

The esthetic is what we think in the presence of the object. The artist's means are not esthetic but his thinking on them is; his esthetic thought prevails over the means to make a work of art. The rules of fugue or sonata form prophesy no esthetic consequence, except by the thought and doing of the artist.

The sound object HPSCHD—"harpsichord" reduced

The sound object HPSCHD—"harpsichord" reduced to the computer's 6-letter-word limit becomes HPSCHD—may be the most elaborately defined sound composite so far achieved by deliberate formal composition. All "chance" factors occur within limits closely or widely permitted by the makers. Each part includes ideas from both composers; together they shaped it. Their thought, the object, and our thinking responses, in whatever relationship we hear it, decide our reaction to this work as a work of art.

HPSCHD consists of 51 electronic sound tapes and 7

solo compositions for harpsichord. Writing in the avantgarde music magazine Source, Cage explains that the piece can exist as "a performance of one to seven live harpsichords and one to fifty-one tapes." The present record is a composition including 3 "live" solos across a composite of the 51 tapes.

The source work, Introduction to the Composition of Waltzes by Means of Dice, is attributed to Mozart (K. Anh. C 30.01). For each measure of a 32-measure "empty" form (four 8-measure sections) the composer provides 11 alternative "composed" measures, the choice made by throw of dice. Measure 8 is always the same. With each section repeated the final form is 64 measures (AABBAABB), lasting one minute. This Dice Game repeated 20 times is Solo II.

Using now a computer-derived numerical system bor-

rowed from the digital principle of *I-ching* (an ancient Chinese oracular or wisdom book), assemble another 64 measures of the same pattern, until another 20 successive assemblages fill 20 minutes. *Solos III-VI* each start with one realization of the Dice Game, progressively replacing the original choice of measures by: *Solo III*, passages from Mozart piano sonatas, treble and bass together as written; *Solo IV*, the same, treble and bass dissociated; *Solos V & VI*, associated and dissociated bass and treble measures from keyboard works by Beethoven, Chopin, Schumann, Gottschalk, Busoni, Schoenberg, Cage, and Hiller. *Solo I* is computer-written in 12-tone equal temperament on the same formulae which are used for the 51 sound tapes. *Solo VII* is anything of Mozart's chosen by the soloist, played as he wishes.

The 51 sound tapes contain music in equal-tempered

scales of, successively, 5 to 56 tones in the octave, each tone deviating over a field of 129 (the half-interval up or down divided by 64 or the equal-tempered tone). Each tape is composed according to a series of programs: e.g., from simple repetitive tones and silences across a field to non-repetitive tones and complexly varied spaces. The patterns are overlaid and continually change, the more redundant being more clearly differentiated, the effect rather like individual trees merging into a forest. Other computer-formalized programs, for note sequence, time (in units), successive events, melodic "goals" (without cadence) and types (diatonic, chromatic, chordal arpeggiation), volume, and dynamics, are similarly intermixed.

For the listener to this record a third program, KNOBS, enables him to alter the composite by increasing, decreasing, or eliminating some parts of the whole. On the record, Solo II (Dice Game) is in the left channel only, Solo VI in the right channel only, Solo I in both channels. "It's the first instance that I know of," Hiller

comments, "where the home listener's hi-fi set is integral to the composition."

Fach solo and each tape lasts slightly over 20 minutes.

Each solo and each tape lasts slightly over 20 minutes, the length of this recorded performance. In "live" performance any part can commence at any time, and the length is determined by previous agreement.

HPSCHD and the Second Quartet of Ben Johnston embody two extremes of esthetic experience. The multiple routines and subroutines of HPSCHD, although resulting from personal choices by the two collaborators, are in effect as impersonal as statistics or the Golden Section. The decisions concerning the intonational and melodic relationships of the Quartet are as personal as a fine handwriting—in many cultures as highly esteemed as any work of art. Neither work is "classic" or "romantic." Each is as free of the conventional indices for analysis as of the customary signals for emotion—the esthetic equivalent of an experiment in pure research.

Except the harpsichord solos, the sound medium of each work is composed in an intonation (system or scale of pitches) differing from the 12-note equal temperament of the piano. The macrotonal scales (5 to 11 pitches in the octave) and the microtonal scales (13 to 56 pitches in the octave) of *HPSCHD* are microtonally varied systems of equal division of the octave, without close relationship to the tones and intervals of the overtone series. They are disparate points of sound lacking acoustical coordination and rich overtone sonority. The melodic scales of Johnston's Quartet are unequal interval systems in just intonation: directly related in some degree to the overtone series and therefore proportionately the more sonorous. The musicians perform these unusual pitch and interval systems with extreme accuracy. If the tones sound "wrong" by our habituated hearing, we must accept the fact that they are "right."

Cage and Hiller made their esthetic decisions by means of computer. Ben Johnston's decisions follow a contrary esthetic philosophy, explained in his paper Three Attacks on a Problem: "What can be grasped with equal alacrity by ear, by mathematics, and by intuitive feeling is the best material for art. And this intelligibility is not a mere matter of conditioning: some relations are naturally more easily understood than others.

"In tacitly accepting as an arbitrary 'given' the 12-tone

equal-tempered scale, Schoenberg committed music to the task of exhausting the remaining possibilities in a closed pitch system. Many composers, tired of tonal clichés, have either abandoned pitch or, more accurately, have organized it as if it were noise. [Noise can be defined as the totally random mingling of sounds.]

"The use of harmonic intervals tuned 'just' (by elim-

"The use of harmonic intervals tuned 'just' (by eliminating the roughness of beats) provides a better point of departure than any tempered equivalents. To make a just intonation pitch system, you select a small number of generative intervals which you can tune precisely, by ear. The unison, the octave, the perfect fifth and perfect major third will suffice.

"I wanted to write a piece in which the players would need to take much greater care than usual in locating the pitches. Each would be dependent upon making precisely the right interval with some other player's note. There are three distinct kinds of interval texture in this quartet.

"The texture of the opening movement results from emphasizing dissonant intervals produced with the aid of simple consonances but predominating over them. The effect is chromatic, the intervals generally augmented or diminished. The movement consists entirely of permutations of a single three-note motif, using a great variety of 'just' tunings, always combined into one of three strict permutations of a 12-note set. The rhythmic and durational relations have a proportional system

SIDE ONE (21:00) **JOHN CAGE & LEJAREN HILLER** (b. 1912) (b. 1924)

HPSCHD (1967-1969) for harpsichords & computer-generated sound tapes

(publ. Henmar Press Inc.)

ANTOINETTE VISCHER

NEELY BRUCE

DAVID TUDOR Baldwin solid-body electronic harpsichord

(Solo 1)

Neupert Bach-model Hubbard double harpsichord harpsichord with 17% Eltro time compression (Solo II) (Solo VI)

original computer programming for HPSCHD; James Cuomo, who helped prepare the original sound tapes with ILLIAC II; Jaap Spek, who supervised the technical processing of the tape collage; and George Ritscher, who engineered the final recording.

Messrs. Cage and Hiller gratefully acknowledge the special assistance of Laetitia Snow, who wrote some of the

This recording of HPSCHD was made possible through use of facilities of the Experimental Music Studio and the Department of Computer Science of the University of Illinois, Urbana. The computer-output sheet included in this album is one of 10,000 different numbered solutions of the program

KNOBS. It enables the listener who follows its instructions to become a performer of this recording of HPSCHD. Preparation of this material was made possible through the Computing Center of the State University of New York at Buffalo. SIDE TWO (14:57)

> BEN IOHNSTON (b. 1926)

STRING QUARTET NO. 2 (1964)

1. Light and quick: with grace and humor (2:44) 2. Intimate, spacious (5:21) 3. Extremely minute and intense; not fast—Quick, mercurial—Very fast, with suppressed excitement—Quick—Extremely minute (6:40)

THE COMPOSERS QUARTET

Matthew Raimondi, violin; Anahid Ajemian, violin; Bernard Zaslov, viola; Seymour Barab, cello Engineering: MARC J. AUBORT

a Dolby-system recording

analogous to the just intonation system of the pitch relations. The starting tone of each successive set form

rises one pitch in a complete 53-tone octave.

section treats serially a 31-note scale, serializes duration, and is a microtonally exact retrograde inversion of itself

trapuntal activity."

"Listening to the quartet you will become aware of microtonally altered intervals and of actual microtones. These occur in the widely leaping melodic lines of the first movement, never in the harmony. The second movement has them in the harmony, sharply contrasting

with the uncomplicated melodic lines and the harmoni-

ous consonances of the just intonation. In the last

one octave of a 53-tone just intonation scale. "The pitch texture of the final movement is created by melodic and harmonic use of microtonal intervals and microtonal alterations of larger intervals, resulting from combining simple consonances and occurring mostly with these. In some places the players are told to find

these microtonal scales by melodic size. The middle

"For the second movement I used mostly consonant

intervals and 'diatonic' dissonance, a harmonic idiom of

rapid chromatic changes and microtonal cross relations,

far closer in sound to Gesualdo than to Bach. These pitch relations describe a strict spiral pattern, ascending

> movement these altered intervals are set off by the clear consonances they surround. In the middle section they eclipse all other types of intervals, in a frenzy of con-

—PETER YATES

PRO RAM (KNOBS) FOR THE LISTENER OUTPUT SHEET NO. 12024

INSTRUCTIONS - THE UNIQUE SET OF RESULTS GIVEN BELOW WERE GENERATED BY MEANS OF A PROGRAM RUN ON THE CDC-640

THE STATE UNIVERSITY OF NEW YORK AT BUFFALO IN JULY, 1971. THE VALUES LISTED IN THE COLUMN LABELLED (TIME) REPREMENTS IN FLAPSED DURATION FROM THE BEGINNING OF THE COMPOSITION. THE NUMBERS IN THE SIX OTHER COLUMNS ARE RANDOM

OF THE VOLUME CONTROL AND THE TREBLE AND BASS CONTROLS FOR THE LEFT AND RIGHT CHANNELS, RESPECTIVELY, OF YOUR PEAPLE OF THE VOLUME CONTROL AND THE TREBLE AND BASS CONTROLS FOR THE LEFT AND RIGHT CHANNELS, RESPECTIVELY, OF YOUR PEAPLE OF THE VOLUME CONTROL AND THE KNOB IN QUESTION FULL LEFT. WHENEVER 4 APPEARS, TURN THE KNOB FULL RIGHT. WHENEVER 1, 2 OR 3 APPEARS.

PROPRIATE INTERMEDIATE POSITION. THESE THREE INTERMEDIATE POSITIONS SHOULD BE EQUALLY SPACED BETWEEN THE EXTREME
FIER HAS ONLY ONE VOLUME CONTROL AND A BALANCE CONTROL, INTERPRET (CH. 1) AS THE VOLUME CONTROL AND (CH. 2) AS I

GOOD LUCK. - - JOHN CAGE AN

PROGRAM (KNORS) FOR THE LISTENER OUTPUT SHEET NO. 12024

ITQUE SET OF RESULTS GIVEN BELOW WERE GENERATED BY MEANS OF A PROGRAM RUM ON THE COC-6400 COMPUTER LOCATED AT

HEW YORK AT RUFFALO IN JULY: 1971. THE VALHES LISTED IN THE COLUMN LABELLED (TIME) REPRESENT 5 SECOND INCRE-A FROM THE BEGINNING OF THE COMPOSITION. THE NUMBERS IN THE STY OTHER COLUMNS ARE RANDOMLY GENERATED SETTINGS THE TREBLE AND BASS CONTROLS FOR THE LEFT AND RIGHT CHANNELS. RESPECTIVELY, OF YOUR PREAMPLIFIER. WHENEVER O OUESTION FULL LEFT. WHENEVER A APPEARS. TURN THE KNOR FULL RIGHT. WHENEVER 1. 2 OR 3 APPEARS! SELECT THE AP-SITION. THESE THREE INTERMEDIATE POSITIONS SHOULD BE EQUALLY SPACED BETWEEN THE EXTREMES. IF YOUR PREAMPLY-CONTROL AND A BALANCE CONTROL, INTERPRET (CH. 1) AS THE VOLUME CONTROL AND (CH. 2) AS THE BALANCE CONTROL. GOOD LUCK. - - - JOHN CAGE AND LEJAREN HILLER.

	VOLU	ME	TRE	BLE	BA	SS
TIME		H.2	CH.1	CH.2	CH.1	CH. 2
0.00	2	4	3	3	1	2
.05	2	4	3	3	1	4
		4	3		1	4
.15	2	3	3	3	î	4
.20	.0	3	M: M: M: M: M: 4: 4: 4: 4	3	1	4
.25	4	3	4	- 4	1	4
.10 .15 .20 .25 .30	4		4	4	3	4
.35	4	4	4	4	3	4
. 40	4	4	4	4	4	4
.45	4	4	4 4	3	4	4
.50	4	4	4	3	4	ō
50 55 1.00	4	4	4	3	4	0
1.00	4	4	4	3	4	0
1,05	4	4	ō		4	0
1.05 1.10 1.15 1.20	0	4	Q	3	4	0
1,15	0	4	ō	3	4	0
1.1 ₀ 1.1 ₅ 1.2 ₀ 1.2 ₅	0	0	Ō	3 3 3	4	0
	0	0	0	3	4	0
1.30	0		2	3	4	0
1.35 1.40	0	2222222111	S	3 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	1	0
1 • 4 0	0	2	3	3	1	ō
1.45	0	S	3	5	4	3
1.45 1.5 ₀ 1.55	0	2	S	2	4	3
1.55	2	2	2	2	4	
2.00	2	2	2	2	4	
2.05	S	2	5	2	3	3
2.10	2	1	2	5	3	3
2.15	2	1	S	2	3	3
2 25	2	1	Ŝ	2	0	3
2.05 2.10 2.15 2.20 2.25 2.30 2.35 2.40	N N N N N N N N	1	5	1	4	3
2.35	۸.	-	0			3
2.40	4	1	0	1	4	3
2 45			5			
2.45	4	2	0	1	4	2
2 55	4	2	Ž.	1	4	3
3 00	4	2	5	0	4	3
3 05	4	2	0	0	4	3
3 10	4	2	0	0	4	3
3 15	0	2	0	0	0	3
2 45 2 50 2 55 3 00 3 10 3 15 3 20	4 4 4 4 4 0	12222224	4)4icicicicioN/N/N/N/N/N/N/N/N/N/Oicicicicicicicicicici	1 1 0 0 0 0	4 4 4 4 0 0	N m m m m m N
	4				M	No.

	VOLUME		TRE	EBLE	BASS	
TIME	CH.1	CH.2	CH.1	CH.2	CH+1	CH.2
y an in the	01181	01111	Cital	OHIE	Onel	CHIE
3.25	0	4	1	0	0	2
3.30	0.	4	1	0	0	2
3.35	0	4	4	0	0	2
3.40	0	4	4	0	0	2 2 2 2
3 • 45	0:	1	4	0	1	2
3.50	0	1	4	0	1	2
3.55		1	4		1	0
4.00	2	1	4	2 2 3	1	ŏ
4.05	2	1	4	3	1	0
4.10	2	1	4	3	3	0
4.15	0	1	4	3	3	0
4.20	0	1	4	3	2	0
4.25	0	1	1	3	2	3
4.30	0	1	1		2	3
4.35	0	1	1	3	2	3
4.40	0	3	1	3	2	3
4.45	0	3	1	3	2	3
4.50	0	3	1	3	2	3
4.55	3	3	1	3	2	3
5.00	2	3	3	3	22222222	3
5.05	S	3	3	1	0	3
5.10	3	3	3	1	0	3
5.15	3	3	3	1	0	1
5.20	3		3	1	0	1
5.25	3	3	2	1	3	ī
5.30	3	3	3 2 2 2 2 2	1	3	1
5.35	1	4	2	4	3	1
5 • 40	1	4	2	4	4	3
5.45	1	3	4	0	4	3
5.50	1	3	4	0	4	3
5.55 6.00	1	3	3	0	4	3
6.00		3	3	4	4	3
6.05	4	3	3	4	4	3
6.10	4	1	4	4	4	4
6.15	4	1	4	4	4	0
6.20	4	1	4	4	4	0
6.25	4	1	4	4	4	0
6.30	4	1	4	4	1	0
6.35	4	1	4	0	1	0
6.40	4	1	4	0	1	4

	VOLUME		TREBLE		BASS	
TIME	CH.į	CH.2	CH.1	CH • 5	CH.1	CH.5
6.45	3	1	4	Ó	ī	4
6.50				0		4
6.55	3	1	2	ŏ	2	2
7.00	0	0	2	0	2	2
7.05	0 3 3	0	2		2	2
7.10		0	2	1	2	2
7.15	3	0	2	0 1 1 1 1 1	3222000	2
7.20	3	0	2	1	0	0
7.25	2	1	S	1		3.
7.30	5	1	S	1	0	3
7.25 7.30 7.35	2	. 1	2	1	0	3
7.40	3 3 2 2 2 2 0	0	4 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2 2	1	0	422222033333
7 50		0	2	1	0	3
7 55	0	0	3	1	0	3
7.25 7.30 7.35 7.40 7.45 7.50 7.55 8.00 8.05	0	0			0	3
8 05	0	0	3	1	0	3
8.05 8.10 8.15	0	2	3 3 3 3 3 3 3 3 3 3 1 1 1	Ö	0	4
8.15	0		3	Ö		4
8.20	2	2 2 1	3		1	4
8.25	0 S S S	1	3	0 0 0 0	1	4
8.30	2	3	3	0		4
8.30	2	1	3	0	3	4
8.40	0	1	3	Õ		1
8.45	ŏ		3	0	3	ĩ
8.50	0	1	1	0	3	1
8.55	0		î		4	1
9.00	0	2	1	0	2	1
9.05	1	2 2 2 2 2 2 2	1	4	2	1
9.10	1	2		4	2	1
9.15 9.20 9.25	1	S	1	4	5	1
9.20	1	2		4	2	ī
9.25 9.30 9.35	1	2	1	4	2	1
9.30	1	2	3	4	2	1
9.35	1	2	3	4	2	
0 45	1	6	1	4	2	0
9 50	1	4	1	1	0	0
9 55	1	4	2	1	0	1
9.25 9.30 9.35 9.40 9.45 9.50 9.55	1 1 1 4	2224444	1 3 3 1 1 2 2	4 4 4 1 1 1	3334NNNNNNNNN0000	0 0 0 1
1000	-		-	1	U	U

TIME	VCI I	IME CH.2	TRE	BILE CH+2	BA CH•1	SS CH.2
10.05	4	4	?	ì	0	0
10-10	4	0	2		0	0
10.15	4	ň	2	3 3	4	0
10.20	4	ŋ	3	3 3	4	0
10.25	4 4	ů Ú	1 2	3	4	0
10.35	4	0	27167616	3	4	0
10,40	4	n	ñ	3 3	4	ő
10.20 10.25 10.30 10.35 10.40 10.50 10.55 11.00 11.05 11.10	4	3	3	3 3	4	. 0
10.50	4	3	3		4	0
10.55	3 3	1	<u>م</u>	3 1	4	2
11.00		3	3	1	0	2
11.10	4	3	3	i	0	2
11.15	4	3	3	l	ò	2
11.20	4	3 3	3	1	0	2
11.25	4		3	2	0	
11.30	4	3	3	2 2 2	0	3 2 2
11.35	4 4	3 3	ر بر	ز	0	2
11.45	4	3	<i>t'</i>	2	0	2
11.50	4	3	40101010	2 2 4	ő	
11.55	n	3 3	ñ	2		2
12.00	O	9			0222	2
12.05	0	0	, 2	4 4	S	2
12 15	0	0	2 ·	4	2	1
12.20	n	0	2	4	0	1
12.25	0	0	2	4	0	
12.30	Ú	0	2	4	0	1
12.35	3 3	0	21016	3 3	0	1
12.45		ი 2	, E	3	0	1
12.50	1 l	_	5	3	0	
12.55		2	ī	3	0	1
13.00	1 1	2	i	3	0	î
13.05	1	S	Ī	3	0	1
13.10	1	2	1	3	1	2
13.20	l	3 5	1	I 1	4	2
13.25	1 1 1	0	1	1	3	2
11.45 11.50 11.55 12.00 12.10 12.10 12.25 12.30 12.30 12.40 12.50	ί	~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~ ~		3 3 3 3 3 1 1 1	0 0 0 1 4 3 3 3	
13.35	1	n	ñ	0	3	2
13.40	4	0	7	0	3	2

	VOLUME		TREBLE		BASS	
TIME	CH.1	CH.2	CH.1	CH.2	CH • 1	CH . 2
13.45	3	0	1	0	3	2
13.50	3	0	1	0	3	2
13.55	3	0	1	0		2 2 2
14.00	3	0	1	0	3	2
14.05		0	1	0	3	2
14.10	3	0	1	0	3	4
14.15	3	0	1	0	3 3 3 2	4
14.20	3	1	1	3		4
14.25	3	1	1	2	3	4
14.30	4	1	1	5	3	4
14.35	4	1	3	2	3	4
14.40	4	2	3	2	3	4
14.45	4	2	4	2	3	4
14.50	4		4	2 2 2	3	4
14.55	4	S	4	2	3	4
15.00	4	2	4	2	3	4
15.05	3	2 2 2, 2 2 2	4	4	3	4
15.10	3	S	4	4	3	1
15.15	3	2	2	4	3	1
15.20	3	2	1	4	3	2
15.25	- 3	4	1	4	0	22222222
15.30	3	4	1	2	0	2
15.35	3	4	1	2 2 2	0	2
15.40	3	4	1	5	0	2
15.45	. 3	4	1	2	0	2
15.50	3	0	1	2	0	2
15.55	3	0	1	4	0	S
16.00	3	0	n	4	1	5
16.05	0	4	0	3	1	
16.10	0	4	1	0	1	1
16.15	0	4	1	0	1	1
16.20	0	4	1	0	1	1
16.25	0	4	1	0	1	1
16.30	()	4	1	1	1	2
16•30 16•35	0	4	1	1 4	4	2
16.40	0	4			4	2
16.45	1	4	1	4	4	2
16.50	1	4	1	4	4	2
16.55	1	4	1 1 1	4 3 3 0	4	S
17.00	1 1 1 1	2	1	3.	0	1
17.05	1	5		3	0	1
17.10	1	S	4	3	0	1
17•15 17•20	1	4 2 2 2 2 2 2 2	4	0	0	2 2 2 2 1 1 1 1 1
17.20	1	2	4	0	0	1

TIME	VOLUME CH.1 CH.2		TREBLE CH.1 CH.2		BASS CH.1 CH.2	
			04.1	Um ⊕ &	CH • I	
17.25	0	2	4	n	0	1
17.30	0	3	4	0	1	2 2
17.35	0	3	4	0	1	2
17.45	0	3 3	4	0	1	2
17.50	Õ	3	ì	Ö	į	5 5 5
17.55	S 5	3	1	0	ì	2
18.00	5	3	1	0	1	2
18.05	S	3 3	1 0	0	ţ	5
18.15	2	3	0	4	. 3	2
18.20	S 5	2	1	ĵ	3	2
18.25	2	2	1	1	3	2
18.30	4	2	l	4	3	3
18.35	4 4	2	1	4	3	3
18.40	4	2	1	4 4	3	3 3
18.50	4	. 3	1	4	3	
18.55	4	3	i	4	3	3 3 3
19.00	4	3	1	4	7	
19.05	0	3 3	1	4	3	3
19.10	0 0	3	3 3	4 4	0	3 0
19.15 19.20 19.25 19.30	ő	3	3	4	0	Ö
19.20	0	1	3	4	n	0
19.30 19.35	0	l	3	0	0	0
19.35	0 0	1 1	3 2	0	. 0	1 1
19.45	0	ì	á	0 0	· 0	ì
19.50	4	î	2	n	ì	ĩ
19.55	4	1	2	0	1	1
20.00	4	1	2	n	1	1
20.05	4 4	3 3	5	0	4	1
20 · 10 20 · 15 20 · 20	4	3	2	0	4 4	1
20.20	4	3 3 3	2 2 1 1	0 0	4	l 1
20.25	0	3	1	1	4	
20.30	0		t		4	3
20.35	0 0	1 1	0 0	1 1 1 1 1 1 1	4 4	1 3 3 3 3 3
20.45	ï	i	0	1	4	3
20.50	1	1	0	î	4	3
20.55	1 1 1	1	0	1	0	3
21.00	1	1	4	1	4	3



The Nude Paper Sermon is about the end of the Renaissance—the end of an era and the beginning of another.

Therefore it is about old and new means of communication. about verbal and non-verbal sound. about the familiar and the unknown, about human activity and the new technologies. It is not a "neo-classic" work nor is it a collage; rather it is "post-modern-music, post-modern-art, post-style," a multi-layer sound drama that is itself an example of the kinds of experience which it interprets and expresses: the transformation of values and tradition through the impact of the new technologies.

Technology is no longer merely a set of techniques for imposing a certain order on the external world but itself a vehicle for remarkable changes - changes that affect individual experience as well as the nature of the culture. Recorded music is at the center of musical life and communication today; recordings have opened up the musical past, created multiple presents and, one hopes, a future. Recording technology makes all possible musical and sonic experiences of the external world raw material and even, increasingly, part of a common culture. Multi-track, multi-layer experience becomes the norm: Ravi Shankar, John Cage, the Beatles, Gregorian chant, electronic music, Renaissance madrigals and motets, Bob Dylan, German Lieder, soul, J. S. Bach, jazz, Ives, Balinese gamelan, Boulez, African drumming, Mahler, *gagaku*, Frank Zappa, Tchaikovsky, Varèse . . . all become part of the common shared experience.

Recording technology also transforms that which it communicates: it makes all music part of the present and in so doing changes it. There is nothing inherently good or bad about this; technology can liberate and it can oppress. But there is no running away any more; we must master what can oppress us, learn how to use it to create and liberate.

The Nude Paper Sermon is the first "total" work to be shaped on, by, and through the medium of modern recording; the record is not a reproduction of anything at all but is the work itself. Like a print or film, it has been created to be duplicated in multiple copies. Commissioned by Nonesuch Records for the Nonesuch Consort, The Nude Paper Sermon was composed in "tracks" and was recorded and mixed as such through a unique collaboration among composer, conductor, and producer/engineer. (A related but different live/theater version also exists and was first performed in New York on March 20, 1969.) The elements have all been re-corded or synthesized on separate tracks, individually edited; combined with "live" overlays, these are montaged to create an 8-track master; finally, all of these elements—live/recorded and electronic, all juxtaposed, intertwined, and transformed—have been mixed down to a final 2-track master. The recording acoustics themselves are not "reproductive" but are actual parameters of the work. (Incidentally, all of the unusual sounds and complex passages produced by the vocalists and instrumentalists are actually performed and not the result of electronic manipulation.)

The words are taken from Three Madrigals by John Ashbery (texts for soloists and chorus) and The Nude Paper Sermon by Steven Wade (texts for actor). The latter, produced especially for this work, is written to suggest the contemporary verbal barrage, that endless language stream of all those who use words to manipulate others: preacher, politician, TV personality, professor, news-caster, even poet. The actor's part is a kind of scoring imposed by composer and performer on fragments of text that are used emotively and as a kind of symbology. At times words dominate, at times they are submerged, at times a precarious balance, interaction, or interweaving is maintained.

By and large, printed texts would be beside the point; spoken language — heard and overheard, comprehensible and incomprehensible, clear, elusive, simple, complex, logical, mystifying — is the subject matter here. Perhaps one printed text is in order, however: that part of one of Ashbery's madrigals which has a traditional structure but is made out of a series of word images and verbal snapshots. It occurs near the very beginning of the work and is set as a kind of Renaissance ruin — real fake Renaissance music ("why don't composers write like that any more?") overlaid with electronic graffiti:

Not even time shall efface The bent disk And the wicked shores snore Far from the divining knell!

On his livid perch Let not the master be cast Back on the petitioner To wise limits of the secret

That hurt the whole city.
The ever prospering shepherds
Are that, who have tasted lament
The shell splashed bitter darkness on the shore

Near the intruder's arch.
The last party to be seized
At twilight and time was cold
To the lovers. And seized their praise

Wild that to the room With brother and sister came. That passions are a fence Draw the vines out of the earth

And listen to new
Memory falls on your olive hands,
The undying luck
Of the dying million ageless

Pushed to hands for approval. Along the level bay A dim blaze of diamond Walking to you: what you had Not even time shall efface The bent disk And the wicked shores snore Far from the divining knell!

On his livid perch Let not the master be cast Back on the petitioner To wise limits of the secret

That hurt the whole city.
The ever prospering shepherds
Are that, who have tasted lament
The shell splashed bitter darkness on the shore

Near the intruder's arch.
The last party to be seized
At twilight and time was cold
To the lovers. And seized their praise

Wild that to the room With brother and sister came. That passions are a fence Draw the vines out of the earth

And listen to new Memory falls on your olive hands, The undying luck Of the dying million ageless

Pushed to hands for approval. Along the level bay A dim blaze of diamond Walking to you: what you had

ERIC SALZMAN

ERIC SALZMAN (b. 1933): THE NUDE PAPER SERMON (1968-69)
Tropes for Actor, Renaissance Consort, Chorus, and Electronics
Texts from John Ashbery, Three Madrigals; Steven Wade, The Nude Paper Sermon

Side One (21:31)

A babble; a madrigal with electronic graffiti—
the sermon begins; soprano solos; with chorus
(the "10 qualities": bodily, sexual, ritual, sub-verbal, etc.)
— an instrumental canzona — another madrigal —
solos for wind instruments
(racket; bass & tenor dulcian;
bass, tenor & alto recorder;
gemshorn; soprano, alto & bass krummhorn;
kortholt; shawm; rauschpfeife),

with chorus: climax. coda

Side Two (23:22)

Monologues, fragments, "ruins" — a choral madrigal — solos for counter-tenor; duet for soprano and counter-tenor; with chorus, plus gamba & lute — lute solos with accompaniments; OM; shout, babble, bells; survival song; wind, birds, stars

STACY KEACH, actor
THE NONESUCH CONSORT

Diana Tramontini, soprano — William Zukof, counter-tenor Alan Titus, baritone — Kenneth Wollitz, winds — Lucy Cross, lute — Richard Taruskin, viola da gamba—with Steven Pepper, portative organ Members of THE NEW YORK MOTET SINGERS, Joseph Hansen, director JOSHUA RIFKIN, conductor

Electronic sounds realized at the Columbia-Princeton Electronic Music Center, New York Special Assistance: Steven Pepper / Produced and Recorded by Peter K. Siegel Editing & Mixing: Joshua Rifkin, Eric Salzman, Peter K. Siegel A Dolby-system recording Recorded at Elektra Sound Recorders, New York; A & R Recording, New York Texts copyright © 1969 by John Ashbery & Steven Wade

Eric Salzman's works include Verses and Cantos, The Peloponnesian War (dance/theater collage with Daniel Nagrin), Feedback (with visuals by Stan Vanderbeek), Foxes and Hedgehogs, and In Praise of the Owl and the Cuckoo; he has also composed the score for Can Man Survive?, a mixed-media environmental exhibit at the American Museum of Natural History in New York. In the summer of 1969, he toured South America, giving performances, seminars, and lectures. Educated at Princeton and Columbia and in Europe, he has been a critic with the New York Times and Herald Tribune, and is currently a critic for Stereo Review and music

director of WBAI-FM in New York. He is the author of a book on 20th-century music and numerous articles that have appeared in this country and abroad.

Stacy Keach played the title role in MacBird!, Falstaff and Peer Gynt with the New York Shakespeare Festival, Coriolanus with the Yale Repertory Theater, Edmund in King Lear at the Lincoln Center Repertory Theater, and the drifter in the film The Heart is a Lonely Hunter. He has studied at the University of California at Berkeley and the London Academy of Music and Dramatic Art; he has also been assistant professor of acting at the Yale Repertory Theater. In the 1969-70 season, he stars in

the film End of The Road and, on Broadway, in Arthur Kopit's Indians.

Joshua Rifkin studied at the Juilliard School of Music, New York and Princeton Universities, and in Germany. His music has been performed in America and Europe; he has also written arrangements for singers Judy Collins and Tom Paxton. As musical supervisor of Nonesuch Records, he founded the Nonesuch Consort in 1968; although the major activity of the group is the exploration of early music, contemporary works also play a significant role in their repertoire.