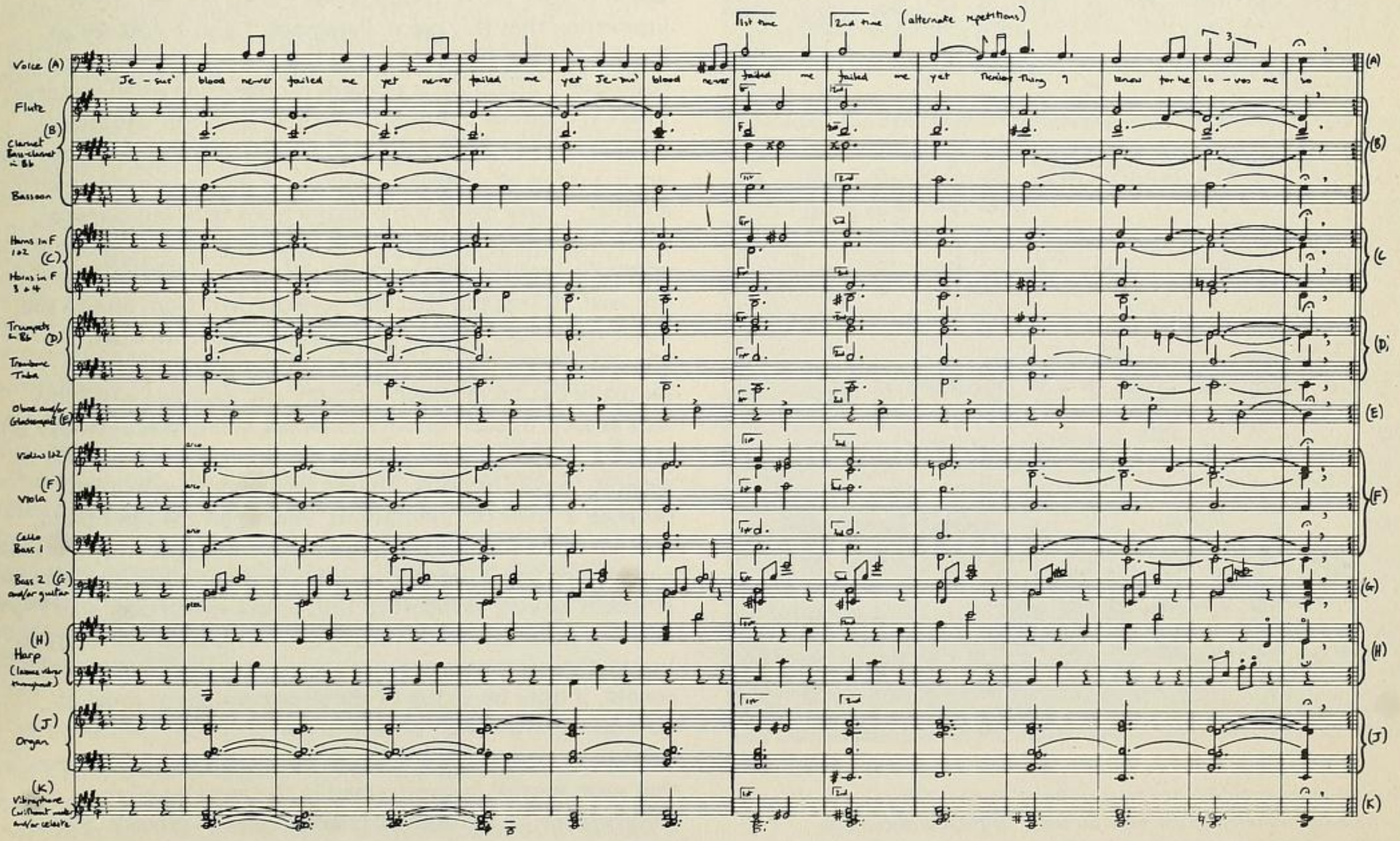
Another important variety-reducer is preference ('taste'). Since performers are often in a position to choose between a fairly wide selection of notes, their own cultural histories and predilections will be an important factor in which 'strains' of the stock they choose to reinforce (and, by implication, which they choose to filter out). This has another aspect; it is extremely difficult unless you are tone-deaf (or a trained singer) to maintain a note that is very discordant with its surroundings. You generally adjust the note almost involuntarily so that it forms some harmonic relationship to its surroundings. This helps explain why the first dissonant chord rapidly thins out.

In summary, then, the generation, distribution and control of notes within this piece are governed by the following: one specific instruction ('do not sing the same note on two consecutive lines'), one general instruction ('sing any note that you can hear'), two physiological factors (tone-deafness and transposition), two physical factors (beat frequencies and resonant frequency), and the cultural factor of 'preference'. Of course, there are other parameters of the piece (particularly amplitude) that are similarly controlled and submit to the same techniques of analysis, and the 'breathing' aspects of the piece might well give rise to its most important characteristic – its meditative calm and tranquillity. But what I have mentioned above should be sufficient to indicate that something quite different from classical compositional technique is taking place: the composer, instead of ignoring or subduing the variety generated in performance, has constructed the piece so that this variety is really the substance of the music.

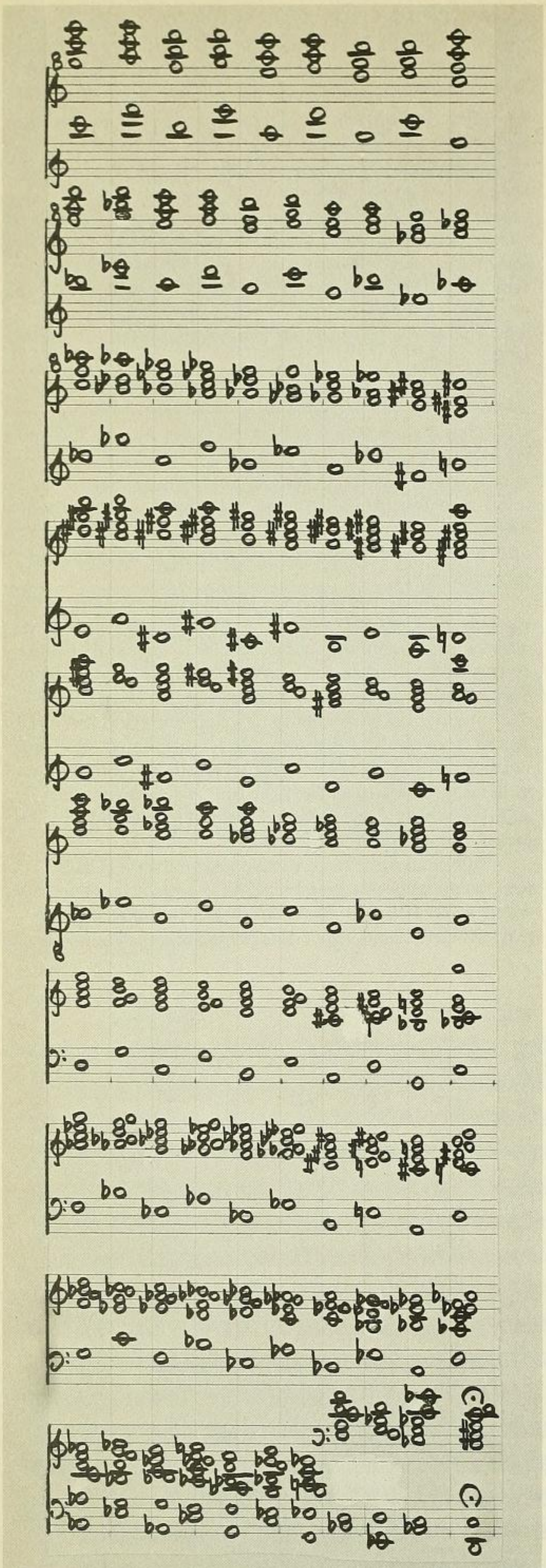
Perhaps the most concise description of this kind of composition, which characterizes much experimental music, is offered in a statement made by the cybernetician Stafford Beer. He says: 'Instead of trying to specify it in full detail, you specify it only somewhat. You then ride on the dynamics of the system in the direction you want to go.'[5] In the case of the Cardew piece, the 'dynamics of the system' is its interaction with the environmental, physiological and cultural climate surrounding its performance.

The English composer Michael Parsons provides another view on this kind of composition: 'The idea of one and the same activity being done simultaneously by a number of people, so that everyone does it slightly differently, "unity" becoming "multiplicity", gives one a very economical form of notation – it is only necessary to specify one procedure and the variety comes from the way everyone does it differently. This is an example of making use of "hidden resources" in the sense of natural individual differences (rather than talents or abilities) which is completely neglected in classical concert music, though not in folk music.'[6]

This movement towards using natural variety as a compositional device is exemplified in a piece by Michael Nyman called *1-100* (Obscure 6). In this piece, four pianists each play the same sequence of 100 chords descending slowly down



Gavin Bryars *Jesus' Blood Never Failed Me Yet*



Michael Nyman *1-100* for four or more pianos. Allow each chord to fade before playing the next chord. Dynamic should be constant throughout (*ie* all *pp,* or *f,* or *fff,* etc) apart from the beginning, when all players should begin together, no attempt should be made to synchronise chords.

the keyboard. A player is instructed to move on to his next chord only when he can no longer hear his last. Since this judgement is dependent on a number of variables (how loud the chord was played, how good the hearing of the player is, what the piano is like, the point at which you decide that the chord is no longer audible), the four players rapidly fall out of sync with one another. What happens after this is that unique and delicate clusters of up to four different chords are formed, or rapid sequences of chords are followed by long silences. This is an elegant use of the compositional technique that Parsons has specified, not least because it, like the Cardew piece, is extremely beautiful to listen to – a factor which seems to carry little critical weight at present.

Composition of this kind tends to create a perceptual shift in a listener as major as (and concomitant with) the compositional shift. It is interesting that on record these two pieces both have 'fade' endings (the Cardew piece also has a fade beginning), since this implies not that the piece has finished but that it is *continuing out of earshot.* It is only rock music that has really utilized the compositional value of the fadeout: these pieces use it as a convenience in the sense that both were too long for a side of a record. But a fadeout is quite in keeping with the general quality of the pieces and indicates an important characteristic that they share with other experimental music: that the music is a section from a hypothetical continuum and that it is not especially directional - it does not exhibit strong 'progress' from one point (position, theme, statement, argument) to a resolution. To test the validity of this assumption, imagine a fadeout ending halfway through Beethoven's 9th Symphony. Much of the energy of classical music arises from its movement from one musical idea to another – the 'theme and variation' idea – and this movement is directional in the sense that the history and probable futures of the piece have a bearing on the perception of what one is hearing at the present.

Experimental music, however, has become concerned with the simultaneous permutation of a limited number of elements at a moment in time as well as the relations between a number of points in time. I think also that it has tended to reduce the time-spans over which compositional ideas are developed; and this has led to the use of cyclic forms such as that in Gavin Bryars' *Jesus' Blood Never Failed Me Yet.* (It is interesting that this piece, Paragraph 7 and *1-100* are all based on 'found material'; and in each case the focus of the composer's attention is towards *reorganizing* given material. There is a special compositional liberty in this situation.)

I do not wish to subscribe to the view that the history of art is a series of dramatic revolutions where one idea overthrows another. I have made some distinctions between classical and experimental compositional techniques, and between the perceptual modes that each encourages in a listener, but I do not wish to propose that the development from one to the other is a simple upward progression. I have ascribed characteristics to these two musics as though they were mutually exclusive, when virtually any example will show that aspects of *each* orientation exist in any piece. What I am arguing for is a view of musical development as a process of generating new hybrids. To give an example: one might propose a 'scale of orientations' where, on the right hand, one placed the label 'Tending to subdue variety in performance' and, on the left, 'Tending to encourage variety in performance.' It would be very difficult to find pieces which occupied the extreme polarities of this scale, and yet it is not difficult to locate distinct pieces at points along the scale. A classical sonata, if only by virtue of the shortcomings of musical notation, allows some variety in performance.[7] On the other (left) hand, the most random of 'random music' (whatever that term meant) is constrained in its range by all sorts of factors down to the straightforward laws of physics. So we might place the Cardew piece towards the left, but not as far left as, say, a free-jazz improvisation. A scale of this kind does not tell us much about the music that we place on it, but its function is to remind us to think in terms of hybrids

rather than discontinuities.

Give the above reservation about polarising musical ideas into opposing camps, I would now like to describe two organizational structures. My point is not that classical music is one and contemporary music the other, but that each is a group of hybrids tending towards one of the two structures. At one extreme, then, is this type of organization: a rigidly ranked, skill-oriented structure moving sequentially through an environment assumed to be passive (static) towards a resolution already defined and specified. This type of organization regards the environment (and its variety) as a set of emergencies and seeks to neutralize or disregard this variety. An observer is encouraged (both by his knowledge of the ranking system and by the differing degrees of freedom accorded to the various parts of the organization) to direct his attention at the upper echelons of the ranks. He is given an impression of a hierarchy of value. The organization has the feel of a well-functioning machine: it operates accurately and predictably for one class of tasks, but it is not adaptive. It is not self-stabilising and does not easily assimilate change or novel environmental conditions. Furthermore, it requires a particular type of instruction in order to operate. In cybernetics this kind of instruction is known as an algorithm. Stafford Beer's definition of the term is 'a comprehensive set of instructions for reaching a known goal'; so the prescription 'turn left at the lights and walk twenty yards' is an algorithm, as is the prescription 'play a C sharp for quaver followed by an E for a semiquaver'.[8] It must be evident that such specific strategies can be devised only when a precise concept of form (or identity, or goal or direction) already exists, and when it is taken for granted that this concept is static and singular.

Proposing an organizational structure opposite to the one described above is valueless, since we would probably not accord it the name 'organization': whatever the term does connote, it must include some idea of constraint and some idea of identity. So what I shall now describe is the type of organization that typifies certain organic systems, and whose most important characteristics hinge on this fact: that changing environments require adaptive organisms. Now, the relationship between organism and its environment is a sophisticated and complex one, and this is not the place to deal with it. Suffice it to say, however, that an adaptive organism is one which contains built-in mechanisms for monitoring (and adjusting) its own behaviour in relation to the alterations in its surroundings. This type of organism must be capable of operating from a different type of instruction, since the real coordinates of the surroundings are either too complex to specify, or are changing so unpredictably that no particular strategy (or specific plan for a particular future) is useful. The kind of instruction that is necessary here is known as an heuristic, and is defined as 'a set of instructions for searching out an unknown goal by exploration, which continuously or repeatedly evaluates progress according to some known criterion.'[9] To use Beer's example: if you wish to tell someone how to reach the top of a mountain which is shrouded in mist, the heuristic 'keep going up' will get them there. An organism operating in this way must have something more than a centralized control structure. It must have a responsive network of subsystems capable of autonomous behaviour, and it must regard the irregularities of the environment as a set of opportunities, around which it will shape and adjust its own identity.

* * *

What I have tried to suggest in this essay is a technique for discussing contemporary music in terms of its functioning. I have concentrated primarily on one piece of music because I wanted to show this technique at work on one specific problem, and because I feel that the technique can thereafter quite easily be generalized to deal with other activities. I do not wish to limit the scope of this approach to music, although since music is a social art which therefore generates some explicit organizational information, it lends itself readily to such analysis. I have in the past discussed not only the fine arts but also, for example, the evolution of contemporary sporting practices and the transition from traditional to modern military tactics by asking the same kinds of questions directed at the organizational level of the activities. It does not surprise me that, at the systems level, these apparently disparate evolutions analogue each other with great accuracy.

In his book *Man's Rage for Chaos* Morse Peckham writes: 'Art is the exposure to the tensions and problems of the false world such that man may endure exposing himself to the tensions and problems of the real world.'[10] As the variety of the environment magnifies in both time and space, and as the structures that were thought to describe the operation of the world become progressively more unworkable, other concepts of organization must become current. These concepts will base themselves on the assumption of change rather than stasis, and on the assumption of probability rather than certainty. I believe that contemporary art is giving us the feel for this outlook.

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1 This ranking is most highly developed in classical Indian music, where the tamboura plays a drone role for the sitar. I think it no coincidence that Indian society reflected the same sharp definition of roles in its caste system.

2 W. Ross Ashby, *An Introduction to Cybernetics,* University Paperbacks, London, 1964, (first published 1956).

3 Each paragraph corresponds to one in the Confucian classic of the same title.

4 A number of the score instructions seem redundant; all of those concerning the leader, for example, make almost no difference to the music.

5 Stafford Beer, *Brain of the Firm. The Managerial Cybernetics of Organization,* Allen Lane, London, 1972, p.69.

6 Michael Parsons, quoted in Michael Nyman, *Experimental Music – Cage and Beyond,* Studio Vista, London, 1974.

7 It is interesting to observe that the sound of a string orchestra results from minute variations of tuning, vibrato and timbre. This is why electronic simulations of strings have not been notably successful.

8 Stafford Beer, op.cit., p.305.

9 Beer, p.306.

10 Morse Peckham, *Man's Rage for Chaos,* Schocken, New York, 1967, p.314.

ALVIN LUCIER'S MUSIC OF SIGNS IN SPACE

Stuart Marshall

Consider how the notion of space has developed in the visual arts since the mid-1960s. Sculptural articulation of three-dimensional space has been supplemented by environmental art, body art, performance space, conceptual space, installation — the list could be enormous. In a sense space has been seen to play no part in music (at least by the composer). Western music has traditionally demanded a repression of space: most music is performed for an audience who are all in the same seat. To a certain extent music performance must address itself to the performance space but only to subjugate its specificities — a 'bad' concert hall is one that irrepressibly asserts its own presence. Conductors attempt to de-emphasise the acoustic characteristics of particular auditoriums in order to attain a kind of acoustic norm appropriate to the kind of music being played. This may involve the repositioning of instrumental sections and the moderation of notated dynamics if, for example, the brass section is over-emphasised by the resonance of the space. But this extremely important spatial parameter is unnotated by the composer and in this sense is extra-musical. It falls outside the musical code. Most music is spatially non-specific in notation and spatially asignifying in performance (in that performance aspires to an acoustic norm).

The music of Alvin Lucier makes a marked break with this tradition. Although his first 'environmental' works were contemporary with the rise of environmental art, I know of no direct visual art influence on his work of that time. Nevertheless his music made use of the very factors that were to become the most obvious problems of environmental/land art. By locating their work at a great distance from their audience (the exigencies of space) many environmental artists were forced to present their work as documentation in the gallery, eventually leading one to wonder just which (and where) the work was. Lucier's *Quasimodo* (1970), which uses an enormously expanded performance space, actually employs separation as its theme — it evokes the distance itself. Similarly his work about spaces other than the audience space (for example *I Am Sitting in a Room)* uses documentation — tape recording — to overlay and interrelate spaces and to explore the specificities of the audience space. In this sense his work has more in common with the installation which articulates the gallery space.

Lucier's music parallels the rethinking and redefining that has taken place in the visual arts. A few examples may illustrate its range. *Whistlers* (1967) and *North American Time Capsule* (1967) — extra-terrestial space; *Chambers* (1968) — scale change and exchange of acoustic space; *Hartford Memory Space* (1970) and *The Duke of York* (1971) — memory space; *The Bird of Bremen Flies through the Houses of the Burghers* (1972) — computer simulation of phantasy spaces.

I have chosen to describe two of Lucier's spatial themes in depth. The first is the acoustic articulation of the performance space and the construction of sound 'geographies' within it. Several of the pieces have been realised as installations and here is an overlap with the work of some installation artists. For example, Dennis Oppenheim's *Castings* uses very similar spatial themes to Lucier's *Outlines.* The second is memory/psychic space involving notions of the subject's representation in and by language and, as Nancy Kitchel has put it, 'The fragility of the boundaries that make one entity separate from another...the inviolability of them. Extending my boundaries, physical and mental, to encompass, assimilate, control others. Internalization as a method of assimilating others.'

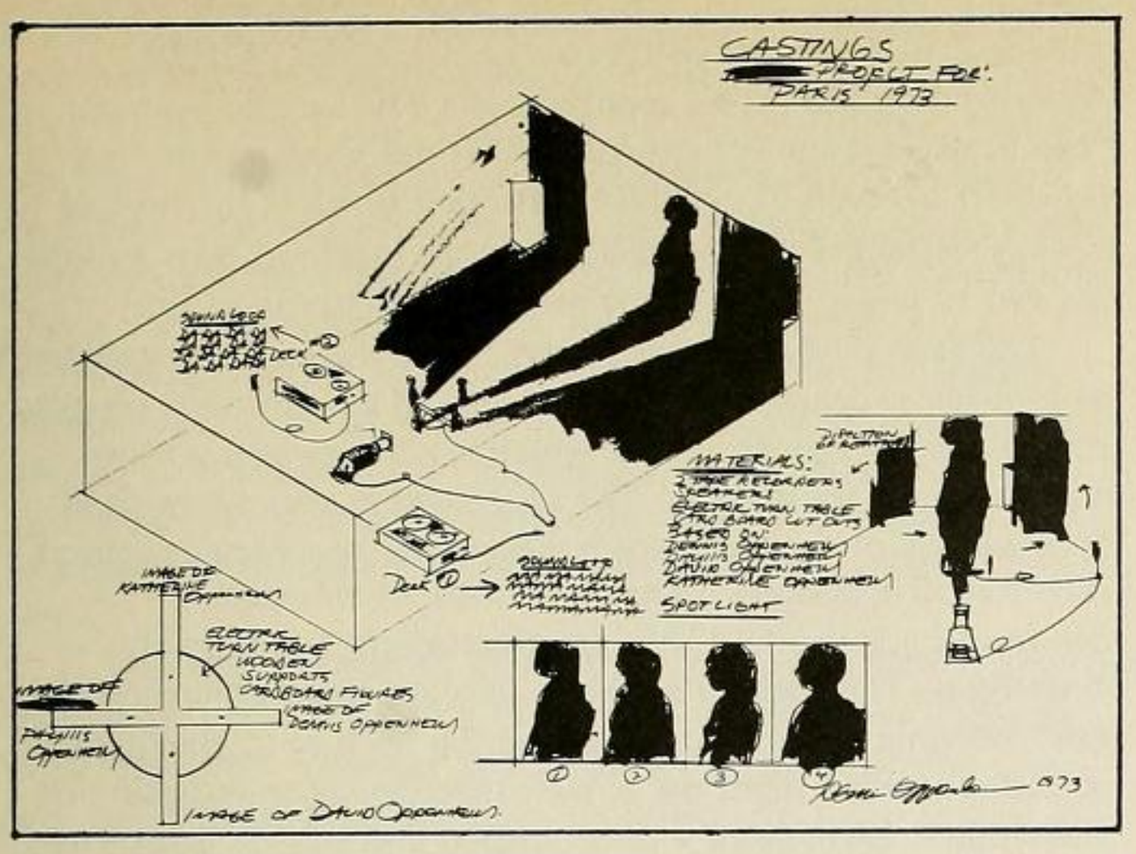
Roselee Goldberg has convincingly argued that the development of notions of extended space in the visual arts have stemmed from the influence of conceptual art, but this has not been the case with Lucier. Although I agree with her that the 'coming-together of dancers, musicians and artists... and the resulting cross-fertilisation of concepts and sensibilities makes it difficult for those wishing to relocate the categories', [1] in Lucier's case an extended comparison of music and art could degenerate into a gratuitous game of free-association and mask the actual influences on his music. For instance, his development of musical spatial codes — his interest in the environment — was not prompted by a desire for grandiose sites, a return to the land (the influence of ecology) or for works of enormous scale, but rather by his concern with acoustic communication and the history of music semantics. Musical space and musical semantics are inextricably tied together in all his work.

* * * *

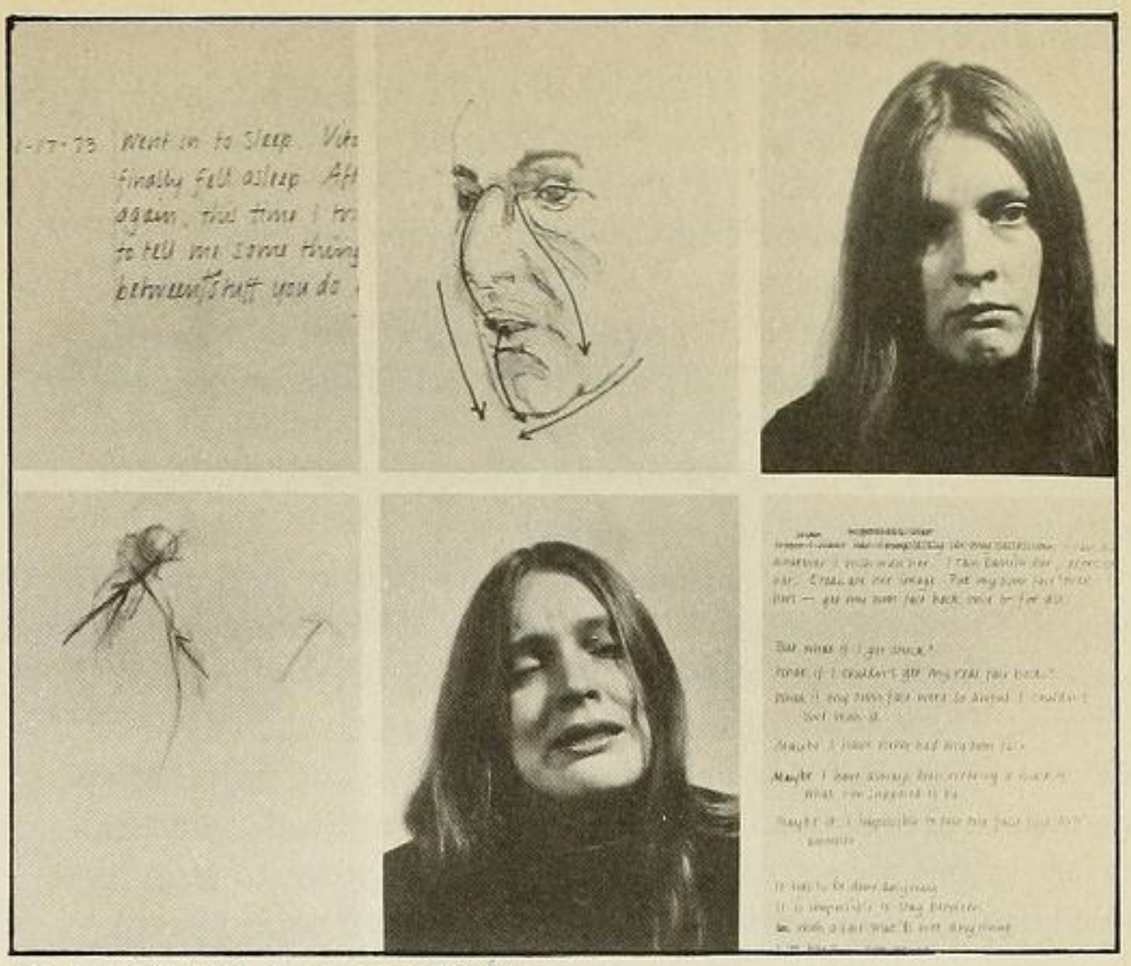
Without entering into all the convolutions of semantic theory it is possible to describe the course of Western music as a gradual slide towards asignification. This has been brought about by an increasing concentration on instrumental music (it should not be forgotten that the majority of the world's music has been, and is, vocal or vocal/instrumental), by the loss of emblematization so evident in the music of the Middle Ages and many non—Western musics, and by the slow elimination of the symbolics of the instrument and its symbolic role in performance.

Experimental music has most certainly been addressed to this situation on occasions, but most new music has continued the general trend. The fascination with composition was continued in Musique Concrète, where iconic signs were placed in a 'formal' musical structure to produce a peculiar tension between code and sign. Cage's musical philosophy was concerned with a metaphysics of presence and a denial of semiosis: '...discovering means to let sounds be themselves rather than vehicles.' [2] Paradoxically his music uses systems so complex as to efface their own presence to 'order' richly iconic signs (sound effects, amplified bodily processes) along with instrumental and electronic sounds.

Lucier is one of the few composers who have questioned the very nature of the musical message. His desire for a richly semiotic music led him to a study of bio-acoustic communication. Much of his work is modelled on the codes and semantics of animal communication which in turn have led him to their necessary corollary — the environment in the sense of the pragmatics of space (survival space, ecospace) both as signified and signifying. 'An animal sound message contains a minimum of two types of information. The first intrinsic part indicates the presence of an individual of the species, his spatial position, and, in a number of species (birds and porpoises among others), individualisation...The second part of the message...may also contain information relative to the milieu, such as localisation of an individual, an object, a territory or a predator.' [3]



Dennis Oppenheim *Castings* 1973



Nancy Kitchel *Exorcism* 1973

'The video-tape documents the acquisition on my own face of physical characteristics of another women whose memory became an intrusive element in a relationship and made me feel as if I were in competition with her for the attention of the man I lived with. After making my face into hers, the re-establishment of my own appearance over her's, eliminating her's. The voice-over relates thought processes leading to the physical transformation. A conflict interrupts the process — in acquiring her face, I also acquire her anxiety about her identity — A mental struggle to myself necessitates a return to a period in memory when my identity was secure.

The notebook contains journal entries leading up to the making of the video-tape, establishing a sense of kinship with her as well as a personal necessity for the piece; tension studies (drawings and diagrams for the purpose of discovering the location of tension points in her face so that I could later concentrate tension into that area of my face); notes for and on the piece; text for the vido-tape and photographs of the process of acquiring her physical and psychological characteristics and symbolically ridding myself of them and her.'

Vespers (1968) and *Quasimodo the Great Lover* (1970) are two of Lucier's works explicitly modelled on the codes and semantics of animal communication. 'I became envious of the prodigious sound-sending-and-receiving acuity of these creatures and began searching for ways to enable myself and others to participate in it.' The titles of these pieces are derived from the animal species whose communication systems provide these models. 'The title *Vespers* was chosen for the dual purpose of suggesting the dark ceremony and sanctifying atmosphere of the evening service of the Catholic religion and to pay homage to the common bat of North America of the family Vespertilionidae.'

Quasimodo is based on the 'songs' of the Humpback Whale, one of the most vocal of marine mammals. *Vespers* is a live performance work primarily concerned with the echolocative signification of space. A performance takes place in darkness using SONDOLS (SONar DOLphins), small echolocation devices which produce a highly directional hard sound pulse the repetition rate of which can be varied manually. These pulses function analogously to the clicks used by flying bats for spatial orientation and food detection. By virtue of their broad frequency spectrum and short duration they are ideal carriers of acoustic information such as frequency modulation, formant frequency activation and reverberation. Comparisons made between the acoustic characteristics of the outgoing pulses and the returning echoes allow for perception of the form and substance of the obstacles or surfaces which are echoed off. If the pulse speed is adjusted to the point at which pulses and echoes alternate periodically, the surface being scanned appears to vibrate — to emit sound itself. Performers make their way slowly through the performance space to a predetermined point using the acoustic information to avoid obstacles (survival) and provide scanning sound 'photographs'. All conventional musical gestures such as improvisation of rhythm are rejected. 'During the rehearsals it became clear that any personal preference as to speed, duration, texture, improvisation — and musical ideas based on past experience — served only to interfere with the task of echolocating and made coherent movement difficult or impossible.' Musical codes are replaced by a communicational code. Syntactic structuring is dictated by the exigencies of sound measuring. Pulses are placed betwen echoes, and silences are required to avoid acoustic clutter which masks an individual's echo trains. The work is totally space-specific in notation, as it is the environment itself which is 'read' as the score.

The signs used in *Vespers* are extraordinarily rich. The sounds emitted are non-semantic, rather like the material non-semantic second articulation of language (the phonemic level), their purpose being to bear information which is imprinted by the environment. 'Sounds used as messengers.' At this first stage they do exhibit indexicality as the directional beam points towards what is to be signified. On their return they are richly iconic signs carrying information which is decoded by means of the processes of acoustic perception. Although human beings constantly decode such aspects of acoustic information — the proximity of a speaker as signified by relative loudness, for example — they remain unnoticed unless they form one of the signs which constitute a perception clash. A common instance of this is the film or television distance shot of a speaker, which is accompanied by a 'close-up' sound recording. *Vespers* purposefully foregrounds such non-conscious aspects of the acoustic message to provide an extremely powerful, familar yet new, sound image. The score for the piece is verbal and consists of a description of the performer's task and the principles of echolocation.

Quasimodo, dedicated to the double bassist Bertram Turetzky, is written for 'any person who wishes to send sounds over long distances, through air, water, ice, metal, stone or any other sound-carrying medium, using the sounds to capture and carry to listeners far away the acoustic characteristics of the environments through which they travel.' The work not only deals with signification at a distance but also with the signification of distance. 'The transmission channel, even when considered as homogenous, is not inert, and it plays a role in signal structure or its perception...'[4] To enable a performer to communicate vocally over great distances, enormous amplification and directionality must be produced electronically. (The songs of Humpback Whales can be heard at a distance of several miles

and certain marine mammals can echolocate bays and coastlines at great distances).

This is achieved by means of chained microphone/amplifier/loudspeaker systems deployed through the space to be activated. The performer should 'sing or whistle or play any large or small musical instrument' through the first amplification stage. A remote microphone detects this amplified sound, and this second booster stage broadcasts to a third and so on. The chain finishes with loudspeakers in an auditorium located at a distance from the performer great enough to allow the sounds to travel for a minimum of one second through acoustic space.

Again musical codes are replaced by communicational codes. The notation describes how the performer can construct a sign repertoire modelled on the acoustic sign system of whales. These are structured in sets 'in which each event within a set is subject to gradual, repetitive and cumulative variation with respect to pitch, timbre, amplitude, envelope or any other aspect of sound and time, in order to amplify in time the relationship between the original sound event, its change and the environment through which it travels.' Performance duration, as in *Vespers,* is dependent upon the length of time required to fully explore and articulate the acoustic environment in order to provide a detailed sound description.

Quasimodo and *Vespers*, like the majority of Lucier's work, present great notational problems. Neither can be performed in a detached 'professional' manner but require the performers to understand and carry out extremely complicated tasks. They must learn to consciously listen to what they normally hear non-consciously. Both scores explain the works in terms of responsibilities and aims appropriate to the goal-oriented nature of the performance activity. Both scores also provide a kind of textual realisation in the form of phantasy performances using the same principles of communication.

* * * *

The Only Talking Machine of its Kind in the World (1969) is Lucier's first speech piece which uses his own speech characteristic – a sometimes pronounced stutter – as material. It is also the first work to deal with the signification of memory space and psychic space and with the role of language and desire. The piece is for stammerer and a tape delay playback system consisting of a large number of tape machines, which are arranged in a network branching away from the speaker. Speech, when recorded through this system is increasingly repeated as it passes through more and more replaying tape machines which carry the speech towards the audience. Lucier's concern is with the transgression of the linguistic code and the appearance of extra-linguistic signifiers within speech ('the fracture of a symbolic code which can no longer "hold" its (speaking) subjects...', '...the speaking subject as subject of a heterogeneous process...' Julia Kristeva).

The work uses anxiety about public speech: '...while everybody does not stutter, I think everyone has a certain amount of anxiety about speech. I've met a lot of people whom I don't think stutter but they think they do.' The performer is to talk about 'things that are intimate enough that they change your psychological state.' Lucier is considering stutters as psychically overdetermined signifiers, resulting from repressed unspoken signifiers interfering with intended speech and irrupting as compromise formations and as transgressions of the systematicity of the linguistic code. They are an instance of what, in Julia Kristeva's terminology, is describable as the presence of the geno-text within the pheno-text – that moment of transgression which challenges the illusory wholeness of the transcendental subject. They mark the operations of the primary processes of the unconscious and of desire, and reveal a heterogenity within the signifying process - the infringement of the code from which the subject derives pleasure. These signifiers are repressed because of their history, their significance for the subject as associations with repressed material. 'That's interesting because it's a mapping, it's a history of yourself... I can now treat the substitutions that my speech produces as historical, even of my own particular lifetime but sort of tracing responses or associa-, the whole fabric of how a word has sort of lived...and is continuing to live in my mind.'

The tape delay system throws the performer's speech back at him/her repeatedly, as an analogue of the primary process of the compulsion to repeat which is also realised within the stammers themselves. The tape system also operates as an analogue of the relations between the psychic systems as it re-transcribes signs [5] as traces [6] until, in this case, obliteration is reached through the superimposition of rewritings. The speaker's verbal signs are degenerated until they become incomprehensible, and a texture of rhythmic sound is formed from the almost mechanical articulation of the stutter. Histories are decomposed and speech is returned to phonation, to the drive to utter.

* * * *

'I am sitting in a room different from the one you are in now. I am recording the sound of my speaking voice and I am going to play it back into the room again and again until the resonant frequencies of the room reinforce themselves so that any semblance of my speech, with perhaps the exception of rhythm, is destroyed. What you will hear, then, are the natural resonant frequencies of the room articulated by speech.

I regard this activity not so much as the demonstration of a physical fact, but more as a way to smooth out any irregularities my speech might have.'

I am Sitting in a Room (1970), Lucier's second major speech work, occupies a kind of nodal position for these earlier works. The making of the piece necessitated the use of tape, and although live versions are possible (I heard of a 24-hour version performed in San Francisco) the definitive version is Lucier's own tape recording. This is Lucier's only extant work for magnetic tape as he has always been a great protagonist of live performance. The piece was made by recording the spoken text in a room, playing it back into the room through loudspeakers and repeating the operation until the situation described in the text has come about. The work was instigated by a demonstration of a loudspeaker, which was designed to take the resonance and acoustics of the reproduction space into account, and also by Lucier's observation of the behaviour of public speakers. Experienced speakers will often move about in a space, attempting to find a position in which flattering components of their speech are amplified by resonance and optimum voice-projection is attained. The space is used as an acoustic mirror which can be distorted for self-flattery. The resonance frequency of a space is excited when a sound produced within it corresponds in wave length to one of the dimensions of the room. Constructive interference of these sound waves leads to their amplification and predominance over other frequencies present within the exciting sound. Any space will therefore amplify certain components of sound and dampen others. By recycling a sound event through this room/filter amplified components will be greatly re-amplified and dampened components further suppressed.

I am Sitting in a Room uses verbal signs both to describe the process of the piece and as raw material, as a sound event on which the environment can leave 'its mark'. The connection with the sound signs of *Vespers* is obvious: 'it's like the bat piece, I didn't want the input to have much of interest about it semantically.' There is a slow shift from the semantics of verbal signs to the semantics of iconic signs, from arbitrary signs to motivated signs. A co-extensive shift takes place between the specificities of Lucier's speech - his stammering - and the specificities of the room's

acoustics, its acoustic signature. 'I'm not interested in these resonant frequencies of spaces in a scientific way as much as I am in opening a secret door to the sound situation that you experience when you are in a particular room.' The shift is a curious one, as verbal meaning persists long after the speech sounds have been degraded to the point at which a latecomer finds them incomprehensible. As in *Vespers,* there is a slow foregrounding of aspects of acoustic communication which are usually perceived non-consciously as attention is slowly directed from the speech act to its context. (In a sense every speech act bespeaks the state of the oral cavities, its immediate environment, proxemic information etc).

The work relates to *The Only Talking Machine* in that both works are concerned with operations upon Lucier's speech characteristics. Whereas in *The Only Talking Machine* these are nullified by their constant repetition, in *I Am Sitting in a Room* they are smoothed away in a gentle catharsis. It is in this sense that the first work is dedicated to those 'who believe in the healing power of sound.'

* * * * *

Although Lucier's work is usually described in the context of electronic music his pieces are never about electronics per se. 'I don't care particularly much about circuitry or things of that kind but I do care about what electronics can do for me to help me touch people.' His synthesizer works never use the sound-producing modules - the instrument is used in its capacity as sound processor, its ability to change a sound's parameters.

The Duke of York (1971) and *The Re-Orchestration of the Opera 'Benvenuto Cellini' by Hector Berlioz* (1974) are two of Lucier's rare works for synthesizer, and the notion of synthesis is central to both. They relate strongly to the first speech piece in their concern with memory space (in this case phylogenetic) but also demonstrate a new attitude towards acoustic messages. In this case a vocal utterance is considered in aggregate as an indicator, a subcategory of the identifier signs. '...the means by which a person...may be definitely recognised.'[7] *The Duke of York* is scored for vocalist and synthesist(s). The vocalist either with or without the collaboration of the synthesist prepares a repertoire of vocal utterances, samples of the acoustic messages of various vocal identities, and orders them chronologically or according to their temporal relations within the memory. If this is done without the help of the synthesist, the synthesist prepares his/her own repertoire. The vocalist's score may take the form of texts, records, tape-recordings of the original utterances. A performance requires the vocalist to speak, sing, etc, his/her repertoire into a microphone which is connected to loudspeakers via the synthesizer. If the performance is collaborative, the synthesist attempts to modify the vocal sounds to match his/her remembrance of them. If the performance is non-collaborative, s/he modifies the sounds to simulate the vocal identities of his/her repertoire. A key requirement of the work is that no change on the synthesizer can be rescinded. Consequently as the piece progresses, superimpositions are made and a synthesis of vocal identities is formed.

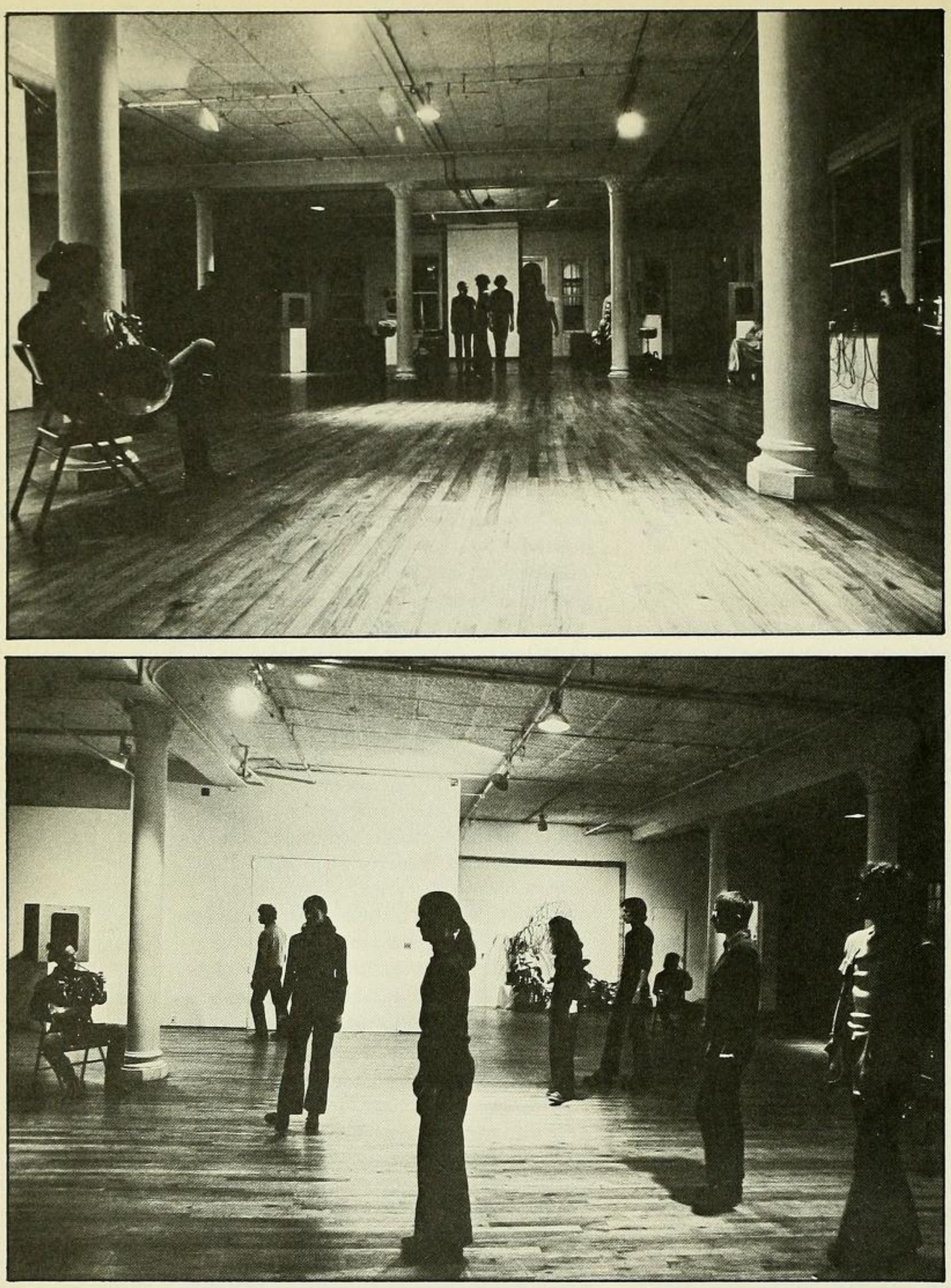
Lucier intends the work to have many phantasy correlations — the tracing of ancestries, hidden family ties and ancient liaisons. 'It seems to me quite possible that all the things that are told to us today in analysis as phantasy... were once real occurrences in the primaeval time of the human family.'[8] Synthesis not only takes place between successive identities but also between the performers' remembrances of the vocalist's or each others' chosen identities. The piece strongly emphasises the phatic function of music and provides an opportunity for the mediation of externalised phantasies. His idea that the piece may provide the possibility of making manifest the kind of latent phantasy links and thoughts that he describes explains the work's requirement of synthesis. The synthesis that takes place imitates the unconscious mechanism of condensation — one of the means by which dream thoughts can escape censorship. The work is in fact a massive condensation producing a 'collective figure'.[9]

The Re-Orchestration of the Opera 'Benvenuto Cellini' by Hector Berlioz, again concerned with phylogenetic memories, is of a much more personal nature, tracing 'coincidences' in the lives of Berlioz and Lucier. The synthesis, again made by means of a synthesizer, is of a taped recording of Berlioz's opera and Lucier's speech. 'Resonances' between Berlioz's 'music as idealised speech' and Lucier's voice are established by means of the vocal control of resonance, filtering and envelope shape.

* * * * *

Lucier's most recent work has markedly shifted emphasis from the signification of pre-existing spaces to the construction of complex sound geographies, all of which involve elements of dance. Since 1973 he has been musical director of the Viola Farber Dance Company and this working involvement has led him even further away from the notatable work realisable without the composer's presence. These pieces all to a great extent involve acoustic perspective, mapping and superimposition. *Still and Moving Lines of Silence in Families of Hyperbolas* (1973-4) and *Outlines* (1975) of persons and things, use acoustic phenomena that are particularly difficult to describe, and as far as I know the former piece, although performed many times, is still unnotated. Structuring in the musical or even communicational/syntactic sense of the ordering and combining in time of musical signs has been replaced by a concentration on the temporality of sound structures. 'Composition' has become irrelevant as he has turned his attention to 'the unleashing of natural phenomena that have to have their own time to develop.' He has recently remarked that he has replaced the composer's expending of effort in composition by a desire to understand acoustic phenomena. 'John Cage looks at all the possibilities and then subjects...them to chance operations. That to me is artifice, and I don't want to do that...now I'm thinking of the physical sounds...I just want to understand how they will hit an object and reflect around or...diffract around and I want to use that. So while I'm not dealing with sounds in superimposed systems, which makes composing hard, I'm trying to deal with the physical realities of sound which is... the hardest thing of all.'

Still and Moving Lines of Silence begins from the phenomenon of standing waves and resonance first used in *I am Sitting in a Room.* It has many versions but the 'simplest' one, which is the basis of all others, is realised with sine wave generators, amplifiers and loudspeakers. A standing wave is produced in a space when a tone is played which corresponds in wavelength, by a simple whole number relationship, to a dimension of the space. Constructive interference takes place and the sound wave stabilizes, dividing the space into stationary troughs and crests of pressure. These can be perceived on moving through the space as increases and decreases in loudness. If the sine waves is played through two loudspeakers these lines form hyperbolas due to a phase effect between the speakers. This version is used with the Viola Farber Dance Company to provide a kind of sound terrain within which the dancers orient themselves. Extreme control must be achieved and accurate calculations made in order to ascertain which pitches to use in which spaces. This presents enormous problems as reflections of sound within the space complicate the theoretical calculations. Minutely untuning one sound source throws the stable phase pattern out and the hyperbolas of pressure lines move in eliptical patterns,



Still and Moving Lines of Silence in Families of Hyperbolas 1973-4. Three stages in the performance at the Kitchen, New York, February 1975.

Mary Lucier

their speed depending upon the amount of untuning. In this case the sound geography moves within the performance space, passing by audience members. This version was performed by Lucier at the Serpentine Gallery, London, 1973 using snare drums positioned around the walls. The passage of a sound crest around the gallery was made observable by its activation of the drum membranes and snares. The physicality of the sound is almost impossible to describe. When a pressure wave passes by the effect is similar to an alternation of deafness in either ear. Versions have been realised with instrumentalists who substitute for one of the loudspeakers. Here minute intonational changes cause dramatic effects in the total sound structure. Lucier relates the piece to *Vespers* in that echolocative type interactions can take place between performers and their environment, in the same way that water skimmers can determine their positions relative to the banks of a pond by perceiving the echoes of the wave trains caused by their motor actions.

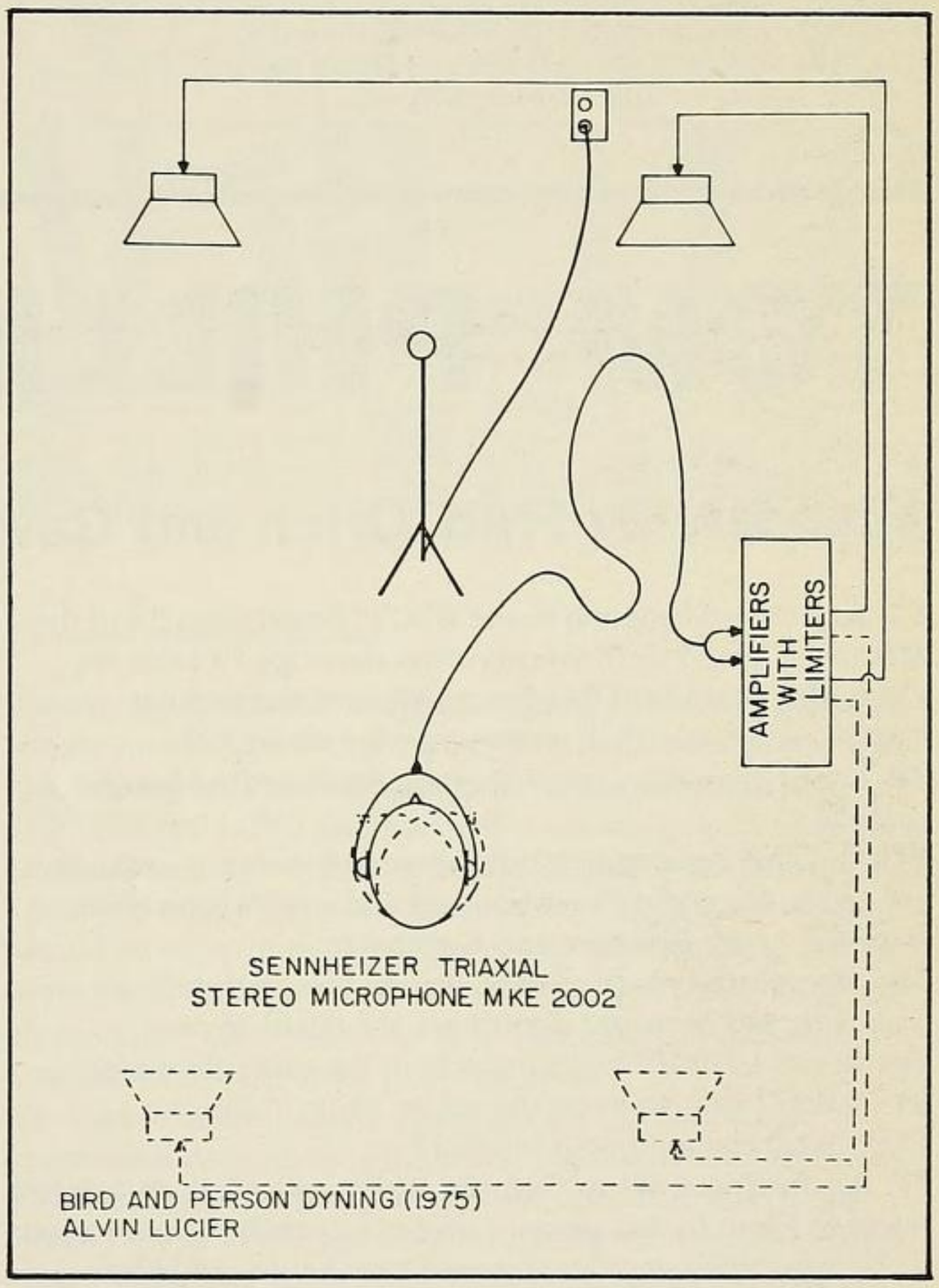
A vocal version has developed through Lucier working with the singer Joan La Barbara for a performance at the Musée Galliera, Paris, in October 1974. Working also as a dancer, in that she moved to find acoustical nodes within the sound structure, she described her vocal experience as a pushing of sound waves away from herself. In the Paris performance she sang inaudibly, integrating her voice into the sound structure by moving it at will.

Outlines is an extension of this standing wave piece into a form of acoustic holography. A dancer stands in front of a bank of loudspeakers which reproduce sine waves corresponding in wave length to the dancer's body dimensions. An acoustic shadow or negative image is projected out in a tunnel in front of the dancer. Parasitic harmonics also project scaled up or down silhouettes, creating multiple images which are transforms of the primary shadow. Stationary objects are also employed in the piece and their shadows are detected by a microphone which provides a scanned negative image through loudspeakers. Extremely high frequencies by virtue of their minute wavelengths can be used to cast perceivable shadows of objects as thin as fishing lines.

Bird and Person Dyning (1975), Lucier's most recent work, makes use of a rather eccentric sound producer — an electronic bird. The bird was a gift from a person Lucier has never met who was interested in his work. This electronic 'novelty' consists of a fretted plastic ball which produces electronic bird sounds when plugged into the mains. A constant companion of Lucier's for over a year, it fascinated him by its ability to generate combination tones which are produced in the ear in a numerical relationship to the stimulus pitches. The subjective perception that this sound source generated became the basis of the performance work. For some time he has also wanted to make a work using some binaural microphones he had bought to make the recording of *Vespers* that was released on record. These tiny microphones are worn in the ears to produce a personalised reproduction of sound as distinct from the kind of stereo reproduction made with microphones which are separated in space by several feet

A performance of the piece involves the projection of the performer's subjective perception of the bird sound source into the performance space through loudspeakers.
If the performer moves his/her head from side to side the sound source pans between the loudspeakers, thereby reproducing the performer's perception. The difference between the reproduction of a sound by loudspeakers and by headphones, and the relation in each case between the recording space and the reproduction space, is a crucial aspect of this work. When listening to a stereo recording on headphones there is a mismatch between the two spaces. If the listener re-orients his/her body the recorded sound space swivels within the visually perceived reproduction space. If the recording is played on loudspeakers, the recording space

Phillip Makenna



Bird and Person Dyning 1975

and the reproduction space remain in a fixed relationship of overlay (unless of course the loudspeakers are moved).

In the performance, the recording and reproduction spaces are one and the same. The performer's subjective perception is co-present with the audience's perception and a situation of feedback arises in the cycle: performer's perception becomes audience's perception becomes performer's perception. Feedback (howl-round) occurs as the amplifiers re-amplify their signals, and perception of the sound source is altered for both performer and audience as complex combination tones are formed between the sound source and the feedback tones. Feedback and panning are affected by the movement of the loudspeakers to positions at which time delays are created, owing to the sound having to travel for great distances. The resultant sound complex includes 'heterodyning, a phenomenon that creates phantom twitters including mirror images, above and below the originals. Due to the realistic properties of the binaural system, these phantoms would appear at various locations in space, often in and around the listener's head.'

Lucier's most recent work poses important questions about the relationship of the subject to music as a signifying practice. It focuses attention literally on the *position* of the subject. In no sense can an audience member be considered the mere passive recipient of musical meaning. In these pieces the stress on the articulation of perception makes the subject active as the place where musical meaning is created. Everything is in motion and no one can perceive the work as totality. This is a new notion of musical temporality which is intrinsically linked to musical space.

Discography

North American Time Capsule (1967). CBS Odyssey Records 32 16 0258, and Music of Our Time Series S 34-60166.
Vespers (1968). Mainstream MS/5010.
I Am Sitting in a Room (1970). SOURCE Record 3.
The Duke of York (1971) and *Bird and Person Dyning* (1975). CRAMPS Records, to be released 1976.

All unnumbered quotes are either from Lucier's notations, a series of interviews with Douglas Simon or personal communications.
1 Roselee Goldberg, 'Space as Praxis', ***Studio International,*** Sept/Oct 1975, p.130.
2 John Cage, ***Silence,*** Calder and Boyars, London, p.80.
3 Rene-Guy Busnel, 'Acoustic Communication', in ***Animal Communication,*** ed. T. Sebeok, Indiana University Press.
4 Ibid.
5 'I am working on the assumption that our physical mechanism has come about by a process of stratification: the material present-at-hand as memory traces is from time to time subjected to a restructuring in accordance with fresh circumstances — it undergoes, as it were, a re-transcription. Thus what is essentially new in my theory is that memory is present-at-hand not once, but several times over, that it is registered or deposited in various species of signs.' S. Freud, ***Standard Edition*** 1, pp.233-8, Letter 52,1896.
6 See J.Derrida, ***L'écriture et la différence,*** Seuil, Paris, Collection 'Tel Quel'.
7 C.Morris, ***Writings on the General Theory of Signs,*** The Hague, Mouton.
8 S. Freud, ***S.E.*** XVI, p.371.
9 'There is another way in which a "collective figure" can be produced for the purposes of dream condensation, namely by uniting the actual features of two or more people into a single dream image.' S. Freud, ***The Interpretation of Dreams,*** The Pelican Freud Library, p.400.

TOM PHILLIPS

Interview by Fred Orton and Gavin Bryars

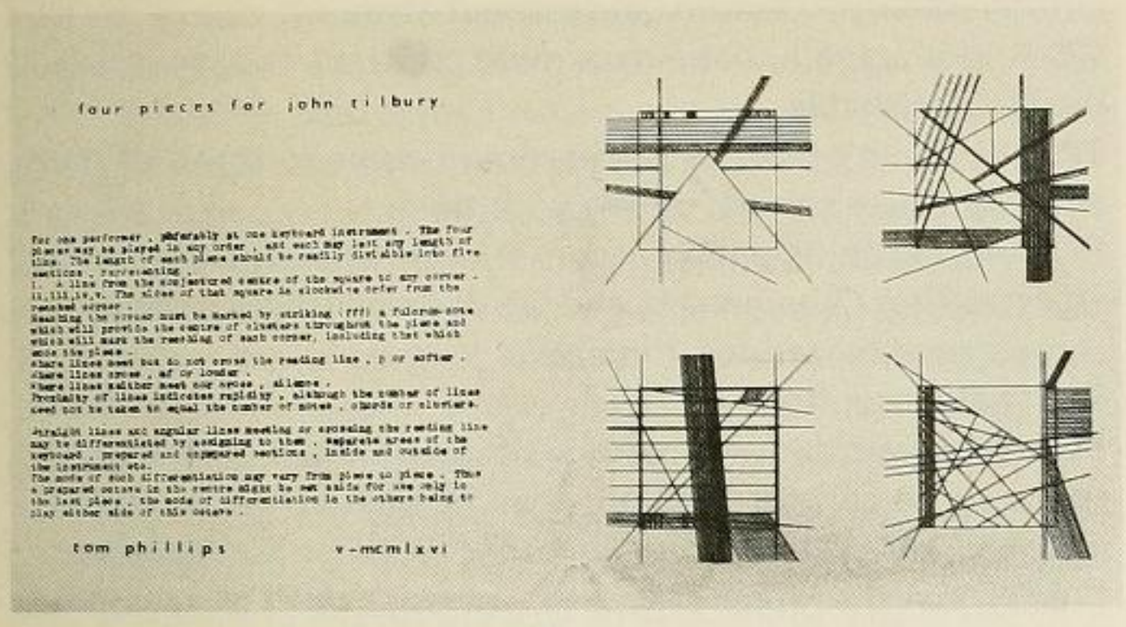
FO Apart from listening to the BBC's 'Grand Hotel' and the *Messiah* it wasn't until your brother developed a taste for music that you heard Beethoven, Mozart, the popular classics. When was that, when you were about 12?
TP I must have been about that age when he first bought records.
FO You also became seriously interested in music, seriously enough to try and make it yourself and sing in choirs, for example, under Beecham and Klemperer.
TP I'm a person much struck, like my son, with *folie de grandeur,* and because I don't have the talent to play Beethoven's *Third Piano Concerto* in the solo role under Klemperer I can get in on the act by being in the choir.
FO What stimulated your interest?
TP By the time I got to Oxford I was more or less completely ready to listen to any piece of music. I knew quite a lot about it. So everything significant would have happened before then, although, of course, there were always new musical experiences — as there still are.
FO What was the nature of your involvement with music when you went on to Camberwell School of Art?
TP Well, I was still in the choir with Jill (Phillips) and I was listening to music and playing the piano.
FO Some of your pictures around this time, *A Little Art History* (1965) and *Ephemerides* (1966), seem quite heavily influenced by R.B. Kitaj.
TP Definitely the latter but not the former.
FO I was thinking particularly of the way elements are laid out on the canvas. *A Little Art History* bears comparison with Kitaj's *Specimen Musings of a Democrat* (1961) in this respect.
TP I know what you mean but I don't think I'd seen that picture. I'm very ready to admit an influence completely: *Ephemerides* is very heavily influenced by Kitaj but it also shares the influence with him of Matisse.
FO It is interesting that at the same time that you were beginning to find your own voice as a painter in 1965, with *A Little Art History* and then *Ephemerides,* you were becoming involved with experimenting with graphic notation in music.
TP That was something Jill was very associated with, in that I was doing some systemic abstract paintings based on the golden section.[1]
FO Were you also involved with chance procedures?
TP Yes, I was. Certainly *A Little Art History* has got chance procedures in it.[2]
FO It would seem that an interest in musical notation at this time helped clarify the way your paintings could be or indeed were made.[3]
TP I was always interested in musical notation. When I was at school I did 'O' level music and I got myself a piano when I was 18. There was quite a lot of writing down of music to do, which was the bit I enjoyed most anyway.
FO But you had an interest in experimental music, or at least the kind of notation that went along with experimental music at this time?
TP No, I wouldn't have thought so. I was pretty reactionary.
FO You hadn't read Cage's *Silence* by 1965?[4]
TP No, I left art school and then I was more or less on my own and via the agency of Ron Kitaj I got a job at Ipswich School of Art, where I had to find material for students to talk about. I think that was where I happened on things like *Silence,* which would have been at the end of 1965 I expect.
FO So new musical notation was in the air at the time.
TP Yes, I suppose I was looking for it. It certainly occurs in that painting.
FO Is the system of wavy lines that appears in *A Little Art History* derived from some kind of musical notation, that wavy line which appears in *Ephemerides and Parnassus: J.J. Fux?*
TP I doubt it. There actually is musical notation there: as you can see there are actual notes and things on it.
FO When did you paint *Parnassus: J.J. Fux?* It's dated 1966 but quotes or paraphrases the score *Jigsaw Pieces* which wasn't published until 1967.
TP It certainly predates that. I know that *Jigsaw Pieces* was made because I had access to silkscreen materials so it might have been done in 1966. There's often a technical reason why something is done.
FO Where does the ribbon-like shape in *Palindrome* derive

from?

TP From the *Book of Kells,* from Anglo-Saxon, Saxon crosses, all that sort of area (I did Anglo-Saxon literature when I was at University). Those formal devices, and lots of my formal devices, come from illumination.

FO The other ribbon-like lines seem to be similar to those in *A Little Art History.*

TP This is based on a ceiling that Leonardo da Vinci did in Milan in the Palazzo Sforzesca, and his own for his Accademia Leonardo da Vinci. He had a school for a brief time and there is a seal of it which is this interlacing pattern.[5] I've an intricate mind and intricate minds are always fond of interlacing patterns.



Four Pieces for John Tilbury 1966

FO The bottom half of the picture is based on the kind of notation that was used in *4 Pieces for John Tilbury* (1966), which in turn seems to be influenced by Cage's *Variations I.*

TP In sections perhaps it is, perhaps it isn't. I don't know whether I'd seen that. It's quite possible I'd even performed it with John Tilbury. We did a lot of performance at that time.

GB Things like that Cage piece were not very easily available then.

FO When did you eventually become aware of Cage?

TP Through John Tilbury, actually.

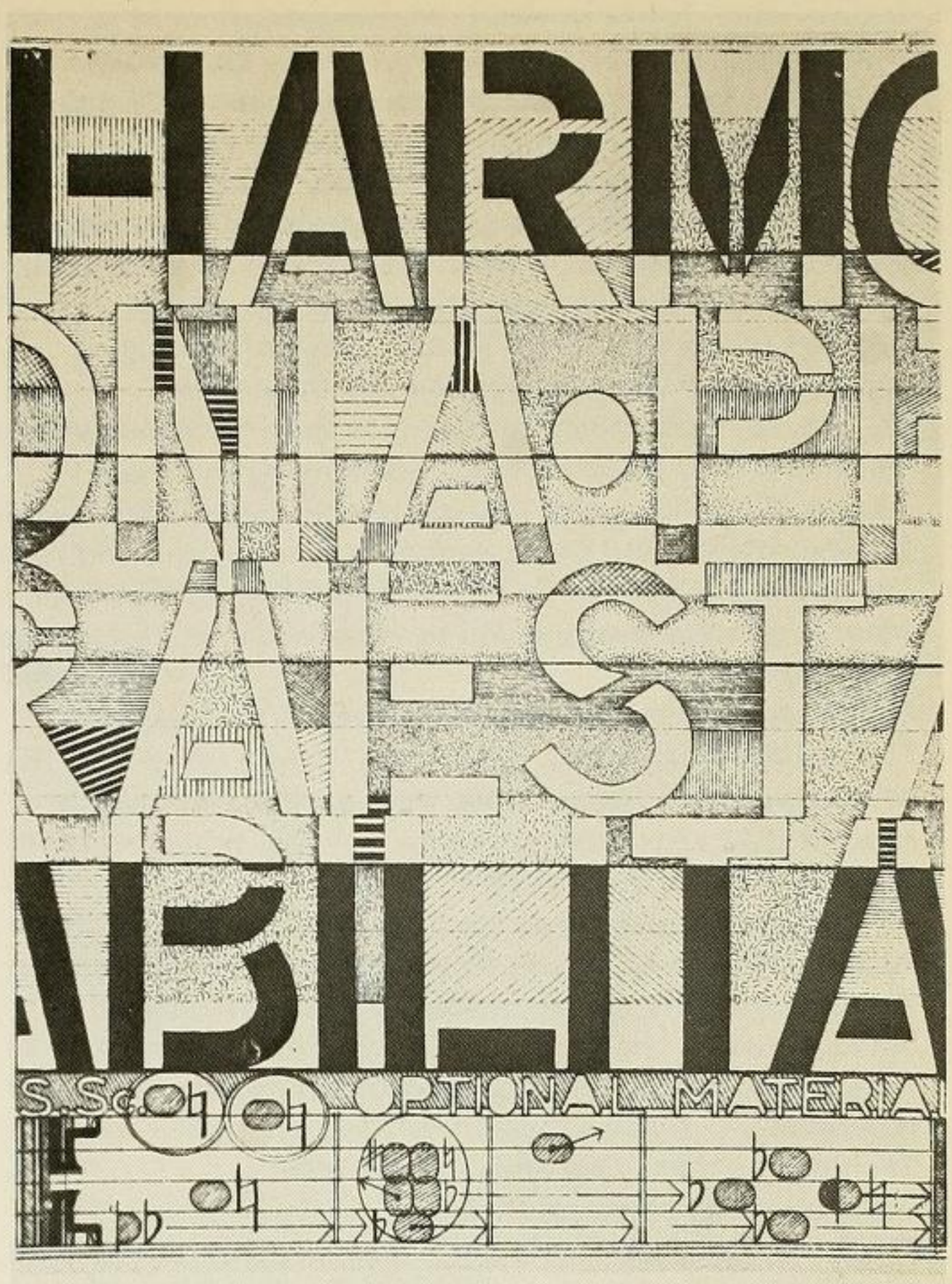
GB Was John playing Cage in 1966? Cornelius Cardew was playing Cage in 1966 and John might have been proselytizing Cage.[6]

FO There would have been more people reading than playing Cage at that time, wouldn't there?

GB That's true, but Cornelius had already worked with Cage and Stockhausen in Europe and was far more involved in it. Exactly what John was doing I don't know. In terms of the way the piece looks there are certain similarities with Cage, but there are also a lot of differences. In the *4 Pieces for John Tilbury* and the *Golden Flower Piece* (1966), which are closely related, there are a lot of things you do that Cage did not. For instance, in *Golden Flower Piece,* none of the Bs is flat, or rather B flat is avoided and the Es and As are predominantly flat. These kinds of devices, of avoiding the square and of using diagonal systems and so on, I don't think Cage would have touched – and of omitting the central section of the keyboard which you did again in *Harmonia Praestabilita* (1967), where you suggest that the solo part should omit the central octave. Both do involve preparing a score, they are indeterminate pieces, not performance scores, things for realisation. That kind of strategy, of avoiding the square, seems closely related to *Game Drawing* (1964), where finding a pathway through a piece is a territorial idea of manoeuvring.

TP I wrote *Golden Flower Piece* as a piece that I could play, but then I thought it was a bit too hard for me. I've never been able to play any of my pieces except for *Ornamentik* (1968). Jill and I gave the first performance at Bournemouth School of Art on concertina and piano.

FO Between 1966 and 1968, the structural devices of the scores and the painting begin to parallel each other. For example, the score for *Harmonia Praestabilita* and *Here We*



Harmonia Praestabilita 1967

Exemplify (1969-70) or *Thesis as Object* (1969) – pictures whose subject and content are their titles *(Ornamentik* with the *Gapmap* and the various *Farbenverzeichnis* and *Benches* (1970-71) etc). Did you find you were being more adventurous in the scores, in the sense that you could try out new pictorial ideas and take more risks, because the results, good or bad, would be more immediate, less colour was being used, they were less time-consuming, and perhaps even more enjoyable to produce? There seems to be a feedback from the scores into the paintings rather than vice versa.

TP I see what you mean. There is a sort of diminished responsibility in making the score, because it's not the centre of my activity and therefore it's not open to the criticism which I invite in my paintings by having exhibitions. This is what I stand by. I'm really handing these scores to a few people and saying: 'Do you find this interesting? Do you find this worth doing?'

FO That in itself is a testing activity, isn't it?

TP Yes, but it's more experimental, more laboratory kind of activity than the painting. I think you're possibly quite right, but you're possibly quite wrong. I'm sure the *Gapmap* stuff predates by quite a long way.[7]

GB How did *Ornamentik* come about?

TP We'd been to a rehearsal to hear Stuart Dempster, the trombonist and he stayed here the next time he came, shortly after. He was vaguely interested in having a new piece of some sort from somebody and I said I'd do something, catching on to the vague excuse for doing another piece for somebody who seemed to want something, that was enough. I sent it to him and it disappeared into thin air. They usually did. That *Music for N Players* (1966) was done for David Bedford as a teaching piece. I don't think he used it either.

FO Did you do that *Gapmap* drawing to get the measurements for *Ornamentik* or was that for another score?

TP The original drawing was done for Brian Eno, and it just predates the other one by about a month.

FO What did Brian Eno do with it?

TP There was a performance event and he wanted to do an

improvisation (while he was at Winchester School of Art) and I said: 'Well, it's too easy to say "*just* do an improvisation"; you'll have to have some small area of limitation, I'll make a little time-piece, like having a stop-watch.' I brought along some xeroxes of one of them which they all had to go by.

FO Two useful solutions to pictorial problems had already arisen from the scores...in the sense that they gave rise to, in the case of the pictures where the title of the picture becomes the content of the picture, a way of making paintings which occupied you for over three years.

TP Yes. All these things were done because somebody wanted something. *Exit* magazine wanted something and I said I can't do a drawing which you can reproduce but a score would be interesting.[8] And Circle Press wanted a big print and I said I'm not interested in doing big prints but I would like to do a score in colour and would you be interested in publishing that and they did.[9]

FO To what extent was chance involved in the making of *Harmonia Praestabilita?*

TP Well, you just use up all the ways of filling in things. I suppose that is a chance procedure.

FO And in the oil paintings?

TP Well, chance plays a part and is only determinable if you do the picture twice. If you do the picture twice you see the part played by chance: the picture looks the same but nothing happens the same.

FO How did you decide which sections of the letters would be treated?

TP I just did them. One on top of the other.

FO So it was an empirical thing?

TP Yes. I thought I was aiming at a picture that looked like something, falling leaves as it happens, because I was very interested in the word tree, the letter tree — this is the big letter picture without the information on.

FO *Here We Exemplify.*

TP In the Tate, that's right. But if I do the picture again — there are two versions of that — no event in it is the same. It's rather like two performances of a piece, in that there is some common ground . Quite a lot of the pictures are like performing a piece, you invent the piece and you perform it.

FO Is that what you meant when you said, with reference to these pictures, that the techniques of musical composition (catches, rounds, canons, fugues) are never far away?

TP That's right. There was something to be learned just from the existence of an art called music.

GB The solo part in *Harmonia Praestabilita,* section 3, line 2, looks different.

TP I remember wanting the top of the S and so forth and its conjunction with harsh bits and soft bits, and it seemed to have a form when you would get to about there.

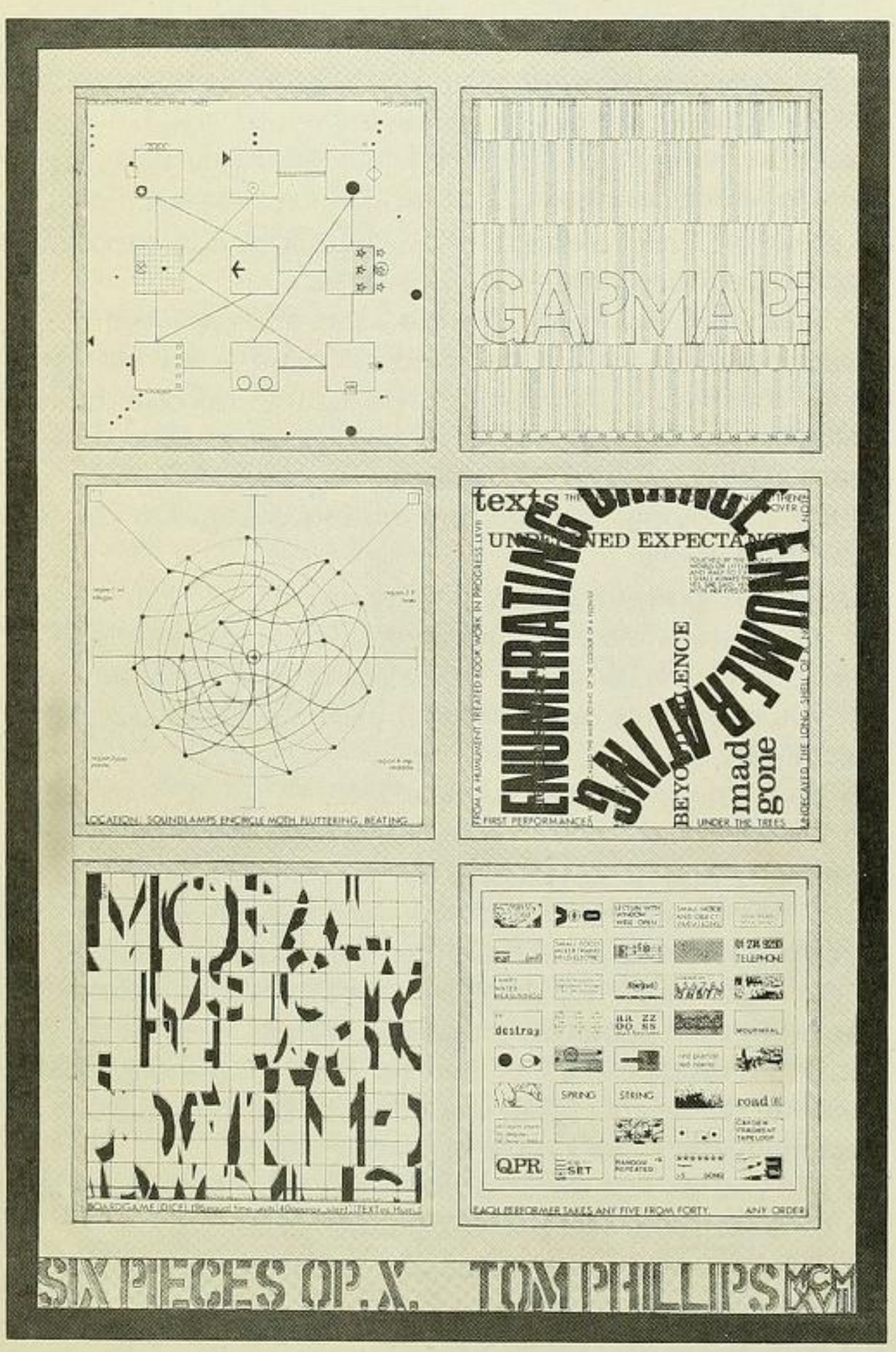
GB And it actually has a maximum contrast, too, so it would be distinguishable.

TP They aren't careless pieces, now I come to think of them, although there's much wrong with them.

FO Another thing which becomes rationalised in *Harmonia Praestabilita, Ornamentik,* and *Six Pieces* (1968) is the compartmentalisation of images.

TP That's true, too.

FO Which was then adapted or adopted by the paintings. A tendency to compartmentalise can be seen earlier in works like the *Cancellation Compendium* (1966) or *Six Sonatas* (1967), but it's rather awkward. It wasn't until after you had made the scores that the now characteristic divisions of the works into sections with specific areas for the title, the image and the text became established procedure.



Six Pieces Op.X 1968

Andreæ Alciati *Emblemata* 1591

TP Yes, that is probably true. It certainly reaches a rigid form quicker in the scores.

FO I was wondering to what extent the devices derive from the layouts peculiar to the emblem books which were interesting you particularly during the mid-1960s. For example, there's the improvisation *Evidence is Mounting in the Dreamcase* (1967).

TP That really is a direct emblem picture.

FO An emblem book had quite a rigid format: the emblematic picture, the accompanying motto, the exposition in verse and perhaps a prose commentary. The scores have these characteristics, too, and before the paintings do. The notation would be the emblem, there is always the title of the piece, there is always the prose commentary which is the instruction, and more often than not, there is some kind of verse content.

TP Yes, oh yes, and some literary content, the pattern of the emblem book is to have the emblem, a little latin tag, and then beneath a verse in the vernacular. The *Golden Flower Piece* is absolutely of the type of an emblem, although I wouldn't have realised it at the time. It has got its own latin tag, a minor moral content and also a mystical content. (Lots of Ron Kitaj's imagery derives, for example, from things that derive from emblem books, *StruwwelPeter* and so forth).

FO How important was the synaesthetic aspect of colour whilst you were painting *Benches?* Up to a certain point you were associating images 2 and 3 with D Minor and B flat Major.[11]

TP I think they were only clarifying for me what the attitude was in me for the picture. You're just thinking of a picture when you do a picture and, of course, that's part of it. It's undeniably part of it but not a part of it you can take away and say well, of course, there's that aspect of it.

FO But you did particularise that aspect of it when you wrote on the picture the key signatures. That is unusual because it's a constant reminder to yourself when you're before the picture, until at a certain point that importance disappeared.

TP Well, I suppose it disappeared when I realised that the dominant colour scheme of the picture was going to be out of my control. Anyway, that really only applied to those internal images here,[12] whereas the allure of the picture was going to be dependent on those huge areas of colours there[13] which had no such basis in colour parallelism. I suppose that's really when it fell away, because it was useful for me to make a key relationship between those images.

FO So you made key relationships between all six images and not just the top two?

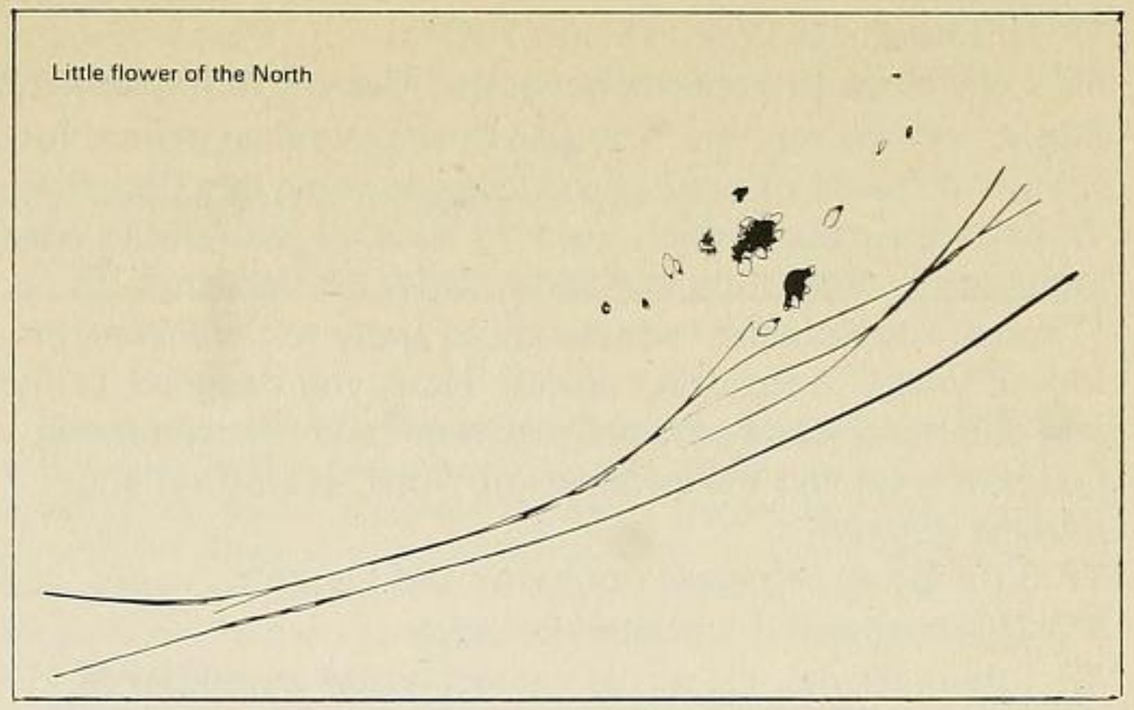
TP Yes, I made them in my head but I never noted it down after that. Oh yes, I certainly did, and there were also tempo relationships. All those things. As I would have thought might be almost apparent from them. There's a lot to do with left and right in it. One's reading habit of a picture is always left to right. There's the time progression of painting the picture, the time progression of the picture itself, the uniting progression.

GB In *Schooltime Compositions* at the ICA you performed *Little Flower of the North.*[14] I remember walking past in between my own performing and seeing some slides, and Angela (Bryars) who was in the next booth, remembers hearing a typewriter. Can you remember what you did for that piece?

TP Yes. You were both right. I looked up in an old medical book and there was a reference to the foliage of the body seen as a forest and the foliage of the North was the hair and this (the stomach) was the equatorial forest, and there were relative temperatures too, and so forth. And suddenly I thought that the foliage of the North is 'Little Flower of the North', which looks like hair, so I cut a large sheet of acetate and snipped bits of hair off — whose hair I don't know — and scattered it about this sheet of acetate which I then cut up in strips. I've still got the slides upstairs.

GB What was the typing?

TP I think I was typing some parts of a lecture relating to music: some aphorisms like 'I can only truly use chance if I can use chance by chance.'



Cornelius Cardew *Little Flower of the North* from *Schooltime Compositions* 1968

GB That time, 1968-9, was a period when you were most involved in performing: there was *Atlas Eclipticalis* at the Round House as well as the first meeting of the Scratch Orchestra at Morley College which you attended.[15]

TP And I played in the first three events or so.

FO Did you have anything to do with the Draft Constitution?[16]

TP No, except that we were talking about it just when Cornelius was going to write it out.

FO Were you aware that the Brahms *Requiem* was in Appendix I (a lot of 'popular classics')? Was that your suggestion at all?

TP No, I don't think so, though we did talk about it in the garden, here. I remember that we had a long discussion and covered all sorts of possibilities.

GB Cornelius' choice of popular classics was a particularly polemical one, like including the Cage *Piano Concerto*, and I imagine that a number of people in the Scratch Orchestra had never heard either that or the Brahms *Requiem*, though they probably knew both of them by name.

FO (Quoting Draft Constitution) 'Beethoven, *Pastoral Symphony;* Mozart, *Eine Kleine Nachtmusik;* Rachmaninov, *2nd Piano Concerto;* Bach, *Sheep May Safely Graze;* Brahms, *Requiem;* Schoenberg, *Pierrot Lunaire;* Cage, *Piano Concerto.*'[17]

TP The last three seem tacked on and quite a different area.

GB If you compare that list with the list that the Portsmouth Sinfonia would recognise as 'popular classics' it would be wholly different. 1968-9 seems to be a musical high point, really.

FO *Six Pieces* contains six different kinds of notation: there's the first quotation from *A Humument* — the *Moral Music* at the bottom left — there's the *Gapmap* which we've already discussed. Then there are these four others which, each in its own right, are quite different. It's almost a synthesis. The notebook shows the kinds of activities that have been going on for a long time.[18] How were the different notations arrived at? What about the bottom right - each performer takes any 5 from 40, etc? That seems to be full of extremely private references.

TP Yes they are.

FO With endless ramifications. For example, one is QPR, which is Queens Park Rangers,[19] but also Queen Pawn Rook, another form of notation. Where do you derive these particular things from, not only in that case but in the others too, since they seem to be almost a compendium of your musical notations over the past couple of years?

TP Well, there's one of these that doesn't relate to another score, this one (top left).

FO *Moral Music* relates to *Harmonia Praestabilita...*

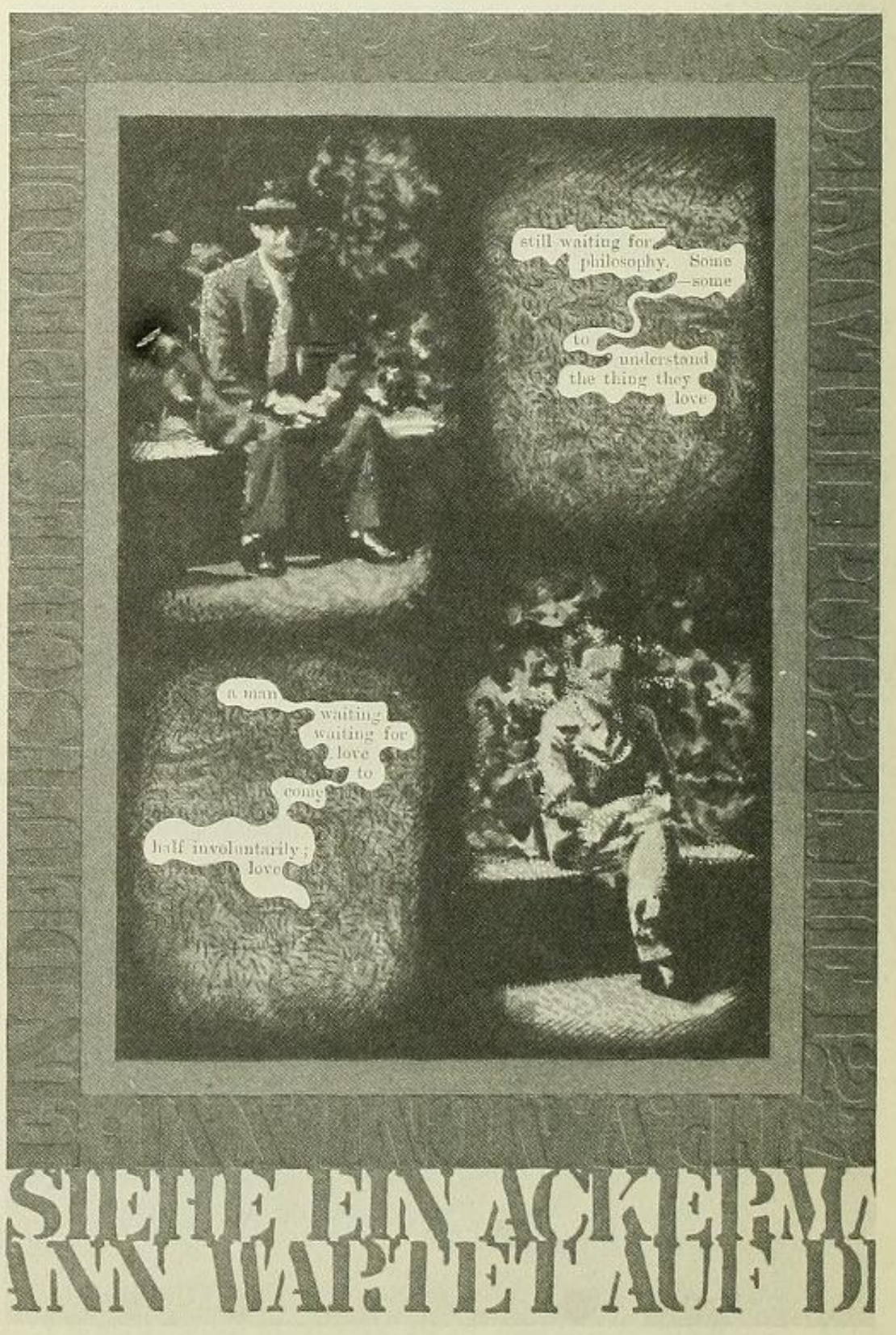
TP ...and that (middle left) is the *Golden Flower Piece,* involving a route-taking method. And that (top left), what is that?

GB That's quite close to *Game Drawing,* being a kind of territorial game where you move by dice or in sequence like Ludo.

TP Yes, I don't think that it does have a parallel, does it?

GB Not to a musical notation.

TP It is paralleled later in *Irma* (1969).
FO Let's go on to *Irma,* then. Michael Nyman, in *Experimental Music,* sees the way that you give only general guidelines for the performance of *Irma* in particular as being like Christian Wolff's instructions which 'seem to leave all possibilities open while gently suggesting that some routes are deadends.'[20] (Though I suppose his remarks could apply to *Six Pieces,* or indeed to any of the other pieces). Now, you designed, printed and published Wolff's *Prose Collection*[21] and I'm wondering just how great was the influence of Wolff, at least on your musical notation.
TP Sure, he was a proper composer and I wasn't.
FO Christian wasn't a proper composer.
TP I think he was. He was as much a proper composer as Borodin was.[22]
FO So what do you think you were getting from Christian? Were there any particular things that you were trying to use?
TP There was a sort of quietism which pleased me because I'm not too fond of the rackety and noisy, and I was quite glad to find somebody not only quiet in the Morton Feldman sense of quietism, but a real sort of quietism of personality – that was useful to me.
GB That's present in his notations too, in that they're nudges rather than instructions.
TP Things get a little less dogmatic after that, don't they?
FO There are very few pieces after that.
TP So undogmatic...non-existent pieces. But it's not like that if one says what someone who influenced you did. It's evident in that one, that little homage piece (*Motto Variation. Stones. Christian Wolff,* Opus 13, 1969). Here, in the catalogue, it's printed the wrong way up, it should be this way, vertical on its side. It's almost the only bit of crude printing in the whole book – a student filled in these gaps with white.
FO I haven't seen the original, but I think I would like that.
TP I like that one, although I've never found anyone who really liked it.
GB Some of the pages of *A Humument* were kind of homages-to-composers as well. I remember you saying that this is Christian's page, this is Cornelius' page, and there is a lot of that going on in a private way. Those pages are identifiable either through the kinds of shapes that result or from the kinds of texts.
TP Both.
GB But they're not identified in the published work.
TP No.[23]
FO With regard to *Irma,* Irma herself, the libretto, the music, the staging instructions, the costume designs all come from *A Humument.* I was wondering whether *Irma* presented herself quite naturally as an operatic work.
TP It sounds like an opera title: it is actually the title of another opera.[24]
FO Did you have to search among the texts for material explicitly to make what is, to my mind, the masterwork of the music we've been discussing up to now?
TP It is the best thing, yes.
FO It's certainly the most ambitious thing.
TP Yes.
GB You were saying earlier that you felt the most successful piece of them all was *Lesbia Waltz* (1972).
TP Yes, well I like that, but it is actually there, whereas *Irma* isn't there.
FO There is some conventional notation in *Irma.*
TP There is quite a lot of it, actually, if you think that that's only thematic material. There are rhythmic things, basses... there's a lot of stuff there. I don't agree with Michael Nyman: if you read the instructions it's really a rather tight piece, without lots of options.
GB I think that's why the recorded version does not seem very strong, because it does sound loose.[25]
TP Well, it was so much less loose and so much more considered than the version at Newcastle that it was a great pleasure, and visually it was very beautiful. They had dancers on one level, actors on another, that was really rather nice. It was much more sensitive to the period and everything.
Jill Phillips At one time it was put that David Rudkin would write the libretto, as it were according to the rules of finding the piece incomplete, and then present the libretto to a composer who would write a score so that the whole thing would be written out in a performable version, and that's the way we've always wanted it done, really.
TP Not quite like that; we never introduced a composer. A group of performers, yes.
GB That kind of Borges research is one of the attractive things about it, and of the *Postcard Pieces* (1969-70) too. The same element of the 'found thing' and deducing the means of making sense from it.
TP The point behind it, in a way, was that if it were an old thing that had been found, if we said that this was an Attic opera and you'd found exactly that much of it – there's a text by Meliaga and some bits of score that you could actually work out, there would be a thousand professors all over the United States reconstructing it and performing it all over the place. It's only because it's a new thing that it doesn't have that value of antiquity. So I tried to incorporate the spurious value of an invented antiquity to give somebody a spur to do it.[26]
GB I must admit that I've always liked *Lesbia Waltz,* not because it's the last piece, but it is quite strange. It looks pretty devoid of interest, at first glance. Why do you like it?
TP It's something I thought would work and absolutely did work to the sum of my expectations.
FO How did you make it?
TP *Smallwood's Piano Tutor* has some exemplary pieces at the end which you're all supposed to be able to play by the end of this rigorous course of scales and so forth, and one of the pieces is called *Lesbia Waltz.* It says *Lesbia Waltz* by William Smallwood and I re-anagrammatised Smallwood into



Siehe ein Ackermann from *Ein Deutches Requiem, After Brahms* 1971

Slowmodal and then anagrammatised the piece, so that keeping the stave structure, the key signatures...
GB Which change twice...
TP ...And now arbitrarily to the piece. Because it's a waltz, with a theme returning and so forth, I've put each item that was the same together from wherever it appeared in the score. So that this is, in fact, just a list of all the nodal items in the score, in the order of their appearance, with the exception of harmony which is in its original order. And because you cut up things you get these half-hinted octavo transpositions which you have to make up your mind what to do with.[27]
GB And that's the last piece.
FO Have you been working on the *Grenville* pieces, which I presume are postcard-based?[28]
TP I didn't get very far with that, although it's still at the back of my mind to do.
FO We should also talk about your *Brahms Requiem (Ein Deutsches Requiem, after Brahms,* 1971).
TP I always think that's a tremendously unproblematical set of things.
FO There's one problem that I got involved with which was to do with the emblemata, the bench. In the Tate picture *(Benches)* they're emblems of mortality and there's a lot of other things about the day your father died, but the picture is also explicitly about fear of death as well.[29] Yet the whole thing about the Brahms *Requiem* itself is that, although it's about death, it's a very optimistic piece of music.
TP Yes. So is that set.
FO Right. And the thing about this particular usage was the change in the emblem of the bench, in that it's no longer a pessimistic emblem, but, at least in the *Brahms Requiem,* a much more optimistic one. At least this husbandman is waiting with great patience, and I wondered if that in any way marked a change in your own attitude to death.[30]
TP Well, I wasn't unaware that they were sitting on a bench, but I don't think that that is a particularly optimistic part of the set, really. Those people are isolated, they're mortal, frail, feeble isloated people, and I suspect that's a little bit ironic — .[31] *'Sieh ein Ackermann wartet (auf die köstliche Frucht der Erde)'.*
Yes they are, but it doesn't necessarily mean that anything is going to happen very much in the terms of their expectation. In the real terms of the Brahms *Requiem* something much better happens. There's a lot of waiting in those images, isn't there? But the end is totally optimistic, isn't it?
FO What determined your choice from the text?
TP I did the picture first, knowing that they matched the work and found their relevant text afterwards, both from the *Humument* and from the Brahms. That wasn't always true. I knew that one (Siehe ein Ackermann..) and wanted to set that text anyway, but had to find the image for that one (Sie sammeln...) so that was the other way round — 'they collect, gather together' and don't know where it's all going to end. And that (Zu der Zeit...) was a very difficult one to get together.
FO I suppose it was the use of that kind of imagery that reminded me of Rauschenberg's *Dante* illustrations more than anything else. I'd thought at first of the Kitaj *Mahler* set, because of its explicit musical associations,[32] but then I discounted it and think that the whole set is much closer to Rauschenberg's *Dante* illustrations than anything else.
TP Well, perhaps, except that I never understood those illustrations very well.
FO They use quite a lot of similar things.
TP I don't really follow Rauschenberg's imagery, not terribly well; I see echoes and things, and they do look sort-of-right.
FO It's a pity that not all your musical stuff went in your *Works and Texts* book, because it would have been a nice opportunity to have got it into shape. You weren't interested in historiography to that extent, but it seems that a lot did get left out which it would have been nice to have included.
GB The musical part itself feels like an appendix in the book.
FO I'm trying to make it, without too much effort I think, an important part.
TP I was diffident about drawing attention to it.[33]

(Interview conducted in London 23 June 1976).

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1 For example ***Golden Section Painting: Scarlatti Sonata*** (1965-73) and ***Golden Section Cancellations*** (1966). Jill Phillips was engaged to take over the Choir Training in the Junior Department Curriculum at the Royal College of Music, September 1965 to March 1966. She took along paintings by Tom Phillips to provoke ideas from the students, asking them for suggestions to translate the visual images into sound ones by association.

2 The number, position and use of the squares in ***A Little Art History*** was settled by tossing coins and noting the runs of Heads or Tails (see top left square where H = Beads, T = Tails). This procedure was taken up again at the beginning of 1968 when a chart of intervals which could be used for musical performance was needed. See below and note 7.

3 As Phillips points out, the use of the Golden Section as a device as well as various experiments in musical notation 'both used and rejected' were employed in ***Six Sonatas*** (1967), in which the six panels of the painting utilize the rectangle and square, often intersected by straight lines, in much the same way as ***Four Pieces for J.T.*** and ***Golden Flower Piece*** but in a more developed form.

4 In her teaching notes on the course she taught at the Royal College of Music, Jill Phillips records that on 23 October 1965, she told the students 'to read article on John Cage (who is made respectable by a seriously-considered piece in ***Music and Musicians)***' because they had 'no idea as to what forms music takes today'.

5 See L. Goldschneider, ***Leonardo da Vinci,*** Phaidon, London, p.9. School of Leonardo: ***Knot Engraving, c.*** 1510, London, British Museum.

6 John Tilbury had, in fact, returned to England from Warsaw in early 1965 and was playing Cage's music in public during the summer of that year.

7 A pencil drawing dated 11 January 1968 (called ***Gapmaps)*** is purely composed of random blank intervals which were obtained by tossing coins. For the Gapmap and its use as an interval scheme in the paintings see 'On T1327 ***Benches'*** Appendix 1 in ***Works. Texts to 1974,*** Edition Hansjörg Mayer, 1974, pp. 151-2. (Henceforth abbreviated to ***Works and Texts).***

8 ***Harmonia Praestabilita*** was published as part of ***Exit*** magazine, numbers 5 and 6, 1967.

9 ***Ornamentik,*** published by Circle Press (Tetrad Press) 1968.

10 See ***Works and Texts,*** p. 74. All these (catches, rounds etc) are, with the exception of fugues, quite clearly devices rather than compositional techniques — ways of extending material with a minimum of formal development. In each the overall form is given and, certainly with rounds and strict canons, once the initial impetus has been given the development of the form is predetermined. Fugue is different and more complex: Tovey went so far as to describe it as a 'texture' rather than a form or device.

11 See 'On T 1327 Benches', ***Works and Texts,*** p.147. The theory of a relationship between sound and colour has a long and uneven history. Apart from early attempts at effecting a combination of music and colour on a theoretical level, as early as Ptolemy, there have been many attempts at producing 'colour-music' instruments. However, the association of particular colours with key-signatures is quite common among musicians, although there is little general agreement about what colour equals what key. One of the key-signatures in question here, B flat major, yields for Scriabin a metallic steel colour, while the relative major of the other, D minor (*ie* F major) gives red for Scriabin but green for Rimsky-Korsakov. Apparently Beethoven is said to have referred once to B minor as 'black', whereas MacDowell had a colour for every key and Hoffman, speaking of his character Johannes Kreisler, describes him as 'the little man in a coat the colour of C sharp minor, with an E major coloured collar.' Clearly there is no absolute correlation, but many musicians have a highly developed sense of synaesthesia, and all practical tests have tended to locate the relationship as a subjective one. This kind of association is quite common in Phillips' work. See also ***Ornamentik,*** where the colour given to the ornaments themselves is that suggested by William Gardiner to signify the trombone playing mp. (***The Music of Nature*** , London,1832, pp.189-190).

12 Images 2 to 7, ***Works and Texts,*** p.142.

13 Images 1 and 8, ***Works and Texts,*** p. 142.

14 ***Schooltime Compositions,*** Cornelius Cardew, composed 1968, first performed at International Students House, London, 11 and 12 March, 1968. The performance discussed here took place at the ICA, London, 29 March, 1969, in which each realisation took place within a separate 'booth' to give the overall effect of a market-place. Amongst others taking part were Cornelius Cardew, George Brecht

(Making A), Gavin Bryars and John Tilbury ***(Make X Words),*** Howard Skempton ***(Vocals),*** students from Maidstone College of Art ***(Song of Pleasure)*** and Tom Phillips ***(Little Flower of the North).***

15 The percussion parts of ***Atlas Eclipticalis*** (John Cage) were performed at the Round House, London on 4 May, 1969 by John Tilbury, Christopher Hobbs, Gavin Bryars and Tom Phillips. Each player made a separate realisation of his part, the whole lasting the length of the concert which took place in the main auditorium while ***Atlas Eclipticalis*** was played from the gallery above in four locations, so that the sounds of the Cage work interrupted, or were themselves interrupted by, the programmed works performed below. They included parts of Cardew's ***Great Learning,*** Hobbs' ***Voicepiece,*** Skempton's ***Scumbling,*** Prevost's ***Silver Pyramid,*** Terry Jennings' ***String Quartet,*** La Monte Young's ***String Trio,*** and George Brecht's ***Candle Piece for Radios.*** The inaugural meeting of the Scratch Orchestra took place at Morley College, London on 1 July 1969.

16 The Draft Constitution was published in ***The Musical Times*** in June 1969, and outlined the five areas of activity that the Scratch Orchestra proposed to explore, these being entitled Scratch Music, Popular Classics, Improvisation Rites (published as ***Nature Study Notes,*** EMC, London), Compositions (published in the ***Scratch Anthology of Composition,*** EMC, London) and Research Projects. It is reprinted in ***Scratch Music,*** ed. Cardew, Latimer New Dimensions. London, 1972, pp.10-11.

17 The list of 'Popular Classics' is given in Appendix 1 of the Draft Constitution (***Scratch Music*** p.11).

18 An unpublished set of original scores and notations by Jill and Tom Phillips which includes among other items, ***Music for N Players No. 2*** (1966), ***Yellow Palindrome*** (1966), ***Totem-Tanz*** (nd), ***Calico Pie*** (nd), and a free interpretation piece of signs related to those eventually used for ***Ornamentik*** (1968). The notebook was rejected for publication by a number of music publishers in 1967.

19 Both John Tilbury and Gavin Bryars were, and still are, supporters of Queens Park Rangers. See John Tilbury, 'Football, Queens Park Rangers and Rodney Marsh', ***Vogue,*** vol. 129, no. 12, 1 October 1972, pp.66-78.

20 Michael Nyman, ***Experimental Music,*** Studio Vista, London, 1974, p.102.

21 Christian Wolff, ***Prose Collection:*** seven of Wolff's prose pieces were collected, printed and published by Tom Phillips in 1969 through private subscription. Later Wolff added more pieces and the whole 13 are published by Experimental Music Catalogue, London. A deluxe version, which omits ***Sticks,*** was published by Tetrad Press in 1973.

22 John Cage had written, in ***A Year from Monday*** (Calder and Boyars, 1968) p.40, that he did not admire the way Ives had separated his life into work (insurance) and music, ***'ie*** treated it socially — it made his life too safe economically and it is in living dangerously economically that one shows bravery socially.' It is in this sense that if, for Cage, Ives were not a 'proper' composer, taking the 'proper' risks, that Christian Wolff was similar, teaching Classics at Harvard at that time. Phillips' rejoinder makes it clear that, for him, all of these are 'proper' composers — Borodin having been Professor of Chemistry at the Medico-Surgical Academy at St. Petersburg, fitting in music composition in his 'leisure' time.

23 In Tom Phillips, ***Trailer,*** Hansjörg Mayer, 1971, page 8 is dedicated to Christian Wolff and identified in the Preface. The page dedicated to Cornelius Cardew, but not identified, was included in the published ***Humument.***

24 This may be H.J. Banawitz, ***Irma,*** A Romantic Opera, first performed in London in 1885.

25 Tom Phillips, ***Words and Music,*** limited edition of 500 copies published by Hansjörg Mayer, January 1975. Track one, side A, is a recording of part of the performance at the University of York (Chorus: 'Love is help, mate'), 1973, directed by Richard Orton.

26 See ***Irma:*** 'Perhaps to treat the indications here given as if they were the only surviving fragments of an ancient opera, or fragments of eye and ear witnesses' accounts of such, and given no knowledge of performance tradition of the time, to reconstruct a hypothetical whole which would accomodate them economically, would be an appropriate basis of approach to a production.'

27 The harmonic exception is that, in order to give bars of the same chord-type an alternating root and fifth of the chord — stylistically appropriate for the type of music — the rule of listing the elements in the order of their appearance in the Smallwood original was broken, not to create different harmonies but to achieve a conventionally correct bass line which faithfully reflected the character of the music of both the original waltz and the resulting anagrammatisation.

28 ***Works and Texts,*** p.263: ***Grenville (The Quest for Grenville).***

29 The titling 'timor mortis conturbat me' for ***Benches*** was in some of the drawings lost in October 1970 and was abandoned in favour of the text 'For all flesh is as grass, the grass withereth', a text closely related to the print associated with mvt. II, 'Denn alles Fleisch es ist wie Gras...', 1. Peter i. 24, ***Ein Deutches Requiem, After Brahms.*** See 'On T1327 ***Benches', Works and Texts,*** pp. 146-152, passim.

30 See the print associated with Mvt.II, 'Siehe ein Ackermann wartet (auf die köstliche Frucht der Erde)', James v.7. ***Works and Texts,*** p. 163.

31 'Behold the husbandman waiteth for the precious fruits of the earth.'

32 R.B. Kitaj, ***Mahler: A Celebration and a Crutch*** or ***Mahler becomes Politics, Beisbol,*** 1964-1967, Kitaj's silkscreen prints associated with Jonathan Williams' poems responding to Mahler's symphonies.

33 See note 18. A complete catalogue of the scores and notations has yet to be published. ***Opus*** magazine is to publish ***Last Notes from Endenich*** which, although not a piece for performance, is a recent drawing which refers to the period that Schumann spent in a mental hospital at the end of his life at Endenich where he died in July 1856.

COLLABORATIVE WORK AT PORTSMOUTH

Jeffrey Steele

'...This is not music for the ear alone.' [1]

The establishment of productive working relationships with all other fields of human activity has always been one of the principal aims of constructivist art since its inception in the years following the socialist revolution in Russia in 1917. When I took up the appointment as head of department of fine art at Portsmouth College of Art in May 1968, after almost a decade of commitment to painting in the constructivist tradition, it was with the definite hope of developing further the experimental work in music in a fine art context which Keith Richardson-Jones, David Saunders and I had already begun at Newport College of Art. I will briefly mention some of the factors which formed the ingredients of the primordial soup out of which the primitive organisms which became Portsmouth Music developed in the years which followed.

In Portsmouth College of Art itself there was a generally favourable climate as well as positive support for the development of this work from the Principal John Powell and from Maurice Dennis, the lecturer in charge of complementary studies. There was the possibility to appoint David Saunders to the part-time painting staff and the appointment of a part-time lecturer in Music. Ron Geesin took this position during the Autumn of 1968 and Gavin Bryars from the beginning of 1969. The year 1968 is of course synonymous with revolutionary activities by students in almost every country in the world. This revolution, or quasi-revolution, contained a fundamental contradiction between a genuinely progressive trend towards conscious political change and a mystifying tendency towards anarchy and a regressive philosophical idealism. The critical attitude of students which prevailed at that time, often amounting to total rejection of all established academic and educational criteria, disappeared with astonishing speed and completeness within two years — probably because the importance of this contradiction was then insufficiently recognized. The students who joined the fine art course at Portsmouth in September 1968 had, in general, a well-developed suspicion of the forces controlling their own education, a positive motivation to construct an alternative, and a strong sense of the need to do this in a collective way rather than as a number of young artist-individuals.

The musical avant-garde of the late 1960s itself contained a complex network of contradictions, of which the major antagonism was between various officially approved descendants of the tradition of Schönberg and Webern and the American-based school led by John Cage. Both of these traditions had firm historical links with contemporary developments in painting, and the conflict could roughly be said to centre on questions concerning the value and significance of structure in a work of art or music and the attendant proclivities, on both sides, for the results to degenerate into academism or mysticism. Since Gavin Bryars had worked directly with Cage at the University of Illinois, and I was interested in experiments in the systematic programming of colour, light and sound such as those of Ludwig Hirschfeld-Mack at the Bauhaus, both tendencies were well represented at Portsmouth.

I think it is the dialectial resolution of these two contradictions in the context of provincial isolation and naiveté which gave Portsmouth music of that time its seductive quality. Of course such a resolution could only be temporary, localized and idiosyncratic, given the larger world context of ideological and political struggle. The emphasis was on the harmonious *apparent* resolution of what was, and properly remains, a fundamentally antagonistic conflict. The unfolding of the various stages produced a series of completely unexpected visual, acoustic, and social situations.

Administrative Problems

Before discussing the development of the music and art itself, I shall write briefly about some of the problems it produced at the administrative level. While the majority of fine art lecturers at Portsmouth initially welcomed the new developments, the fact that a dozen or so students wished to give their whole time to musical/performance/conceptual activities and do virtually no traditionally-oriented studio painting or sculpture caused fundamental differences of opinion within the fine art department. Several lecturers who had perhaps envisaged music as a peripheral presence were unprepared to accept its integration at the kernel of the system. Because I could not pretend to have an unbiased oversight of this disagreement, and had no means of resolving it, I stood down as head of department in September 1969 when the department officially moved out of the Portsmouth College of Art and into the Portsmouth Polytechnic. From my point of view this meant that I was less burdened with administrative work and could take a more active part in creative work, research, teaching and debate. The disagreements about the academic status of music and performance in the fine art department were never formally resolved but Gavin Bryars was appointed full-time lecturer in music, also in September 1969, and all the students concerned obtained satisfactory final examinations results.

Similar disagreements occurred about the status of conceptual art, art and language, performance art, etc, in various fine art departments at that time. These conflicts were all, in some measure, about the general principle of diversification. A group of specialists in mathematics, biology, psychology and communications engineering had overcome the administrative barriers between their various disciplines and the consequent interpenetration of their fields of study resulted in the new science of cybernetics. There was a general hope for something comparable to happen, perhaps along the lines of the Black Mountain College experiment, among the progressive artists in the late 1960s.

At the beginning of 1969 it might have appeared that there was a main opposition between principles of order and system as represented by authority on the one hand, and of disruption, chaos and freedom on the other, as represented by students and the Cage-inspired avant-garde. But, in practice, the main contradiction had a different orientation. Hierarchical social structures in crisis conditions generate entropy and disruption within themselves as part of a process of homeostasis. The real opposing tendency is towards a flexible 'network' structure. Unlike most painters, whose training and experience encourages them to see

themselves as individual creators in hierarchical interrelationship, musicians and composers of very diverse opinions and temperaments are accustomed to working together effectively. Moreover a study of the work of those who were to become involved with music in Portsmouth as students, teachers or visitors shows that they all possess an interest in the precise interaction of various forms of structured information, so that, in the event, the common interest in the multiplicity of situations resulting from this flexibly disciplined approach was reinforced by a common rejection of both excessively dogmatic and excessively libertarian tendencies.

Characteristics of Portsmouth Music

Although the various artists and musicians who taught regularly or occasionally at Portsmouth obviously affected the students' outlook very profoundly, it is important to understand that almost all the initiatives came from the students themselves. They saw that the necessity for a highly trained collaborative organisation logically preceded the acquisition of musical theory or instrumental skills. Realising that a musical performance is primarily a social event whose success depends on the implied psychological relationships between three groups of people designated composers, performers and audience, they learned to work directly on these relationships by the timing and placing of events. Their first concerts consisted in sublimely assured presentations of rudimentary and banal material – aping, miming, posing, juxtaposing and superimposing electronic sounds with impressive *visual* displays of instruments which they only later learned to play. Despite the paucity of content these early concerts were successful because the collaborative, conceptual and organizational base had already been established.

An essential difference between music and painting is that there is no way of recording or preserving the qualitative aspect of particular musical performances which exist in, and cannot be detached from, time. Because photographs and tape-recordings give an essentially illusory and misleading account of reality, the students tended to resist any attempt to legitimate their activities by such false documentation, just as they derided the notion that their texts and scores had any legitimating value as fine art or graphic design in the manner of certain works by Cornelius Cardew, Stockhausen or Earle Brown. Starting from this basis the students began to acquire technical knowledge and ability in composition, arrangement and performance. They learned partly from practice, by trial and error, by questioning, and from cheap instrumental tuition books, but they inverted the explicitly stated premise found in most of these books[2] that long study and practice must precede any worthwhile achievement. It was more as though music was invented to fill an existing need rather than approached from the outside. Each fundamental aspect of music – tempo, rhythm, duration, the possibility of variable pitch, terminology and notation, dynamics, modulation, etc – was immediately set to work and combined with what was already known as a source of new compositions.

This rather spontaneous learning process was supported by formal teaching such as the lecture series, 'System and the Artist', which I presented throughout 1970 and 1971. The theme was suggested by Noel Forster, who reorganised the former Art History and Complementary Studies into a more integrated Theoretical Studies Section of the fine art department in Autumn 1969. Visitors like Cornelius Cardew, Michael Chant, Chris Hobbs, John Tilbury, John White, rather than give classes or concerts, often preferred to work with the students at an equal level on performances of their own or the students' compositions. Only Morton Feldman elected to maintain a certain distance between himself and the students, giving a formal lecture and assuring us that he would never contemplate introducing music into the New York Studio School of which he was at that time Dean. That, on the contrary, his main objective there was to quieten everything down.

The connection between musical responses and the basic human process of learning was further emphasised by the founding of the Scratch Orchestra by Cardew, Michael Parsons and Howard Skempton in London in 1969, by a performance of Cardew's *Schooltime Compositions* at the Portsmouth Guildhall in June 1970, and by the arrival of Ian Hays, who transferred to Portsmouth from another college in order to do music and stayed for less than a year. Hays was a student but comported himself as a teacher, giving lectures and tutorials which were at the same time musical performances of a highly cathartic nature.

The development in the London-based avant-garde away from pieces with a heavily conceptualized emphasis in which aleatory, whimsical or randomized events played a major part, towards a re-evaluation of traditional western melodic and harmonic structures was signalled by John Tilbury's incorporation of a straight rendering of *Bells across the Meadow* by Albert Ketelby into one of his Rome concerts. The practice in Portsmouth of using material from beginners' instrumental teaching manuals integrated perfectly with this trend, but the special quality of Portsmouth music at this time owed its existence to a piece of theoretical legerdemain which, in the end, proved unequal to the everyday strains placed upon it.

The widely propagated views of John Cage to the effect that all sounds have an equal value, and that those ambient sounds entering into a musical performance by chance or as a result of ad hoc technical devices are a musically more interesting aspect of composition than syntactic structures produced by human intellect, legitimated types of musical activities in which participation was considered to be entirely independent of consciousness.

This premise, which was somewhat misleadingly associated with Werner Heisenberg's principle of mathematical indeterminacy, allowed experimental composers a vast new range of conceptual possibilities. Its paradoxical implications were elaborated by La Monte Young in such works as *X for Henry Flynt.* The Portsmouth students in their fashion, and perhaps prompted by La Monte Young's notation 'Practice and perform any piece as well as possible', stood this principle, too, on its head and made it apply dialectically to errors and shortcomings in a basically classical enterprise. Noel Forster gave a lecture (June 1970) on the error factor in his own painting – 'The painting as a measure of its own performance.' Gradually the whole concept of 'error' was eliminated and that of 'deviation' substituted. A system was considered as being realizable by virtue of deviations from it, and while no effort was spared to minimize such deviations from the 'ideal' structure, the structural quality of the deviations themselves became an integral part of the system. Negative factors could now be transferred into the positive column. Successfully realized intentions received silent approval but failure was deemed magisterial. John White compared Portsmouth music to the Promenade Theatre Orchestra: 'Our music is confident, precise and crude but Portsmouth music is soft, faltering and correct.'

But, an important caveat, it sometimes happened that somebody joined a performance and, hearing a high proportion of false, delayed, premature or accidental notes, felt entitled to relax and add their improvised contributions to the apparent disorder or even to make deliberately grotesque or inappropriate sounds. There were various means of indicating that this sort of thing was, in fact, the only inadmissible material.

The characteristics I have so far mentioned fall into five categories:

1. Emphasis on collaborative group work and presentation.
2. Equal importance of visual, acoustic and conceptual aspects of performance.

3. Dedication to the acquisition of elementary techniques of classical music-making.
4. Establishment of working relations with artists and composers.
5. Acceptability of all sounds and actions made with serious intentions.

They applied generally throughout the whole period which I am describing to works by students belonging to different year-groups, different sections and with varying degrees of commitment. A sixth characteristic should be added, which is that full use was made of the college painting, printmaking, sculpture and film studios as well as the collaboration of lecturers, technicians and administrative staff. For example, it was agreed that Terry Riley's composition *In C* would be played for a given duration each Thursday lunchtime for a number of weeks by the same performers using the same instruments. The performance(s) was (were) filmed from a fixed point against a white background.

Politicization

The inherently authoritarian structure of the international avant-garde, its reliance on fundamentally occult philosophical justification, its confusion of conscious with unconscious perception, its total disregard of the real working circumstances of the majority of people, these aspects of avant-garde art negate its pretentions to revolutionary significance. The preposterous nature of John Cage's theories, now so transparently obvious, only percolated slowly through our consciousness then. Suspicion was first aroused when George Brecht visited the department in November 1970. His repudiation, under John Cage's influence, of his own scholarly paper, 'Chance – Imagery' (1957), and his unrelieved emphasis on the spontaneous creativity of a small group of privileged individuals, alienated a section of the audience. Successive events exposed serious fissures in the ideological foundations on which Portsmouth music rested.

Gavin Bryars left to take a senior lectureship at Leicester Polytechnic department of fine art in September 1970. Michael Parsons was appointed on a permanent part-time basis to continue his work in the fine art department and immediately began to pursue very demanding enquiries into the fundamental attitudes to music, studio and theoretical work, and general education in the department. At the same time a more consciously political approach to questions concerning the relations between art, ideology and social structures developed. Towards the end of 1971 John Tilbury read a paper which presented the first specifically Marxist critique of the role of avant-garde music in a class society.

In a rough way we had worked out for ourselves that capitalist relations of musical production are destructive in four connected ways, viz:

1. They reinforce the hierarchical structure of society by associating music with an ideology of ruthless competition.
2. They deprive society of creative music by substituting a profit-making form of electronic reproduction of a limited range of the acoustic residue of works designated as of superlative quality.
3. They devalue musical production and discourage the musical development of children by identifying music with the above-mentioned substitute.
4. The substitute music is itself a powerful vehicle for the propagation of anti-conscious ideology.

John Tilbury showed how the avant-garde, which had previously considered itself virtuously anti-establishment, was in reality an integral part of this repressive system.

To concentrate a political attack, as Tilbury and later Cardew did, on their former friends of the American and European avant-garde betrayed, perhaps, an undialectical approach. It was also dangerously selective since it sought to deny the real creative force, refinement and ability of artists like Cage, Stockhausen and Brecht while diverting attention from the infinitely greater problem of the ideological effects of mass-produced music, to which whole populations are daily subjected at work, in school and in their homes. Nevertheless, in so far as it concerned our own activities, Tilbury's analysis was seen to be accurate both in general and in detail, and the results of his exposure were, in my view, entirely beneficial.

Music became associated with political struggle and in 1972, while ideological differences were disintegrating London groups such as the Scratch Orchestra and the Promenade Theatre Orchestra, a much higher level of unity was noticeable at Portsmouth. Students who had previously been repelled by the ambivalent attitudes to jokes and humour and to the ironically pretentious 'superstar' status of certain individuals, now found that the music had meaning and that they could contribute to it. Others who had, by now, officially completed their studies, returned to Portsmouth for frequent visits and worked to set up new groups directly stemming from the Portsmouth experiment.[3]

Current Developments

The Portsmouth Sinfonia, like a sore boil in which were concentrated all residual opportunist, dadaist and anarchist tendencies, achieved its climax in the Albert Hall on 28 May 1974, and disappeared. The Majorca Orchestra, organized at the same time by the same team of people, notably Robin Mortimore, pursued a diametrically opposite course, giving several concerts in the Lucy Milton Gallery where the music began to approach in sobriety, simplicity and clarity the exhibitions of works by Dutch and English Constructivists to which the gallery was committed. Indeed, on one such occasion James Lampard could announce: 'The next piece the orchestra will play is *Mountain Air* composed by our tenor horn player, David Saunders, whose exhibition this is.'

David Saunders is, however, an exception and it would be wrong to exaggerate the degree of integration possible or desirable between constructivist art and music under prevailing circumstances. I personally feel an unbridgeable gulf between my own work as an artist and music, such as that of Steve Reich, which is usually cited as its nearest equivalent. My actual participation in musical activities at Portsmouth was more in the spirit of I.K. Bonset.[4] I decided late in 1973 that this was an unsatisfactory position and that the most fruitful direction for future collaborative work was, as I had originally thought, more towards the exchange of syntactic information and didactic situations arising out of this exchange. This view was confirmed by the work of musicians and composers with members of the Systems group of artists.[5] The attempt to collaborate implies acceptance of a common view of art, music and learning as fundamentally linked psychological processes, by which information becomes accessible to consciousness.

The systematic approach enables artists and composers to exchange technical concepts more freely. The resultant works are not, as is sometimes thought, concerned with equivalents or Baudelairean correspondences between musical sounds and colours, etc, but rather situations in which known and perceived realities have the maximum possible congruence.[6] Work of this general kind, bringing current developments in systematic music and constructivist art into clear relationship, is now well established at Portsmouth and the Slade. Other modes of collaboration, with origins in the Portsmouth experiment, are taking place at Goldsmiths', Leicester, Liverpool, Nottingham and other art colleges.

The period of fluid interaction between artists, musicians, composers and students ended with the recognition of the

idealist fallacy on which it was based. Recent generations of Portsmouth students, some of whose first works exhibited the characteristics described above, have since developed various combinations of theoretical, musical and fine art production. Much of this work is of a higher qualitative level than the earlier experimental work but the operative principle is to *combine*. The attempt at integration, as such, has been abandoned or deferred.

1 From a programme note by James Lampard introducing the '10 piano concert,' March, 1971, in the Exhibition Hall, College of Art, Hyde Park Road, Portsmouth.

2 One author of teaching manuals, and a prolific and versatile composer of pieces for musicians of limited ability, was free from this puritanical approach. Michael Parsons initiated research into his work and formed a group — the Ezra Read Orchestra — exclusively for its performance.

3 The current range of this work was outlined by Michael Nyman in the Review section of ***Studio International,*** May/June 1976.

4 I.K. Bonset was the pseudonym adopted by Theo van Doesburg for his dadaist activities.

5 The Systems group of artists: See 'Notes on the Context of "Systems"', Malcolm Hughes, ***Studio International,*** May 1972; and Correspondence, 'Systems', ***Studio International,*** April 1974.

6 Cf. 'Systems in Art and Music', Michael Parsons, ***The Musical Times,*** October 1976.

STEVE REICH

Interview by Michael Nyman

MN The artists you seem to have been associated most closely with in the past are the three who are photographed performing your *Pendulum Music* at the Whitney Museum in May 1969 — Richard Serra, Michael Snow and Bruce Nauman.

SR There are others — William T. Wiley and Sol LeWitt for instance. Sol has been very generous to me. He helped me out by buying some scores from me when I was composing *Drumming.* Without his help I wouldn't have been able to buy the glockenspiels and marimbas. He's been a good friend to me and to Phil Glass and to a lot of other people. I admire him and his work.

MN When you wrote the statement 'Music as a Gradual Process' were you aware of Sol LeWitt's 'Paragraphs on Conceptual Art'? Because it seems to me that there are some very striking parallels.

SR I wrote 'Music as a Gradual Process' in New Mexico in the summer of 1968 in complete isolation from everybody except the composer/pianist James Tenney, who paid me a visit and looked over the manuscript and offered some good comments. I discovered Sol's 'Paragraphs' a couple of years later when he gave me the catalogue for his exhibition at the Gemeente Museum in The Hague.

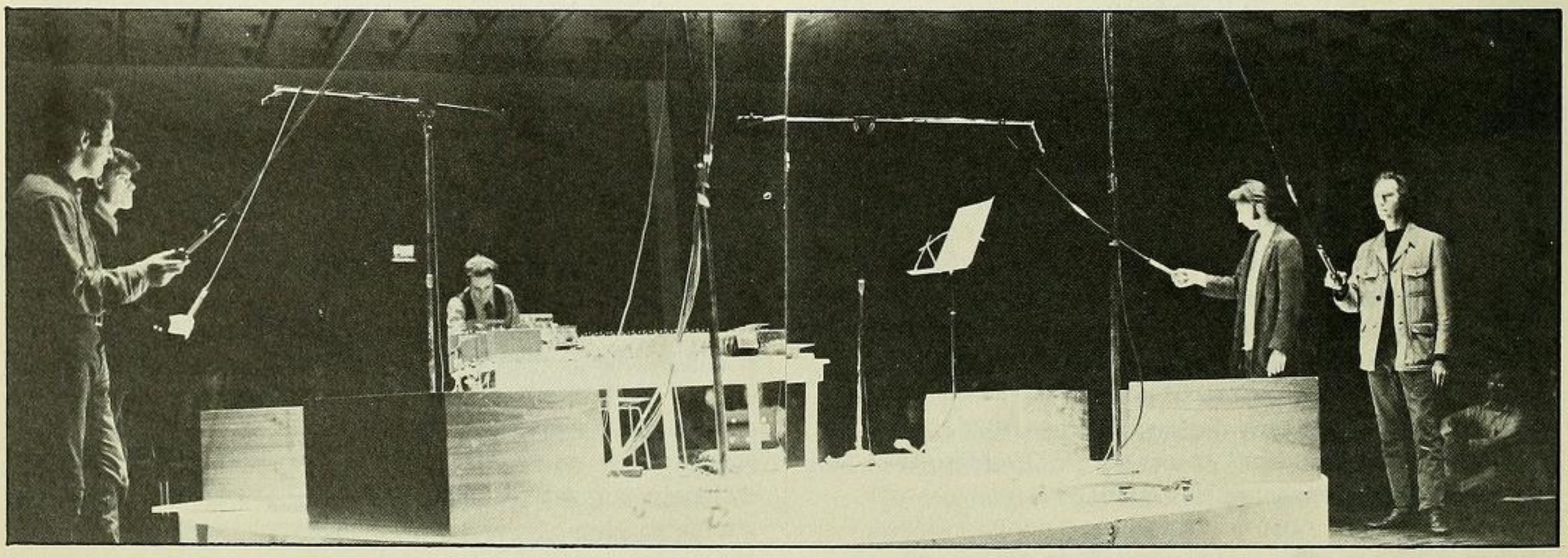
MN He says in the opening paragraph, for instance, that 'When an artist uses a conceptual form of art, it means that all of the planning and decisions are made beforehand and the execution is a perfunctory affair.'

SR I don't agree. Execution is hardly a perfunctory affair and never has been in my music. Also I'm not a conceptual artist because the concept does not necessarily precede the work, but rather, as I said in 'Music as a Gradual Process', not only may the form precede the content but the content may precede the form.[1] In my music the musical material has usually become clear before the form. In *It's Gonna Rain* the material, the original loop, preceded the phasing idea. I knew I was going to work with Brother Walter's voice,[2] I knew it was that material that was generating my excitement. So it was a sound that was in my ear, and later I discovered the process of phasing. So for me sound has been uppermost in my mind and even in *It's Gonna Rain* the question of how long the execution of the phasing would be (in other words does it go round from unison to unison in two minutes or does it take nine minutes or does it take seven minutes) — that decision was crucial. So the execution is never perfunctory. As you know my ensemble will rehearse a large new piece like *Music for 18 Musicians* for two years. So I would completely disagree with what Sol says here — at least as far as my own music is concerned.

MN Do you think LeWitt believes that the execution of his own works is a perfunctory business?

SR Well perhaps, in some of the works where what he does is to make a grid and then superimpose it on top of itself. He told me that in *Arcs, Circles and Grids* he made, I believe, four drawings and then had them mechanically superimposed. In that case the execution was not only perfunctory but it was done in a printing shop.

But I wouldn't describe his *Wall Drawings,* which are among the works I admire most, as perfunctory. There's a huge wall drawing in the Museum of Modern Art in New York which



Richard Landry

Pendulum Music 1968, performed in May 1969 at the Whitney Museum, New York, by (left to right) Richard Serra, James Tenney, Steve Reich, Bruce Nauman and Michael Snow.

was realised by hand. I think that he very often has other people making the marks but the fact that it is realised by hand *will* create something which is not perfunctory because the people will take care in doing it. And the net effect is of seeing a very beautifully modulated surface, a hand-modulated surface with slight areas of greater darkness and greater lightness which create the effect almost of colour — it's done in pencil but you have the effect almost of subtle greens and reds and purples.[3]

So I would say the works of his that I admire most are quite far from this particular description. I would give Sol, like any other artist, the benefit of the doubt and assume that what he wrote at that point was at a period when he was working in this way and that since that time he's not been attempting to fulfil a manifesto but to grow as a human being and perhaps one should assume that he might not agree with it himself now.

MN What struck me was the similarity between LeWitt's 'all the planning and decisions are made beforehand' and your 'once the process is set up and loaded it runs by itself.'[4]

SR Well, my decisions weren't all made beforehand. The only times that I composed a phase piece that goes from unison to unison was in the first section of *It's Gonna Rain* and the individual sections of *Piano Phase.* Every other piece of mine has some aesthetic decision in it as to exactly how many beats out of phase a pattern will shift against itself and when the two voices will become four voices, and when the four voices will become eight voices, and when the melodic resulting patterns will be doubled. Even in *It's Gonna Rain,* where you have the 'pure' process, yes there's a pure process, but how long does it take? That's an aesthetic decision.

MN But surely you'd admit that the tone and purpose of 'Music as a Gradual Process' were very close to that of the 'Paragraphs'?

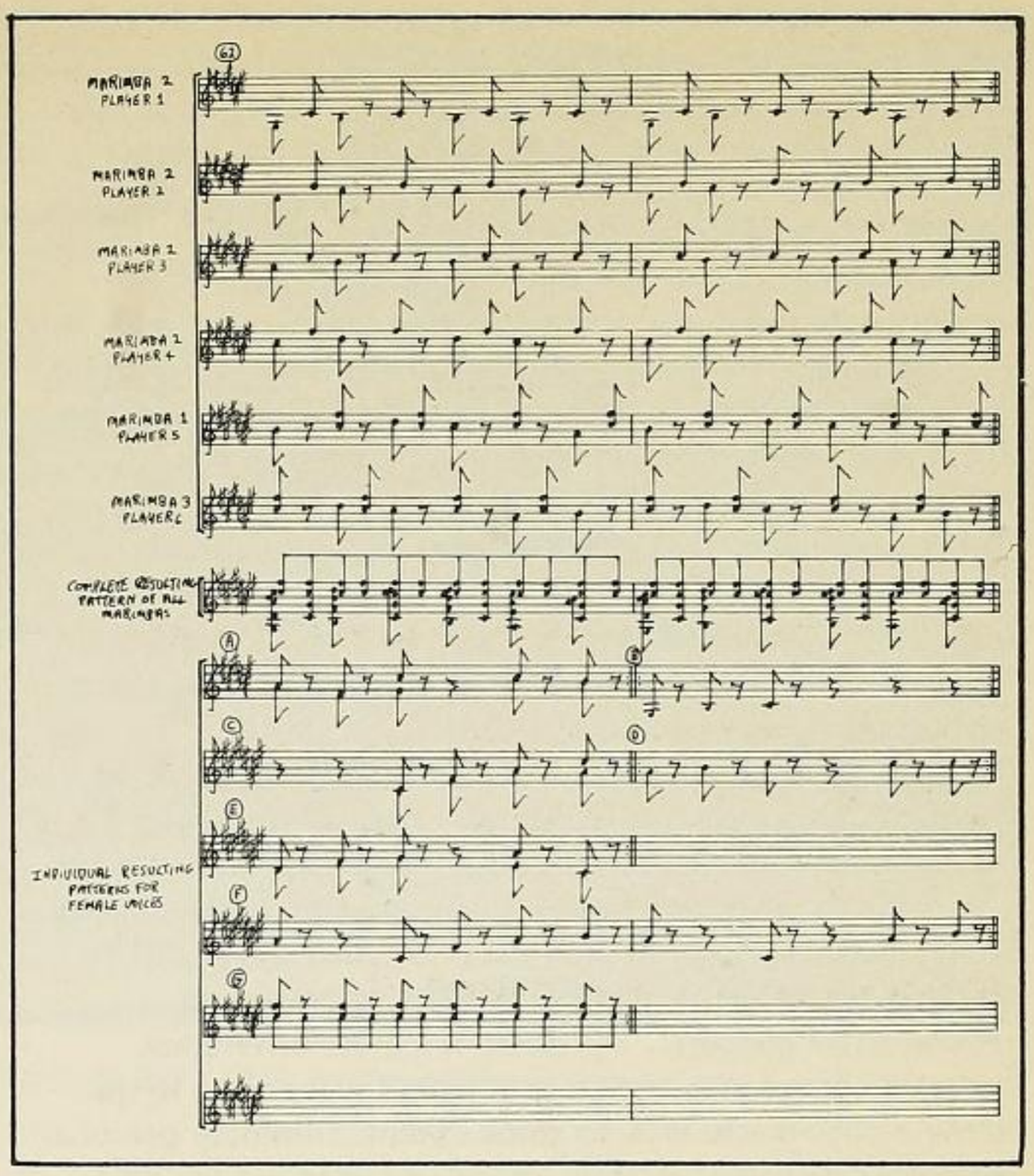
SR Yes, but we're talking now in 1976 and at the time I was writing in 1968 much of the stress in new music was on chance and free improvisation and I was trying to separate myself from that and to show that one could work in a more impersonal way. What I really wanted was a blend of individual choice and impersonality. You're doing something which is working itself out and yet because you've chosen the material and the process it is also expressive of yourself and you needn't meddle with it any further for it to express your personality. But surely what you say is true that the thrust of my essay, and the tersely worded style, was to drive home an idea of *im*personality which I thought was important at the time. And now it's eight years later and I don't feel like making that point any more because it's so well understood. In fact I've changed musically quite a bit and I'd like to bring my words up to date too.

MN Later on in the 'Paragraphs on Conceptual Art' LeWitt says that 'Regular space might become a metric time element, a kind of regular beat of pulse. When the interval is kept regular whatever is irregular gains more importance.' Would you say that this applies to the resulting patterns in your music?

SR No, because the resulting patterns are really part and parcel of what's going on. I think what I'd have to do to realise this particular sentence of Sol's is to superimpose some other melody that is completely free and divorced from the music. That's how I interpret his statement.

In his sense of the word here I don't believe that resulting patterns are irregular because they are absolutely regular, they are simply doubling, no more no less. A visual equivalent of resulting patterns in Sol LeWitt's terms could be that you'd have a very finely sharpened pencil and drew, with a ruler, a grid of X number of lines in each direction and then took the pencil and ruler and went over those lines stressing certain ones — that would be resulting patterns in visual terms.

MN But I wonder whether those lines need emphasising, whether you should have left the listener to perceive the whole range of resulting patterns for himself. Instead you focus attention on what interests *you* rather than leaving it



Drumming 1971 (part of Marimba section). 'Here, once again, resulting patterns are sung. A is a duet. Band C may be combined to form a trio, as can C and D. E is a duet which may be combined with F for a trio, and G is a trio by itself.'

open. In the tape pieces, which inevitably have a far richer range of resultant patterns, you don't impose, you don't do any 'shading'.

SR Well, I don't because one can't do it with a voice piece. In other words you think that *Phase Patterns* would be better without the resulting patterns?

MN It's possible...

SR Well, how about *Drumming,* where you've got the voices to deal with?

MN That's where the trouble begins. I think that once you moved outside the uniform ensemble of four organs,[5] say, and you started introducing resulting patterns on instruments and voices that are not part of the original instrumentation, then the doubling separates out from what is doubled. In the marimba section of *Drumming*, for instance, the marimbas sound as though they are *accompanying* the voices, rather than the voices emphasising what emerges from the marimbas which I see, hear, as a deficiency.

SR In one way I would agree with you: let's say that sometimes the singing could be better. I think on the DGG recording that the mix of marimbas and voices is very successful, the voices are very very subtle. So one answer to your question is simply that it depends on performance. The more the voices stick out in terms of volume the more they fail, and the music doesn't do what it's supposed to do, and becomes, in fact, melody and accompaniment. On another level I'd have to defend it. In *Piano Phase,* because there were no resulting patterns, there had to be many, many phases — 24 in all.[6] It takes about 20 minutes and everything that happens is phasing. So in a phase piece that doesn't have resulting patterns you have more phase relationships to deal with. But I find the piece lacking a certain kind of musical excitement and interest that I personally am attracted to, and for that reason, as early as *Violin Phase,* I introduced the doubling of resulting patterns.

Now you're right, it does direct the listener's attention, but when the idea of resulting patterns first came to mind while I was composing *Violin Phase* it was as an expression of the performer — there were all those sub-patterns and the

performer had an opportunity to make his own choice. It was mid-point between melody and accompaniment and pure process, because although the patterns are being doubled, they should be doubled fairly subtly so that the listener is able to hear other patterns at the same time. Also there's a period when the listener's mind is free, when the resulting patterns are over and the performer doesn't immediately phase and there's a pause as if to say 'well, you've heard this, you've heard that, you've heard the other thing and now your mind can just wander'. In *Violin Phase* there is about a minute of just loops running after all the resulting patterns have been played at the end of the piece.

MN To return to the LeWitt 'Paragraphs', he says that 'If the artist wishes to explore his idea thoroughly, then arbitrary or chance decisions would be kept to a minimum, while caprice, taste and other whimsies would be eliminated from the making of the art.'

SR Certainly there's no place for chance in my music beyond the traditional place for it; namely, after all the rehearsals one can never know exactly how a live performance will go. The idea of composing through tossing coins, or oracles, or other chance forms I would reject now, as I did in 1967, and as I did in 1958 when I first heard John Cage's retrospective concert.[7] But there is a great difference between chance and choice, and what I was trying to do in my earlier pieces was, to some extent, eliminate personal choices as a composer. Now, especially in *Music for 18 Musicians,* I have made a great deal more choices. There still isn't one iota more of chance in my music and I don't foresee that there will be. I believe that chance procedures have produced very poor music and an extremely unhealthy musical climate wherever they have had an effect. Some people have said that it may not be interesting music, but hasn't it been good for the performer? I'd say it was unhealthy for the performer. It's as unhealthy as a chance diet or a chance series of breaths — and it has created a false notion of performer freedom that claims a performer is free when pitches and rhythms are not notated, whereas I would say performers are free on one level if they are simply free to choose the music they love to play and have an opportunity to play it for an audience that loves that music too. On another level I would say the more self-imposed musical and religious self-disciplines performers, or any person, take upon themselves the more they truly free themselves. Musically these disciplines would obviously include regular practice as a performer or composer. Religiously, they would include many regular practices of which, as a Jew, I would mention prayer three times a day, observing dietary laws which limit one's intake of meat, and the setting aside of one entire day each week as a Sabbath where one relinquishes composing, writing, the telephone, travel, turning machines or lights on or off and, instead, prays, studies, eats and sings with family and/or friends.

MN LeWitt also says 'once out of his hand the artist has no control over the way a viewer will perceive the work'. That certainly applies to your earlier work, but it's surely true of traditional music too?

SR Yes, but it's particularly true of music that works with short repeating patterns. In the phase pieces you can't possibly know all that people may hear. First there are two, three or four identical repeating patterns playing canonically against each other in different phase positions and, at times, on different groups of identical instruments simultaneously — and at the end of *Drumming*. Second there are acoustic by-products of this repetition and phasing. For instance, in the first section of *Drumming* for tuned bongos, one may be listening to the little 'tkk' of the stick hitting the skin that bounces off the ceiling at the rear of the concert hall and focusing in on that rhythmic pattern. That may be more present for a listener than the fundamental pitch of the drums. Similarly with the attack sound of the wooden mallets hitting the metal keys of the glockenspiels later in the piece. These acoustic by-products are particularly audible when there is rhythmic repetition and a constant key centre, as is often found in Balinese and African music. As to the fundamental phase relationships, these are basically a variation of canonic technique and resemble Western musical techniques of the Medieval and Baroque periods. In listening to any canonic music one will naturally focus on one of the two or more simultaneous voices — and this focus will shift depending on the listener.

MN You would obviously disagree with LeWitt's statement that 'It doesn't really matter if the viewer understands the concepts of the artist by seeing the art.'

SR Well, in 1968 through about 1972 I would have. What I said in 1968 was that I wanted the process to be perceptible.[8] It was very important to me that the listener be able to perceive precisely what was going on in the music and I hope that I succeeded.

MN But do you still hold to that position? Even with the programme notes in front of me I find it very difficult to follow the process of *Music for 18 Musicians* — the only way you can hear the structure is to follow the metallophone cues, which seem to indicate changes of section. Surely you don't intend people to listen as intently as that?

SR Let's put it this way: in *Music for 18 Musicians* you can hear what's going on in the sense in which you can hear that the melodic pattern is getting longer. You may not realise that the melodic pattern is being repeated over and over again and is being re-accented, and that's *how* it's getting longer. So in a sense you're right, I'm not as concerned that one hears *how* the music is made. But if some people hear exactly what's going on, I'm glad of it, and if other people don't, but they still like the piece, it's just as well.

MN I get the impression that your new piece, *Music for 18 Musicians,* was composed more intuitively than your earlier pieces.

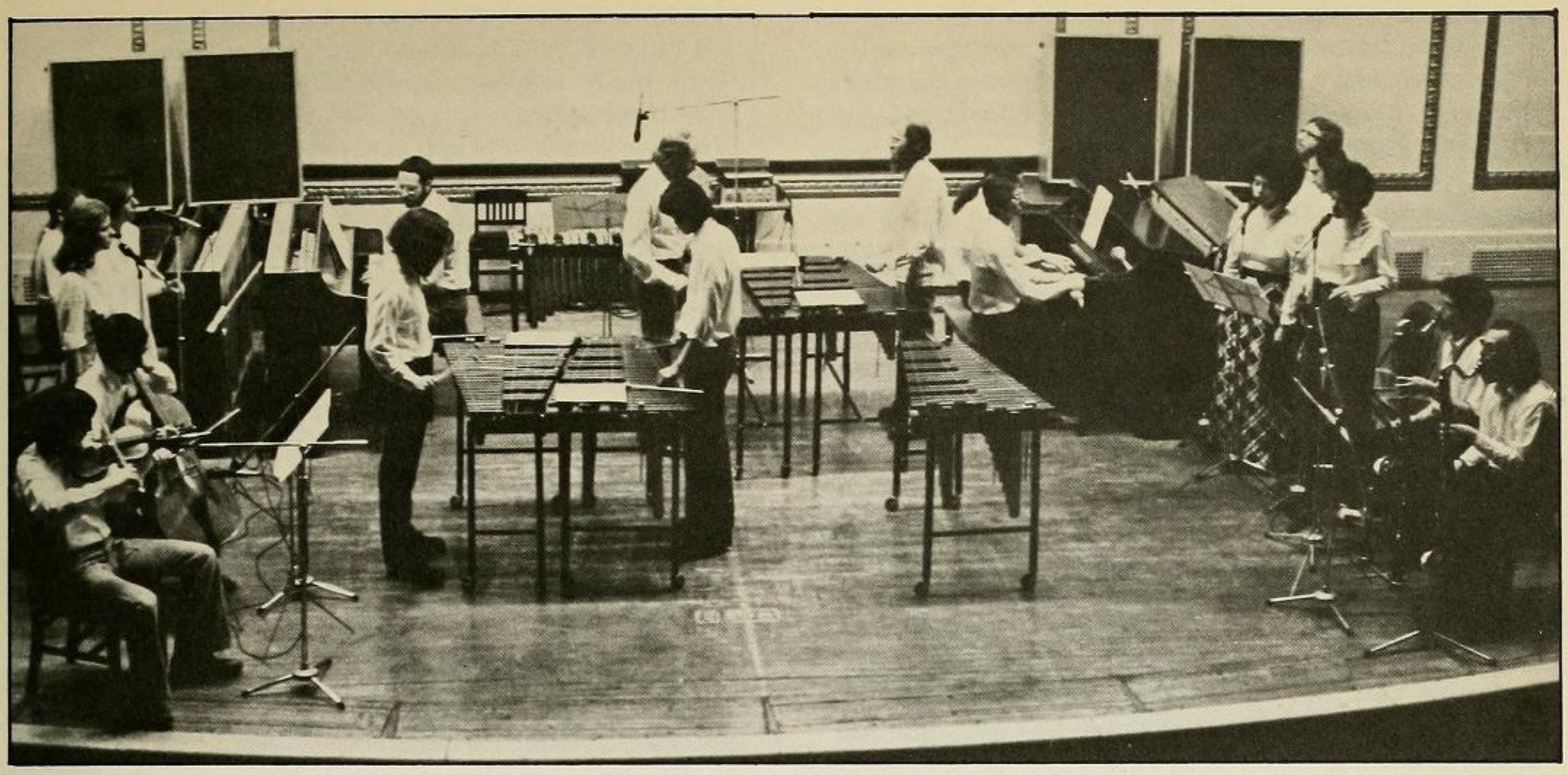
SR Yes and No. *Four Organs,* as I've said over and over again, was composed intuitively in 1970. I had the process of a short chord gradually getting longer in mind, but instead of it spinning itself out I had to sit down and write out each bar in detail, and use my ear as a guide. So *Four Organs* is very much an intuitive piece — realising a gradual process through personal choice.

MN Until I looked at the score I had thought that *Four Organs* was a completely seamless process, but in fact there are a lot of 'jump-cuts.'

SR I was trying to make *Four Organs perceptually* seamless, and what you say proves that I was successful. Colin McPhee, in his book on Balinese music, says that the number of repetitions of a particular pattern will be more when the pattern is shorter, less when the pattern is longer. So in *Four Organs* from bar 31 to the end you don't have any repeats. From bar 23, where it has changed from 11 to 13 beats, the increments are very small — I add only two or so beats at a time. But by the time I get to the end I'm adding much larger increments because the scale has gotten much larger. So the percentage increase is about the same, but because the scale is larger I add a lot more.

MN LeWitt says that 'conceptual art is made to engage the mind of the viewer rather than his eye or emotions'. I remember when we first talked in 1970 you said that any connections between your music and Op Art were meaningless since Op Art was merely 'a trip for the retina.' I recently read a criticism of *Arcs, Circles and Grids* that it was 'surprisingly retinal.'[9] Would you say that as the sound of your music has got more lush that it is in danger of becoming the aural equivalent of retinal art?

SR Just the opposite. If you want to accuse me of something that's purely perceptual, then you have to go to the early pieces. That's the criticism levelled at me by the 'machine critics' who say my music is machine-like. They always pick on the organ pieces or phase pieces and say that this is only the working-out of a process, it has no human expression and it doesn't represent anything emotional



Music for 18 Musicians 1976, permier performance at the Town Hall, New York, 24 April 1976, by Steve Reich and musicians.

and it might as well be done by a machine. Which is the equivalent of saying that it is just a trip for the retina, that it's pure perception. Obviously I hope that *Four Organs, Drumming* and my other early pieces *do* have an emotional effect, but some critics criticise them that way.

So I think *Music for 18 Musicians* was consciously composed with a feeling of liberating myself from very strict structures. I had to have some strong formal organisation because I'm just built that way, but once I'd established those 11 chords at the beginning,[10] each section was in a sense an invention. I didn't have an overall plan that would govern exactly how section 2 would relate to section 11, or how any of the sections would precisely relate to each other. Within some sections you'll find strict buildups working in strict canonic relationships, and then they'll be harmonised, absolutely as a question of taste and personal choice, with no other justification. Nevertheless, the 11 different sections do relate to each other as members of a family: certain characteristics will be shared, others will be unique.

MN But one finds that as the texture of your music becomes richer and more seductive, not only is there less possibility of following the process, but there seems to be less necessity.

SR You're right. There was a didactic quality to the early pieces, I think. When you discover a new idea it may be very important to present that idea in a very forceful and pared-down way. My early pieces are very clear examples of a strict working-out of certain musical ideas that were new, though they did have strong relationships to canonic structure and augmentation.[11] But once you've done that for a while – you can't draw the same drawing over and over again. The artists I admire are the ones that move on. There's no point in simply rehashing those same principles in another orchestration. Would you really have wanted me to sit there cranking out just one perfect phase piece after another?

MN I guess it's the combination of primary structure and primary material that, along with 'Music as a Gradual Process' has conditioned one's mode of perceiving not only your more recent music, but also, probably incorrectly, that of other composers.

SR I'm very pleased with this situation because it proves that something happened early on, from 1965 to 1970, when the phase pieces and organ pieces were done and the essay was written, that was in a sense a bringing to fruition. The music and the ideas surrounding it were thoroughly worked out. *Drumming* in a way is the transition piece, because by the time you get to the end of *Drumming* you're really in another place, because the marimbas, glockenspiels, voices and drums are all playing simultaneously.[12] Then you get *Music for Mallet Instruments, Voices and Organ* and *Music for 18 Musicians.*

MN So in fact variety of materials is important to you?

SR Yes, it's been very important to me to work with different kinds of instruments (or the lack of them in the case of *Clapping Music).* It's very important for me to work in successive different media because the formal necessities of dealing with the voice, as opposed to dealing with the clapping of the hands, as opposed to working with marimbas, or pianos, or strings, or with bass clarinets, all produce very different basic musical assumptions. Mallet percussion and bare hands produce short tones whereas voices, bass clarinets and strings can produce longer ones and that leads to basic decisions about duration of notes, the human breath and so on. Plus the sheer beauty of sound these instruments can produce, especially in combination.[13]

MN You're not interested in genuinely minimal music?

SR No, I'm not. I'm interested in music in a more traditional sense of that word, and I really always have been. By 'traditional' I mean several of the world's musical traditions including that of Europe from about 1200 – 1750, that of Balinese Gamelan music as it has survived, West African music as it is found now, American jazz from about 1950 to 1965, the music of Stravinsky, Bartok and Webern, and I look forward to studying the traditional middle-eastern cantillation of the Hebrew Scriptures in the near future. In other words I'm interested in music and not in acoustic research. I know there are acoustic by-products in my music[14] but I believe that first the fundamentals have to be taken care of. Now, since my concern is with fundamentals, literally and metaphorically – literally, in the sense of the fundamental tones, the notes themselves; metaphorically in the sense of the fundamentals of music *ie* tempo, rhythm and timbre – if those are taken care of, then the rest is, as I've said before, a kind of gift that comes out of the nature of what you're doing. Striving for it is rather like the composer who sets out to write a 'sad' piece – or a 'mysterious' piece. This has always struck me as absurd. To see and hear this kind of search for acoustic effect today where one repeats say piano tones over and over again until one can hear the third, fifth, seventh, ninth or higher partial strikes me as a kind of 1970s version of

programmatic salon music.[15]

MN But to return to the artists. Sol LeWitt and William T. Wiley seem to have little in common, apart from friendship with you, though Wiley did do the sleeve illustration for the *It's Gonna Rain/Violin Phase* record.

SR Bill Wiley is a very good friend of mine and someone I admire whose work is very different from mine. To me Bill's basically a draughtsman — a very fine draughtsman. And it was with him that I actually discovered the process of swinging a microphone in front of a loudspeaker that resulted in *Pendulum Music.* I think Bill has to get some credit for that, because of his air of freedom, and looseness. His personality and the theatrical event we were working on in Colorado in the summer of '68 called *Over Evident Falls* encouraged me to just stand there swinging that microphone in a way that I might not have felt as inclined to do otherwise. So it's those kinds of human qualities rather than Bill's surrealistic drawing and sculptures that bear an imprint on *Pendulum Music.* You could say also that he's responsible for the funky early realisation of *Pendulum Music* on Wollensack tape recorders. We stuck a broomstick pole between two chairs and masking-taped the mike cords over three Wollensacks. That's the *echt* way to do it. As Steurmann is to Schoenberg, so the broompole is to *Pendulum Music.*

MN Is there any connection between Bruce Nauman's work and yours?

SR The connection is purely personal. We were both good friends of William T. Wiley. Bruce was his student and I was Bill's friend. We met at Wiley's house one summer in Colorado — the summer of 1968 when I made *Pendulum Music.* In fact Bruce was around the day that it was 'composed', the day I discovered I could swing a microphone in front of a speaker to get those feedback pulses. Bruce and I became friendly because we liked each other.

MN And you both moved back to New York in '68?

SR Well, I was just in New Mexico and Colorado for the summer of '68 and Bruce moved to New York just for one year in the fall of 1968, and in the spring of '69 the Whitney Museum grouped us all together in the 'Anti-illusion' show — Nauman, Richard Serra, Phil Glass, me, Mike Snow, Keith Sonnier and some other people.[16] We were all in New York and we were seeing each other socially. I lived about 150 yards from Richard's studio and about 400 yards from Mike Snow's. So when I had my laundry done, or when I went to the subway, we'd bump into each other. At that time we were all more or less equally known and unknown. The Whitney wanted to put on this show, and decided to add performances to the exhibition.[17]

Richard showed those very nice early films of the lead dropping, and Bruce bounced in and out of the corner with Meredith Monk and his wife for an hour, which was a very interesting performance. Phil Glass played *Two Pages* and I can't remember what else, and Mike Snow showed *Back and Forth (⟷)* and *Thirty Seconds for Montreal.* I did *Pendulum Music, Violin Phase* and the one and only performance of the phase shifting pulse gate.[18]

MN Did you feel at that time there was any mutual influence amongst that group of artists and musicians, or was there simply an aesthetic atmosphere in which you mutually reinforced each others' work?

SR I would say it's very much the latter. If it were possible for a sculptor to influence a musician and vice versa it would happen, but the simple fact is that despite all the theories that are spread about the relationship between art and music, they're incredibly different. I would say that with film you have the possibility of a direct analogy with music because film is an art in time.

MN Were you actually influenced by Michael Snow's work?

SR No, I saw *Wavelength* in 1967 or '68 when I had already done *Piano Phase, Violin Phase* and all the tape pieces. So it was more a question of saying 'Aha, here's somebody I'd really like to meet.' I saw the movie without knowing him but I immediately made a point of finding him personally. There was no influence since his film was finished and so were those pieces.

MN What particularly appealed to you in *Wavelength?*

SR I saw two things that attracted me — one that was similar to my work and one that was different, and I thought that therefore it was extremely interesting. It was just like what I was doing because he was zooming very very slowly, so there was a gradual process going on. It took about 45 minutes to zoom in finally on that photo of the ocean, so that towards the end of the film the frame is filled with the ocean. On the other hand there's a whole melodrama, a murder mystery, going on which is totally unlike what I do. Also there are changes in the film stock, and the whole realisation is very imperfect and loose. In other words you know that he knows how to do it perfectly, but he's chosen to do it imperfectly. And so I got a kick out of that because I had chosen to do things more perfectly and I thought I could learn from someone like that. And in a funny way I think that *Music for 18 Musicians* is closer to Mike Snow's attitude.

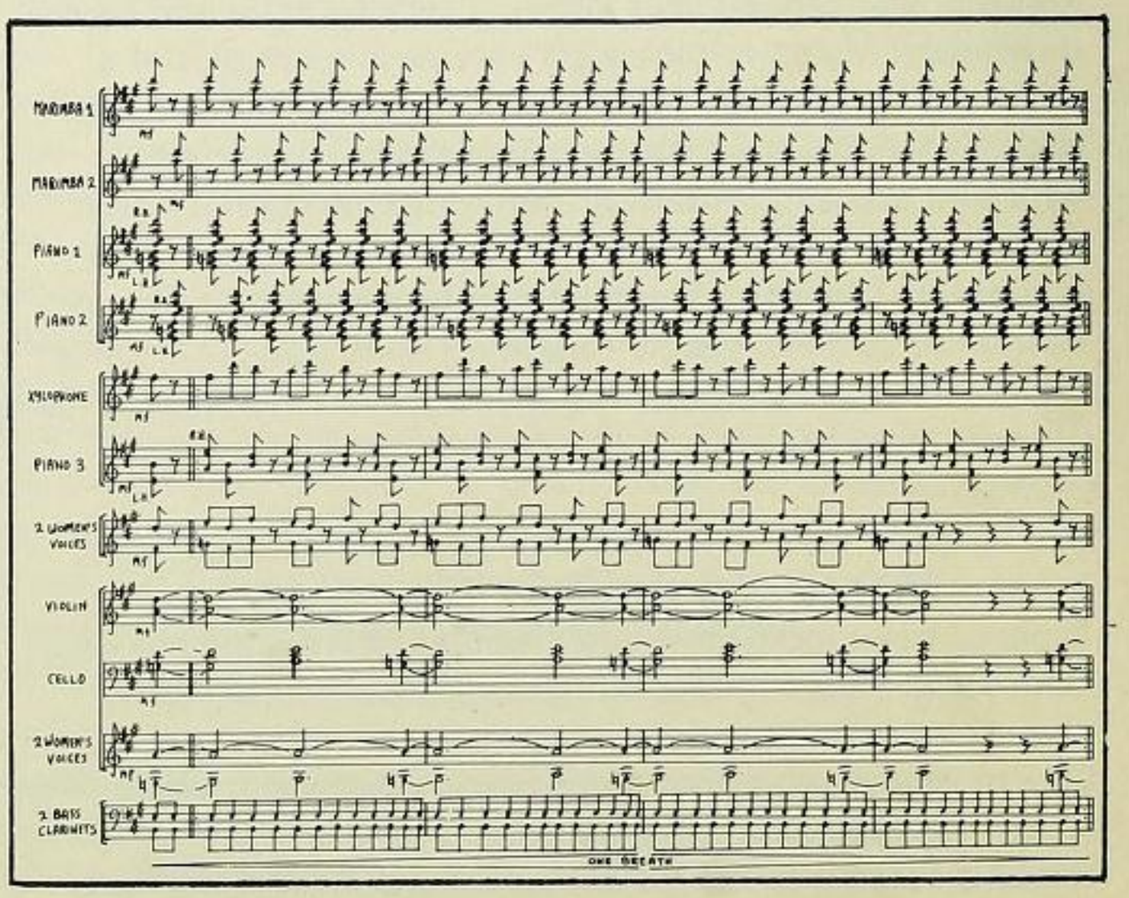
MN What is the connection?

SR It's the relationship of the human breath in *Music for 18 Musicians* to the strict rhythm going on throughout the piece. There's a kind of washing up of the breath, literally like waves. One of the metaphors that's come to me about the piece is that you can imagine a group of drummers at the edge of the beach ankle deep in the water and they're playing in strict time. Around their ankles the waves wash in and out — there's a whole other time washing up against their strict musical time. This is a breakthrough in this piece; it gives it a kind of life none of the other pieces has, exactly.

It's the first time I've thought about it, but it's rather similar to the way Mike Snow deals with time. On the one hand you've got the absolute precision, of 12 beat bars, and under them the bass clarinets and voices play or sing pulses for the duration of one full breath. And this strikes me as similar to Snow's attitude towards time in *Wavelength* and almost every other film he's made. In Snow's work there's a very interesting blend of what I have referred to before as degrees of symmetry or asymmetry. It's the difference, let's say, between a metronome, a good drummer, a heart beat and waves on the shore — they're all periodic but they're all different degrees of periodicity. And *Music for 18 Musicians* is the first piece of mine where there are different periodicities simultaneously.

MN You've often referred to the lead pieces of Richard Serra.[19]

SR I spent some time with Serra just preceding the time he started working with lead, so I was around when he did the first pieces of the lead sheet on the wall being propped up



Music for 18 Musicians 1976. Section II, Bar 3

PENDULUM MUSIC

FOR MICROPHONES, AMPLIFIERS, SPEAKERS AND PERFORMERS

2, 3, 4 or more microphones are suspended from the ceiling by their cables so that they all hang the same distance from the floor and are all free to swing with a pendular motion. Each microphone's cable is plugged into an amplifier which is connected to a speaker. Each microphone hangs a few inches directly above or next to it's speaker.

The performance begins with performers taking each mike, pulling it back like a swing, and then in unison releasing all of them together. Performers then carefully turn up each amplifier just to the point where feedback occurs when a mike swings directly over or next to it's speaker. Thus, a series of feedback pulses are heard which will either be all in unison or not depending on the gradually changing phase relations of the different mike pendulums.

Performers then sit down to watch and listen to the process along with the audience.

The piece is ended sometime after all mikes have come to rest and are feeding back a continuous tone by performers pulling out the power cords of the amplifiers.

Pendulum Music 1968. Score.

by the pole. Now, again analogies between sculpture and music are hard to make, but he could have had a pole cast from lead. But he didn't, he chose to take the same material and roll it up — which is very difficult to do — so there was a kind of deadpan working out of a process: lead holding up lead. This also had a very powerful effect — similar to the effect I hope my early pieces had. They too,were the deadpan working out of a process — especially *Pendulum Music.*

In fact I would say that the relationship between Serra and me is lodged in *Pendulum Music.* I gave him the original score of *Pendulum Music* as a gift; in exchange he gave me a piece called *Candle Rack* which is simply a piece of wood with ten holes drilled in it that holds candles and sits on the floor. Actually, hardly anyone performs *Pendulum Music* any more.

MN Some of my students did it at Nottingham last year, unprompted by me.

SR Really, well, it's very easy to do, one can say that for it. I'd prefer the lo-fi version. You can do it beautifully on small, inexpensive loudspeakers because then you get a sort of series of bird calls and I much prefer that to hi-fi shriek.

MN *Pendulum Music* is the only piece of yours that one can talk of in terms of a *natural* process, because the other pieces, as you've admitted, all have some degree of personal intervention on your part.

SR And not only that, they're *musical* in the sense that *Pendulum Music* is strictly *physical.* A pendulum is not a musician. So of all my pieces that was *the* most impersonal, and was the most emblematic and the most didactic in terms of the process idea, and also most sculptural. In many ways you could describe *Pendulum Music* as audible sculpture, with the objects being the swinging microphones and the loudspeakers. I always set them up quite clearly as sculpture. It was very important that the speakers be laid flat on the floor, which is obviously not usual in concerts.

MN So if someone composed it now, it would be called performance art.

SR Exactly. — But I'm more interested in music.

MN Does that mean you're finished with the art world?

SR It's not so much a question of finishing with one thing as trying to establish something else. I'm happy to see sculptors, painters, film-makers and dancers in the audience. But I'm disappointed if I don't see many musicians. So if you ask me who the people are that I'm *most* interested in hearing my music the answer is definitely young musicians.

MN So that playing in art galleries and museums was just a means to an end, and now you'd prefer to play exclusively in musical contexts?

SR We never did play in galleries very often, but we did play and continue to play in museums. But if we play in museums and galleries *exclusively,* and my music is discussed more or less exclusively in art magazines, then musicians will simply not hear or know about my music. In the end it boils down to very simple details: the curator of a museum or gallery director has a mailing list, and that list is made up of painters and sculptors and art patrons and other galleries and other museums, and when they advertise your concert they use their list. They don't bother to go to the local music school to find out where the musicians in town are. You simply lose the musical audience — so I'm trying to make up for that. I want to be sure that musicians have an opportunity to hear my music, and that is facilitated by playing in concert halls, for the radio, and in music schools, as well as museums.

MN But how could you have broken into the musical world in 1968 or 1969?

SR I couldn't have, The only way that I had access was through the fluke of meeting Michael Tilson Thomas, whom I met through the playwright Richard Foreman. Richard was a friend of Michael Snow's and mine, and he was working on *Elephant Steps* on which Michael Tilson Thomas was the musical director. And somehow I think Thomas had seen a piece of mine in Cage's *Notations* book[20] — the first page of *Piano Phase.* Richard heard him doodling around with it on the piano and he immediately asked him if he knew me, and Thomas said that he only knew about me. So Richard was the liaison between us, with the final result that *Four Organs* was played on the Boston Symphony programme.

And this was a huge breakthrough because it brought my music to a musical audience. People who hadn't known about it heard it — some hated it, some loved it — but at least it was presented in context along with (if I remember rightly) CPE Bach, Bartok and Mozart. I was pleased to have that happen, but I was nervous about the fact that I had to sit down with a bunch of players who weren't part of my group, who had to look at my score and simply like it or not like it — and they did. For me it was a real test: will this music work in a musical context? So it was a kind of *rite de passage,* and it worked. But I didn't have any other access, but then accidents like that began to breed other accidents.

MN Do you find that your attitude towards the art world is changing?

SR It may be that after a period of such activity as there was in the 1960s, things are naturally slowing down. Starting in about 1970 I feel that there was some sort of change in the gallery world in New York. It seemed to me that there wasn't much interesting work around, that there were a lot of older artists who were continuing to do good work, but there were fewer and fewer younger artists doing good work.

MN Do you see the same thing happening in music?

SR Well, music has always moved slower — there aren't the same expectations. In the 1960s everyone thought it was great that there was one art movement following another in quick succession. For instance, there was a two or three-year period between the emergence of Pop art as a dominant form and the emergence of Minimal art as a dominant form; and then after that you have the process art that I was tied in with. Things moved very rapidly and then suddenly ground to a halt.

MN But the pace of music is slower?

SR Well, it has accelerated from what is was in the middle ages, but it's still considerably slower than three or four-year generation period in the visual arts. I composed *It's Gonna Rain* in 1965, so this kind of music has been going on for well over ten years and it's only now gaining serious attention and consideration.

Now frankly I think this slower movement is more healthy. It's harder to get accepted in serious music. There are a lot of people around playing Bach, so you've got to deal with them — and their standards are high. They're not going to accept your music without careful and repeated listenings. If you want to be taken seriously by musicians in general, and not just a small coterie on the outside, it's going to take a while.

MN But when your music becomes available for anyone to play, it ceases to have the exclusivity that it has at the moment, and playing your own music is obviously almost your sole source of income.

SR Well, that exclusivity is something I really don't believe in. I *want* other musicians to play my music. And to put the economics straight: when it comes to making a living – since I don't teach and don't want to teach – to publish *Piano Phase* and *Clapping Music* doesn't threaten my income, and it gives other musicians the chance to play and therefore really learn my music. Your theory is that if others can play my music, why hire the original group to play it? But I suggest another theory: now that other groups have done it, and the piece is well known, wouldn't you like to hear a performance done by the composer and his own ensemble?

MN You say that you're primarily interested in younger musicians getting to know your music.

SR Yes, I'm interested in other musicians *playing* my music. If a piece of music is going to survive, who's going to make that decision? It's not going to be painters or sculptors or music critics, it's going to be other musicians. If musicians like a piece of music they will continue to play it, and it will continue to live. Otherwise it's like pop music, it comes and it goes.

MN You are currently negotiating with Universal Edition to publish your scores, but you'd presumably be selective as to which music you'd allow other people to play. You wouldn't, for instance, put out *Music for 18 Musicians* since you are just about to start touring that piece yourself.

SR Not today, but perhaps tomorrow.

MN But when is that tomorrow?

SR I can't say. It's a question of other people being in a position to put out the energy that's necessary to rehearse that piece, and the money that's necessary to make sure that the marimbas are at A=440, and in tune with the pianos, and that the metallophone is in tune with the marimbas. All the hardware that's necessary represents money, represents love, represents rehearsals, represents a certain kind of investment that can be measured emotionally and financially.

MN What about the question of scale and duration in your music? Taking a particular phase relationship in *Drumming,* for instance, once you've made the phasing shift, there's no *inner* reason – nothing within the music – that dictates how long you stay where you are and when to move on.

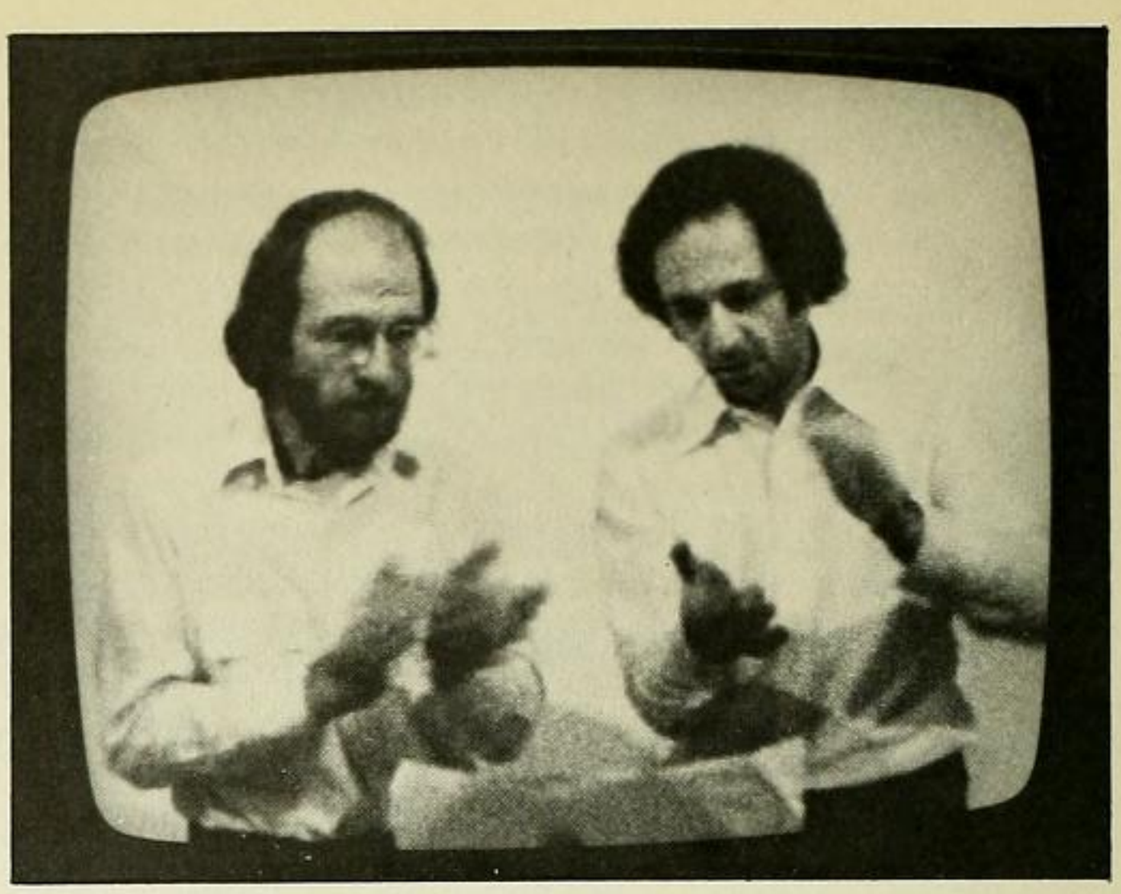
SR Yes and no. I mean there's nothing written in the scores about it so far, and my attitude has always been to leave it to the taste of the musicians. In other words I assume that I'm writing music and not creating a scandal, and I assume that those who play the music will by and large try and play it as music and not try to create a scandal. What I mean by that is that if you take *Piano Phase* and you make it last for three hours, you're creating a scandal and you're not playing the piece seriously. *Piano Phase* could take, if you were really tearing along, about 16 minutes, and if you're going incredibly slowly, 22 to 24 minutes. It's a pretty wide latitude. But on the other hand you can't play it in seven minutes or play it for an hour without hurting the music.

MN Why not?

SR Because we're human beings and in many respects we're very similar, and at a certain point boredom sets in even if you're an aficianado. At a certain point you've heard the relationship long enough to appraise it carefully, to appraise what the upper resulting patterns are, what the lower resulting patterns are, what the middle resulting patterns are, and it's time for a change.

MN *Piano Phase* is not the best example because the texture's pretty bare. What about *Drumming?*

SR *Drumming* will vary in concert performance from a little over an hour to about an hour and 20 minutes. That's the most complete latitude that I'm aware of – 15 minutes in what is generally an 80 minute piece. On the other hand if you played *Drumming* for two hours, that's a mistake, it's just wrong – you've grossly elongated something that shouldn't take that long.



Clapping Music 1972. Photograph from Reich's video-tape of the piece with (left to right) Russ Hartenberger and Steve Reich.

MN Have you tried it?

SR We've not tried it that long, but we've played the piece many, many times without fixing it; so that in other words, without consciously trying to do it, we've simply allowed ourselves the human situation of having no rules. I've never told anyone how long or how short to go on for. The singers have x amount of patterns to sing and they pace themselves slightly differently each night. Sometimes new patterns have been added and others have been subtracted. The piece is constantly in a certain kind of flux and the time does vary, but never, never, never has it taken two hours and never, never, never has it taken 45 minutes. If you did it in 45 minutes you'd be moving along at such a clip that no one really could get a grasp on what they heard – they wouldn't be able to hear those relationships clearly. And if you played it for two hours it would just be a bore. You'd just be saying, I want you to hear this thing in the detail that it would not be fair for me or anybody else to ask someone to examine it in. If there's someone who wants to sit at home and pick up his phonograph needle and put it back on the record and hear that section again and again and again, then he's free to do that. But in a live concert performance I believe it would be a gross error and an imposition on the audience and on the players.

I think Ezra Pound says something about pieces having an absolute tempo. Some musicians have perfect pitch, as you know, and other musicians have what you could say is an absolute sense of tempo – given a piece of music they know really what the right tempo is. And this relates to the number of repetitions in my music. There is latitude, but there are limits to that latitude.

(Interview conducted at La Rochelle, France, 26-27 June 1976)

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1 'Material may suggest what sort of process it should be run through (content suggests form), and processes may suggest what sort of material should be run through them (form suggests content). If the shoe fits, wear it.' ('Music as a Gradual Process', 1968, reprinted in Steve Reich, ***Writings on Music,*** Universal Edition, London, 1974.)

2 ***'It's Gonna Rain*** was composed in San Francisco in January of 1965. The voice belongs to a young black Pentacostal preacher who called himself Brother Walter. I recorded him along with the pigeons one Sunday afternoon in Union Square in downtown San Francisco. Later at home I started playing with tape loops of his voice and, by accident, discovered the process of letting two identical loops go gradually in and out of phase with each other' (*ie* 'phasing'). Sleeve note to Live/Electric Music, ***(Violin Phase*** and ***It's Gonna Rain)*** Columbia MS 7265.

3 LeWitt's instructions for another MOMA Wall Drawing (June 1970) are: 'Within four adjacent squares, each 4' x 4', four

draughtsmen are employed at four dollars per hour for four hours a day and for four days to draw straight lines four inches long using four different color pencils. Each draughtsman will use the same color throughout the same four-day period, working on a different square each day. Each 4' x 4'.' (***Arts Magazine,*** February 1972).

4 'Though I may have the pleasure of discovering musical processes and composing the musical material to run through them, once the process is set up and loaded it runs by itself.'

5 Reich's earlier instrumental music was written for homogenous ensembles — ***Piano Phase*** (1967) for two pianos, ***Four Organs*** (1970) and ***Phase Patterns*** (1970) for four identical electric organs. The first three sections of ***Drumming*** (1971) each use similar uniform instrumental sets — bongos, marimbas and glockenspiels — which are all combined in the fourth section. Whereas in ***Phase Patterns*** the resulting melodic/rhythmic patterns are doubled by the two 'spare' organs (that is, the ones that are not phasing), in ***Drumming*** 'outside' sounds are brought in to reinforce the resulting patterns — the male voice in the bongo section, female voices in the marimba section, and whistling and piccolo in the glockenspiel section.

6 ***Piano Phase*** is in three sections whose basic material 'reduces' from a 12-note, to 8-note to 4-note figure — hence 24 phase shifts.

7 The retrospective concert, covering the music Cage had written over the previous 25 years, was held at Town Hall, New York in May 1958. It included not only chance and indeterminate works like the ***Concert for Piano and Orchestra*** (1957-8), but also completely-notated pre-***I Ching*** music based on rhythmic structures and repetition which must have had a strong appeal for Reich. (He has shown some interest in the early Cage percussion music).

8 'What I'm interested in is a compositional process and a sounding music that are one and the same thing.'

9 My memory was at fault. What Robert Pincus-Witten had said (in ***Artforum,*** February 1973) was that ***Arcs, Circles and Grids*** consisted of 195 illustrations 'some of them incidentally and misleadinly optical.'

10 The 11 pulsing chords heard at the opening of ***Music for 18 Musicians*** supply the harmonic material for the whole work.

11 Reich made clear his relationship to historical musical procedures: 'I think that what pleased me about phasing was that it related to canonic structure. You'll hear the phrase in the artworld that "it's been done before." It's intended as a criticism but for me it's a compliment. If you come up with a musical idea which has no relationship to something that's been done in the past by any musical culture, then the odds are you're an idiot and working with some novelty which is a complete waste of time. I think that a lot of directionality in music is just such an idiocy. Whereas if you find something that has some resemblance to something that happened two years ago or 2,000 years ago, then you're probably on some solid ground and the older the idea is-the more solid the territory. So I'm more interested in what's old than what's new. It's our duty to ***take*** what's old and make it new.

The idea of canon is ludicrously simple: you sing the tune, then I sing the tune, but we don't start at the same time. Ludicrously simple and incredibly successful — it gave birth to the fugue and the free canon. And the substitution of beats for rests (that Reich first used in ***Drumming)*** is also a ludicrously simple idea. You simply have a measure and you fill it up. It's like filling up a glass of water; you can fill it up gradually as quickly or as slowly as you like, but the glass is there, the liquid is there and you just fill it up. And you can have two glasses and do it at the same time, or you could have 100 glasses, and do it at the same time.'

12 The timbral uniformity of the three instrumental groups of the earlier sections of ***Drumming*** is broken down in the fourth section not merely by the fact that they are ***combined***, but because they are ***re***-combined into three mixed groups, each consisting of a set of drums, marimba and glockenspiel. But of course the instruments of the same type are still arranged in a staggered relationship with each other, but are not heard as such.

13 The 'sheer beauty of sound' has progressively increased in Reich's work since ***Drumming,*** apart from the smaller, stripped down works, ***Clapping Music*** (1972) and ***Music for Pieces of Wood*** (1973). When I pointed this out to Reich he replied: 'After ***Drumming*** there was a pause during which I had to figure out how to get out of the phasing process, and all I could come up with was sudden phasing, as it were. But the piece, ***Clapping Music,*** is an extremely severe, short, simple piece of music, and it could easily have been written a good deal earlier if I hadn't bothered with the phasing. It's like the first part of ***It's Gonna Rain*** — you simply go from unison back to unison. What's interesting about ***Clapping Music*** is that no two people clap the same, so you have minute differences there, otherwise the number of repeats is the only freedom in the piece, other than the tempo. ***Music for Pieces of Wood*** is considered to be one of my most aggresive pieces, since it can be ear-puncturing as far as volume goes, so that the whole aesthetic and feel of the piece — which was written in 1973 after ***Music for Mallet Instruments*** — is severe, extreme and percussive. All I am trying to say is that once having written ***Music for Mallet Instruments*** it was possible to go back and write the claves piece, and once having written that it was possible to wait for two years and come up with ***Music for 18 Musicians.*** I'm telling you now that if I do a piece for two girls' voices, it's going to be very pared down, very minimal and very simple (or perhaps not so simple). Don't expect that now I'm going to move onto ***Music for 36 Musicians*** because that isn't going to be the next step.'

14 'The use of hidden structural devices in music never appealed to me. Even when all the cards are on the table and everyone hears what is gradually happening in a musical process there are still enough mysteries to satisfy all. These mysteries are the impersonal, unintended, psycho-acoustic by-products of the intended process. These might include harmonics, difference tones, sub-melodies heard within repeated melodic patterns, stereophonic effects due to listener location, slight irregularities in performance, etc.' ('Music as a Gradual Process').

15 Reich is here evidently referring to the music of composers like Charlemagne Palestine.

16 Namely (for the record) Carl Andre, Michael Asher, Lynda Benglis, William Bollinger, John Duff, Rafael Ferrer, Robert Fiore, Eva Hesse, Neil Jenney, Barry Le Va, Robert Lobe, Robert Morris, Robert Rohm, Robert Ryman, Joel Shapiro, Richard Tuttle.

17 In the catalogue to the 'Anti-Illusion' show, Marcia Tucker wrote that 'Music, film, theater and dance have been considered separate from the plastic arts because they involve time as well as space. They are therefore impermanent, temporal manifestations whose duration is dependant upon the artist rather than the observer. However, the plastic arts have begun to share with the performing arts the mobile relational character of single notes to series, individuated actions to the fabric of a narrative sequence, or single steps to a total configuration of movement.'

18 For information on the phase shifting pulse gate (a device that was the background to the augmentation of the chord in ***Four Organs)*** see Steve Reich, ***Writings on Music,*** Universal Edition, London.

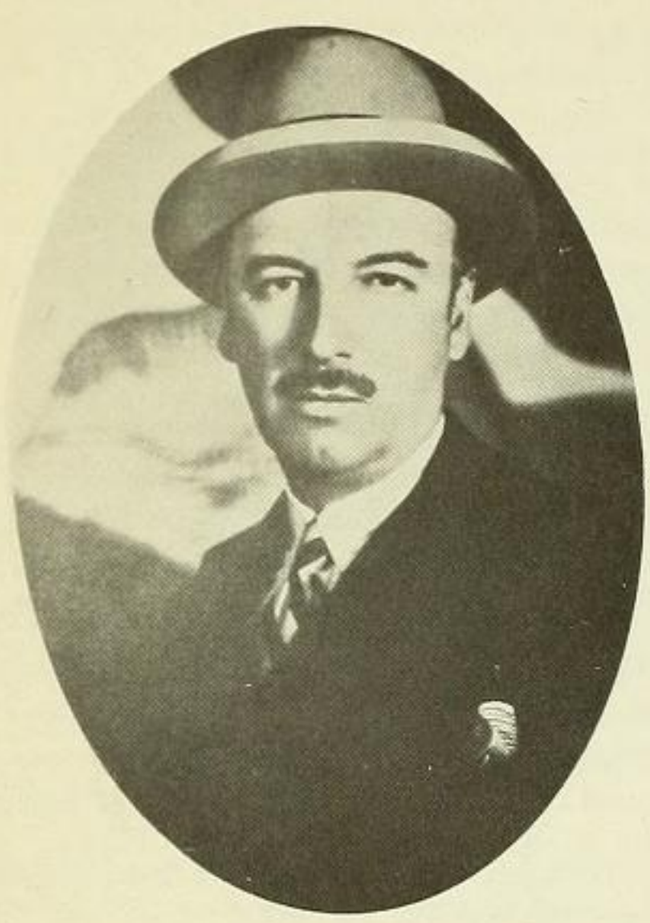
19 In an interview in ***Artforum*** (May 1972) Reich said that Serra's propped lead sheets and pole pieces were demonstrations of physical facts about the nature of lead, both being more about materials and process than about psychology.

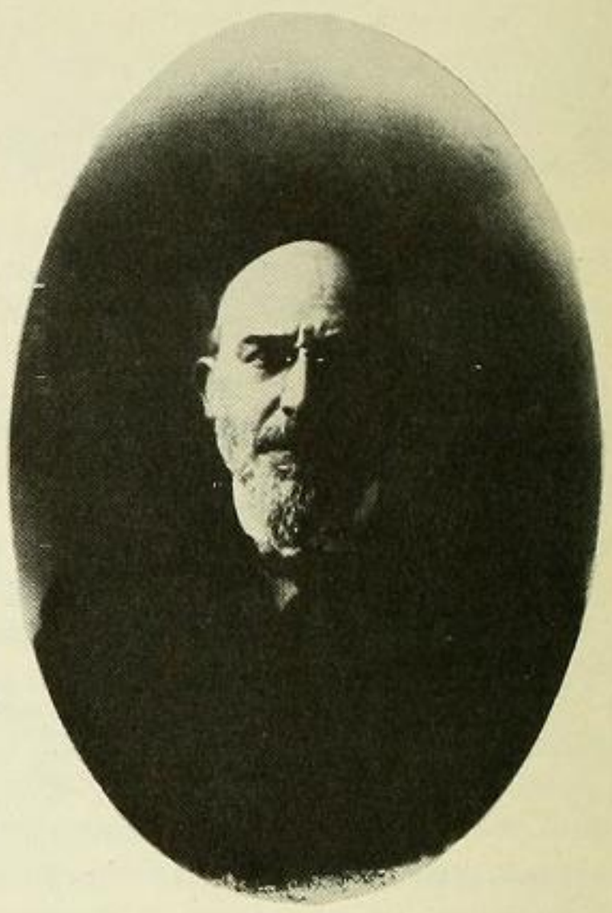
20 Cage, ***Notations,*** Something Else Press, 1969.

21 ***Music for 18 Musicians*** will receive its first British performance at the Roundhouse, London on 30 January 1977, before Reich begins a tour of ***Drumming*** in Huddersfield, York, Keel and Birmingham (1 — 4 February) and the Roundhouse (6 February).

BERNERS, ROUSSEAU, SATIE

Gavin Bryars





Lord Berners/Told a crowd of learners/That if they wished to compose/They should paint or write prose. (M. Cassel)

Erik Satie wrote music, a play, scenarios and executed a large number of drawings and short texts; Henri Rousseau painted, wrote plays, poems, composed and taught music; and Lord Berners, apart from a public life ranging from the diplomatic corps to being the focus of fashionable society, produced a curious body of music, painting and literature, whose importance is often masked by the very nature of his life-style. All three had little tuition in the art for which they are best known, and yet their work is of such startling originality that perhaps this in itself has been a contributing factor. Certainly awareness of the work other than that for which they are best known can only make for a more balanced picture of their real worth.[1]

It is apparent, for example, that there is a misplaced confidence that the role of Berners and Satie within music is fixed, and that it is peripheral. But while it may be true that their work lies outside the mainstream of music, and Rousseau's painting is difficult to locate within the mainstream of art, this is precisely why they are so important. The music of Berners and Satie is still largely misunderstood. It is felt to be lightweight, humouristic and eccentric; yet its surface resemblance to the music of contemporaries, and its use of parody, makes it extraordinarily subversive. In fact its 'amateur' nature is its strength – 'amateur' in the sense in which Satie used the word when defending Albert Roussel against the charge, brought by a former 'Prix de Rome' winner, of being a 'mere amateur'. Satie pointed out that, according to the prize-winner, Franck, d'Indy, Lalo, Chabrier, Chausson, Debussy and Dukas were all 'amateurs' and ends his tirade: 'With a united voice I cry: "Long live the amateurs!"'

This outline of aspects of the work of these three musician/artists is very much a prolegomenal one, and I intend to develop it beyond its present tentative state. But while the doubts about their own adequacy were very real to Satie and to Berners, and while Rousseau did need the kind of confidence given to him by friends like Jarry,[2] the independence of spirit and confidence in the quality of their imagination, and the range of work that imagination generated, are themselves sufficient reason for prizing the 'amateur' status above that of the competent professional.

Lord Berners (1883-1950)[3]

Lord Berners' output of music was not large – less than 30 works, and there was occasionally a gap of two or three years between one piece and the next – but what he did produce shows that he was one of the few truly original composers this country has produced this century. Taking into account his painting, graphic work and writings, his entire oeuvre is impressive and the picture emerges of an extremely complex and, in my view, important artist. His early music, up to the early 1920s, though mildly atonal, was independent of other contemporary work and is spiky and dissonant. By the mid-1920s, with his first ballet *The Triumph of Neptune* (1926) and, to some extent, with his only opera *Le Carrosse du Saint-Sacrement* (1920, revised 1924), the element of parody and acerbic humour present in the earliest work is transformed into a more approachably melodic and tonal idiom, which avoids pastiche and still maintains a jagged edge. He had a fondness for any style so exhaustive that it contains its own parody (one definition of 'baroque') and Constant Lambert notes this when he refers to Berners' liking for the Spanish, or pseudo-Spanish in music.

Although Berners has been compared with Satie – Gray refers to him as the English Satie – Philip Lane was at pains to discount any connection between them in his broadcast talk on Berners in 1973. But the fact remains that several of those musicians who have a high regard for Berners, whether they are from the mainstream of contemporary music (like Constant Lambert or Peter Dickinson) or from its experimental fringes (like John White and myself) are equally devoted to the music of Satie. Each pursued what was essentially an isolated career, at odds with the work of his contemporaries, and each produced a body of work that ranges beyond the normal confines of a composer's.

Harding points out that when E.L.T. Mesens mentioned Berners to Satie, drawing Satie's attention particularly to his titles, Satie seemed to have heard of Berners, retorting angrily: 'He's a professional amateur. He hasn't understood.' Given the close similarity of their status, ignoring for a moment the great disparity in their respective wealth, Satie's hostility could well stem from a misplaced desire to protect his own preserve. With both men, there is a tendency to group works in clusters of three, for example; and Berners, like Satie, had doubts late in life about his compositional ability which led him, again like Satie, to study 16th-century counterpoint.

We learn in *A Distant Prospect,* the second volume of Berners' autobiography, that his interest in music 'had been aroused in the first instance by the sight of musical notation on paper', that is he was 'attracted to it *pictorially'* (my italics). Given such a propensity towards visual stimulus, it is not surprising that such a large proportion of his musical works have a direct visual, literary or parody motivation — arguably the *Fugue in C minor* (1924) is his only 'abstract' work — and several have graphic elements by the composer. His earliest published work, the *Lieder Album: 3 Songs in the German Manner* (1913) to words by Heine, for which he designed the cover, concentrates on the strong sense of sarcasm that is present in the original poems, deliberately choosing those poems that, being balanced between an apparent sentimentality and an implied irony, serve to demonstrate the nature of his own humour. He fastens delightedly on the fact that composers who had previously set the first poem to music had interpreted 'thou' as a beloved girl[4] — 'Thou art a tender flower...' — when he had discovered that, as he says in his preface to the song, 'according to one of Heine's biographers, this poem was inspired by a white pig.' The sense of foreboding that Heine expresses is caused by his awareness of the fate that will eventually befall the animal, and Berners continues: 'the present version is an attempt to restore to the words their rightful significance, while at the same time preserving the sentimental character of the German Lied.' The performance instruction 'schnauzend' for the dissonant staccato chords in the piano accompaniment makes it clear that the snorting of the pig is an integral part of the music.[5]

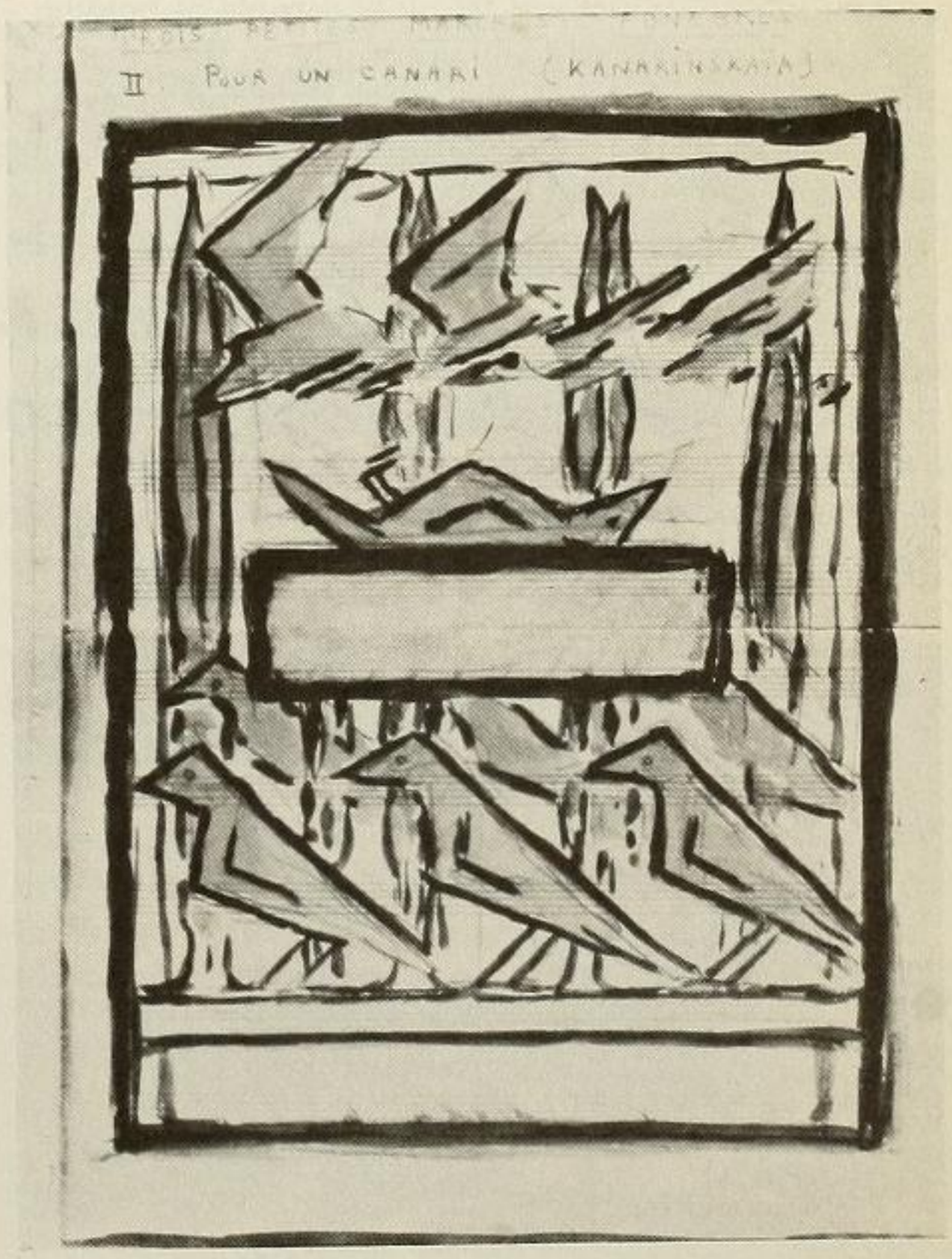
This tone of sarcasm alleviated by humour occurs constantly in the early pieces and, again, he was at pains in some to make it plain precisely what is the object or state of affairs being depicted. In the piano solo, *Le Poisson d'Or* (1914), for example, he prefaces the piece with a poem in French, in which he tells of a lonely, dejected goldfish swimming round and round in his bowl, dreaming of a companion: the arrival of a breadcrumb from above distracts him, and the dream disappears, leaving him to eat the bread and continue swimming, and the music follows this scenario aurally. The *Trois Petites Marches Funèbres* (1914) make their content clear both by the titles of the individual pieces (*For a Statesman, For a Canary,* and *For an aunt from whom a legacy is expected)* and through the nature of the music that is, respectively, pompous, genuinely sad, and ebullient.

Although Berners did not add any design to the published work, he did do some visual work related to these; but only a sketch remains of the funeral march *Pour un Canari,* a watercolour in yellow and black on music paper. Whether this was intended for possible publication is difficult to determine, though it seems that the other two may also have been sketched. Perhaps he realised that the point had been made sufficiently forcibly through the music to make any graphic addition superfluous. Apart from the much later cover for the unpublished song *Red Roses and Red Noses* (about 1940), Berners never again added any graphic work of his own to his scores. Nevertheless, the strong relationship between his music and other visual elements persisted: there is the unpublished 'Symphonic Sketch' *Portsmouth Point* (about 1920), which is 'after a drawing by Rowlandson', and in the later ballets and film scores he was working to an established text or to a possible or actual scenario.[6]

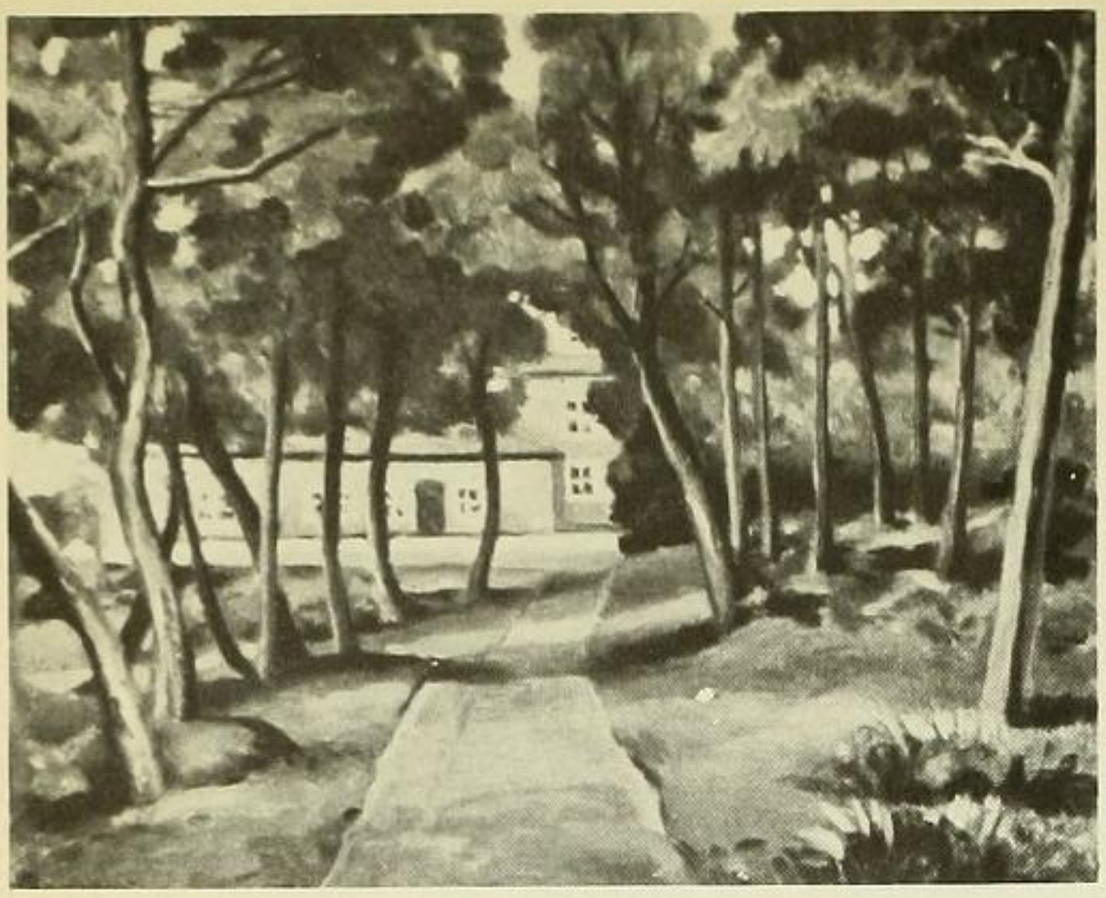
It was early works such as the *Trois Petites Marches Funèbres* that had been greatly admired by Stravinsky and Casella, both of whom had been astonished by the original conceptions and advanced style achieved by someone whose musical education had been rather desultory. But when Berners' works enter the public domain, in the theatre and ballet, they become at the same time more musically accessible. In this respect his opera, *Le Carrosse du Saint — Sacrement,* is a pivotal work between the aggression of his piano works and songs and the curiously spiced melodic qualities of the later works, and no doubt his choice of Merimée's librettos reflected this. Although more accessible, his music for *The Triumph of Neptune* or *A Wedding Bouquet* (1936) was certainly not written to cater for popular tastes and its apparent easiness is deceptive. Stravinsky maintained his friendship with Berners until the latter's death in 1950, and 'thought his *Wedding Bouquet* and *Neptune* as good as the French work of that kind produced by Diaghilev...'[7] The suite from *The Triumph of Neptune* is still played, *A Wedding Bouquet* is still produced occasionally, and Peter Dickinson has championed the songs and piano works. Only when Berners' original opera and ballet works like *Luna Park* (1930) are given a rehearing, however, will a balanced assessment of all his music be possible.

Berners took great care with the production of his collaborative works, and his designs for the backdrop, curtain and costumes of *A Wedding Bouquet,* in which he collaborated with Gertrude Stein, testify to this.[8] By this time, 1936, he was already well embarked on second and third careers as painter and author, and his backdrop, which is still used in productions at Covent Garden, is clearly related to the paintings that he did at that time.[9] However, this reference to his visual work needs some substantiation.

We have seen how his earliest memories of music had a



Sketch for *Trois Petites Marches Funèbres, c* 1914

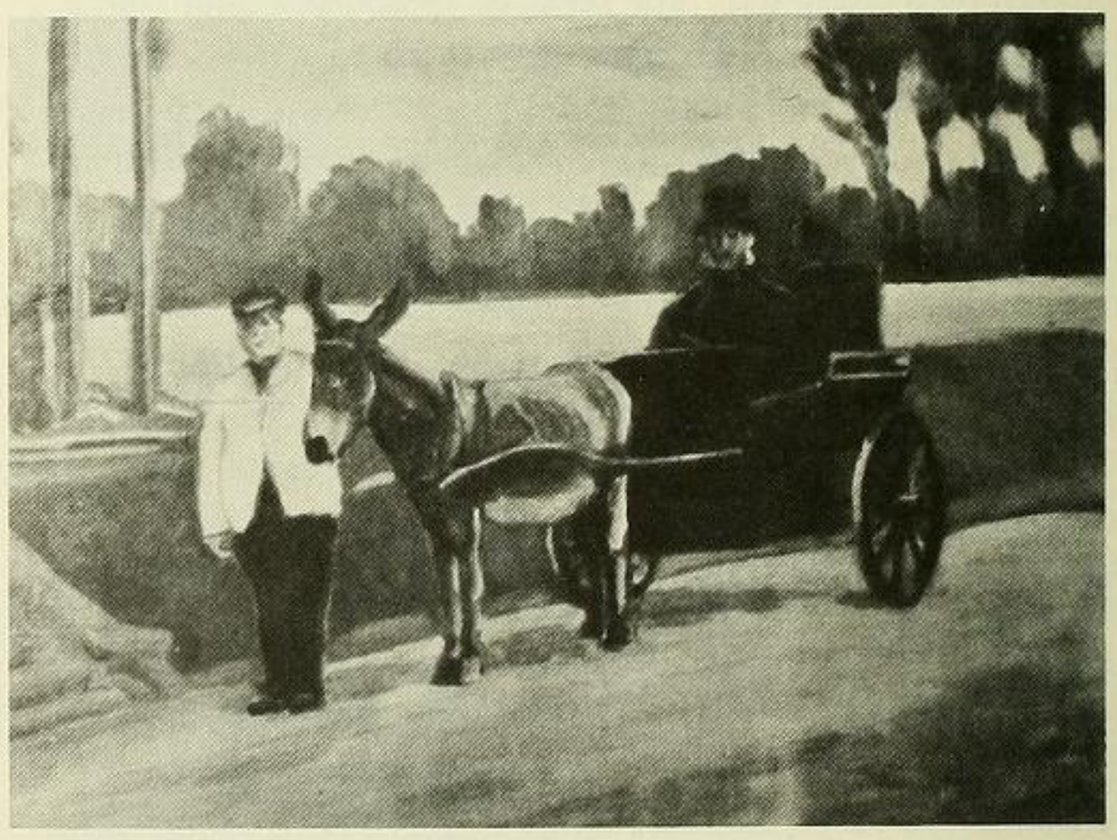


A Glade 1931

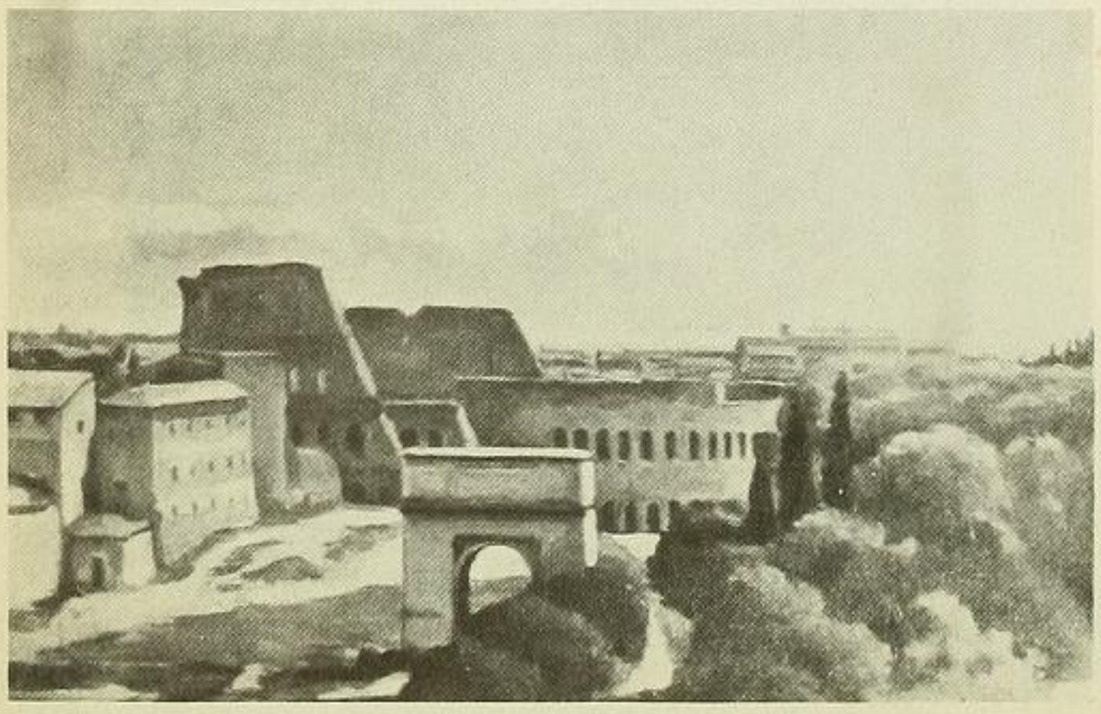
strongly pictorial origin and we know, from his autobiographies, that he painted from very early childhood. By the age of 11, drawing and painting were a fairly constant activity although, like his music, strongly discouraged by his mother, and his only instruction came through occasional criticism by other amateurs.[10] When he went to Eton he was not allowed to attend either the drawing classes or the music lessons, and it was only much later in life that he sought studies with an academician whose name, according to Lambert, he would never divulge. I have mentioned how he added visual elements to his early scores and it is interesting to note that about the time his music was in a transitional state, in the mid-1920s, he was painting actively, sometimes copying works by other artists but also painting original pictures too. During his lifetime, Berners exhibited about 100 oil paintings, all of which are now in private collections, and the work has never been catalogued. At both his major exhibitions most of the paintings were sold quickly, many to friends, but as a critic wrote at the time, 'while no doubt his personality was the cause that at one time or other during the exhibition nearly every celebrated person seemed to drop in to see his work, his pictures are quite capable of holding their own anonymously and selling entirely on their merits.'

His first one-man exhibition was at the Reid and Lefèvre Gallery, London, in 1931, and consisted largely of landscapes painted in England and Italy, along with a few still-lifes. It is difficult to say precisely what this show contained, since the gallery has lost all records of the sales, but four paintings were illustrated in magazines at the time and others named in reviews confirm the predominance of landscapes. The presence of Italian subjects is partly explained by his fondness for Corot and his debt to Corot's early Italian landscapes, something that Clive Bell noted. Berners owned a number of early Corots and when he exhibited his collection of French 19th-century paintings in June 1935, he indicated then that he found 'the directness and simplicity of Corot's early paintings of Italy...the perfect method of dealing with landscape.' And he admired landscapes by Matisse and Derain, which he also owned, for similar reasons.[11] 'Directness' and 'simplicity' are particularly appropriate when applied to Berners' own work, in which the landscapes are generally viewed from a distance using a limited range of colours, and all his work has an overall quietness that is, as another reviewer wrote, 'curiously poised and satisfying.' Herbert Furst observed that Berners 'has a similar, possibly even a stronger sense of design than his master, especially in the landscapes', and all critics were agreed about his technical accomplishment, pointing, for example, to his 'originality and force.' Certainly a characteristic of all his paintings, and for that matter his music and writing too, is a balance and an almost neutral approach to his subjects which, while not making them in any way lifeless or dull, produces a sense of equilibrium.

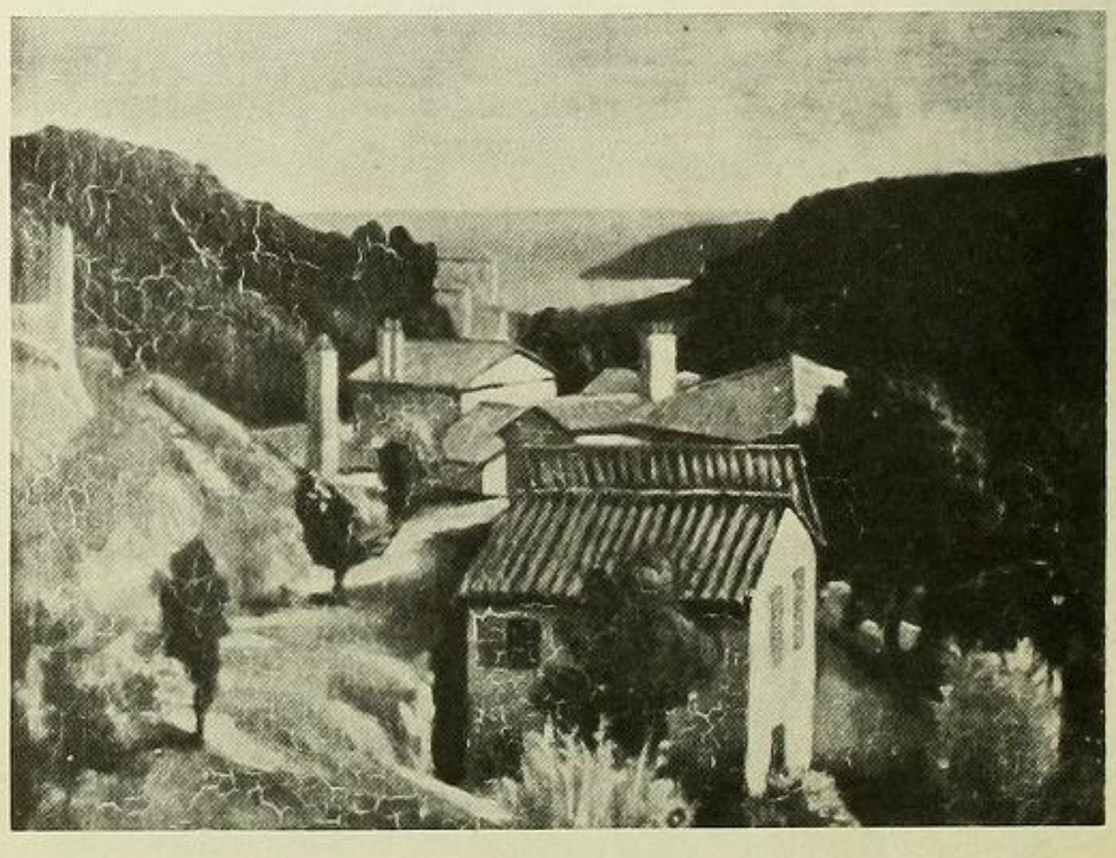
In May 1936 he had a second exhibition at the same gallery when he showed 44 new works, and the titles show that he was by no means confined entirely to Roman scenes. In addition, not all the pictures were painted directly for we can determine that *Wedding Group* was painted from a photograph, and *White Horse,* a painting of Penelope Betjeman riding, was taken from a frame of a film on 'film critics at home' when John Betjeman was film critic of the *Evening Standard.* Between 1931 and 1936 Berners had written the music for *A Wedding Bouquet,* designed the stage-settings and the curtain, painted 30 costume designs, published the first volume of his autobiography and his first novel *The Camel* (with 3 illustrations), and supervised the



The Donkey Cart 1933



Untitled (The Colosseum, Rome) 1931



House Near Mentone exhibited 1936

building of Faringdon Folly as well as producing enough work for his exhibition. Also in 1936 he was commissioned by J.L. Beddington of Shell for a painting for their advertising campaign. The painting they requested was of Faringdon Folly, a tower about 140 feet high that Berners had built in 1935 with a view to the south of the Uffington White Horse. The project, which was his idea, was designed by the then Duke of Wellington and is one of the last follies built in England, in the face of considerable local and national protest.

Courtesy Shell UK Ltd.

Faringdon Folly (Shell poster) 1936

In 1938 Berners was made president of the committee for organising the Salon d'Automne Exhibition of 'Peintres indépendants brittaniques' at the Palais de Chaillot, in which he showed at least three paintings, exhibiting with the London Group.[12] After 1938 he appears not to have exhibited again in his lifetime, although the painting of *Faringdon Folly* was shown alongside the poster during the late 1930s and has since disappeared. Despite the conservative nature of his own painting he was friendly with the avant-garde of the time — Salvador Dali was a visitor to Faringdon on several occasions and gave him a drawing [13] —. and a still-life in his first exhibition, termed a 'transcendental' picture by a critic and containing a red horse and a globe, shows some evidence of unorthodoxy.

Berners' humour does not emerge very often in the paintings, but is shown very strongly in his writings, and in them his ideas and attitudes to art and music can be found by negative example.[14] His portrayal of the composer Emanuel Smith, in his novel *Count Omega* (1941), is a hilarious parody both of a type of musician and a compositional aesthetic that Berners found totally abhorrent. Smith, an earnest and academic composer, is anxious to burst on the musical world with something new and sensational but, on the other hand, he has a contempt for the addition of anything extraneous to the music itself. Earlier attempts at revivifying the spirit of music had failed, like 'colour-symphonies, the introduction of strange noises into the orchestra, the flooding of the hall with vaporized benzedrine...'. Smith finds this distasteful and searches for something transcendental within the music itself. His symphony, *The Last Trump,* 'in one movement with logical persuasiveness and vigorous flow...led onwards to a gigantic climax...' which he eventually finds in a single long and loud trombone note played by an enormous woman called Gloria, whom he sees at a mysterious party given by the shadowy practical joker Count Omega. The Count puts on a concert to show off the work and, in the end, Smith's symphony ends in a riot, in the presence of the Queen Mother, and he is the victim of one of the Count's jokes.

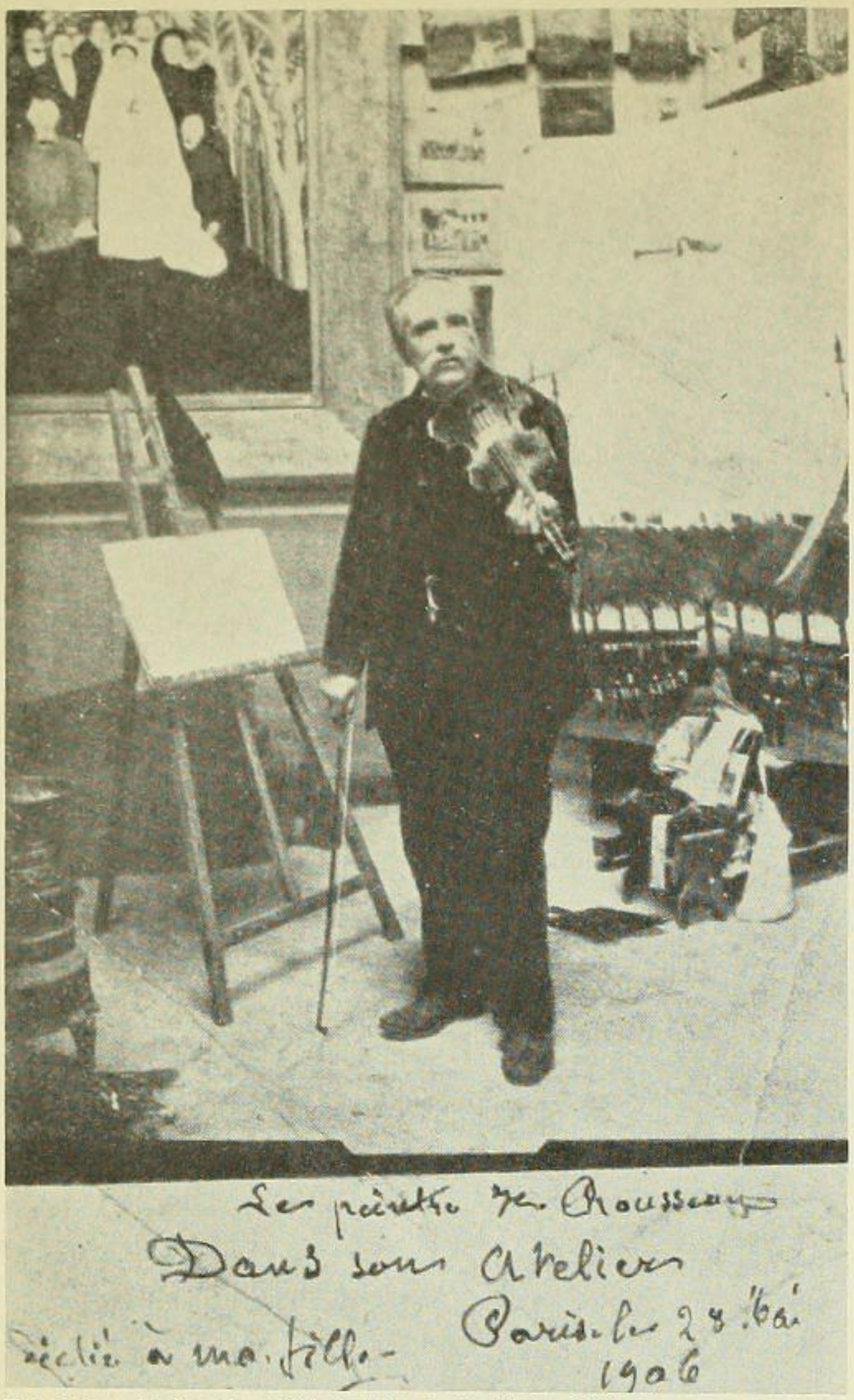
In *The Camel* (1936) attitudes to art and music are also mercilessly lampooned, especially in the character of Mr. Scrimgeour, the church organist, who writes poetry but is an indifferent performer on the organ. Interestingly too, like the performance of Smith's symphony in *Count Omega,* Scrimgeour's performance of a Bach fugue ends in disaster. The atmosphere of the story is close to the ironic prose of Prosper Merimée, whose work Berners had chosen for his only opera *Le Carrosse du Saint Sacrement.* A feature of many of Merimée's short stories is that it is through the very inflexibility of the characters that tragedy is produced, and Berners was clearly very much influenced by his prose style.[15]

As a child, Berners had experimented with the toy theatre[16] and this fact, allied to his interest in the work of Jules Verne, made the choice of *The Triumph of Neptune* such a fruitful subject for his first ballet, commissioned by Diaghilev in 1926. Since we know that, by July 1926, Berners had already completed a number of pieces of music intending them for a possible ballet before the subject was chosen, these connections have some significance in that the Vernian theme of travel in unexplored regions, here the imaginary geography of the fairy realm, is very much to the fore. Lambert maintained that it was only after the scene in the 'Frozen Wood' that Berners began to be taken more seriously[17] and it is worth pointing out that the short scene preceding this, which dovetails into it in the orchestral score, is a very odd piece of atmospheric percussion music. Scored for Flexatones, Timpani, Side Drum, Cymbals, Bass Drum, Wind Machine, Sea Noise and Thunder Machine, and consisting largely of extended rolls with a steady accompanying pulse, it is a passage of pure percussion that has no parallel in Berners' output and which, incidentally, predates the better-known examples by Varèse or Cage.

While it is neither possible nor desirable to attempt to discuss the whole of the work of someone as complex as Berners in a short space, it is clear that while he was a flamboyant and brilliant social humorist, the real value of his work was to a great extent hidden by the public nature of his life and art. Like one of his boyhood heroes at Eton, his life took on the flavour of a series of art works, but this was paralleled by a shyness which he masked with humour, as when Diaghilev tried to get him to take a bow after the first performance of *The Triumph of Neptune* and Lord Berners declined saying: 'No, my aunt has threatened to disinherit me if I ever go on stage.' As for his wealth, it should be borne in mind that he did not succeed to the title until after he had already published the *Trois Petites Marches Funèbres* and the *Fragments Psychologiques* for solo piano, and, like Raymond Roussel and Francis Picabia, he put his wealth to good use: a number of Berners' books would not have emerged so quickly without his ability to support the work financially. He was a serious and committed artist who, like Roussel, achieved a lucid and detached style whose apparently easy surface belies the enormous effort that it cost him to produce.

Henri Rousseau (1844-1910)

Although most of Rousseau's biographers indicate something of his life in music, the extent to which musical and, by extension, temporal and narrative factors informed his iconography seems to have been underestimated. Music played a considerable part in his life, often being his chief means of support, but his music and his literary work are more interesting in that they do give us some insights into his work as a whole. We know that, at school, he was not a particularly bright pupil but he did win some prizes — notably for drawing in 1860 and for vocal music in 1859 and 1860 — which led to him toying with the idea of becoming a musician. Although most of his biographers have him playing the clarinet (some the saxophone) in his regimental band, there seems to be little hard evidence for this and even less for the story, sustained by Apollinaire, of his having been in the Mexican campaign — Henry Certigny has pointed out that the regiment went to Mexico the year before Rousseau enlisted in 1864. One solid piece of evidence we do have as to Rousseau's musical abilities however, is the diploma he was awarded on 28 March 1886, when he was



Rousseau playing the violin in his studio, Paris 1906

made a 'membre d'Honneur' of the Academie Litteraire et Musicale de France. This was awarded after he had presented the Academy with a waltz he had composed, *Clémence,* and which he played (it is for solo violin) in the Salle Beethoven.

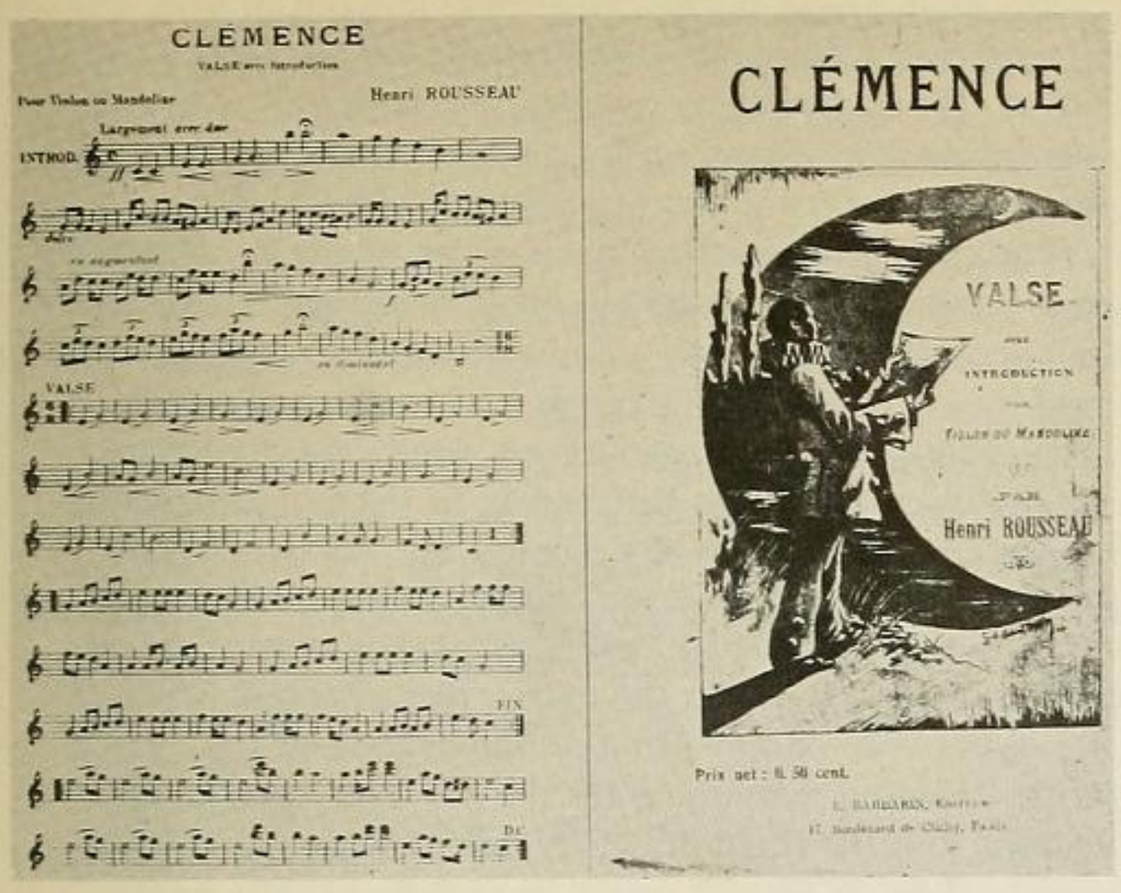
There can be little doubt, too, about the importance to Rousseau of the 1889 World Fair in Paris. It inspired him to write a beautifully comic play, *Une Visite à l'Exposition de 1889,* which Tzara maintains was written during the exhibition and which therefore shows the immediacy of his response to it. Dora Vallier sees a strong connection between the performance of Augusta Holmès' piece for choir and orchestra *Ode Triomphale,* which involved choruses with flags inscribed with symbolic figures, and the paintings *Centenary of Independence* and *The Carmagnole,* especially the flags and banners in the latter. In 1895 we hear of Rousseau singing an aria from *Mignon* after the dessert at the banquet for the Salon des Indépendants, and it is also by 1895 that he begins his association with Alfred Jarry. This relationship is far too rich a study in its own right to be treated here, but as far as music goes, at the time that Jarry and Remy de Gourmont commissioned *War* for their magazine *L'Ymagier,* they were including a body of musical works, such as motets, roundelays, folk songs. And we also hear of Rousseau playing his violin at the soirées organised by William Molnard and Gauguin during 1894-5.

In 1899-1900, the two years when he did not exhibit any work, he played the violin in the orchestra of the Tuilerie Gardens; and Remy de Gourmont, Jarry's co-editor, spoke of seeing him play the violin in the streets for money. Rousseau did, however, write another play in 1899, *La Vengeance d'une Orpheline Russe,* and attempted unsuccessfully to have it put on at the Théâtre du Chatelet. By 1901 he was teaching music and drawing for the privately-sponsored Philotechnic Association, an adult education project, and, after his second wife's death in 1903, he opened his own school, teaching, among other subjects, music and painting. When he did finally begin to sell work to dealers, he also began, by about 1907, to hold his own soirées modelled to some extent on those of Molnard and Gaugin some 12 years previously. Programmes for several of these exist and they appear to have continued until about mid-1909. His students performed a rigorously planned and thoroughly rehearsed programme, and he refers to making his orchestra 'work hard'. Among the popular classical works performed, such as the Bach-Gounod *Ave Maria* and Lehar's *The Merry Widow,* were scattered his own compositions. *Clémence* figures quite frequently on these evenings and others that occur are *Les Deux Frères* and *Clochettes,* as well as pieces that may or may not be by him. At the oft-quoted banquet that Picasso organised for him in November 1908, he took his violin with him and played *Clochettes* as well as *Clémence* (for dancing). Guilhermet recalls that at one of his soirées, attended by Apollinaire, Picabia, Utrillo and Marie Laurencin, Rousseau began by placing a scale on his violin and all the audience sang the chromatic scale after him, and that he then sang a song, *J'ai du bon tabac..,* which all the audience sang too. It is during the time he was painting Apollinaire's portrait, *The Poet and his Muse* (1909) that he refers to making his orchestra study hard; and Apollinaire, though in general an unreliable source for anything on Rousseau, tells how Rousseau sang 'the songs of his youth' while he was painting.[18] This appears to be the last reference to musical performance in his lifetime.

However, it is worth drawing attention to the way that musical and literary ideas filtered into his art. Tzara asserted, in his introduction to the published text of *Une Visite à l'Exposition de 1889,* that Rousseau was an example of what he called 'the complete artist', the modern equivalent of the 'omniscient man' so esteemed in the Renaissance. Rousseau is a good example for Tzara's view that, since art is a state of mind rather than a means of expression, the way used to express oneself is unimportant.[19] More important, perhaps, is the theatrical impossibility, or at least the extreme difficulty, of staging his plays — the shifts of scenery and scale are so drastic and rapid that they are, in concept, cinematic rather than theatrical. His use of space and his compressed and edited use of time almost presuppose the telephoto lens or the gun microphone, as in the first act of *La Vengeance d'une Orpheline Russe* which is set in a scene that 'represents the outskirts of St. Petersburg, several wooden chalets in a long lane opposite the river Neva. The home of Mme. Yadwigha is composed of 4 rooms and a garden...' Within two pages of the script Anna, the maid, searches a room, then the garden, knocks on the neighbour's door and so on! Roger Shattuck sees the same sort of phenomenon in a painting like *The Football Players* (1908) when he points out that the four figures in this picture are 'so much alike that we can easily see the same man in four successive positions...(which) suggest the possibility of an unrolling in time as well as in space. It is cinematographic time (a succession of "stills") not chronological time'.

In addition to temporal events of this kind, several paintings have temporal and anecdotal elements which are related to his shifting view of himself and of his social relations. The two most important self-portraits have this factor within them. *Myself: Portrait-Landscape* (1890) has been modified by Rousseau at least twice: once when he added the name of his second wife, Joséphine, to his palette alongside that of his first wife, Clémence, and again when he added the insignia of the Palmes Académiques to his lapel.[20] *Present and Past* (1907), on the other hand, has an accompanying text, which is another way of incorporating these kinds of ideas, being intended to be read alongside the picture, like the poems Berners included in his early music, and like the texts that Satie added to his later piano works. For *The*

Dream (1910) the text is a subtle and moving poem in which Rousseau is quite precise in identifying the instrument that the snake-charmer plays as a 'musette', a kind of bagpipe, and commentators like Apollinaire who refer to 'the flute' in this picture do him an injustice.

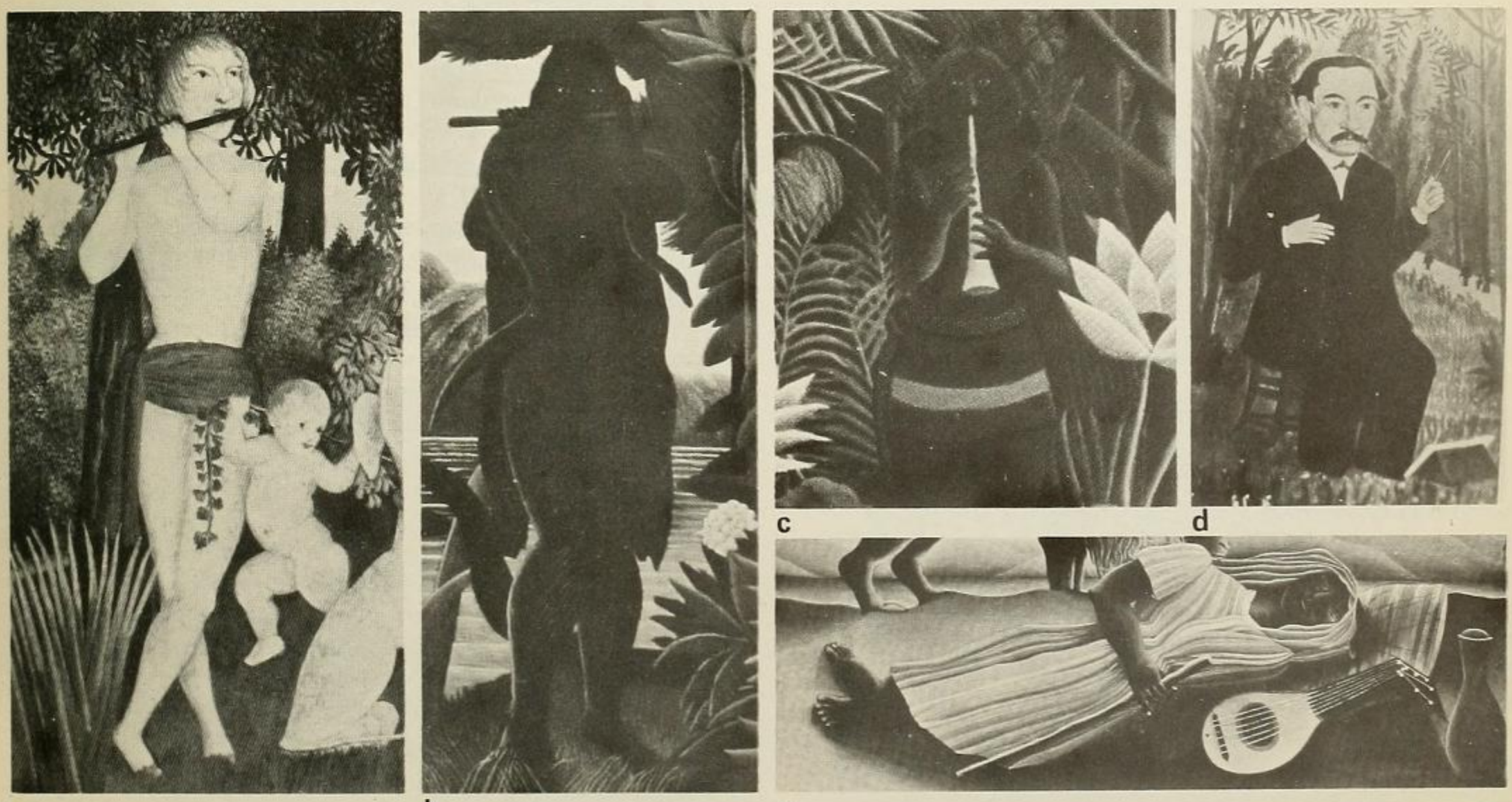


Henri Rousseau *Clémence* Paris 1904

There are direct musical references in a number of other paintings too, and in each the reference is an exact one. *The Sleeping Gypsy* (1897) has a 'mandoline' alongside the sleeping figure, identified as such by Rousseau in a letter to the Mayor of Laval when he offered to sell the painting to his native town in July 1898. In both *Happy Quartet* (1902) and *The Snake Charmer* (1907) the transverse flute is played, in the former by the figure representing Adam, and in the latter by the snake charmer himself, which may account for Apollinaire's confusion. There is also an early self-portrait, *Henri Rousseau, Orchestra Conductor (c.*1893) which identifies himself in a musical role, as well as a small painting of a precisely-noted corner of the park, *Luxembourg Gardens, Chopin Monument* (1909). Add to these the painting *The Carmagnole* (1893), which commemorates the revolutionary song and dance of the same title of 1793, and a sense of the accuracy of his musical references in the paintings becomes apparent.

Apart from these elements in the paintings and plays, Rousseau also wrote a number of pieces of music that appeared from time to time during his lifetime. Of these, *Clémence* was performed the most frequently, but there is also *Clochettes,* which he played at the Picasso banquet, and *Les Deux Frères* which is on the programme for his evening of 14 November 1908. In addition, there are also three works which appeared posthumously, having been registered for copyright in 1912 and 1913, two of which are for piano solo, *Romance pour piano* and *Valse d'Amour,* and a song, *La Légende du Rouge-Gorge* for voice and piano. This song, using a 'poésie de Rousseau' for the text , tells the folk-legend of the origins of the robin's red breast, in French 'redthroat'. There is a tendency for the music to illustrate the words, for example in the soft middle section where we find the bird alighting on Christ's head to an accompaniment of descending quavers in the piano part, and the whole feeling is of a superior kind of parlour-song, using conventions from the 19th-century song repertoire in a rather awkward way. It is certainly the work of someone who is aware of the devices he has at his disposal — the opening piano introduction resembles that of, say, a dramatic Schubert song — but other elements, such as the metrically dislocated ending, tend to make direct comparison unhelpful. If one were to ask a number of composers to set the poem to music, ignorant of Rousseau's setting, it is unlikely that many would have a loud and dramatic opening to the words. 'The Galilean dies and bows his head', or a loud and dramatic ending for the words 'its throat had been stained with the divine blood and our Lord willed that all the offspring be marked for ever with the blood of Golgotha.'

Since we have no evidence that Rousseau studied the piano, it is interesting that the two piano pieces, *Romance pour piano* and *Valse d'Amour,* are so well written for the instrument. While *Romance* has touches of a Mendelssohn *Song without words,* the *Valse* is a smooth, flowing song-like construction with an element of sentiment, a sort of piano equivalent to Satie's song *Tendrement* or *Je te veux*, which



3 MUSICAL REFERENCES IN ROUSSEAU'S PAINTINGS
a.) Detail from *Happy Quartet (Adam and Eve)* exhibited 1902
b.) Detail from *The Snake Charmer* 1907
c.) Detail from *The Dream* 1910.
d.) Henri Rousseau, *Orchestra Conductor, c.* 1893
e.) Detail from *The Sleeping Gypsy* 1897

it resembles in structure and effect. Compared with *La Légende du Rouge-Gorge,* these two works are much more well-organised and are handled very confidently. *Romance,* for example, demonstrates a knowledge of compositional craft and, though apparently symmetrical in structure, is manipulated in a subtle way which breaks this at key points in the piece. *Valse d'Amour,* an 'intermezzo', is much the longest of these pieces, due to the convention of repeating each section. But despite its length, each of the three sections is strongly characterised and the repetitions never pall.

Although the earlier *Clémence* is a waltz too, with a lengthy introduction, it is clearly a much earlier work than the others; it is less tightly organised than either of the piano pieces and feels as though the final version has been arrived at through repeated playing.[21] The introduction is both dramatic and rambling, as though Rousseau were warming up by playing up and down the violin until he is ready to play the tune itself, or until the audience is sufficiently attentive. If, as reported, *Clémence* was played for dancing at the Picasso banquet, it would be likely that the introduction, not being a waltz, would have been omitted or curtailed (or, I suppose, lengthened if they were extremely drunk or noisy). The waltz is charming, though not without its oddities: why was it given a time signature of $\frac{6}{8}$ when, of its 64 bars, only two actually use a rhythm appropriate to such a time signature? Was it because of ignorance of the difference between $\frac{6}{8}$ and $\frac{3}{4}$, well known to any musician versed in the rudiments of theory but not encountered by anyone who was working intuitively? These two bars, however, do give the waltz a curious impetus that breaks the invariable rhythm of the previous 25 bars. It could be that, at some stage, the waltz itself included words, for certainly the phrasing is vocal – at least, the fact that the word 'Clémence' fits the predominant motif might indicate this. However, to speculate further about, for example, the possible suppression of such a text following his second marriage would be excessive.[22]

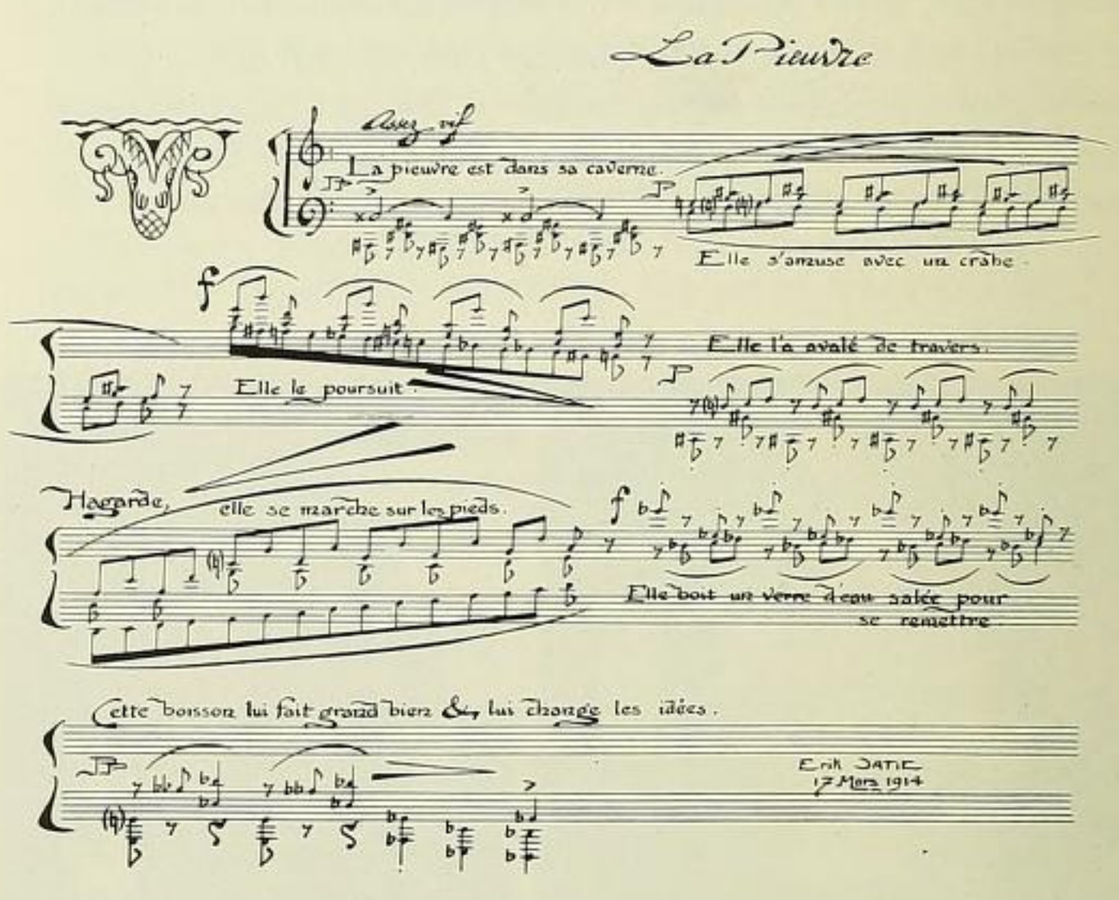
Of course Rousseau's music is not nearly as important as his painting. In fact it is quite minor, but it was good enough to publish, just as Berners' paintings were good enough to exhibit. Rousseau's music, and his plays, are interesting for the light they shed on the range of his work, and for giving a fuller picture of the man than can be gained from the painting alone. The very fact that he diversified his output to such an extent is worth noting and, taking his music and published writings in conjunction with the main body of his art, both views of Rousseau's oeuvre – that he is either a 'naive' or that he is very clever – are capable of being reinforced. However, there also emerges an intelligence that would be surprising only to a casual observer of his art.

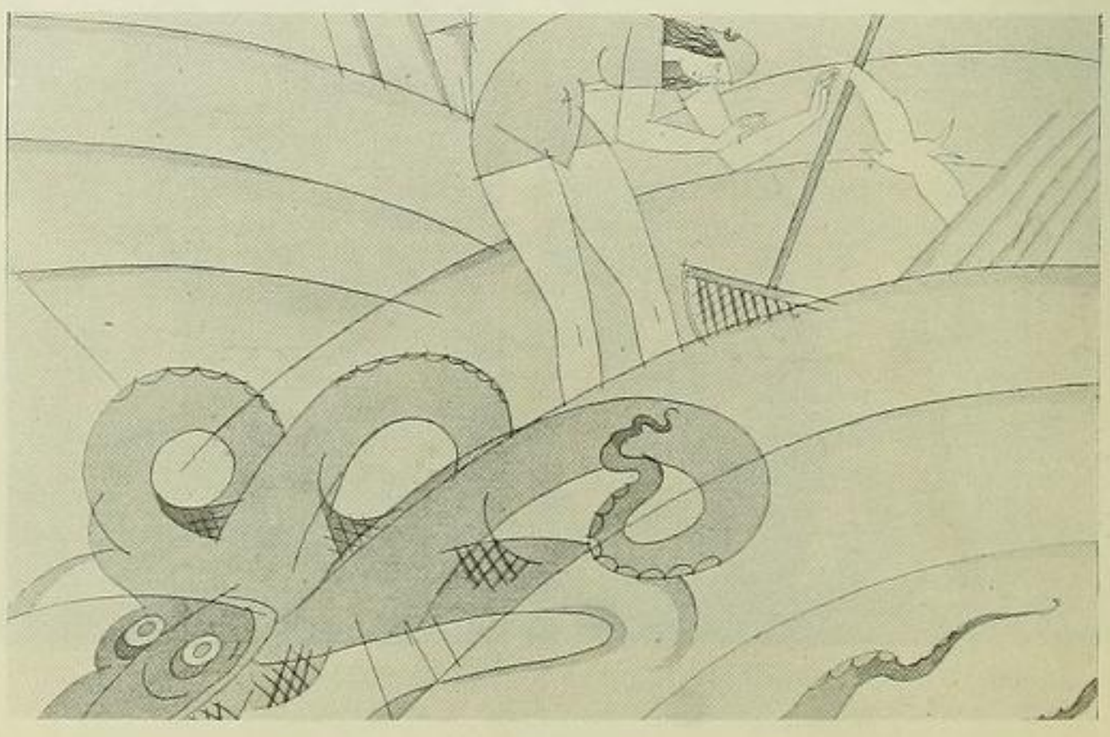
Erik Satie (1866–1925)

It is well-known that throughout his life Satie was closer, in general, to artists and writers than to other musicians. Many of his most important works involved collaboration of one kind or another, with Joséphin Péladan, Contamine de Latour, Jules Depaquit, Braque, Charles Martin, Diaghilev, Cocteau, Picasso, Picabia and Massine. Apart from these, many other works involved his own narrative or pictorial programme either as an integral part of the music's structure, as a commentary superimposed on the music, or even as a means of generating the music in the first place.[23] Contamine de Latour has pointed out how 'theory-bound' Satie was, feeling acutely, though privately, the inadequacy of his musical education. And it is true that the meticulous craftmanship his notebooks show, both in the resolution of particular technical problems as well as in the construction of pieces, demonstrates a greater degree of planning than the finished work would seem to indicate.

In *Sports et Divertissements,* the music, taken apart from the drawings which initiated it, is often considered to be his most concise and even perfect work. Yet this very perfection can easily distract from the great merits of the piece as a whole: it is the one work where the greatest collaborative unity of music, text and pictures has been achieved. While it is, of course, possible just to listen to *Sports et Divertissements,* or even to play the pieces with the short texts and Satie's reproduced calligraphy in front of you, the most rewarding experience is to have the whole work, including Charles Martin's drawings, and above all to avoid the heretical error of reading Satie's texts aloud during the music or between the individual pieces.[24] The Charles Martin illustrations were the raison d'être of the commission – to have music accompany an album of drawings illustrating various sports and pastimes – and a deluxe edition was printed by Lucien Vogel, Paris 1914. (The present edition, while reproducing Satie's manuscript, omits the drawings). These show sports such as golf, tennis or fishing; games like blindman's buff; pastimes like picnics, flirting, dancing the tango and so on. The music was written between 14 March, 'fishing', and 20 May 1914, 'golf', each piece incorporating a short text written within the music, like a narrative, which vacillates between commenting on the music and the activities depicted. Excluding for the moment Satie's own calligraphy and the small drawings that he added at the top of each page (each piece is never more than a single page), settling on any one element at the expense of the others produces only a partial experience, and the performer needs to adjust his perceptions to all the elements throughout the work. The hermetic nature of the piece may be best understood by realising that the ideal place for a listener is to look over the performer's shoulder during performance, hardly a concert-hall phenomenon.

Some of the texts describe actions which the music illustrates and can be viewed as ironic examples of the 19th-century passion for descriptive music, such as the Kotswara *Battle of Prague.* In *La Pieuvre* (Octopus or Squid), for example, the music consists of only seven short





Erik Satie *La Pieuvre* (score) and *La Pieuvre* (Charles Martin drawing) 1914

fragments, each eight beats long, having a short sentence written for each phrase in the music.[25] But within such an innocuous work there is a wealth of meticulous detail. The text, for example, employs a neat pun on 'travers' used initially in the sense of 'the wrong way' when said of swallowing, and in the last line in the sense of correction of 'ideas that are all wrong' ('idées toutes de travers'). The music, too, uses cross-reference of types of scale-pattern[26], interval movement;[27] combined musico-verbal puns,[28] and a symmetrical use of dynamics,[29] all of which contribute to a particularly tight and balanced structure. Yet *La Pieuvre,* which I chose quite arbitrarily, is by no means the most complex of the set, in fact each one reveals the same concern for precision, coupled with an apparently off-hand delivery. Add to this the curiously pastel and limp Charles Martin drawing, and the shift of focus from one element to another produces a dazed effect in which Satie invariably exceeds what is immediately given in the pictures. The drawing of *La Pieuvre* does not show a crab in spite of the references to one in his text, and this text takes on the tone of a private monologue rather than a commentary on a 'real' event.[30]

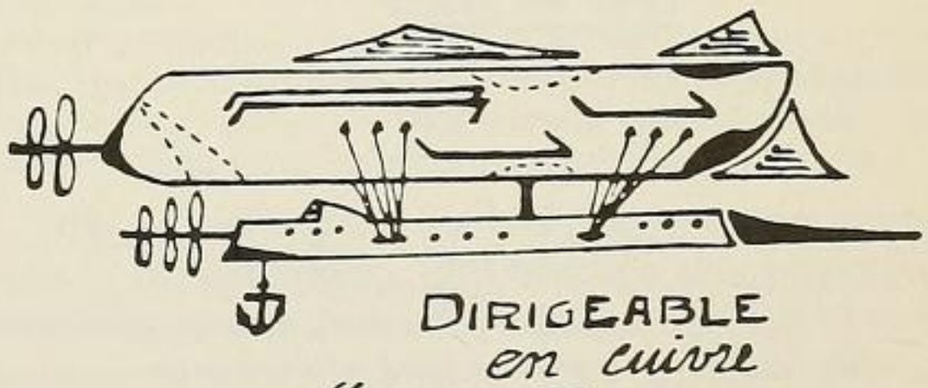
The 20 short pieces are preceded by a 'Chorale Inappetisant,' which is rigorous and gritty, contrasting alarmingly with the main body of the music. This Chorale is itself preceded by a short text in which Satie advises the reader — this very term gives a clue to how the piece should be handled — to 'turn the pages of this book with an amiable and smiling hand, for this is a work of fantasy and does not pretend to be anything else. For those who are wilting and dulled I have written a Chorale which is serious and respectable. This Chorale is a sort of bitter preamble, a kind of austere and unfrivolous introduction. I have put into it everything I know about Boredom. I dedicate this Chorale to those who do not like me — I withdraw. Erik Satie.'

While this gives us something of the flavour of Satie's acerbic humour, it also confirms something of how we are to view his work as a whole. In a self-portrait written for a publisher's catalogue shortly before *Sports et Divertissements* (June-August 1913), he wrote: 'M. Erik Satie was born at Honfleur (Calvados) on May 17th 1866. He is considered to be the strangest musician of our time. He classes himself among the "fantasists" who are, in his opinion, "highly respectable people"...' Satie's choice of the term 'fantastic' is crucial to a grasp of all his work. His musical output is extensive, especially if we take into account his notebooks, but this does not give a full picture of the range of his work. Anyone wanting such a picture has to turn to the writings — to a complete play like *Le Piège de Méduse* — to titles for imaginary musical works, to unrealised scenarios and, above all, to the body of work that consists of invented organisations, maps of imaginary lands;[31] drawings of fantastic means of transportation, bizarre advertisements and strange drawings of a curious architecture. These appear to have occupied him throughout his life and, although many have been lost, what remains constitutes a strange and fascinating aspect of his work. Although the drawings and card-texts are amenable to a fairly straightforward classification, such simplifications mask the extraordinary qualities of the imaginary world that Satie fabricated, where elements are intricately connected and cross-referenced by veiled allusion, and his invention can be seen operating outside his musical work. One salutary effect of recognising this complexity could be that it might lead to his music too, receiving an adequate account at last.[32]

Because the drawings were, until their publication later this year by Ornella Volta, to be found in several different locations;[33] it has been difficult to even see the greater part of this important work. However, there have been a sufficient number illustrated[34] for some sense to be made of them, and the difficulty in finding them has had the reciprocally salutary effect of shifting the onus for finding the work onto the potential spectator. In fact, for me, this inaccessibility seems to be the best situation, having a secrecy that is implicit in the work and which Satie may well have approved. And there is a sense in which the easy availability of such material can, by altering the context in which it is found, modify the significance of the work itself. It is apparent that in this, his most private and hermetic work, Satie constructed a complex and intricately bizarre cosmology that proposes, as Ornella Volta suggests, 'a universe on the other side of the mirror from that of his everyday life.' After his death in 1925, his friends Caby, Milhaud, Desormière and Wiener accompanied Conrad Satie into his room that no one had been in for 27 years. That Satie considered his 'universe' to be of importance can be judged by the fact that among the general incredible disorder and filth, they found these drawings carefully put away in cigar boxes, whereas works such as *Jack-in-the-box* and *Geneviève de Brabant,* which Satie had lost years before, were found stuffed behind the piano.

In two of the short texts;[35] Satie gives something of his own relations to this work: in one entitled *Enchantement,* he says: 'When I wish, I live in France "at the time of Charlemagne", thanks to a sorcerer friend (journey into the past)'; and in another note: 'A fairy trousseau; princely furniture; an inexhaustible cheque book; a *devoted* servant; the art of making myself invisible, such are the gifts bestowed on me by my friend the Magician to please me... No one knows.' This partly accounts for the recurrence of sorcerers, for the medieval period of many texts and also, by implication, it sets himself firmly within this imaginary world rather than in the position of a passive and objective observer from the present day.

Some sorcerers are identified by name — Dr. Paillon, W.B. Son, the magician Picot, the enchanter Casabus — as well as anonymous sorcerers and a magic second-hand dealer. They own, or build, castles, manor-houses, farms, monasteries, hamlets, churches, presbyteries, aircraft, mansions, houses, ruins and false castles; and one of them, W.B. Son, owns two 'transaériens' (futuristic aircraft), and lives in the country of Spitzberg. This appears to be a land in the extreme north having St. George as its capital and being part of the Borean States, or Boreal Republic, which has Frigorenhavn as its capital, and Buckingham and Frederic-Guillaume as principal towns. Satie also designed a medallion or coin of this Republic, dated 1883, as well as a small map



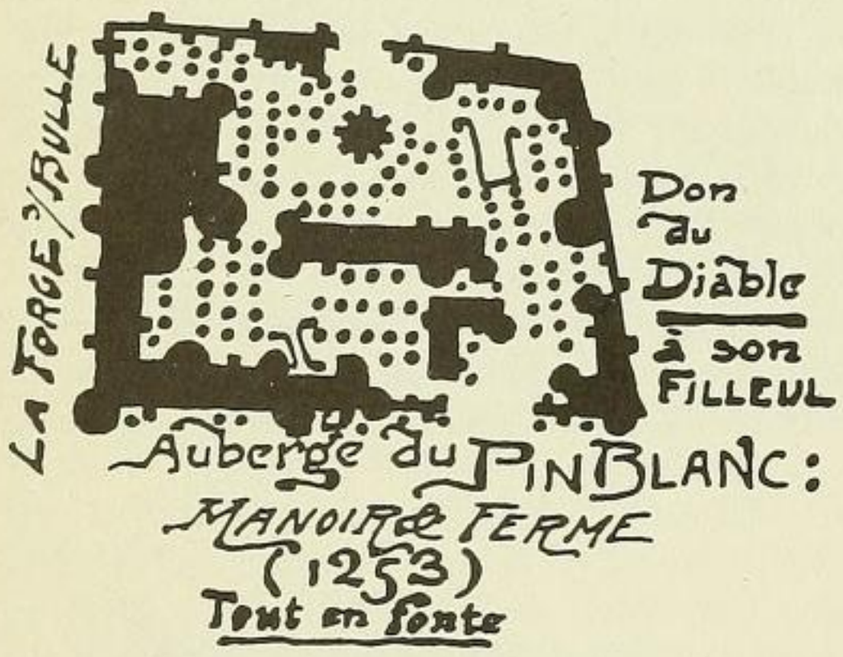
Erik Satie *Dirigeable "Le Rapide", c.* 1920
Courtesy Editions Champs Libres, Paris

describing the Republic of Spitzberg as 'States of the Devil.' The two 'transaériens' of W.B. Son are named *States of Spitzberg* and *Boreal Republic* and appear to look the same, since one drawing suffices for the two.

An almost identical 'transaérien' belongs to Dr. Paillon and is called *The Invisible,* and although no details of construction are given for these flying machines, another unnamed 'transaérien,' we are told, is made of steel. Steel, in Satie's world, is more usually used for the glider, and at least three steel gliders exist, two of which are named — the *St. Jean* and *Le Bourdon* (either 'bumble-bee', the organ stop 'bourdon', or even 'pilgrim's staff'). Dirigibles, on the other

hand, are always made of copper, three being named: *Le Brutus, Le Saumon* and *Le Rapide.* And though they are very similar, there are slight differences of design. However, there is also a building made of copper, an old gothic house being used by Coutelier, a clockmaker and optician. The text, which has no accompanying drawing, takes the form, as do many of the texts relating to buildings, of an estate agent's advertisement, worded like the hoardings still to be seen along country roads in Normandy. Ornella Volta has spoken of Satie's high regard for 'commercial literature' which is, for him, the only kind with a precise sense – 'You have something to say and you express it.' This is exactly what happens here. On the other hand, with this particular advertisement there is an oddity. In every case that I have looked at, if Satie has difficulty in fitting words into a space, they are written in another direction (alongside and vertically for example). Yet here we have quite a short and manageable text which is the only example I have seen where he breaks the word, writing 'opti-cien' on separate lines. It is so unnecessary that it seems to deliberately draw attention to itself, especially given his care in every other case, and it may or may not be of consequence.[36] The other oddity about this advertisement is that the house in question is made of copper, the more usual material for a building, where the material is named, being cast iron. The distinction may be merely that no sorcerer is mentioned in connection with this building, whereas the cast iron ones generally have a sorcerer somewhere in the background, as in this extract: '...belonging to a sorcerer...Belle-Eau sur Bois...forest, castle and farm (15th century) in cast iron...'

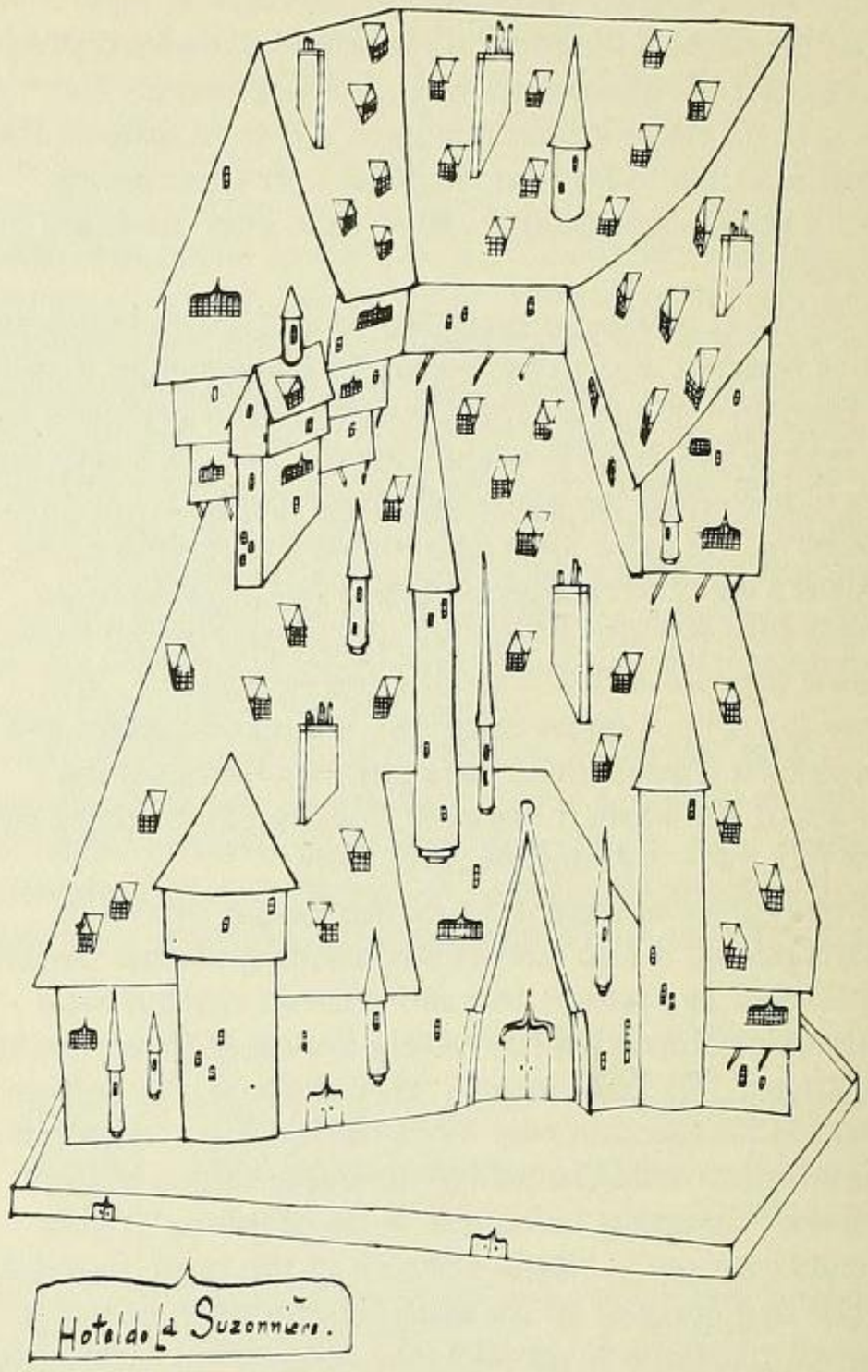
Other cast iron buildings with precise geographic locations belong not to a sorcerer but to the devil, for example the *Inn of the White Pine* at La Forge sur Bulle which appears



Erik Satie *Auberge du Pin Blanc*
Courtesy Editions Champs Libres, Paris

twice in different formats, and is a 'farm-priory', a gift from the devil to his godchild (*sic*), closely related to another called *Inn of the Red Jug.* Both the devil and an anonymous sorcerer also own large tracts of land, the sorcerer owning the Valley of the Ouchessin and all it contains, the devil owning the Valley of the Toupet, described as 'country of the "gigantic".' The ominous tone continues with the other characters named in this world. Professor Quint makes war-machines that feature invisible absorbers and transformers; Dr. Lapin also makes war-machines of a more vicious type; and Picot the magician is far more subtle and makes 'lead soldiers that know how to make themselves invisible, how to climb along walls, how to walk on water, how to leap over houses (Ltd.)' Dr. X has armies 'of Land and Sea' instigating 'terror through drollery', and Doctor Mulot has the mechanical armies of Carabus the enchanter which are in 'the service of Prince Joseph-Napoléon Bonaparte, descendent of the false king of Rome.'

These details are all written on business calling-cards, without any linking narrative, and this use of isolated facts as a means of giving a picture of a whole state of affairs can be usefully linked to Satie's musical work where ideas are seldom, if ever, developed and are only stated in their logically-primitive form. Even the tight construction of *Sports et Divertissements* mentioned earlier is not the same kind of construction as would be found in, say, the relationship between a motif in the development section of a sonata and its first appearance as a subject. Rather is it the successive statement of a number of elements of the same type. This is also what we find in these small discrete texts and designs which are drawn in a confident linear style without any hesitancy or improvisation, being clearly conceived and clearly executed.[37] Some of the loveliest drawings, though without texts, are the series of very similar turretted buildings with curious perspective which gives them a feeling of the medieval. The presence of a



Erik Satie *Hotel de la Suzonnière, c.* 1895
Courtesy Editions Champs Libres, Paris

number of pictures showing towers at this time, probably much earlier than the card drawings, could be constructed as a metaphor for his own withdrawal and consolidation of his own ivory tower. For, as he wrote at the end of his life recalling this period, '...after that, life became so unendurable that I decided to withdraw to my estates, and to spend my life in a tower of ivory – or of any material (of a metallic nature)...I was pitiful to behold – even through spectacles of controlled gold...Yes.'

Until after this article was begun, it had seemed unlikely that these drawings and texts would be collectively published, and it was only possible to reconstruct piecemeal the interrelationships of elements, bearing in mind the scattered locations of the work. However, the more cards one sees, the more apparent it becomes that they constitute a serious and considered body of work, perfectly coherent, and not at all the idle doodlings of a lonely or a rambling mind.[38] Although the fantastic seems to prevail here there is, to some extent, partial reference to the real world. While the 'dirigibles in copper' and the 'gliders in steel' may seem fanciful for the time of writing there had been, in the 13th century (a century that occurs more frequently that any other in his texts), a number of speculations, by Roger Bacon especially, on the possibility of flight with the assistance of a thin-

walled *metal* container filled with either rarefied air or 'liquid fire'. And later, in the 17th century, an Italian priest, Francesco Lana di Terzi, did a series of drawings in which a small boat was supported in the air by a number of thin-walled *copper* spheres. The addition, too, of the various systems of propellers and fins to the dirigibles reflects the kinds of problems debated in Jules Verne's *The Clipper of the Clouds,* the aerostat versus aeronef controversy, where the problem was how to control a dirigible so that it was not at the mercy of winds and air-currents. Given these kinds of connections Satie's drawings take on a rather more reflective quality and have sufficient links with the real world to enable the interested reader to enter his construction of an imaginary history, geography, engineering, and architecture.

Acknowledgements
For the section on Lord Berners I must thank, in particular, Robert Heber-Percy, Hugh Cruddas, and Berners' publishers, J & W Chester Ltd. (Sheila MacCrindle and Peter Todd); for the section on Henri Rousseau, M. Charles Schaettel (Musée de Laval), M. Henry Certigny and M. François Lesure (Bibliothèque Nationale); for the section on Erik Satie, Nigel Wilkins, Mme. Ornella Volta, M. Joseph Lafosse-Satie, and Mr. Fred Booth.

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1 There is no account of Lord Berners' work in print, although a study by Philip Lane is in preparation, and so I felt it necessary to give a little more biographical detail than I would have done otherwise. A recent letter from an American musician friend had the words 'Lord who?' in response to my interest in Berners' work, and the number of indices that jump from Berlioz to Bernini made it feel at times as though I were looking for the ***Anglo-American Cyclopedia*** article on Uqbar. Rousseau's music is mentioned in passing in biographies, but is either not known or not taken seriously. With Satie's drawings and small texts I began my research before the March-May 1976 exhibition at the Stedelijk Museum, Amsterdam, of Satie's graphic work, which included scores and postcards in addition to the small drawings, and I only discovered very recently that Ornella Volta's impending edition of the complete writings (Edition Champs Libre, Paris, to appear January 1977) would also include all the known drawings. It is gratifying to realise that, unaware of it as I was, my own view that the drawings and texts needed reassessment was, in retrospect, part of the same feeling amongst a small group of Satie-ists elsewhere.
2 The support that Jarry's lecture 'Le Temps dans L'Art,' given at the Salon des Indépendants in 1901, gave to Rousseau, for example, must have been considerable, coming as it did at a time when he exhibited for the first time after a gap of three years. In the lecture, Jarry discusses temporal effect in the visual arts — a statue 'seizes and fixes' a moment of time, so that Lot's wife became a statue of salt in response to God's 'Don't move anymore!' — as well as justifying the presence of anachronism in painting — soldiers with guns in Breughel's ***Massacre of the Innocents,*** old wood engravings showing the siege of Troy with cannons.
3. All Lord Berners' musical work is published by J & W Chester Ltd. and collected editions of the songs and of the piano works are due early in 1977.
4 For example, Schumann Op. 25 no. 24. He even refers, in a letter to Clara, his wife, that the song is his 'near worship' of her.
5 The other two songs in the set also concentrate on the presence of animals in human sentiment: King Wiswamitra's desire to possess Vasichta's cow, and the Three Wise Men arriving in Bethlehem to find Christ asleep in a feeding trough, with cows and sheep standing by. A later story, ***Mr. Pidgeon*** (1941), deals with the same phenomenon, though here with the more conventional small dog.
6 There are designs on other scores: ***Le Poisson d'Or*** has a cover, frontispiece and engraving by Natalia Gontcharova, and ***Luna Park*** (1930) has a cover design by Christopher Wood taken from one of his designs for the ballet.
7 Stravinsky had met Berners, then Gerald Tyrwhitt, when he was diplomatic attaché at the British Embassy in Rome and examples of his diplomacy show both his humour, his good intentions and an occasional disinterest in the tedium of bureaucracy. When Ronald Firbank died in Rome. Berners, never imagining Firbank to be a Catholic, had him buried in the Protestant Cemetery, thinking that he would 'prefer to lie in the shade of the Pyramid of Cestius, in the company of Keats and Shelley...' and balked at the thought of trying, afterwards, to rectify such an error in Italy. He had helped Stravinsky when he was suspected of smuggling a plan of fortifications out of Italy in 1917, in fact his portrait by Picasso.
8 Gertrude Stein said of this: 'I did like the ballet it was a play and well constructed and the drop curtain had a bouquet that was the most lovely bouquet I have ever seen painted (by Berners)...it all went so very well, each time a musician does something with the words it makes it do what they never did, this time it made them do as if the last word had heard the next word and the next word had heard not the last word but the next word...' Carl van Vechten says that Gertrude Stain completed an opera, ***Dr. Faustus Lights the Lights,*** by 20 June 1938, and that she had hoped to have music composed for this by Lord Berners. But these plans did not materialise: Berners apparently wrote to say that he was unable to compose anything at the time. However, as late as 19 November 1938 Lord Berners was discussing the opera as an impending reality, in an interview in the ***Evening Standard,*** giving details of the possible staging and indicating that the music would be that of a 'conventional grand opera in 3 acts...nothing like Gounod of course...'
9 22 of his watercolours for costume designs have recently emerged and were included in a documentary exhibition on Constant Lambert, South London Art Gallery, September 1976, and I am grateful to Kenneth Sharp for showing them to me in advance. In addition, I came across a further eight at the bottom of a file of costume designs at Covent Garden when Mr. Morgan Rendell was showing me the designs used since the remake in 1964.
10 This was of the type 'a little more blue. I always think a picture is nicer if there's just a touch of blue somewhere...'
11 The technical and geographic preferences that influenced his initial choice of the Roman Campagna as a subject was allied to the fact that, in literature this equates with 'the Italy of Goethe, Beckford and Byron, the Italy of the Grand Tour.' This phrase occurs twice, in exactly the same form in quite different locations in Berners' writings.
12 The other members of the committee were Kenneth Clark, Pierre Jeannerat and Beddington.
13 Berners wrote a short poem related to this drawing which has recently been set to music by Peter Dickinson as part of his collaged piece, ***Surrealist Landscape*** (1974).
14 Berners appears, fictionalised, in Nancy Mitford's ***The Pursuit of Love,*** as Lord Merlin, an apt pseudonym, and also in his own ***Far from the Madding War*** (1941), a more sombre self-portrait as Lord FitzCricket. He is present, by implication, as narrator in ***Percy Wallingford*** (1941).
15 For example, ***The Etruscan Vase*** where, at the time when the hero has finally dispelled his doubts about his fiancée's faithfulness, he is killed in a duel in defence of the same lady against the very accusation that caused his doubts in the first place, and which his code of honour obliges him to complete even though the lady herself has convinced him of the trivial error. In Berners' humour, though, no such comparison is possible, except perhaps with the dry humour apparently characteristic of his father. Occasionally Berners manages a kind of meta-humour as when the Vicar, in ***The Camel,*** is attempting to be funny: 'He had thought of a very good riddle for the Parish Magazine, it had come to him that morning after breakfast, in the closet. Q. Why is Sunday unlike any other day? A. Because it's the Lord's Day. He was delighted with it...it was not as easy as one might imagine to think of something bright and original for the Parish Magazine.'
16 In ***A Distant Prospect*** he tells of producing Wagner's ***Das Rheingold*** in this form, though he tends to recall the occasions when accidents happen.
17 Lambert added that it was not until ***A Wedding Bouquet*** ten years later that people realised that 'though his tongue was often in his cheek, his heart was just as frequently on his sleeve' — an anatomical metaphor that would undoubtedly have appealed to Berners.
18 Apart from naming the four songs in question, Apollinaire also indicates that beneath ***La Carmagnole*** (1893) Rousseau had written part of the French folk-song 'Auprès de ma blonde...'
19 For Leonardo, according to Richter, harmony and rhythm 'respond to feeling for beauty...and reveal themselves in different attire according to the condition of each art.' Characteristically, Lord Berners maintained much the same thing when he pointed out that an artist was as unlikely to put too much sugar in a soufflé as to put too much sentiment in an aria.
20 He added this although it had been awarded in error. Whether he had discovered the error before including it is not easy to determine, but he did not paint it out. This brings to mind MacGonagall's persistence in using 'Sir' before his name although he seems, eventually, to have realised that the award of 'Knight of the White Elephant, Burma' was a practical joke.
21 The slightly incongruous beginning has, in the copy in the Musée Henri Rousseau, Laval, a pencil note written below the first three bars to the effect that perhaps it is better an octave higher, a modification that irons out the erratic leap in the fourth bar.
22 Of all these published works, the one we can be most certain of is ***Clémence,*** having been published in his lifetime and preserved, along with other effects, by Robert Delaunay. The other three pieces were disputed by Henry Certigny when I showed them to him, but they are supported by François Lesure, Head of the Music Department of the Bibliothèque Nationale, Paris. For M. Lesure the only possible doubts concerning these three works stem from the

available biographical data concerning Rousseau, which are the doubts that M. Certigny expresses. On the other hand they were deposited there for copyright, but not until after his death in 1910. M. Certigny feels that no one was interested in publishing the music in 1912 and 1913, although it must be remembered that it was precisely then that a number of Rousseau's friends were occupied with perpetuating his memory by his grave, the memorial medallion, and the poem by Apollinaire chiselled into the stone by Brancusi (the grave and the memorial is now in Laval). Equally, as M. Certigny points out, ***Valse d'Amour*** is dedicated to an Englishwoman, Miss Kett O. (or Irish) and there was no one of that name among his relations. But he does concede that she could have frequented his salon, there could have been a romance, or she could have been a pupil. Equally, although Rousseau knew no one called the Comtesse d'Albiez, the person in question was alive in 1906, called Dalbiez (I am indebted to M. Certigny for this information), and it is quite in order to dedicate a work to someone who is known either by reputation or at a distance. (She is the dedicatee of ***Romance pour piano).*** Although there was no P. Rousseau, the author of the text for ***La Légende du Rouge-Gorge,*** among his relations either, he did refer to himself in a letter of 1907, as coming to be called 'père Rousseau' on account of the help he gave to neighbours. However, it would be unusual to abbreviate this to P., as in F. Christmas! I concede to M. Certigny that the poem itself is somewhat literary and that Rousseau, having become a freemason, would be unlikely to deal with such a 'piece of religiosity', but we must bear in mind the complexity of his character and the danger of a fixed point of view. On musical grounds, on the other hand, this piece is the least likely of the disputed pieces to be by the same hand as the others, though the presence of certain incongruities make any positive judgement, for the time being, premature. It should be pointed out, too, that the cover to ***Valse d'Amour*** indicates that it is a posthumous work.

23 Ornella Volta points out that it was when he could count on a performer of Ricardo Vines' quality to play his works that Satie began to adopt systematically the use of notes ***for the performer's eyes only*** (my italics)

24 Satie expressly forebade such reading, in the score of ***Heures séculaires et instantanées*** (June-July 1914), the work ***immediately*** after ***Sports et Divertissements:*** 'I prohibit any person to read the texts aloud during the period of musical performance. Every infraction will arouse my just indignation against the culprit. He will be granted no mercy.' (trans. Shattuck). When we attended a performance of Satie's piano music in Como, September 1975, my companion, Christopher Hobbs, was unable to stay in the room when a lady read, amplified and in Italian translation, the texts of ***Sports et Divertissements*** in between Claude Copens' performance of the music. Even as I write, a notice has arrived in the post about a performance of Satie at the Acme Gallery 'for piano and narrator' of these works. Satie's term the 'period' of performance makes such a thing unpardonable. Given the general pianistic sensitivity to performance of the notated sounds, it is striking that so many indulge in behaviour which, rightly, would have, and probably has incurred their excommunication by Satie.

25 The text is: 'The octopus is in her cave/She is playing with a crab/She chases it/She's swallowed it the wrong way/Haggard she treads on her own toes/She drinks a glass of salt water to recover/ This drink does her a lot of good and changes her ideas.'

26 The whole-tone scale for phrases 2,4 and 7; the chromatic scale for 3; the diatonic scale for 5.

27 The melodic phrase above the scales in phrase 3 has descending 4ths in the right hand, while phrase 5, its mirror, uses ascending 5ths, *ie* inverted 4ths.

28 Phrases 4 and 6, while being rhythmically identical, are inverted (alternating low and high notes in 4, high and low in 6). Given the fact that both texts deal with swallowing, the first with 'going down the wrong way', the second with swallowing a medical corrective (salt-water) with the inevitable anti-peristalsis, the reversed down and up movement can hardly have been fortuitous!

29 The dynamics for the seven phrases are soft, soft, loud, soft, soft, loud, soft.

30 Some pieces, like ***La Balançoire*** ('The Swing') are extraordinarily economical. In this, like the later ***Water-Chute*** where the downward rush of notation is the graphic equivalent of the carriage sliding down to the water-splash, there is the pictorial device of the tune in the right hand depicting the swing's movement by alternating rising and falling both aurally and visually.

31 Chesneaux points out that Jules Verne drew maps of his imaginary lands as an extension of his cartographic interest, that an entity achieves credibility by being mapped. In this connection it is worth recalling Brahms' distress at finding Schumann, shortly before the latter's death, working out obsessive voyages across Europe which connected towns of particular spellings: beginning A, Aa, Ab... etc.

32 Roger Shattuck probably gives the best account of the music, although he is not a musician, and, although the recent German account by Wehmeyer is thorough, the book by James Harding ***(Erik Satie,*** London 1976) manages to avoid discussing the music altogether.

33 In the Bibliothèque Nationale, Paris; in the Houghton Library, Harvard University; in the Bibliothèque littéraire Jacques Doucet, Paris; and in the private collections of Robert Caby, Henri Sauguet, Pierre-Daniel Templier and Le Comte Henri de Beaumont.

34 In Pierre-Daniel Templier, ***Erik Satie,*** Paris 1936; G. Charbonnier (ed.) ***Humour Poétique (La Nef*** vol. 71-2), Paris 1951; Trevor Winkfield (trans.) ***Dried Embryos,*** London 1972; Anne Rey, ***Erik Satie,*** Paris, 1974; ***Satie op papier,*** Amsterdam, 1976.

35 Given the present position, with the impending publication of Satie's complete writings and of these drawings too, this account must take on the appearance of the equivalent of Borges' ***An Examination of the Work of Herbert Quain*** (1941). a 'fiction' in which Borges describes the work of an imaginary writer by giving a critical review of his work.

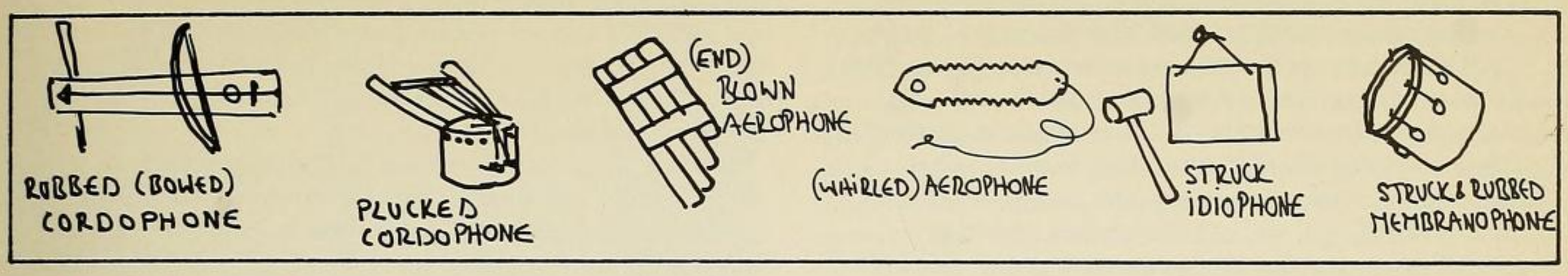
36 There is a standing joke in Belgium, told to me some time ago by Hervé Thys, about the pronunciation there of certain French words, especially 'Opticiens', 'Titian.' 'Aimez-vous les Titians?' would elicit the response, 'Oui, et les p'tits chats aussi.' Similarly, Opticien becomes 'au p'tit chien.'

37 Lambert used to emphasise the difference between Satie's ***Gymnopédie no. 3*** for solo piano, and Debussy's orchestration of it, saying that Debussy had, for him, converted Satie's 'drypoint' into a 'watercolour', covering it with 'an impressionist haze.' What Lambert saw in the music as a reaction against colour and atmosphere through an emphasis on the linear, applies with equal force here to the machine-like precision of the drawings, allied to an obsession with the medieval that influenced not only the Rose + Croix music, but as Guichard has shown much later work too.

38 Ornella Volta is quite correct in noting that , at the end of his life, Satie used his awareness of the value of publicity only as a means of speaking to himself, an awareness that he had used to great effect earlier in the various letters of excommunication and vilification sent from the Eglise Métropolitaine d'Art de Jesus Conducteur.

RADICAL STRUCTURE:1

Paul Burwell



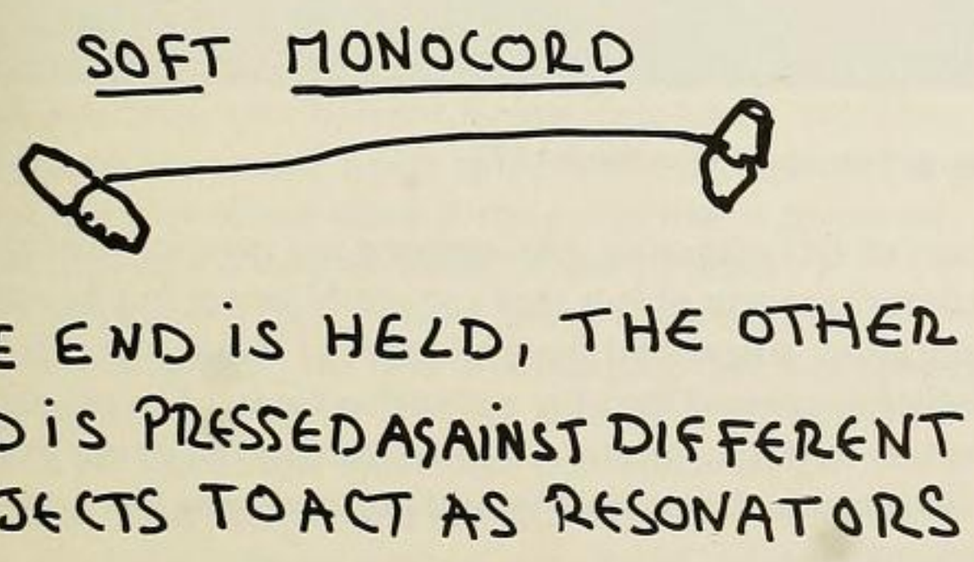
Paul Burwell *Six Instruments*

Topography

At present there is a large amount of music and sound work based wholly or in part on improvisation. As with all art forms, the principles that inform it are constantly being analysed or reassessed, making the task of describing them and outlining the salient points of the work difficult or inexact.

However, I would like to go through the component parts of the idea of improvisation as I see it in the present-day context. Improvisation now means creating new structures and musical 'laws' or conventions, as well as improvising variations on content following current rules and methods. The improvised music I am interested in has as its foundation an examination of sound, and develops from this vocabulary and syntax. To quote from myself: 'A knowledge of the means and methods of sound production, a feeling for the "softness" of instruments...they are not rigid, intractable objects but indistinct and malleable. They move and modify air. The performer mediates between object (instrument) and natural phenomena (air) by supplying motion of some kind (striking, rubbing, plucking and bowing). The objects fall into only four basic categories: cordophone, membranophone, idiophone and aerophone.'

'A mechanism has to exist that will cause particles of air to vibrate. A resonator may also be needed. The materials can be viewed sympathetically, their tendencies to vibration and resonance sensed. The objects can be the mediator between player (man) and the space/air outside him (natural phenomena).'

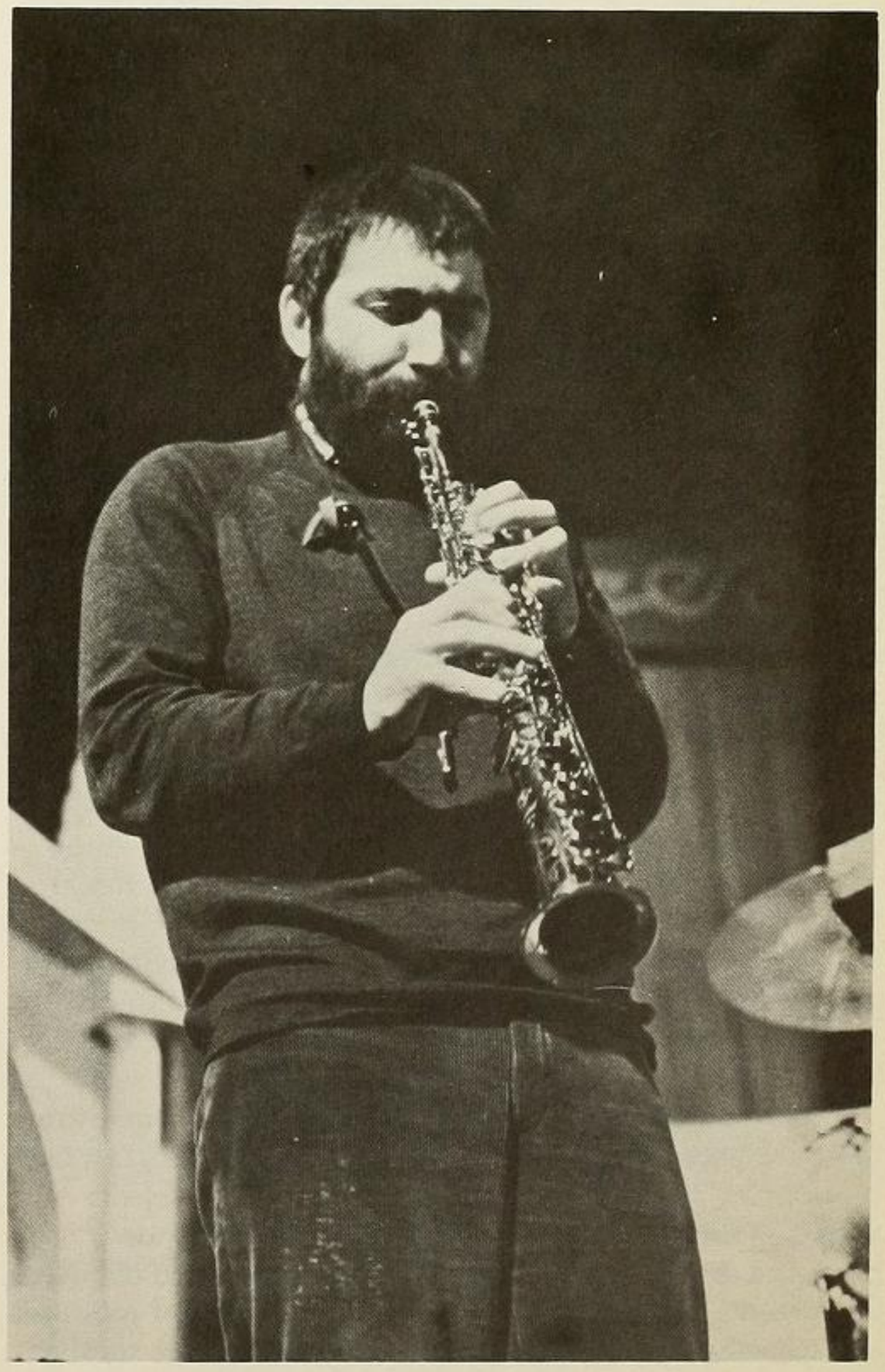


Paul Burwell *Soft Monocord*

'A sound is made. It can be listened to. Its surroundings an its relationship to them can be observed and modified. Another sound can be made, either during or after the duration of the first sound. The sound is a product of a set of interactions between man, objects and natural phenomena. It also becomes an element in that set and modifies it. The whole is a flux.'

'Do what is interesting/absorbing. An attention to the content of sound particles (vocabulary) and a concern with the nature of an event can lead to the construction of a grammar and syntax in which each element tells about itself, the other elements and their relationships. A sound can be altered by the space that bounds it and by the positional relationship between player and listener within that space... the edges, the planes where different elements meet blur/become indistinct. The whole is soft and malleable (organic/in flux).'[1]

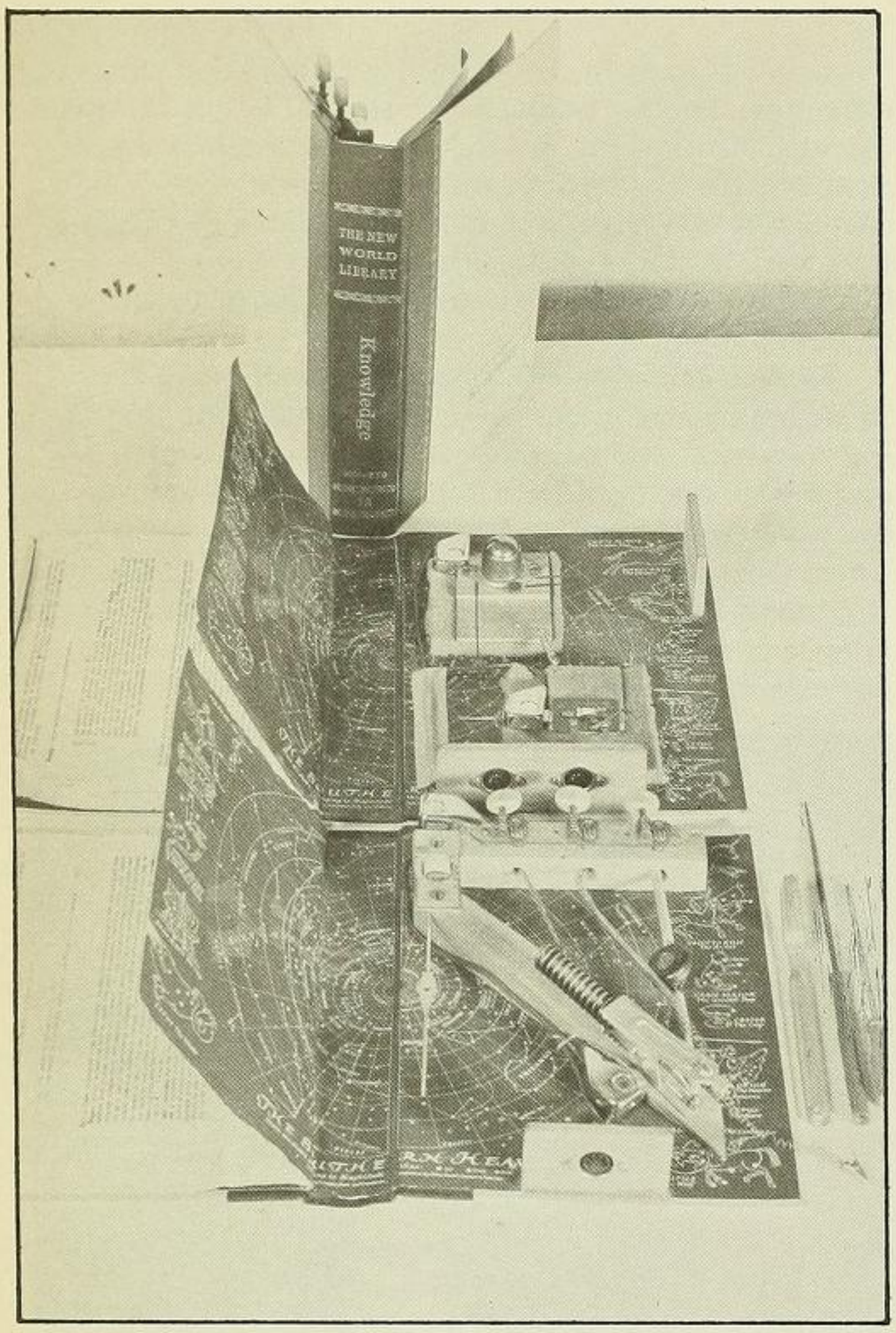
To expand further with a quotation from Evan Parker: 'A general statement: our music is a celebration of "hereness" and "nowness"...Improvisation is a process that defines its own form.'[2] And from Steve Beresford: 'Improvisation can be based on setting up situations that you know and playing within them and/or setting up situations in which there are large numbers of variable and unknown factors...Much of the interest comes about through a willingness to let the instruments be themselves. Whatever that is.'[3]



Evan Parker on soprano saxophone

I would see radicalism as inherent in my idea of improvisation — the examination, questioning and testing (sometimes to destruction) of first principles, the building-up of new ideas and approaches whether concerned with musical form, event/observer relationships, the acoustic properties of instruments and other sound-producing objects or the nature of performance itself.

Evan Parker, for instance, by developing the technique of circular breathing — breathing out through the mouth continuously while taking in air through the nose — is able to play dramatically long notes on soprano saxophone. With the addition of chords he can build completely different structures (apart from the obvious innovations in content) and take his music into different areas. Traditionally, wind instrument music has been governed by breath-length and less than breath-length monotonic phrases, which in improvisatory musics have tended towards the creation of

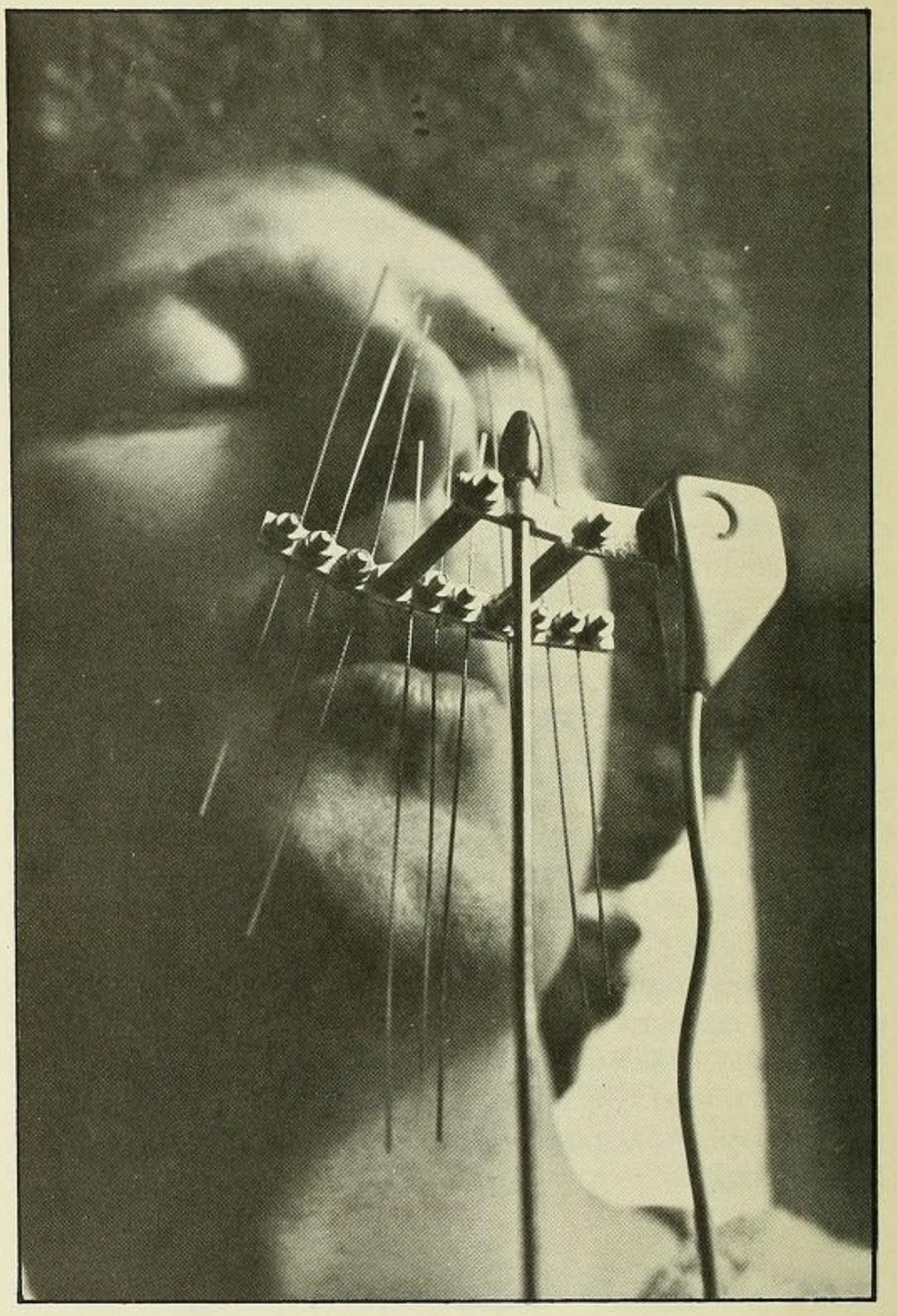


Hugh Davies. SHOZYG I (centre) and SHOZYG II (front) with cover

repeated/modified phrases and clusters of notes. His recent solo performances have moved out of the traditional concert performance and into the creating of environments, using his new tools to play with the acoustic properties of the space in which they are contained and to work directly on the physiology of hearing, producing such riveting sonic (musical) results that I did not notice the feat of circular breathing when I first heard it. Of Evan Parker's solo playing David Toop observed that 'the sound appeared to significantly affect balance and orientation.'[4]

In a discussion of radical structuring it is also correct to talk about the work of Hugh Davies, who for some years has been exploring the hidden acoustic properties of objects and the music-making applications of the sounds thus produced. Davies' work emphasises exploration and discovery, instruments (objects) being subjected to all kinds of processes and techniques until they have yielded all they have to offer. By the use of contact microphones he is able to conjure audible sounds out of objects that are usually (to the human ear) sonically inert. His SHOZYGs (named after the *New World Library Encyclopedia of Knowledge,* vol.13, SHO–ZYG, between the empty covers of which the first instrument of that name was built) are collections of springs, bits of wire, ball castors and various other things that are brushed with toothbrushes, bowed, scraped and tapped with screwdrivers. Davies combines several of these units to make up a solo performance table, a folding card-table on which several SHOZYGs are placed. One I particularly like is made from several very fine fretsaw blades fixed to a rigid support and amplified with a contact mike. To produce a sound the fretsaw blades are blown on.

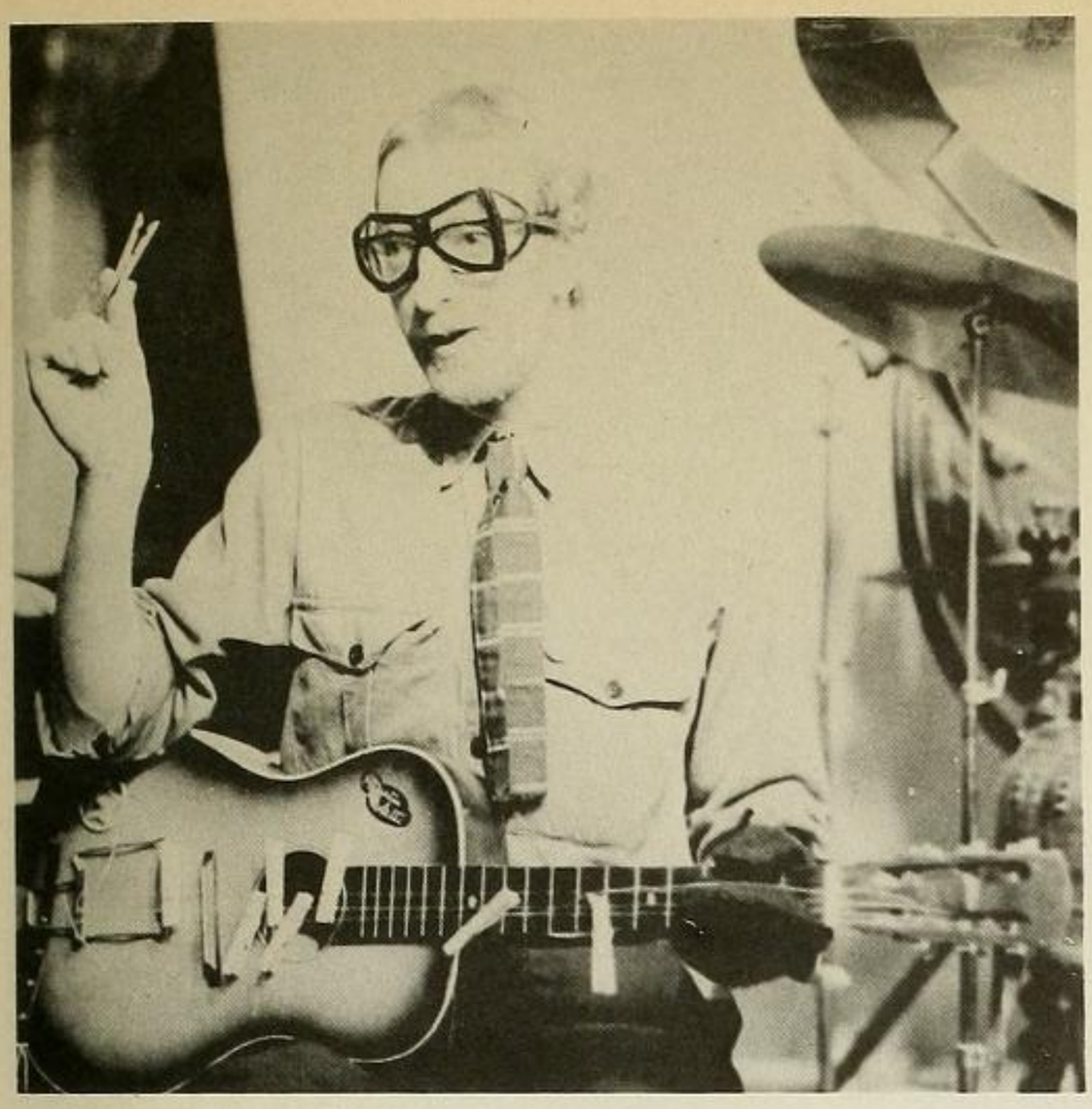
These instruments are used by Davies in group or solo performances, and versions are also exhibited in galleries, arts labs and colleges. Visitors are free to play them. He has even had a limited edition of his 'Eargongs' distributed as



Hugh Davies *Aeolian Harp* 1972

part of *OU* magazine. (An eargong is a personal instrument comprising any object that can easily be set in physical vibration, suspended from a length of string, the top of which is pressed into the ear with a finger. The object is struck and the vibration transmitted up the string to the ear. Objects are chosen that would not normally yield an audible sound).

The results of radical restructuring can sit uncomfortably in situations developed to suit different work. Music is generally seen as an entertainment, as part of a work/play axis that has work during the day as a period of emotional, sensual and instinctual deprivation with entertainment as a rest and escape from work. Music that is not part of this kind of entertainment is still fitted into the same modes of presentation, however unsuitable. This hampers the development of the work and contributes to the likelihood of the audience misconstruing the concerns of the performers and their work. Compared to, say, Performance Art, the cultural



Annabel Nicolson

Steve Beresford playing at the 'London Calling' London Musicians' Collective concert, London 1976

expectations of a piece of music are massive. Differences in basic concerns, structure or even content are frequently misinterpreted as failure to get to grips with form, structure and content just because of the disparity between what is presented and cultural expectations.

Recently the London Musicians' Collective was formed, one of its intentions being to acquire a space for events, performances and exhibitions to accommodate experiments in music and sound work. Many of the Collective's members implicitly or explicitly question the concert and performer/audience relationships and expectations in their work. Perhaps the most explicit of these is Steve Beresford, whose group-improvised work with 'The Four Pullovers' and solo work use the concert situation to ironic effect. Utilising a wide range of visual and aural effects, parody and pastiche, he constructs a complex commentary of what is music, what is performance. Sometimes, by taking prevalent ideas about music and performance to extremes, his work prompts a questioning of one's own basic values and assumptions while laughing at the parodied values and assumptions of other people.

The work of other Collective members, such as Max Eastley, David Toop, Colin Wood, Steve Cripps and Paul Burwell, is often concerned with the implicit questioning or reconstructing of the traditional forms of music presentation, working in and responding to different social and environmenta contexts, operating on different length time-bases. Working in the open air for several hours can effect a profound change in the structure of sound work if the performer is prepared to be sensitive to the various needs of the situation. A musician playing in a field or on a beach becomes just an element in a landscape. His role is defocused. But in a concert hall he is the centre of attention: all activity is subservient to him and his work. The music hall is a closed unit, excluding all other sounds and activities except the music, which is usually tightly structured and closed, relating only to its own laws.

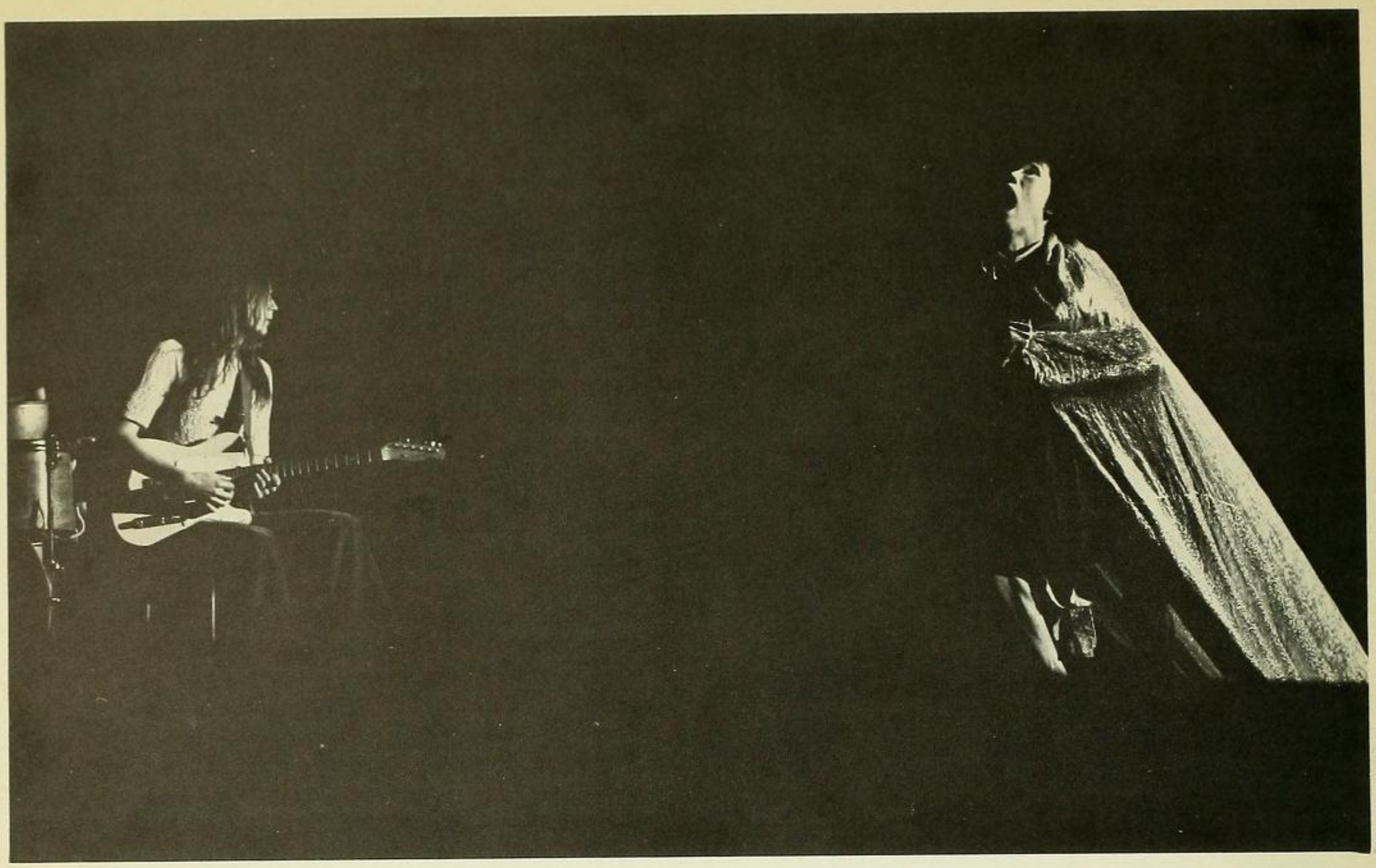
John Cage argued for the significance of extra-musical sounds in his silent 4'33",[4] moving the onus of the musical or aural experience from the composer or performer onto the listener. Al Junaid states that the act of audition is the significant part of a musical event. He sees listening to music as a meditation or religious exercise, and warns his reader that criticism of the relative abilities of performers is flippant and superficial. One should 'Think only of Allah for he is the one whom they seek in their audition.'[5]

Cage talked about letting sounds be themselves. Jessica Mayer tells us about the Obura of New Guinea, whose 'range of sound systems (which) they regard as capable of generating meaningful symbolic communication is much wider than in our own culture. We distinguish clearly between "cultural" sound systems such as "speech" and "music" which involve symbolic communication and "natural" sound systems which do not.' She continues: 'Obura culture places a great deal of what we would simply regard as random or contingent "noise" or "natural" sound within the sphere of meaningful symbolic communication.'[6] Although man can observe and rationalise he is still a natural element, and his sonic emissions can be seen in relation to and interacting with the total soundscape. It is this ability to observe objectively that can sometimes delude us into thinking that we are separate from our physical and biological environment and generate feelings of alienation.

My own work has been increasingly concerned with developing a sensitivity to the different 'range of sound systems capable of generating meaningful symbolic communication.' This has led me to explore a wide range of situations, from using formal structures solo in a room to a project evolving over a year on Newhaven Beach. I was first taken to the Beach by performance artists Keith James and Marie Leahy with dancer Sally Cranfield. We worked all afternoon. I played on the beach and later on/in the sea, playing drums, cymbals, gongs, wind and stringed instruments. I played pieces comprising deliberate sounds, allowing them time to move in the open land/seascape, bass drums and gongs to place sounds, resonant sustained sounds on bamboo trumpets, and simple structural systems utilising redundancy so that if wind dissipated some of the sound, and waves or human sounds masked more, what was left to be heard would still be 'meaningful symbolic communication.' The wind turned some of the stringed instruments into Aeolian harps.

Paul Burwell in the last four works on Newhaven Beach, spanning four seasons

On my second visit I made an hour-long tape recording of the flood tide against the pebble beach. Each visit was



Roger Morton

David Toop *Guitar and Ishii II Dance/Mime* at the Roundhouse, 1973

intended to roughly coincide with the seasons of the year. Structure, content and duration were radically different each time. On the third visit in winter I played a regular drum kit, very loud, at night, the only possible audience being the crews of three coasters waiting about a mile out for the full flood tide on which to enter Newhaven Harbour. They should have heard some of it echoing off the cliffs and over the surface of the water. On the fourth visit I worked with a costume I had made and previously exhibited and had other people wear in performance. The costume had sound-producing objects (mostly made from things found on the beach on earlier visits) hanging from it. There was also a frame drum on top of a staff, and a pair of diving goggles I had found which were impossible to see through due to weathering. Wearing the costume I walked into, around in and (a little bit) under the sea.

David Toop has been involved with various aspects of these kinds of 'communications' for several years, having done a lot of playing on and around Dartmoor, sometimes working with artist Marie Yates. He has recordings of working with wind, water and animals. At present he is working at London Zoo on projects to do with sound and communications and non-human life forms (for an example see his human/carp/chubb piece). Toop's work in these areas is not concerned with exoticism and the employment of novelty. It functions on a deeply structural level. His work in more traditional musical surroundings shows the same concerns, examining different aspects of 'signals and noises', their relationships and significations.

His concert flute playing is the most sensitive and responsive aspect of his work. He creates resonances and 'airoglyphs' displaying all the most human qualities in his work. His bamboo flutes (some up to six feet long), being less mechanically sophisticated, have more of their own presence and are made and activated by him rather than played in the way that he plays the concert flute. In all Toop's flute work breath is very important. The sound of the column of air set in vibration by breath being divided by a sharp edge, the breath, the air, the breath pressure, the bamboo or metal all become structural elements in his playing. His solo work on prepared bass and six-stringed electric guitars moves in significantly different areas. His concern with a time-based (as opposed to an object-based) world, in which there are only events, processes occurring on different time-bases and therefore no objects, no sculpture, is most evidenced in this area of his playing. (This separation into areas is only concerned with indicating the points at which certain interests predominate).

His guitar pieces are slow, notes following one another very gradually, surely the slowest guitarist ever, building up resonances, beat frequencies and difference tones. This area of his work seems to have little base in any other music. The type of preparation he uses and its nullification or 'rubbishing' of anything resembling traditional guitar technique, the very different sounds it produces, have had a de-conditioning or liberating effect on his work with guitars.

Toop's concern with time-base is shared by other musicians, in the sense that music is inherently time-based. It is durational, an event, although it can transcend corporeal time. Levi-Strauss asserts that 'music, along with myth and dreaming, are machines for the suppression (obliteration) of time.'[7] However, an object-based society has not unnaturally tried to make music into an object by exerting as much control as possible over the form, content and performance of a piece of music and trying to ensure its sameness. The isolated performance situation of concerts, rigid composition techniques and the general fixing of parameters, content and structure evidenced in all forms of Western music, arises from trying to insist that a process is an object. A musician who has not been sucked into the construction of objects produces a comparatively huge amount of work if seen from an object-based point of view.

Colin Wood talks of his music as being person-orientated rather than composition or instrument-orientated, emphasising an organic continuum. His work in drama, dance and performance art is based on this person orientation, different media being viewed as the 'voice' of the performer. His aim is to achieve 'complete integration of aural, visual and dramatic media, so that the person is revealed through whatever instrument, body or materials he or she uses.' He feels that this goal can be achieved through the use of 'improvisation by people who know each other very well.

Shelly Lee (dance), Frank Perry (percussion), Colin Wood (cello)

Welfare State *Memorial to the First Astronaut* 1975, with Lou Glandfield (monocord), Colin Wood (cello), Lol Coxhill (soprano saxophone)

It has been talked of but almost never reached through conventional art processes.'[8]

Harry Partch has a jaundiced opinion of the value of most of this talk: 'Nearly everyone in the art professions positively beams when I say that I believe in an integration of stage and film arts. Subsequent to this enthusiastic approval, however, I have seldom experienced anything but timid back-pedalling from either choreographers or film-makers because of an imagined threat to their particular specialities...Fairly early in life I discovered that what film-makers and choreographers really want is musical yardage goods, to constitute "background" for whatever spur-of-the-moment ideas they might concoct.'[9]

drama. But Colin Wood prefers to approach solutions through close collective improvisation. He has worked in several improvised and non-improvised music, theatre and dance groups such as Balance, Ritual Theatre and Welfare State. These different contexts have ranged from totally collective situations to others where music was just used referentially, as a means of conveying a literary image or emotion. Steve Beresford, who also underwent a musical further education, used music in this way. I feel that the referential use of music (*ie* using a piece of music for associative value) is a result of alienation. Music education is a hotbed of alienation techniques, great care and effort being devoted to distancing the musician from any direct or 'real' relationship with his work.

It is possible that our verbal language structure carries the root cause of this general alienation and constant maintenance of what Carlos Castaneda/Don Juan refers to as the 'internal dialogue' that constantly serves to verbalise behaviour and separate it from experience. This process allows us to 'translate' musical or aural events into verbal/literary/semantic references and associations or relative crudeness (Walt Disney's *Fantasia)* or sophistication. A long way indeed from letting a sound be itself.

This is not to be construed as an argument against synaesthesia. Real synaesthesia must allow sounds to be themselves. I would see the colour/sound/healing co-relations of percussion and idiophonist/medium/healer Frank Perry as operating outside the verbal/literary/semantic referential system. However, neither Steve Beresford (whose musical ideology and work probably has some sort of hidden mechanism that would serve to turn my criticism back on me) nor Colin Wood use music in this way to the exclusion of more direct involvement, interaction and commitment. Wood, through his involvement outside traditional music performance situations and their attendant expectations, has developed ways of presenting his music in situations as diverse as day-long performances or ten-minute concert solos.

New music, sound work and their radical structures require different attitudes on the part of the audience. A lot of the things normally looked for and appreciated in music may not be there, yet the work may have sufficient similarities to traditional musics to render this absence disappointing. Other contemporary music, such as the work of Guiseppe Chiari and the Fluxus works of Ben Vautier, La Monte Young and George Brecht, does not create this feeling of frustrated expectation, as there is little in the sound content (or just little sound content) to give rise to such expectations at all. At present, there is an almost total lack of informed (or even uninformed) criticism and little development of a critical or theoretical language for critics to use. I see the growth of an adequate form of discourse as essential for the evolution of the work. An informed, understanding and sympathetic audience, capable of discussion and criticism, is a necessary part of any art activity. A more responsible attitude to music and sound work in art schools is also called for. The provision of proper facilities, with tutors experienced in the working methods and concerns of sound workers, would enable new music to develop in a fitting intellectual and critical atmosphere while building a more specifically informed audience.

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1 Paul Burwell and Annabel Nicolson, 'A Reciprocal Lesson', 1975.
2 Evan Parker, programme notes for 'Urban Collective Calls' concert, 1976
3 Steve Beresford, writing in same programme notes as above, but about 'The Four Pullovers'.
4 David Toop, 'The Drones and the Chanters', *MUSICS* number 8, 1976.
5 Al Junaid, ***Tracts on Listening to Music,*** ed. J. Robson, Royal Asiatic Society, 1938.
6 Jessica Mayer, 'Sound in a New Guinea Society', *MUSICS* no. 5, 1975.
7 Claude Levi-Strauss, ***The Raw and the Cooked,*** 1964.
8 Colin Wood, private correspondence to author, 1976.
9 Harry Partch, sleevenotes for ***The Bewitched,*** CRI SD 304.

RADICAL STRUCTURE:2

David Toop

The Dismemberment Routine/Texts/Works

The Lizard is Cut into Nine Transformations

When the lizard is cut into nine segments then the parts will fail to coalesce. Thus posited, the destruction of the creature is irrespective of context to an impermissible degree – our animal must be cut into nine 'transformations.' Such vicissitudes are not subject to the terminal. On the contrary, we are dealing with the endless transformational processes which overshadow the triviality of mass. We, as humans, are creatures with hands to grasp. We exist in a medium of maximal visibility. Therefore, we feel and see 'things'; spaces to be filled; static and volitional masses in occupation of such spaces. Our language is, in consequence, a reification of process itself. Our appreciation of solids and quasi-solids is of a relatively high order and, indeed, imposes itself upon perception, accounting and expression to the degree that it masquerades as a cosmology.

It will be apparent, though, to even the most casual observer that such a cosmology cannot prove adequate where it is necessary to enter the realm of metaphor to assimilate the non-object/the intangible/the event. To reverse the perspective for a moment, Gregory Bateson states (Bateson, 1966): 'I personally do not believe that the dolphins have anything that a human linguist would call a "Language". I do not think that any animal without hands would be stupid enough to arrive at so outlandish a mode of communication. To use a sytax and category system appropriate for the discussion of things that can be handled, while really discussing the patterns and contingencies of relations, is fantastic.' Bateson's observation concerning environmental factors as a determinant in communication and, presumably, conceptualisation stems from his perception of dolphin vocalisation in all its elaboration, subsuming semiotic systems – for example kinesics – common to many terrestrial creatures. A portion of the dolphin's vocalisation functions as the fast-feedback signalling known as echo-location, a means of measuring relative proximity with time.

We have the factor of time as an all-embracing principle and it is in these terms that current art-forms display a traumatic break with the received tradition. The significance of such a shift within the field of music is pronounced. As the perfect time-based medium, music has been betrayed and stands as an example of the seemingly impossible feat of transmuting process into object. The consequences are evident in the spectacle of music as a high-entropy consumable. It is remarkable, then, that the consequences are repeatedly vilified where the root factor is ignored or misunderstood. Despite the pressure exerted upon sound-workers by a space-based, object-oriented ideology there are nevertheless pockets of resistance.

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A consistent application of *process* will be subject to eventstructural principles and will inevitably fail to generate 'Form' – as used by music theorists, historians, etc. 'Form' in this sense thus becomes irrelevant to improvisation – only of consequence to the object-builders – and is replaced by 'radical structure.' As Evan Parker wrote: 'Music criticism often refers to the "architecture" of a work. On this analogy I should like to state that I'm interested in snelter more than monument.' We can be sure that the doctrines of the 'mental furniture industry' will ensure that structure will not be perceived in general except in this gross aspect of 'form.' Static, developmental, mythical and narrative form will continue to hold sway within the space-based milieu.

• • • •

All sonic phenomena signify on a proxemic level to some degree – music, speech, paralanguage, animal vocalisation, audible energy loss from machines, meteorological sounds, etc, all occupy social space – a term devised, as far as I know, by Ragnar Johnson (Johnson, 1975). To avoid creating a duality, it should be stressed that there is no need to use terminology pertaining to space since we are dealing with relationship. It is the context and structure of such sonic phenomena which determine their precise significance for social relationship.

• • • •

The Leaf-Hole Cricket (Oecanthus brevicauda) chews a pear-shaped hole near the centre of a leaf, puts its body through the hole, rests its forelegs on the surface of the leaf and scrapes its elytra, thus increasing the amplitude of its song. The Mole Cricket (Gryllotalpa gryllotalpa) digs a loudspeaker-like burrow then sits, head first, in its burrow and stridulates, thus increasing the amplitude of its song. The Howler Monkey (Alouatta palliata, etc) has greatly enlarged hyoid bones which form a resonating chamber in its throat, thus increasing the amplitude of its song.

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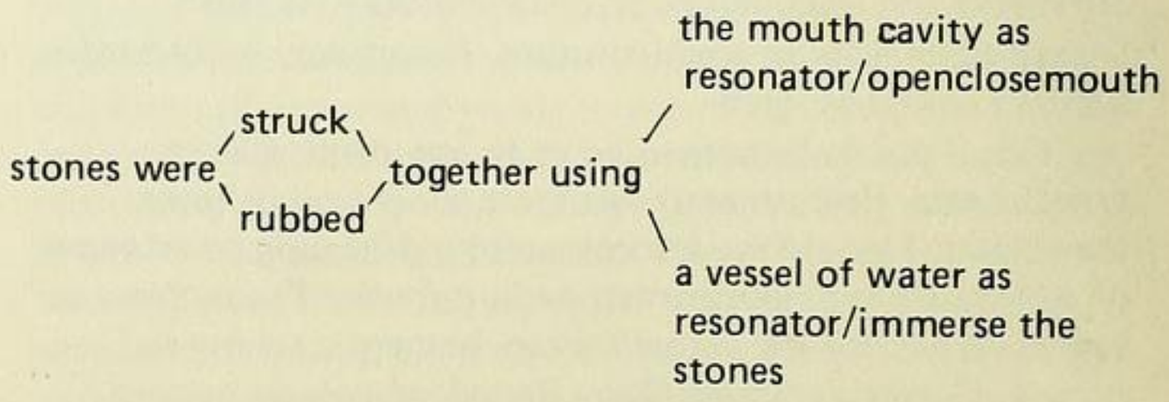

flutes were dipped in water vessels and air vessels.

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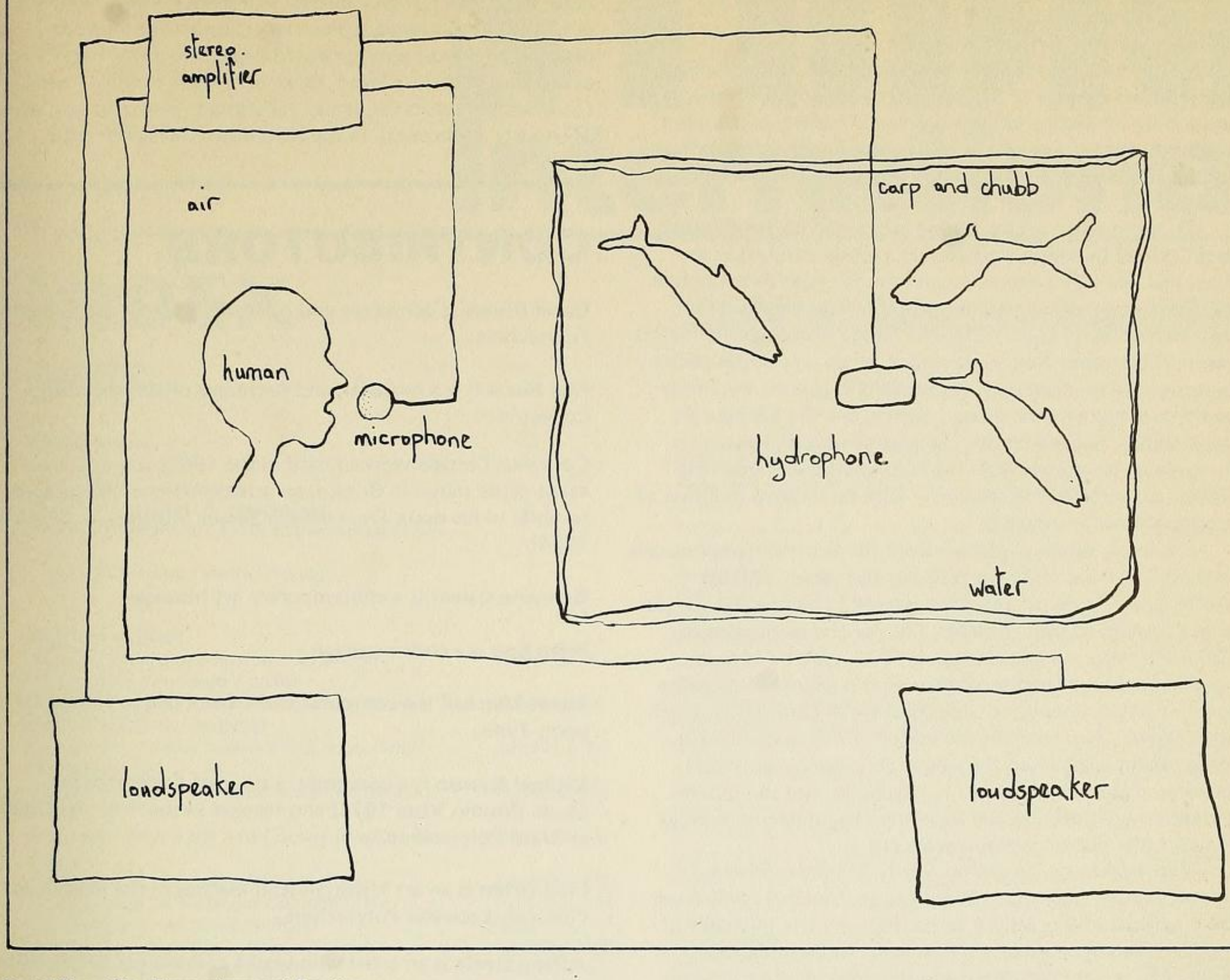
Technology is process, of course, and symbolic process at that. The literature tells us that it was not unknown for African drums and New Guinea flutes to be fed. Nor is this unknown in contemporary American music (Young, 1960).



The business of encoding/decoding is the consensus problem with radical structuring, and that is only to say that the 'message' is not addressed to anybody in particular but anticipates 'context as half the work.' It is both ethno/anthropocentric to deny this music: if our ears are sufficiently attuned to alien communications then our listening experience of alien messages is open and searching. Music as we know it has been encoded toward semi-hermetic social groupings – groupings created and sustained by the negative attitudes generated by space-based derived fundamentals. With a time-based language we are ecologically motivated.

• • • •

Certain species of bird (*ie* shrikes) are famous for their alternate duetting in which male and female sing an interlocking series of different notes. Observations have been made of one partner singing the whole song by itself if the partner is either temporarily or permanently absent. Clear examples are found in Nigeria, Ethiopia and South Africa, of music existing as a 'product' of social relationship (naturally, it is not a product until entered into a retrieval system). The music I have in mind is the flute ensemble music of these areas, in which players contribute equally to a cyclic melody. Each flute has only one or two notes and the melody thus necessitates rhythmic sequence from all the players. One way in which this music remains a *social* music, *ie* a proxemic and context-bound process, is documented by Samual Akpabot in his treatment of the Kara flute ensemble of the Birom people of Northern Nigeria (Akpabot, 1975). Included in the notation of such an ensemble performance:

Player 1 stops to do a little dance
Player 2 stops to blow his nose.
Player 3 stops to urinate and spit
Player 4 stops to laugh at 3 and chat with the crowd
Player 3 stop to argue
Player 4
Player 5/drummer/ stops to tune his drum.

GENERAL REFERENCES

Latham, J. 'Zeit and Schicksal' Catalogue, Stadtische Künsthalle Düsseldorf, 1975.

Sebeok, T. *Perspectives in Zoosemiotics* Mouton, The Hague, 1972. *Zoosemiotics: At the Intersection of Nature and Culture,* Peter de Ridder Press, Lisse, 1975.

SPECIFIC TEXT REFERENCES

Akpabot, Samuel 'Random Music of the Birom', *African Arts VIII.* 2, 1975.

Bateson, Gregory. 'Problems in Cetacean and Other Mammalian Communication,' from *Whales, Dolphins and Porpoises,* edited by Kenneth S. Norris, Univ. of California Press, 1966.

Hinde, R.A. ed. *Bird Vocalisations: Their Relation to Current Problems in Biology and Psychology,* Cambridge University Press, 1969.

Johnson, Ragnar. 'Social Space in World Music', *MUSICS,* no. 5. December 1975/January 1976.

Parker, Evan. Statement, published for concert, 23 May 1976.

Young La Monte. *Piano Piece for David Tudor no. 1,* October 1960. Published in an anthology edited by La Monte Young and Jackson Mac Low, 1963.

CORRESPONDENCE

Hovels and Palaces: I
A Reply to Messrs. Wood/Rushton

While I am sure the readers, myself included, of your cartoon in the Sept/Oct issue of *Studio International* were highly amused by its witty and light-hearted (?) satire, and while I of course grant your right as artists to poetic licence, I must correct the blatant errors of fact on which your work of art is based.

To begin with, Victor Burgin was asked by the Scottish Arts Council to design a poster for a group exhibition in April this year. This was done and the Scottish Arts Council duly received their commissioned posters to distribute in their normal way. Some time later Burgin expressed to me his desire, if the opportunity ever arose, to do an intense poster campaign. After discussion we decided to reprint the image and text of the original poster, leaving out the Edinburgh show details. Subsequently 500 posters were fly-posted throughout Newcastle with the help of students from the University and the Polytechnic – with no indication either of sponsorship or authorship.

Far from 'begging' posters from the Scottish Arts Council, the total cost was £630 for printing and paper, £35 for Victor Burgin's train fare and one night in a hotel, £7 for van hire, £20 paid to four students, £50 for the mailing cards, £30 for stamps – a grand total of £772, paid by myself.

It has always been the policy of this gallery to organise some of its art activity outside the normal confines in which art is shown. And whereas the editor of this magazine has for some time criticised the role of 'bourgeois/capitalist' galleries, it has always been these galleries, not the public-sponsored institutions, that have tried to pioneer new ways in which the public can view works of art.

You might now be asking, where did the money for this capitalistic 'rip-off' of Burgin come from? It came from the commission this gallery earns from the sale of works of art (to collectors abroad, I might add). In these days of decreasing private patronage and the dependence of the art world and indeed this magazine on public funds, I would have thought that your energy as artists and writers would be better employed encouraging any form of patronage whether private or public, because this would lead to a wider range of exhibiting opportunities outside the 'bourgeois/capitalist' gallery structure.

So, to return to profit and loss. On our reckoning, it seems that you yourselves were the only ones to profit from Burgin's poster, as you no doubt received a fee from the magazine. In fact, far from a profit being made, there will be a loss – to ourselves financially and worse, to the art world as a whole – as a result of your destructive attitude. Certainly it appears that far from being progressive in your attitude you are clinging to an outdated and simplistic notion of dealer practice merely because it suits your particularly naive interpretation of leftist ideas.

There is obviously more that I would like to say but time is not on my side. Unfortunately, I was only given a morning in which to meet *Studio's* copy-date for this issue.

Robert Self
Robert Self Ltd
50 Earlham Street
London WC2

P.S. Could you please explain the motor-cycle reference?

Review Section

The Review Section, which includes our regular columns, coverage of the UK and abroad, and book reviews, will be published in the January/February *Studio International*, devoted wholly to an augmented issue of reviews. Part IV of Barbara M. Reise's 'Who, What is "Sigmar Polke"?' will therefore appear in the January/February issue and not, as previously announced, in the November/December issue.

CONTRIBUTORS

Gavin Bryars, a composer and performer, teaches at Leicester Polytechnic.

Paul Burwell is a musician and Secretary of the Musicians Collective.

Cornelius Cardew worked hard in the 1960s to popularise avant-garde music in Britain, an achievement which he seeks to undo in his book *Stockhausen Serves Imperialism* (Latimer 1974).

Germano Celant is a contemporary art historian.

Brian Eno is a rock musician.

Stuart Marshall is a composer and artist living in Newcastle upon Tyne.

Michael Nyman is a composer, author of *Experimental Music* (Studio Vista 1974) and teaches in the Fine Art Dept at Trent Polytechnic.

Fred Orton is an art historian who teaches in the School of Fine Art, Leciester Polytechnic.

Jeffrey Steele is an artist who works as Principal Lecturer in Fine Art at the Portsmouth Polytechnic.

David Toop works with acoustic, visual and verbal means and is at present on a GLAA-funded APG placement at the London Zoo.

STUDIO International

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Covers designed by Lyndon Haywood

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Review Section

CASSETTE SUPPLEMENT

GAVIN BRYARS + MICHAEL NYMAN
CHRISTOPHER HOBBS + MICHAEL PARSONS
JOHN WHITE + JAMES LAMPARD
HOWARD SKEMPTON

RECENT ENGLISH EXPERIMENTAL MUSIC

AUDIO ARTS MAGAZINE
VOLUME 3 NUMBER 2

Recent English Experimental Music

GAVIN BRYARS
CHRISTOPHER HOBBS
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MICHAEL PARSONS
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JOHN WHITE

AUDIO ARTS

AUDIO ARTS VOLUME 3 NUMBER 2

RECENT ENGLISH EXPERIMENTAL MUSIC

GAVIN BRYARS

PONUKELIAN MELODY GAVIN BRYARS: CELLO, JOHN WHITE: TUBA, CHRISTOPHER HOBBS ORGAN & ORCHESTRAL BELLS

The piece was composed in April - May 1975 for a concert given by Bryars with Christopher Hobbs and John White at the Lucy Milton Gallery, London. Ponukele is the setting, in an imaginary Africa, of Raymond Roussels Impressions d'Africa (Paris 1910) and it is there that the shipwrecked passengers of the Lyncée wile away the time waiting for their ransoms to arrive from France to pay the King, Talu VII Emperor of Ponukele and king of Drelchkaff, by forming the 'Club des Incomparables' who organise a remarkable gala in the 'Place des Trophees', the main square of Ejur, the capital. The slightly machinist aesthetic of the music is a combination of this derivation, allied with the tempo of Erik Satie's Les Pantius Dansent 1913, and the harmonic language of his Rose + Croix notebooks and music of the 1890's. The compositional method, for what it is worth, was such that the various phrases were not composed in the sequence in which they appear in the music, being written directly on the final score, like a picture, without modification. The only gaps in the implacable one beat per second are the irregular rests at the points where a page has to be turned.
Recorded live at the Lucy Milton Gallery, 15 May 1975

CHRISTOPHER HOBBS

ARAN, PTO: ALEC HILL, CHRISTOPHER HOBBS, HUGH SHRAPNEL, JOHN WHITE
3 PIANO DUETS: CHRISTOPHER HOBBS and JOHN WHITE,

Aran was written in 1972 for the PTO, the group consisting of John White, Hugh Shrapnel, Alec Hill and myself which played together from 1969 - 1972. In many of the pieces I wrote around then, the note-to-note details of the compositions were worked out using random or systemic means. In the case of Aran a knitting pattern was employed to decide the repetitions of pre-determined rhythms. The rather strange instrumentation (6 cowbells, 4 handbells, toy piano and reed organ) invites comparison with gamelan ensembles, but I was pleased that the final sound was much coarser than in the Balinese music. This performance was given by the PTO on October 1, 1972, at The Orangery, Holland Park.

The 3 piano duets are numbers 10, 11, and 14 from a set of 14 written in December 1974. Since 1973 I have written much more recognizably conventional music, feeling that systems tended exclusively to explore themselves rather than the composer and the nature of what he is trying to say musically; concerns which seem to me expressible only through empirical means. The pieces written since these duets (including 4 sonatinas 14 more duets and an operetta) have become progressively more approachable. However I think the duets still provide fairly easy listening. The performance is by John White and myself on the occasion of their first performance at the Palais des Beaux Arts, Brussels, on February 1, 1975

JAMES LAMPARD

THE CATERPILLAR MAJORCA ORCHESTRA

The Caterpillar stems from my early period of Majorca Orchestra , compositions alongside The Great March , The Two Tune March and The Butterfly Waltz .

Robin Mortimore and myself formed the Majorca Orchestra in 1973 to try and cater for the creative needs of Portsmouth Sinfonia members including ourselves who wanted to extend the Sinfonia's attitude towards performance into composition. There were ten members in the first Majorca concert, six of whom where composing for the ensemble, Ian Southwood, Sue Astle, Brian Watterson, Robin Mortimore, Dave Saunders and myself. As none of the early Majorca members had been formally trained in composition the first pieces were technically plain, but the absence of training gave us an original musical viewpoint from which the simplest of musical procedures appeared dangerous and exciting. My own interest in music developed at Portsmouth ArtCollege's experimental music course and through arranging music for the Sinfonia which finally overcame my hostility to classical music, developed through background and education.

The division of harmony in the early pieces concentrated on melody, accompaniment and bass in various combinations and degrees of dominance. Although the pieces were simple and unpretentious their composition was not an easy task.

I remember spending days writing the Great March , sat at the piano playing it over and over again waiting for it to make sense and give a feeling of completion. Even though it had only two chords, the bass played the root of each chord and the melody derived from notes of the chords, at times it seemed I was taking enormous harmonic liberties.

The Caterpillar differs in two ways from other early compositions, firstly the accompaniment and bass play long closely-spaced chords throughout instead of the usual Majorca on - beat off - beat, secondly the starting point for the piece began with the pentatonic melody whereas usually I work from a proposed chord sequence onto which a melody is added. In the original sketch there is an eight bar theme and two systematic developments but the final development was later ommitted because at the time it seemed over-complicated and out of character with rest of the piece although looking back it might be worth including one day.
Recorded on 3 March 1974

continued . . .

MICHAEL NYMAN

THE OTHERWISE VERY BEAUTIFUL BLUE DANUBE WALTZ
ORLANDO GOUGH, JOHN LEWIS, BEN MASON, MICHAEL NYMAN
DAVE SMITH: PIANOS

The Otherwise Very Beatiful Blue Danube Waltz (1976) is the result of the imposition of one found system on another found system - a process (that of Fredric Rzewski's Les Moutons de Panurge, 1969) on a structure (the first 32 bars of the opening of Johann Strauss's Blue Danube Op. 314). The Rzewski piece is based on the principle of the cumulative melody - 1, 1+2, 1+2+3, 1+2+3+4, etc. - and I thought it would be perhaps more interesting to apply this procedure to a (well -) known harmonic/melodic structure than an invented one. This recorded version is for five pianos; each pianist played the same simple piano reduction of the waltz. All start together but because of the difficulties of counting - having reached, for instance, the 8th bar, gone back to the beginning and started to build up the tune again, it's difficult to remember whether you'd reached the 8th, or the 9th, or the 7th bar the previous time around - the players soon get out of phase with each other. As in the Rzewski piece the rule is 'once lost, stay lost ' (Hence the ending, where one player plays the whole 32 bars through alone, is completely unplanned). The superimposition process appears to take over from the additive process, leaving an awareness of 'some method' of extending about 40 seconds of music to 12 minutes, and of the indestructability of the original harmonic structure.

The title derives from a derogatory comment of Arnold Schoenberg's on the fact that the first six phrases are rhythmically identical: 'Here one finds numerous slightly varied repetitions, as in the otherwise very beautiful Blue Danube Waltz'.

This is a recording of the first performance given in the Foyer of the National Theatre on 14th June 1976

MICHAEL PARSONS

PIANO PIECE 5 MICHAEL PARSONS, PIANO

Piano Piece 5 was written on 24 October 1973, and is the fifth of a set of pieces written during that year; it was preceded by Rhythmic studies 1 - 4, to which it is structurally related. However, whereas in these works cross - accentuation and syncopation are used, in Piano Piece 5 there is no subdivision of the beat: a slow even pulse of approx. 40 beats per minute is maintained. The harmonic material is based on fifths, with the addition only of the second, fourth and seventh degrees of the scale. This implies the pentatonic mode of G A C D F, and relates to my interest at that time in Scots bagpipe music. There are 5 sections, the beginning of each marked by a change of harmony: the two hands begin with open fifths (G and D) an octave apart, and for each s section they move one step in contrary motion. In the course of the piece the upper part moves up a fifth, and the lower part down a fourth, thus passing through different harmonic regions and arriving again at an open fifth (D and A), this time two octaves apart, in the fifth section. The sustaining pedal is held down throughout.

The piece is deliberately uneventful, concentrating on a single kind of sound to achieve a 'spacious flatness' (Howard Skempton), and to make clear structure using very simple material.
Recorded in Fylkingen, Stockholm 21 April 1976

JOHN WHITE

PHOTO - FINISH MACHINE (1971)
PIANO DUET 10, 11, 12 & 13 (1974)
CHRISTOPHER HOBBS & JOHN WHITE PERCUSSION/PIANO DUET

Photo - Finish Machine was written for two sets of four temple blocks (two players). The order of pitches and styles of attack (single or quadruple stroke) are identical in both parts. The material is 'spread' by means of an altering handicap system which lengthens or shortens the silences between the players' sounds so that there are overtakings, fallings back, occasionally simultaneous arrivals at certain points, and a dead heat to finish up with.

In the four piano duets thematic imagery from styles of music from the past (Bruckner, Bizet, Beethoven and Chabrier) serves structures which the composers referred to might well have not used. A parallel to this way of working can be found in the pictures of M. C. Escher who populates his strange world with recognisable ants, birds and little gnome - like men in order to accentuate its strangeness.

Photo - Finish Machine recorded 10 June 1976 at the Whitechapel Gallery, London.
Piano Duet recorded 1 February 1975 at the Palais des Beaux Arts, Brussels.

HOWARD SKEMPTON

WALTZ JOHN TILBURY, PIANO

Waltz was written in April 1970, and few pieces have sprung so painlessly from the keyboard. Like other works of the period, it reveals an appitite for the extension or repitition of a single sound, in this case a major tenth. But why choose the tempo of the waltz, a relic of something alien? It seemed necessary after works like A Humming Song and September Song to infuse the music with a sense of momentum, as if the Feldmanesque 'pools' of sound were showing signs of stagnation.

A jigsaw- type form was adopted to enhance the sense of spaciousness, to evoke a non - European soundscape free from development.

Michael Nyman has rightly pointed out that 'Waltz' is really a chaconne. Not so much a stream, let alone a pool; more like a series of waves generating a disarming sense of security. No wonder the rising chromatic scale sounds so quirky, so perverse !

As the composer, looking back over six years, a sufficient period of time to liberate genuine affection, I am pleased to see that Waltz is entirely devoid of cleverness. The predominant quality is purity, frequently seen as a mixed blessing, but arguably basic, like sincerity.
Recorded 3 October 1976 in London

This issue of Audio Arts is produced in collaboration with Studio International and is complementary to the Nov/Dec issue: Art & Experimental Music.*
**(Studio International, 14, West Central Street, London SW1)*

Acknowledgement is due to Michael Nyman for his invaluable assistance in the preparation of this issue of Audio Arts.

EDITOR: WILLIAM FURLONG
AUDIO ARTS,
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October 1976

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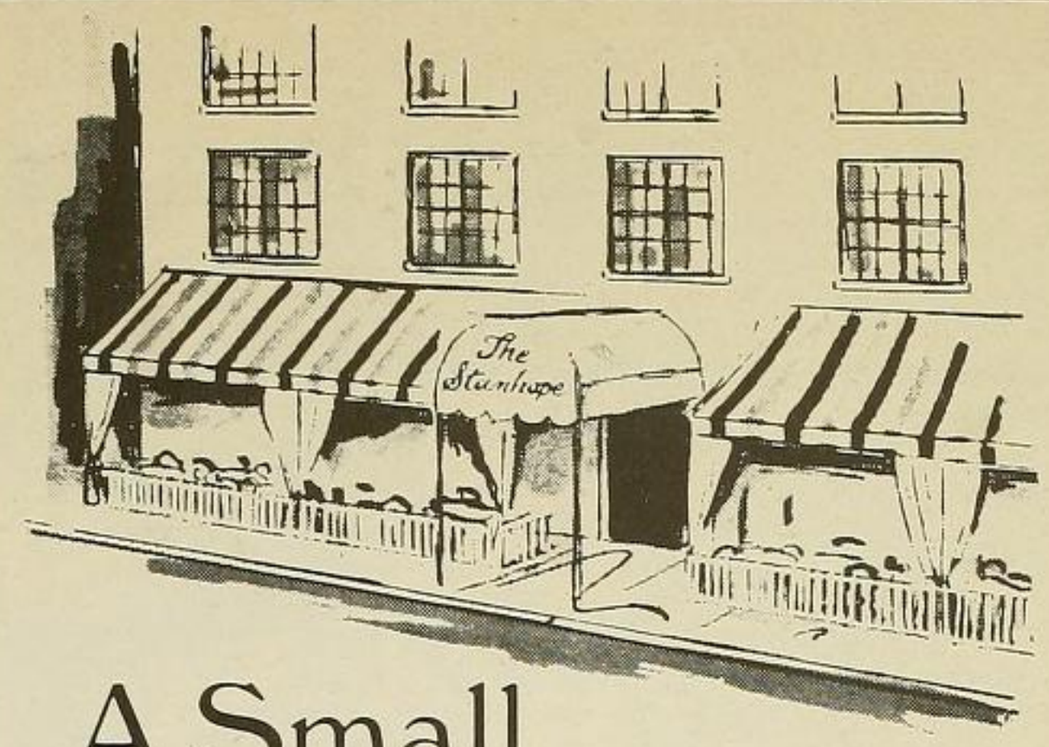

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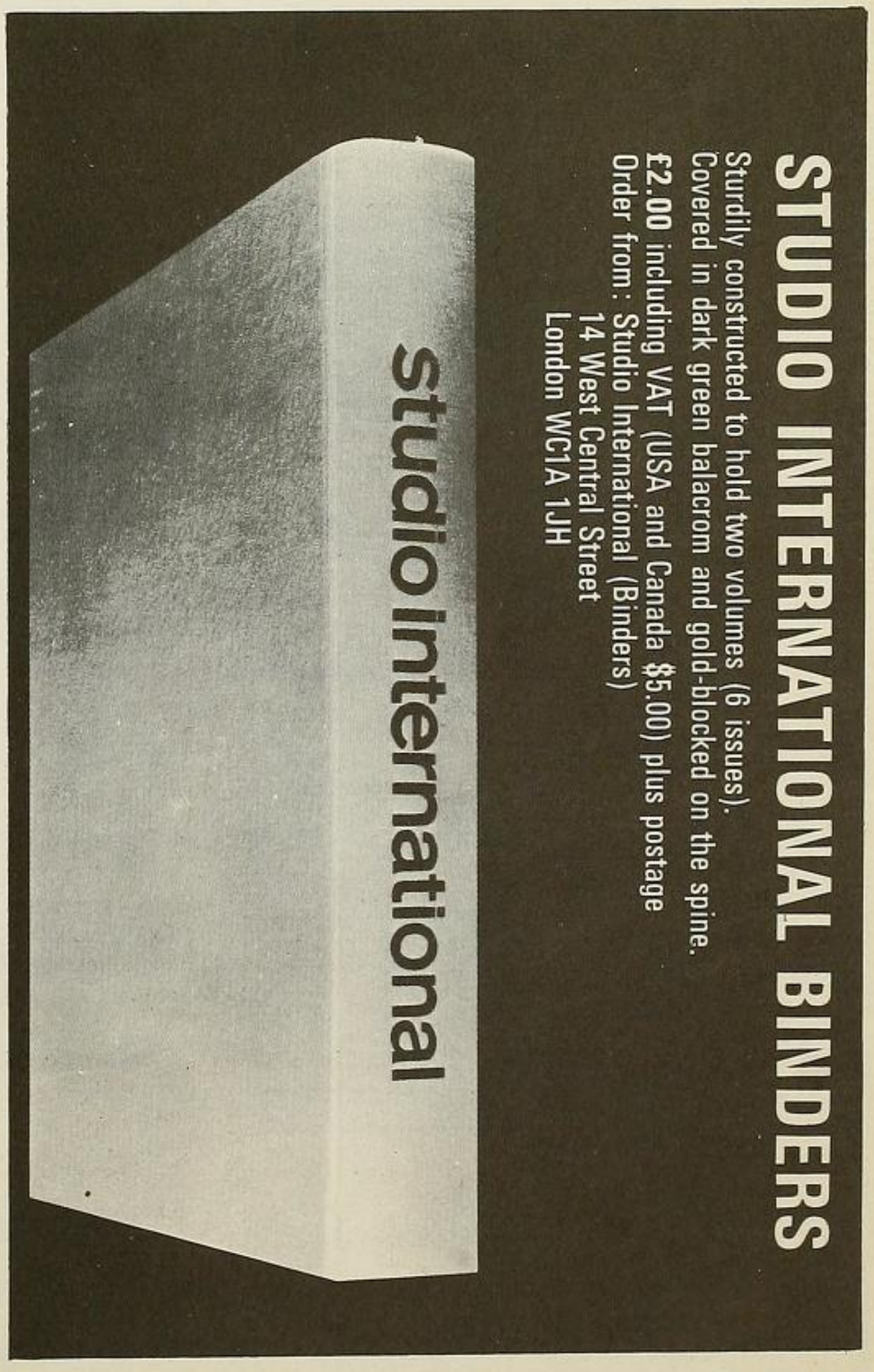

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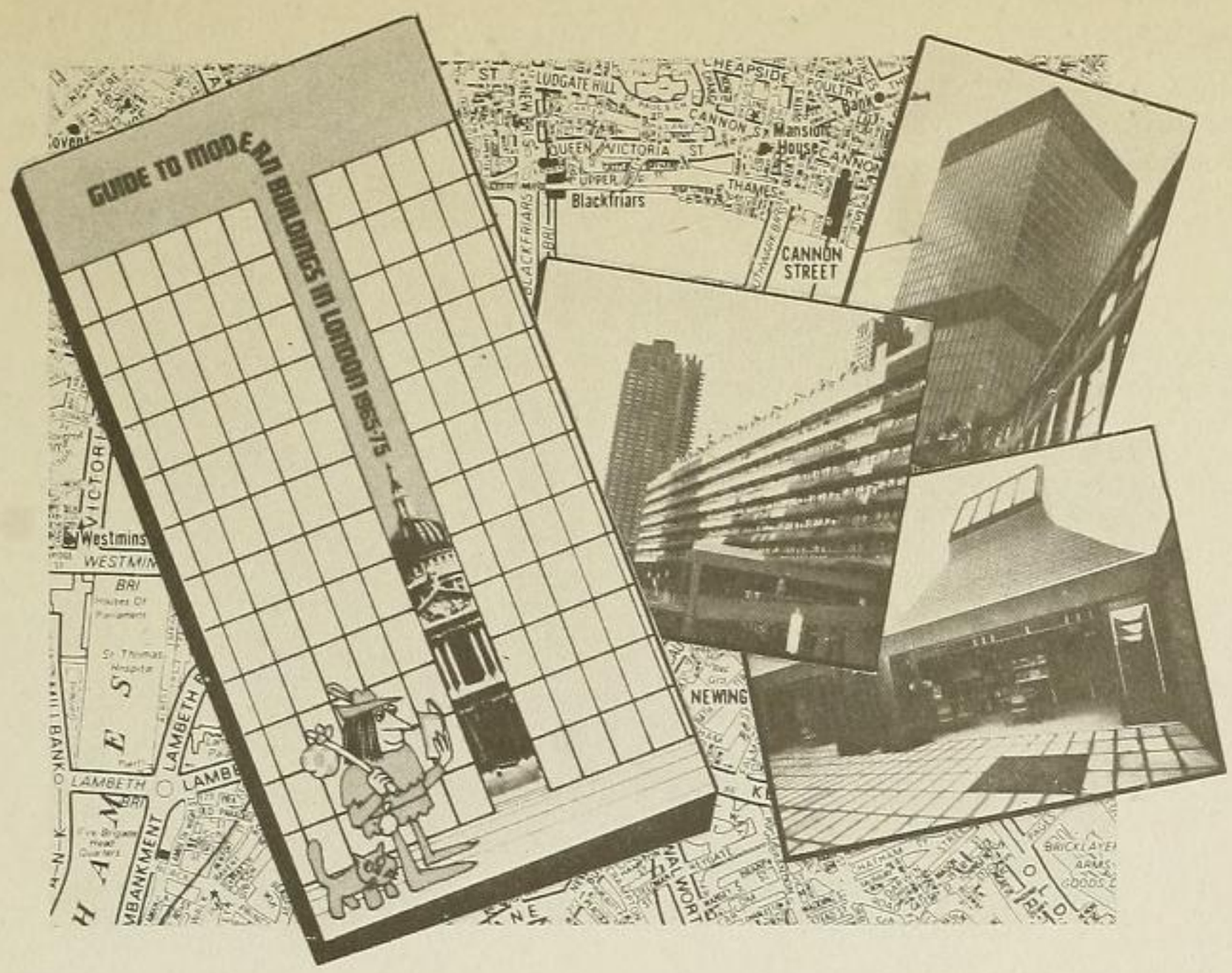

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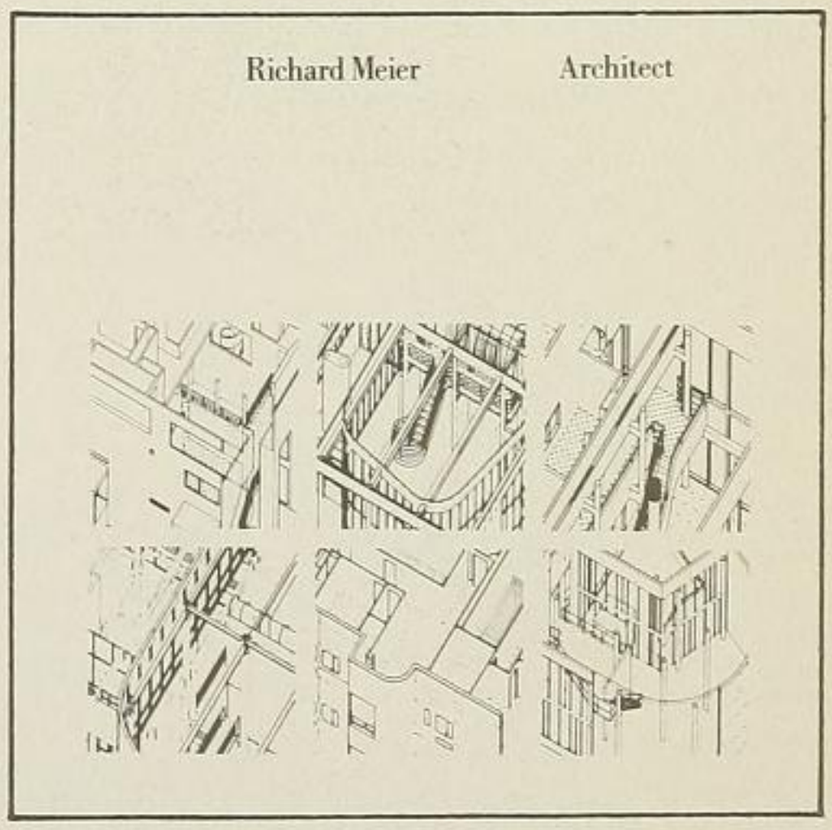

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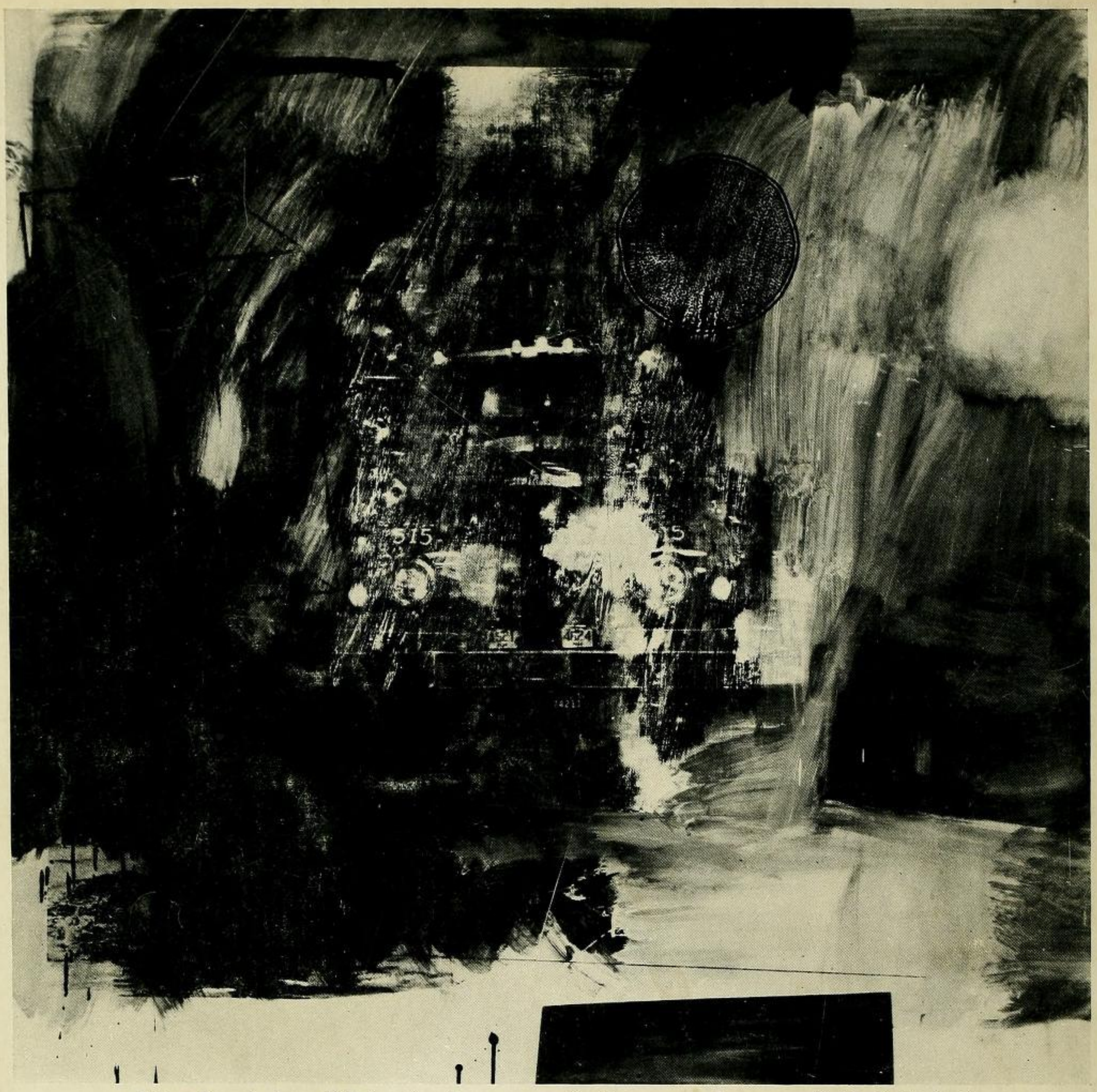

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