

— PROGRAM —

Side 1 — 30:49 Min.

LEJAREN HILLER

TWELVE-TONE VARIATIONS FOR PIANO (1954)

- I. Theme
- II. Variations upon Individual Tone Rows
- III. Variations upon Two Tone Rows Combined
- IV. Variations upon Three Tone Rows Combined
- V. Variations upon Four and Six Tone Rows Combined

Roger Shields, piano

Side 2 — 28:39 Min.

LEJAREN HILLER

(a) MACHINE MUSIC FOR PIANO, PERCUSSION AND TAPE (1964)

- I. Trio I
- II. Solo I (Piano)—Duo I (Tape and Percussion)—Solo II (Piano)
- III. Solo III (Tape)—Duo II (Percussion and Piano)—Solo IV (Tape)
- IV. Solo V (Percussion)—Duo II (Piano and Tape)—Solo VI (Percussion)
- V. Trio II

Jeffery Kowalsky, percussion
Roger Shields, piano

(b) SONATA NO. 3 FOR VIOLIN AND PIANO (1970)

- I. Furioso
- II. Largo
- III. Prestissimo

Mark Sokol, violin
Roger Shields, piano

Twelve-Tone Variations for Piano (1954)

Twelve-Tone Variations shares with my *String Quartet No. 5* of 1962 the dual characteristics of being composed according to serial techniques and being a full-scale set of variations. These are the only two compositions of mine that bear these two features in common though I have in numerous other works used variation form or have incorporated aspects of serial technique into compositions fundamentally based on other compositional premises.

As indicated above, this composition is in five movements. The first movement, the *Theme* itself is brief. The “theme” as such is a combination of six tone-rows. This, right off, is a somewhat unusual feature of this work, since it is more usual to base a serial composition on one basic row and perhaps subsidiary rows derived from it. Here, however, these six rows bear no particular relationship to one another. Nevertheless, they are combined together to form a melodic phrase several bars long that constitutes the actual “theme,” of the whole set of variations. The first movement, then, consists of four presentations of this theme, namely, itself, its retrograde, its retrograde inversion, and finally, its inversion. Note that it is the whole complex, not just the rows, that here undergoes the three classic permutations of serial writing.

The remaining four movements are all variations derived from this basic material. The second movement consists of six variations, all rather short, that are based upon each of the six rows taken in turn. The third movement consists of three more complex and longer variations utilizing combinations of rows 1 and 2, rows 3 and 4, and rows 5 and 6, respectively. The fourth movement, extending this process, consists of only two variation sets based upon rows 1, 2, and 3 and on rows 4, 5, and 6 respectively. By now, however, each of these is a fully developed complex movement in itself. Finally, the last movement consists of four variations, based on rows 1, 2, 3, and 4, on all 6 rows, on rows 3, 4, 5 and 6 and again on all 6 rows, respectively. Actually, the first variation on all six rows is in effect a restatement of the first movement, the *Theme*; however, it is this *Theme* played more-or-less upside down and backwards, that is to say, as if the first page of the score had been rotated 180° on the music rack. The final variations that follow this are an extended fugue and coda.

My remark about the restatement of the “*Theme*” reveals something of the freedom of the techniques applied throughout this composition. Although I have used all such standard techniques as inversion, retrogradation, retrogradation of inversion of both the rows and materials built from them, as well as building chords and other such structures from the rows, I have also not hesitated at all, to repeat notes freely in

violation of the “classic rules,” of devising novel techniques such as quadrature (90°) rotation, i.e., interchanging the pitch and time domains, of lining out the rows down a page of manuscript, across the systems, rather than only linearly, and so on. On the other hand, there is no use here of serialized rhythms, dynamics, and the like since these attributes of total serialism did not occur to me at the time.

I should also point out that these variations are also much freer in form than the bulk of the classic variation literature. In variation structures by Beethoven, for instance, the harmonic plan, the phrase lengths, and really often the basic outline of the melody of the theme is normally rather closely adhered to. This is not at all the case here, not even in the earliest variations.

Machine Music for Piano, Percussion and Tape (1964)

Although compositions involving both performers and tape were hardly a novelty even in 1964, it was not so usual to make the tape part so closely related to the instrumental parts as is done here. The tape recorder part throughout exchanges musical materials with the other two instruments much in the manner of a normal instrumental trio.

Machine Music possesses a symmetrical arch form. *Trio I* is a compact sonata form movement laid out as follows with the main section set at a *furioso* tempo ($\text{♩} = 216$). (The bar numbers refer to the published score):

Bars	Number of beats at $\text{♩} = 216$
1-2 Introduction (<i>grave; marcato</i>)	—
3-16 Exposition (first subject and transition)	60
17-22 Exposition (second subject and close)	30
23-35 Development	60
36-49 Recapitulation (first subject and transition)	60
50-55 Recapitulation (second subject and close)	30
56-57 Coda (<i>grave; marcato</i>)	—

Each *Duo* and each *Solo* lasts precisely one minute. The Three *Duos* are closely related musically, as are *Solo I* and *Solo VI* and *Solo II* and *Solo V*. *Solo III* and *Solo IV* are derived in turn from these. The instrumentation is so arranged that each performer has the opportunity to play a given basic musical structure once and just once. Moreover, the tape recorder enters in every other section throughout the composition, thus permitting its operator each time to cue up and get set for his next entry. Incidentally, the tape part is fully notated in the score, not only for documentation, but also for the benefit of the performers, since they must precisely co-ordinate themselves to it as well as one to one another.

Three three *Duos* are identical melodically and rhythmically, but differ from one another not only in terms of instrumentation and hence tone color but also “tonally” by successive transpositions by a major third (G#-C-E). The music itself, in 5/4 meter and most simply laid out in *Duo II*, is built up from four basic “lines.” Line 1, consists of four notes, assigned durations of 4, 5, 6, and 7 beats respectively. This guarantees a non-repeating accompaniment for 420 beats, so I set 210 beats as the total length for each *Duo*, since the next 210 beats would be the same except for the four-beat note. The “tune” of Line 3, played on the piano strings in *Duo II*, uses only the other 8 notes of the chromatic scale. Line 3 also contains rhythmic interpolations to fill in beats not supplied elsewhere. Line 2 is a 3-bar ostinato based on three notes repeated 4 times on beats 1, 4, 7 and 10 of each bar. Line 1 consists first of a repeated note on beats 2 and 6 of every bar and second of a note pattern that chromatically expands outwards (in the bells in *Duo II* from Ab up to F and down to C).

Solo I is simply a chord played on the piano *pp* according to the metric plan $(1+2+3+\dots+10)$. *Solo VI* is the retrograde of this played *ff* by the percussionist. *Solo III* is the combination of these on tape played *mf*. The duration of each sound event in this tape cue is exactly 0.5 second. The contents of these sound events are random cuttings from all the work tapes used to make the other five cues.

Solo II, for the solo piano, consists of four contrasting ideas presented in bars 1 through 4. Each idea is developed independently in successive bars by transposition, inversion, retrogradation, systematic shifting of material within the bar, and so on. The details of all these changes are easily perceived in the published score. Then, since there are 24 bars in all, each item occurs 6 times and occurs according to the following

symmetrical system:

/1234/4123/3412/2143/3214/4321/

Solo V is essentially the same music, this time, however, reconceived for percussion. I have been told by several percussionists that this is the most difficult piece they know of in the percussion literature. Finally, *Solo IV* is generally related to these two virtuosic soli in that it is dense and aggressive in texture. The sounds on the tape here are also reminiscent of the two *Trios*.

Trio II, of course, serves as a traditional finale and climax. Remember that this is a piece meant to go somewhere dramatically and not just be a chunk of soundscape. *Trio II* not only contains many elements derived from the *Trio I* in particular but also the bulk of the more theatrical elements in the work — the use of a roller toy, the title of the composition spoken backwards on the tape and the close terminated by an alarm clock.

Sonata No. 3 for Violin and Piano (1970)

I wrote this three-movement sonata during November and December, 1970 in Buffalo and added some final touches and alterations while vacationing on Lanzarote in the Canary Islands in early January, 1971. I find it rather odd to explain why I suddenly decided to write a piece of "straight" chamber music after not having done so for a considerable number of years. One compelling factor at least was the presence in Buffalo of Mark Sokol and Roger Shields for whom the piece was written. Their virtuosity was perhaps a challenge — so whatever else it is, the sonata is at least crushingly difficult to play.

It is in the three traditional movements: a sonata allegro, a slow movement and a rondo finale. Its mood is harsh and relentless. In this way, it is quite a contrast to its two predecessors. *Sonata No. 1* (1949) is cheerful and cozy and *Sonata No. 2* (1955) is rather full-blown and romantic by comparison.

There is really little that needs to be said regarding each of the movements save to note that there is a case to be made out for regarding this *Sonata No. 3* to be in C. There is repeated emphasis in the first movement on this tone — and on middle C in particular. The middle movement by contrast centers around F sharp and the final movement emphasizes C again. Also, much of the writing for each of the two instruments derives from their inherent possibilities and limitations, for example, the kinds of multiple stoppings assigned to the violin. With regard to the piano, incidentally, only in the middle movement is the pianist asked to produce sounds directly inside the piano; otherwise he is strictly treated as a keyboard performer, although occasionally he is required to do some rather unusual things like play with his chin and his elbows.

The Performers:

All the performers in this recording are or have been members of the Center of the Creative and Performing Arts in the State University of New York at Buffalo directed by Lukas Foss and Lejaren Hiller.

Roger Shields grew up in Arcola, Illinois and received the bulk of his musical training at the University of Illinois with Soulima Stravinsky. As the Kinley Fellow in 1955-6, he also studied with Yvonne Loriod in Paris and in 1969 he was a prizewinner at the International Busoni Competition in Italy. In addition to his work for the Center, he has also concertized as a performer of both classical and contemporary music in the United States, Canada, and Europe.

Mark Sokol comes from Seattle. After beginning violin studies with his father, Vilem Sokol, he went to the Julliard School of Music where he studied with Dorothy DeLay and Robert Mann. While in the army, prior to coming to Buffalo in 1970-71 he formed the West Point String Quartet which presented over 200 concerts. In the summer of 1971, he organized the Concord String Quartet which has since been engaged in recording contemporary string quartets for Vox Records. Their first record set includes Hiller's *Quartet No. 5* that is written in quarter-tones.

Jeffery Kowalsky came to Buffalo in 1971 after studying percussion with Thomas Siwe and more recently with G. Allan O'Connor at Northern Illinois University in DeKalb. He was percussionist with the New Music Group at N.I.U. from 1969 to 1971 and timpanist with the Rockford, Ill. Symphony in 1969. He presently is a candidate for an M.A. degree in percussion at SUNY at Buffalo, studying with Jan Williams as well as being a member of the Center.

Lejaren Hiller

avant garde

Seite 1:

LUKAS FOSS
(geb. 1922)

Paradigm (1968) (18'00)

"for my friends"

Session · Reading · Recital · Lecture

Jan Williams, Schlagzeug-Dirigent
(Percussionist-cond.) · **Stephen Bell,**
Elektrische Gitarre (Electric Guitar ·
électro-guitare) · Charles Haupt,
Violine · Jerry Kirkbride, Klarinette
(Clarinet) · Marijke Verberne, Cello ·
George Ritscher, Tonband und elektro-
nische Mittel (Tape recorder and Elec-
tronics · Bande et sons électroniques)
Lukas Foss, Musikalische Leitung
(Musical Supervision · Supervision
musicale)

(Music Publisher: Carl Fischer Inc.,
New York—B. Schott's Söhne, Mainz)

LEJAREN HILLER

(geb. 1924)

Algorithms I, Version I (1968) (9'15)

I. The Decay of Information

II. Icosahedron

III. The Incorporation of Constraints

Seite 2:

Algorithms I, Version IV (1968) (9'15)

I. The Decay of Information

II. Icosahedron

III. The Incorporation of Constraints

Petr. Kotik, Flöte (Flute) · Jerry Kirk-
bride, Klarinette (Clarinet) · Darlene
Reynard, Fagott · (Bassoon · Basson)
Frank Collura, Trompete (Trumpet ·
Trompette) · Mario Falcão, Harfe
(Harp · Harpe) · Ed Burnham, Schlag-
zeug (Percussion) · Charles Haupt,
Violine · Marijke Verberne, Violon-
cello · James Kurzdorfer, Kontrabass
(Double-bass · Contrebasse) · George
Ritscher, Tonband (Tape recorder ·
Bande)

Lejaren Hiller, Dirigent
(Conductor · Direction)

(Music Publisher: Theodore Presser
Company, New York · Universal
Edition, Wien)

ELLIOTT SCHWARTZ

(geb. 1936)

Signals (1968) (9'38)

James Fulkerson, Posaune (Trombone)
Nicholas Molfese, Kontrabass (Double-
bass · Contrebasse)

Elliott Schwartz, Musikalische Leitung
(Musical Supervision · Supervision
musicale)

Lukas Foss: Paradigm
("for my friends")

Paradigm ("for my friends") employs
5 musicians: a percussionist/conductor,
electric guitar, and 3 other instrumentalists.
All have notes to play and words to
speak, whisper, or shout. Words are
handled like notes.

I—*Session*. Each player has 3 tasks (musical
materials) and proceeds from one to the
other, sometimes at random, sometimes
on cue. The cues are syllables that com-
bine in a sentence: "Someone will be held
responsible".

II—*Reading*. Each player has moments of
note choice and moments of word choice.
Words and music are like a mosaic,
differently put together at every reading.
A glance at the composer's choice of
words reveals that grammar and meaning
are not left to chance; a poem should

All 5 players	Percussion	High Instr.	Middle Instr.	Low Instr.	Electric Guitar
Bury	your nostalgic your vulgar	pretention attitudes	devious political	fantasies manœuvres	not for me. waste.
Bury	your secret your polite	ornaments sentiment	calculated routine	caresses games	with twelve tones. ad nauseam.
Bury	your sophomoric your idle	abuse applause	timid indiscreet	recipes detours	of yesterday. but—is it art?
Give up	your hidden your pen heavy with	sonata scruples	virtuous gratuitous	mistakes choices	of fashion. et cetera.

(Any words from the second column to any words from the following one, etc.)

result from the 8×8 available word
juxtapositions.

III—*Recital*. An instrumental interlude. Every
sound is cued by the percussionist whose
flexaton serves as a baton.

IV—*Lecture*. Imitation techniques of all
kinds. For example: one imitates the
inflection or rhythm of a word on one's
instrument; the imitation is either preced-
ing, simultaneously duplicating, or
succeeding the spoken word. At times a
tape is heard imitating the live perfor-
mance with a tape delay of 2 seconds.
The words are taken from a recent
lecture:

"To take refuge in the past is to play safe. Avoid-
ance of truth. To burn the past is to play safe.
Avoidance of knowledge. Safeness lurks wherever
we turn. Improvisation that works is improvisation
made safe: one plays what one can play, that is,
what one knows, and one observes rules, insurances
against disorder, traffic controles. Chance music
is safe music if we accept any result as nature hav-
ing its way. To control the result is also to play
safe: freedom, choice handed to the performer
because it doesn't matter what he does: the given
entities control the music, neutralizing the perfor-
mer's personal additions. Electronic music is safe:
escape from the most dangerous element in music:
performance. Shock in music is always effective,
hence safe: cringe benefits. Program notes in
pseudo-scientific jargon are safe: language used
to conceal rather than reveal. Silence is safe, even
virtuous. Show me dangerous music."

Lukas Foss, born in Berlin, U. S. citizen
since his fifteenth year, composer, con-
ductor, pianist, teacher, and proponent
for new music, became successor to
Arnold Schoenberg at the University of
California in 1953 and conductor of the
Buffalo Philharmonic in 1962. Foss' early
compositions were traditional, neo-classic.
In the last 10 years he has emerged as a
leading force in the American avant-garde.
This transformation was the unexpected
result of an improvisation project which
he began in 1957 as an experiment with
his students at a time when the word
"aleatoric" had not yet entered the musi-
cal vocabulary. "Time Cycle" was the
transition piece. There followed "Echoi",
"Elytres", "Fragments", "For 24 Winds",
"Cello Concert", "Baroque Variations",
"Organ Preludes", "Paradigm" and
"Geod".

Lejaren Hiller:

Algorithms I, Versions I & IV

Algorithms I is the first of a cycle of three
compositions entitled *Algorithms I*, *Algo-*
rithms II, and *Algorithms III* that make use
of progressively more complex and
sophisticated computer programs for
their realization. *Algorithms I* was com-
pleted in 1968 and its two sequels are now
in progress of composition. In all three
works, each movement exists in four
"versions", any one of which can be
chosen for a given performance. Each
"version" reflects small but important
changes inserted into the various computer
programs used to produce this music.
This plan not only demonstrates that such
changes can drastically alter the overall
effect of a given general musical structure,
but also permits the controlled and iden-
tified isolation of the specific effect of a
particular musical element on the impres-
sion of the whole. This is a novel appli-
cation of a standard type of experimental
design.

The first movement of *Algorithms I* is
stochastic music in which the melodic lines
become progressively more dependent
upon previous pitch and rhythm choices.
The second movement is a complete serial
composition in which all row permutations

are used once each; also, rhythmic choices are least organized at its beginning and end, and most organized in its center. In the third movement, controls of vertical sonorities, of melodic motion, of resolutions of dissonant chords, of rhythmic patterns and of cadential structures are progressively introduced.

In this recording, only "Version I" and "Version IV" of Algorithms I are performed. These differ in control of factors such as note density, types of rows used, melodic constraints and types of dissonances resolved. All the music, both instrumental and electronic, was composed on an IBM-7094 computer. In addition, the sounds in the two tape channels were produced by digital-to-analog conversion on the Illiac II computer. Additional details concerning this composition are published in an article in "Music by Computers", edited by H. von Foerster and J. W. Beauchamp, published by John Wiley and Sons, New York.

Lejaren Hiller, born in New York in 1924, is currently Slee Professor of Composition at the State University of New York at Buffalo, a position previously held by composers such as Copland, Chavez, Thomson, Kagel and Pousseur. His background includes science as well as music, for he had a successful career as a research chemist before he turned to music professionally. From 1958 to 1968, Hiller designed and directed the Experimental Music Studio at the University of Illinois. He was the first composer to employ digital computers for music composition. In addition to computer music, he has composed some 70 other scores in all forms, instrumental, electronic and theatrical, including "Three Rituals for Two Percussionists", "HPSCHD" written in collaboration with John Cage, "A Triptych for Hieronymus", "Suite for 2 Pianos", and "Machine Music".

Elliott Schwartz: Signals

"*Signals*", composed in 1968, attempts a fusion of musical sounds, percussive use of the instruments, and words spoken by the performers. The piece is focused about two extended passages calling for a high degree of performer choice, in which the players respond to "signals" from each other. Other areas of the work, more tightly controlled, often ask the two players to become "four" (pitches both sung and played), or, conversely, ask the two to become "one" (duets upon a single instrument, first the trombone and finally the double-bass).

Elliott Schwartz teaches at Bowdoin College in Maine, and has also held visiting lectureships at Trinity College of Music, London, and the University of California at Santa Barbara.

The Center of the Creative and Performing Arts in the State University of New York at Buffalo, directed by Lukas Foss and Lejaren Hiller, is widely recognized for its skillful performances of contemporary music. Over the past six years, more than 100 composers have received performances on the Center's "Evenings for New Music" presented in Buffalo, New York City and elsewhere in the United States and Canada. The young virtuosi who make up the group have come to Buffalo from all over the Americas as well as from both Western and Eastern Europe and Japan.

Realisationen: »Evenings For New Music«

Center of Creative and Performing Arts, State University of New York at Buffalo

Produktion • Production • Directeur de production • Karl Faust
Toningenieur • Recording Engineer
Ingénieur du son: George Ritscher
Center Coordinator: Renee Levine
Design: Holger Matthies, Hamburg

Deutsche Übersetzung des Textes auf
Einlageblatt.
Traduction française ci-incluse.