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IMPROVISING PIANISTS: ASPECTS OF KEYBOARD TECHNIQUE AND MUSICAL STRUCTURE IN FREE JAZZ - 1955-1980.

Submitted by Mark Peter Wyatt Lockett

as a thesis for the degree of Doctor of Philosophy

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M.P.W. Lockett.

ABSTRACT

The jazz avant-garde of the 60s and 70s has often been
depicted as a movement that signalled the end of jazz as
we had come to know it, a movement of unbridled musical
energy and passion without the essential restraining
influences of formal guidelines and reverence for
- traditions. With the benefit of hindsight, from observing
the almost neoclassical stance of jazz in the 80s, the
notion that this music signified the genre's Armaggedon
was patently a misconception. This thesis argues that
free jazz was as much a style, concerned with finding its
own voice and technical vocabulary, as any other period of
jazz history.

As an analytical and critical study of pianists and their
use of the piano in free jazz and improvised music, this
survey is designed to fill a gap in musicological research
of this important artistic movement, which hitherto has
been primarily concerned with biography and with related
sociological issues. The study traces the piano through
the turbulent years of radical experimentalism in jazz and
the subsequent refinement in free improvisation in Europe
and the U.S. through the work of pianists central to the
movement. Rather than adopting the chronological
approach, this study considers the music under broad
headings specifically related to technique; the

instrument's position within the group, and the generation
of form, motivic structure and 'language'.

Chapter 1, by way of introduction, outlines the argument
of what constitutes the 'freedom' in free jazz and looks
at the early development of the avant garde as it arose in
opposition to the prevailing traditions of bebop and
contemporary notated music with special reference to three
influential pianists: Herbie Nichols, Lennie Tristano and
Thelonius Monk. Chapter 2 is concerned with new concepts
in overall form, while Chapter 3 takes a closer look at
the smaller components, or motifs, of modular
improvisatory structure. Chapter 4 examines the physical
nature of piano tones, their unique qualities of sustain
and resonance and their changing patterns of distribution
in this music; looking at 'space' firstly in the sense of
the piano's natural resonance and the pianists whose work
has explored this particular characteristic, and secondly,
the physical space involved in the act of playing, the
sense of movement or kinaesthesis. Chapter 5 will
concentrate on the dynamic and percussive approach to free
jazz piano. Chapter 6 turns from the physiological to the
psychological processes of improvisation; how the opposing
forces of habit and originality assert themselves in the
improviser's art. Chapter 7 will form a brief conclusion.

CHAPTER 1

There is always a danger in using such etymologically loaded words as 'freedom' that definitions become blurred. In discussing the development of piano style and technique in the field of free improvisation or free jazz (which, even, some would argue, have become mistakenly synonymous terms for distinctly separate genres) it will be necessary to get a clear idea of what sort of freedom we are dealing with in terms of this music. The source of philosophical worry about freedom has usually been the troubling issue of responsibility. In the free will v. determinism debate philosophers in general are hoping to make some room in the world for whatever degree of constraint is required within 'freedom' for holding people responsible for their actions. The problem of responsibility is more associated with ethics and morality, but the question of degrees of freedom is central to the present study. In working within an artistic genre which has acquired the label 'free' one must have in mind (a) what are the constraints whose absence is being signalled and (b) what it is from the artist that is being allowed free expression.

Complete freedom would be the freedom to decide or to do anything at all. Sartre's extreme libertarian view upholds that all our actions are spontaneous and that absolutely any decision is possible for any given

situation. This sense of freedom with regard to free

improvisation is an anomaly. As Howard Riley put it in

conversation:-

> "With people who don't like the idea of improvising
> without any guidelines you sometimes find this
> attitude; 'Well if it's free I can play anything,
> so I'll play I Do Like To Be Beside the Seaside.'
> That's all very well but personally I'm not
> interested in playing I Do Like To Be Beside The
> Seaside!"

Bertrand Russell's powerful remark that however free we

may be to do as we please we are not free to please as we

please makes just this point. Free jazz with a capital F

is now a standard term used to denote certain post-1955

developments in the jazz art, and while other terms such

as 'avant-garde', 'the new thing' and 'outside' have also

been used, Free jazz (first used as as title by Ornette

Coleman for a 1960 record which became a seminal influence

on the whole movement) is the one that stuck. Just like

Swing or Dixieland, Free is a style, and the very fact of

it being a style indicates that there are certain

boundaries and limitations.

It will often seem that in most things there are choices

to be made, and these choices are usually among a limited

number of alternatives. In the art of improvisation these

choices may be limited by logic, aesthetics,

unimaginitiveness or other criteria, and the freedom is

therefore incomplete. This is not to imply that this is
in any way an unsatisfactory or an inadequate sort of
freedom, on the contrary, the limitation of options (self-
imposed) with an absolute freedom of decision within those
options is a radical type of freedom which is at the heart
of this music.

The fact that its roots in jazz and avant-garde music are
clearly discernible have led some to criticize improvised
music on grounds of unoriginality - just a chaotic mish-
mash of former styles. While there can be no doubt of the
importance of these influences I would argue that these
are not a direct cause of the evolution of free jazz but
only an influence towards it. The distinction is a subtle
one. If often seems irresistible to regard the artistic
mind as a sort of field in which operates feelings,
desires, motivations to which it is subjected, and that
artistic output is the simple resultant of the various
forces converging upon it. Let us consider the following
hypothetical model:-

socio-cultural background

present environment

emotion/intuition ————————→ resultant action

financial considerations
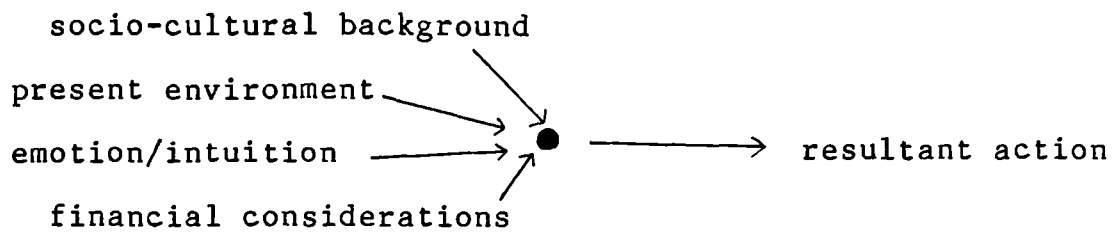
This is a model which gives rise to psychological
determinism. Now in this model there might be some
distinction between influence and cause, but the
distinction would be a shallow one. The cause of the act
might be identified as the strongest of the forces acting
upon one, while the other would be just influences. There
would be no qualitative difference between the two - just
a difference in strength.

The model I would propose is such that these forces never
converge on one point and do not give rise to direct
resultant action. Rather they are kept in abeyance by an
overriding self-motivation and are allowed to filter
through at a pace at which they can be absorbed and
digested:-

background

environment

emotion   self-motivation

gain
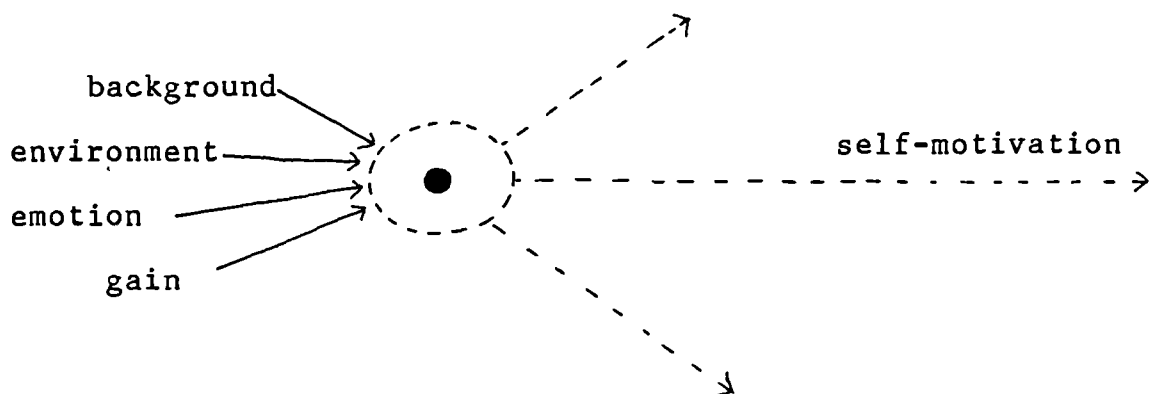
The artist is aware of these influences but they do not
cause him to do anything. Rather he causes himself to act
in certain ways in the knowledge of the forces that act
upon him. The creative motivation comes from within.

The identity of free jazz as a movement owes its existence
to radical developments which began in the mid 50s when a
handful of musicians recognised the need to react against
the dominant tradition of bebop which was by then past its
prime. The process of finding new, alternative means of
expression was a gradual one. Around this time there was
a proliferation of new personal jazz idioms from Miles
Davis' modalism to John Coltrane's "sheets of sound" to
Ornette Coleman's harmolodics. Liberated from various
traditional harmonic, melodic and rhythmic constraints
these musicians and others set about establishing
alternative workable frameworks for themselves. The
freedom from the routine frameworks of bebop was not a
species of randomness. This would indicate that the
freedom was a purely destructive impulse. Freedom from
these well-worn limitations cannot be just plain
uncausedness, any more than the seemingly aimless
meanderings of electrons are really 'free'. The question
is this: what qualification must be added to uncausedness
to produce freedom in an acceptable definition which could
apply here?

What I am concerned to argue is that improvised music as a
genre is not completely 'free' any more than it is a
victim of rigorous causal determinism. The range of
alternatives in a given musical context may be in some
sense determined (stylistically) but which one we choose
among the range is not. Therefore it is up to the soloist
or the improvising group to map out a working vocabulary.

Apart from minor variables, known as interpretation, the
musical score is a complete art work ready to be
'realized'. Now the idea of finished product is an
anathema to free music. While free improvisation has
borrowed stylistic elements from the avant-garde - its
liberated approach to rhythm, pitch and timbre -
fundamentally it is quite different. It is more like a
continuous 'work in progress' and far more unpredictable
and volatile than its notated counterparts. The
renaissance of improvisation in Europe and the U.S.A. has
taken place on many levels from the professional,
international scene of improvising musicians, to the
proliferation of amateur music collectives in the U.K.
which provide platforms for local musicians and open
participatory events. Common to all the different
social/economic levels is the underlying wish to restore
creative process as a thing of greater value than
consumable product (commercial recording or published
score). In group improvisation there is an attempt to

restore the lost communality of spontaneous invention
absent from notated music - to make music once more in the
sense of a non-verbal social intercourse.

The new improvised music has emerged as a result of
various influences that have converged on the contemporary
music scene. We can identify these influences under three
broad headings:-

1. Jazz and other popular forms of black American music.
2. European and American avant-garde art music.
3. The growing awareness and involvement with other world
    musics.

While free improvisation in part represents a breaking
down and fusion of the various genealogical strains which
separate contemporary movements in music, for the sake of
clarity I shall consider these three lines of development
separately.

1. The quest for freedom appears as the very beginnings
of jazz and reappears at every point of change and
transition in the music's history. The earliest jazz
musicians asserted their independence of the melody, form,
rhythm and expression of the turn-of-the-century musics
that surrounded them. In the late 20s Louis Armstrong
forged the concept of the soloist which has remained

fundamental to all jazz ever since. In the 1930s the
Count Basie Band revolutionized the jazz rhythm section.
In the 40s, when the previous swing era was largely
exhausted, the new music of Charlie Parker, Dizzy
Gillespie and Bud Powell introduced yet more new freedoms
to jazz.

Bebop emerged during the national despair of World War II,
when jazz was only surviving as a social music in a
vicious atmosphere of racial and economic exploitation.
It is a technically complex music of desperation and
emotional extremes requiring a co-ordination of muscle and
intellect that pressed human agility and creativity to
their outer limits.   John Litweiler sums up the
experience:-

> "Bop was an exhilarating adventure; in Gillespie's
> dizzying trumpet heights, in Powell's hallucinated
> piano excitement, a deadly fall to earth is ever
> possible. The vividness of Parker's alto saxophone
> lyricism made him bop's central figure, and his rhythm
> tumult is the tumult of complex, fleeting emotions.
> The brokenness of his phrasing, the swiftness of his
> passing emotions, from cruelty to tenderness, suggest
> a consciousness that was itself disrupted by the
> panic of alternating drug ingestion and withdrawal
> that, he said, was his life's continuity". (1)

Toward the end of the 40s, the unrest and nervous
excitement of bebop were more and more replaced by the
calm and smoothness of 'cool' jazz, a movement led by
Miles Davis and John Lewis, and the earthier, 'funkier'

style of bop called 'hard' bop with groups under the
leadership of drummers Max Roach and Art Blakey and the
pianist Horace Silver.

Silver developed a style of playing from bebop with a
fuller left hand often playing cluster-like chords in the
lowest registers. With the emphasis on slow to medium
blues he would play aggressively, on the beat, with a
feeling and expression more reminiscent of older blues and
boogie styles. It is to Silver that we owe the new
meaning of the word 'funky'. In his compositions he
strove to retain the basic format of bebop but give it new
life and structural variety. Thus he might use two 12-bar
blues phrases, followed by an eight bar bridge taken from
song form, and then repeat the blues phrase to end, and so
combine blues and song form in a 44-bar structure; or he
might combine a 15-bar main theme with a 16-bar interlude,
and so on, in an unprecedently liberated approach to
schematic ordering.

Far more radical experiments in jazz form in the mid-50s
were carried out by Charles Mingus. He wrote music
without foundation in pulse ("Getting Together"), he used
dense ensemble polyphony and texture ("Eulogy for Rudy
Williams") and also experimented in lengthening chord
changes over many measures, thus foreshadowing styles of
modal jazz. "Pithecanthropus Erectus" contains only the

vestiges of song form in its ABAC structure of the theme.
However, only A is composed; B is an improvised saxophone
duo, and C is an open-ended collective improvisation over
one chord with no fixed tempo. The pianist plays a
chordal motif which signals the entry of the next strain.
The theme statement is the first block in a pyramidal
structure; the next block is the tenor sax solo, the piano
solo is the pyramid's apex, and the descending side is the
alto solo and the final theme statement. The
improvisation builds to a frenzy towards the middle of the
performance and the harmonic structure of the solos is
quite static i.e. modal. In "Tijuana Moods" the shorter
pieces are pyramid forms packed with different events and
dense ensemble textures constantly in motion. Of the two
longer cuts, "Ysabel's Table Dance" is quite loosely
structured, with collect improvisations which alternate
over harmony that is static (modal) and mobile (chord
changes). The "Tijuana" suite, recorded in 1957, was
followed by other compositions demonstrating a
multiplicity of experimental ideas; gospel music
imitations, riff-based blues, parodies of 20s and 30s
styles ("Boogie Stop Shuffle", "My Jelly Roll Soul") and
completely abstract 'pure sound' improvisations ("Passions
of a Man"). Although often regarded as an outsider to the
mainstream currents of jazz development, Charles Mingus's
compositions led the way in a gradual breakdown of the
clearly differentiated roles of soloist and ensemble

background prevalent in Swing and Bebop; the lines that
rubbed against and crossed each other wildly and freely
recalls much more the older styles of New Orleans but
without those strict harmonic conventions. The breakdown
of traditional harmonic schemes, whether through the free
atonality of Cecil Taylor, or through simply removing any
harmonic basis to the music as in the early trio
·recordings of Ornette Coleman, was followed by a new
rhythmic conception, characterized by absence of metre and
symmetry. Far from rendering the music 'rhythmless', this
move gave rise to more subtle nuance and group empathy,
perhaps because of a previous common background in jazz
rhythm. Particularly in free collective improvisations
which relied heavily on the front line brass, a spirit of
empathy is felt by the flexible and natural method of
compatible respiration. They breathe and hence play as an
organic unit with no recourse to the tensile synchrony of
bebop. This ethic of total freedom, ecstatic communion
and the spirit of black consciousness in the early 60s (2)
(the continuing struggle for true racial equality in
American society, anger, and the recognition of African
ancestral roots) resulted in music of an emotional
intensity which was quite unknown up to that time.

As a harbinger of free jazz, which he disliked and
despised ("I used to play avant-garde bass when nobody
else did. Now I play 4/4 because none of the other

bassists do", he said in 1974). Mingus nevertheless
introduced advanced ideas to rhythm section accompaniment
in 1956/57, with spontaneously changing tempos, dynamic
levels and rhythmic patterns behind the soloists. He
employed some highly original and innovatory pianists;
among them Mal Waldron, whose uniquely sparse, blues-
infused harmonic style came into its own in later trio
recordings, and Don Pullen who became a central figure of
free jazz piano in the mid-60s in his duo recordings and
performances with percussionist Milford Graves.

But the innovations in piano style and technique in the
free jazz movement owe much to the work of three pianists
active in the late 40s to early 50s: Lennie Tristano,
Thelonious Monk and Herbie Nichols.

Tristano focused on the more relaxed and romantic aspects
of the bebop idiom, engendering a style which became known
as 'cool' jazz. While bop's harmonies, for all their
extensions and substitutions, are rooted in blues and the
32-bar song form, Tristano was creating more fragile,
open-ended structures in his search for a looser, more
lyrical idiom. In May 1949 he recorded the LP
"Crosscurrents" which included two cuts: "Intuition" and
"Digression", without theme, fixed harmonic structure, or
fixed tempo. Each piece begins with Tristano's piano
improvisation. Then alto sax player Lee Konitz joins in,

improvising on the piano phrases, followed by the rest of the sextet. Main and supporting roles in the collective improvisation slip effortlessly from instrument to instrument. Tristano and his group sometimes included such experiments in free form in their nightclub sets, though over subsequent years none of these musicians returned seriously to free playing. Lee Konitz felt that these recordings were of considerable influence in the free jazz movement, as he explained to Ira Gitler:-

> "Lennie said 'Let the tape roll for three minutes', and we played this intuitive thing. Barry (Ulanov) was to signal one of us at the end of two minutes.... I don't know what it means, except that we did do that kind of playing, and it was a great feeling. We did it once at a concert in Boston, and it was very exciting. It was difficult for us to do it in a club, as it was even to just play tunes, so we didn't play together any more for quite a few years. We really goofed. We had a lot of things going...No one in all this talk (referring to the free jazz of the 60s) hardly ever mentions that. And you know damn well that these cats have heard that record somewhere along the line. It just doesn't come from no place." (3)

That these short but prophetic recordings spawned the whole free jazz movement of the 60s is a highly questionable assumption, but they were nevertheless indicative of the bold experimental spirit that would eventually liberate jazz from the closed structures of bebop.

Although esteemed as a 'musicians' musician' and a great

teacher, Thelonius Monk worked in isolation for most of

his creative life. His records were ignored and his

personal style and technique ridiculed by the press,

though later in his life his music proved accessible to a

wider audience, long before intransigent critics

recognised its extraordinary originality. Gary Giddins,

puzzled by this long struggle for recognition, writes:-

> "Monk isn't merely accessible; he's almost gregarious
> in his desire to entertain, as long as the listener
> is willing to be entertained on Monk's terms. By this
> I don't mean to suggest that Monk's music is
> lightheaded or lighthearted, though on occasion it
> can be both, but that everything he did was designed
> to heighten the listener's response to melody, rhythm
> and harmony. His tools were traditional and his
> craftsmanship impeccable. Monk relished swing and the
> blues and the freedom to do with them as he pleased
> (his motto was: 'Jazz is freedom'); he pursued his
> muse with dauntless concentration, impressive faith,
> and an almost childlike glee. This, after all, was
> the musician who more than anyone else transformed the
> minor second from a mistake to resource." (4)

In his quartet recordings from 1948 he created a rhythm

section sound through his style as far removed from the

quickened nerves and the smooth harmonic relationships of

bop as was possible. There is a feeling of space both in

the economy of his interaction and in the wide, sparse

intervals he offered as harmonic colour and support.

During other solos he would often withdraw completely, or

just make very occasional interjections. Space is the

crux of this new rhythmic style: pulse and line are

separated, and the unprecedented rests generate an intense
feeling of suspense as each piano interjection is
highlighted by the conspicuous absence of 'comfortable'
harmonic relationships.

Like Monk's compositional output of the 40s, and Mingus's
of the 50s, the music of Herbie Nichols had little impact
on his contemporaries. In fact, Nichols had no noticeable
influence on jazz at all, even though he is one of the
greatest composer-pianists of the early 50s. In his
youth he had been the house pianist at Monroes, where he
played with Lester Young, Dizzy Gillespie and others in
the late 30s Harlem jam sessions out of which bebop grew.
He served in the army from 1941 to 1943, after which his
story, as A.B. Spellman (5) recounts, grows steadily more
pathetic, until his death in 1963 from leukaemia, at the
age of 43. He made his living by playing with a
succession of mediocre Dixieland and r and b bands, and
almost never had the opportunity to play his 100 unique
compositions for audiences. Thelonius Monk introduced him
to Mary Lou Williams who recorded two of his tunes in
1952, earning him a modest reputation as an unusual
composer. But apart from this he was ignored by the bebop
culture - only freaks survived, anyway, was Nichols sad
assessment. However, the wit and vigour of his music has
not the least suggestion of his life's course of poverty
and creative isolation. He led six recording sessions

between 1952 and 1957. In the first he improvises in a
pastiche of different styles and the music is full of
abrupt contrasts, disjunct phrases, substitute chord
changes, and cliff-hanging rests. Most of his recordings
are in medium to fast tempos for purposes of clarity and
boldness.

Rhythmically Nichols plunders a variety of styles from
stride and swing to bebop. Most of this themes are based
on call-response patterns and he punctuates his own lines
with isolated chords, clusters or runs. His 1956
recordings attracted a couple of promising reviews in the
jazz press. Larry Gushee wrote in Jazz Review:-

> "....certainly an original stylist, he plays as if
> conversing with himself. That is to say, he'll
> play a short phrase of the tune, interpose an
> angular, rather dissonant motive, combine this with
> an elusive mumbling in his left hand. Herbie likes
> to build his tunes around emotional situations that
> are attractively heartfelt and natural.....He has the
> advantage of richness of experience and varied
> musical contrast...."(6)

In these recordings he stretched pop song form almost to
breaking point; the 32, 16 and 12-bar forms of
conventional jazz had become useless to him. "The Gig"
has a 67-bar chorus, suggesting a transition from
certainty to the chaos of a modern jam session. "Query",
like Ives' "The Unanswered Question", is a question in
musical notes. A tense, emphatic call rises, and the

response is a mundane, half speed falling sequence. But when this unsatisfactory rise and fall begins a fourth time, a strong minor chord is interjected, followed by a long dumbfounded silence. Then a different query in the same shape receives a less evasive reply until at the end the initial query, now inverted, is followed by a cadence of satisfaction.

This, like many of his other compositions, have a programmatic content, and his art of portraiture is full of fantasy. In "House Party Starting" the quiet tonic triad at the opening "speaks of grave and silent doubts as to whether there is really going to be a party, whether there is going to be lots of fun. There is supposed to be a rising crescendo as more people enter the shindig to the accompanying noise of broken glassware and shuffling feet."(7)

"Hangover Triangle" is a nervous, panicky, intensely chromatic portrait of events observed from a park bench one summer night. "The site was really no more than an open triangle formed by converging streets. Everyone around me seemed determined to have a ball far into the night. Too many drank too deeply of the revelry, resulting in a lot of comic antics which, at least, inspired a very funny title." (8)

Nichols' whimsical titles disguise a seriousness and
dedication to his art as composer and pianist. He drew
inspiration from many sources: Bartok, Stravinsky, Villa-
Lobos, Thelonius Monk and Jelly Roll Morton ("Jelly was an
honest extrovert who used the freedom of jazz piano to
tell the story of his love of life and the historic times
in which he lived") (9). A prototype of the 1960s outcast
musician, Nichols embodied classic and modernist jazz
attitudes in a one-man tradition that bypassed bebop
altogether.

2. Improvisation in art music was a much more radical
departure from tradition. In their efforts to set up
alternative performance frameworks amidst the complexity
and sterility of serial compositional procedures in the
early 50s, composers turned to improvisation, though not
often in a thoroughgoing sense. It was found that the
aural effects of complex notational methods could also be
achieved simply and effectively through controlled use of
improvisation. Naturally this raised thorny issues of
exactly whose music was being played, as rigorous
notational practise had reduced the role of the performer
to little more than automaton. However, despite these
more philosophical problems, elements of proportional and
graphic notation; one or three-line staves for melody
instruments, and rapid flurries of unspecified grace notes
are typical of the Italian composers of that time; among

them Berio, Maderna and Nono. These indeterminate elements were not generally used in a structural way, but were rather an outgrowth of the tendency towards intricate detail and ornament. As a rule they were not interested in gesture with all its theatrical ramifications and emotional immediacy than in the 'purer' serial abstraction and precalculated precision. Far more radical experiments in sound exploration and performance structures were some of the contemporaneous developments in the U.S.A. John Cage, Morton Feldman, Christian Wolff and Earle Brown were all pioneers of new notational systems which put greater degrees of responsibility on the performer. Cage's use of random and chance procedures for making compositional decisions was a logical outcome of his studies with the Zen master Suzuki, who was instrumental in formation of Cage's philosophy of non-involvement (at that level of decision at least). Cage wanted "to let sounds be themselves rather than vehicles for man-made theories, or expression of human sentiments." (10). Cage's approach to indeterminacy, however, was concerned solely with pre-performance decisions, and not with improvisatory freedom. The form, once decided upon, would be just as binding for that performance as that of any conventionally notated work.

Christian Wolff, on the other hand, was evolving another type of indeterminacy in which the decisions were to be

made actually during the performance. In pieces such as
Duo for Pianists II (1958). For Five to Ten People (1962),
and In Between Pieces for Three Players (1963) he sets up
specific conditions and systems of cueing, controlling the
response of one player to another. This idea was taken up
later by Stockhausen in Plus-Minus, Prozession and
Kurzwellen (1968) before he renounced all composer control
in the text-derived "intuitive" pieces.

Many of Morton Feldman's early pieces were written on
graph paper in simple pitch x time schemes. By dividing
an instrument's range into broad areas of high, middle
and low, he was able to dispense with logical connections
and justifications for the movement from one note to the
next, and thus "project sounds into time, free from a
compositional rhetoric" (11). In Earle Brown's notational
systems, players gauge their entrances and relate to each
other according to graphic indications that imply
concurrent counterpoint and patterns of reciprocality.
Brown also pioneered aleatoric and invertible scores, as
well as non-specific graphic notation open to free
interpretation.

In the early 60s Lukas Foss formed an ensemble in Los
Angeles called "The Improvisational Chamber Ensemble"
which attempted to offer a listening public a 'serious'
counterpart to jazz improvisation, evolving very minimal,

functional notation systems through rehearsal and self-analysis. While these structural frameworks could more or less guarantee interesting musical results in Foss's terms, it was essentially an exercise in group composition rather than improvisation. He felt too entrenched in compositional method to get immersed in the unfamiliar territory of free improvisation. This attitude is made clear in his article "Composition v Improvisation" (12), where he describes spontaneous ideas as "raw material, 'exposed' rather than 'composed'......a fertilizing influence on composition."

Greater acceptance of the validity of improvisation per se is found in the New Music Ensemble led by the composer Larry Austin at the University of California, Davis, in the early 60s. This group avoided such safety mechanisms as used by Lukas Foss and gave public performances with nothing more decided than a brief description of the length and spirit of the end result. The historical significance of this ensemble, and others to which it gave rise such as Nuova Consonanza and Prima Materia in Rome, lies in its criteria of accessibility to a discerning listening public and its unwillingness to achieve this through 'safe' pre-composed structures.

Another improvisation ensemble working in Rome in the mid-60s was "Musica Elettronica Viva". They had a more

experimental and less studied approach than the groups previously mentioned, due in part to the diversity of interests and backgrounds of its individual members. Frederic Rzewski, Richard Teitelbaum and Alvin Curran represented the academic composers-turned-improvisors, Franco Cataldi and Ivan Coaquette had little previous musical experience and were self-taught, and Steve Lacy was a well-established avant-garde jazz musician. Alvin Curran describes the experience as it was in 1968:

> "....the music hopped, writhed, flew, floated, soared, crashed in a kind of dialectical aleatory which left everyone at the end physically exhausted. We were dangerous and we knew it." (13)

Whereas other collective improvisation groups of this period worked out their vocabulary through a process of exclusion and were often hidebound in their imitation through improvisation of the types of sounds that had come to be expected of avant-garde 'serious' music, Musica Elettronica Viva had an ethic of all-inclusiveness which they considered to be more important than accessibility of stylistic considerations. This inevitably led to a conflict of interests: to continue to explore the fruitful areas of mutual interest within such a diverse group of musicians, or whether to open the group up to other musicians, non-musicians or even audiences. This

principle of inclusiveness and breaking down the divisions
of musicians, non-musicians and listeners was behind
Curran's "Soup - A Recipe" (14) and Rzewski's "The Sound
Pool" (bring your own sound and cast it in). A British
counterpart to these experiments was the Continuous Music
Ensemble which formed in 1965 in Wood Green. The group
later changed its name to The People Band achieving a
certain notoriety and also making a record under the
patronage of Rolling Stones' drummer, Charlie Watts. (15)

As improvisation was a very new thing to a tradition which
had previously relied exclusively on notation as its first
means of expression, attention was focused on the micro-
world of sound exploration, rather than extending the
boundaries of style and structure, as in the case of free
jazz. In 1965 Cornelius Cardew (who later co-founded an
amorphous, anarchic ensemble, The Scratch Orchestra, which
also experimented with free improvisation) joined a group
of four musicians in London who gave weekly performances
of what they called "AMM" music. Cardew writes of this
experience:-

> "AMM music is supposed to admit all sounds but the
> members of AMM have marked preferences. An openness
> to the totality of sounds implies a tendency away
> from traditional musical structures towards
> informality ..... Informal 'sound' has a power over
> our emotional responses that 'formal' music does not,

in that it acts subliminally rather than on a
cultural level. This is a possible definition of
the area in which AMM is experimental. We are
searching for sounds and for the responses that
attach to them, rather than thinking them up,
preparing them and producing them. The search is
conducted in the medium of sound and the musician
himself is at the heart of the experiment." (16)

3. A profound influence on both jazz and art music has

been the growing awareness and access to world music - the

numerous and varied traditions of folk, court and ritual

musics. The increased knowledge and contact with Oriental

music, for example, and its effect on John Cage, Henry

Cowell, Harry Partch and Lou Harrison, has made it a

seminal influence in the development of twentieth century

American music. Indeed, the contemporary art music of the

West Coast, for all its technological sophistication has,

in general terms, more in common with the East in its

approach to restrictive tonality, non-developmental

harmony, performance ritual, combined art forms and

extended time spans. David Reck writes of this Western

preoccupation with Eastern music:-

"It is a curious irony that the two power factors
in the destruction of indigenous cultures and
their musics - the European colonial empires and
the modern age of advanced communications and
technology - have also given us the hope for
their preservation. It was through the hundreds

> of thousands of European adventurers, administrators,
> and missionaries who fanned out across the globe
> (and wrote about what they saw and experienced)
> that we in the West first became aware of other
> cultures....the tape machine has made it possible
> to record and preserve and transport music over
> thousands of miles so that we may listen to much
> of our earth's music on the spot where we stand,
> in our own two shoes." (17)

It is not surprising that many improvisers have taken to playing a variety of non-Western instruments, or that their playing techniques have been influenced by ethnic musics to which improvisation is central. Don Cherry and Nana Vasconcelos both occupy a middle ground between jazz and a type of eclectic primitive music (of mainly African and Latin American derivation) which is reflected in an expressed concern with "naturalness" in musical ideas and a spirituality which is part of their approach to improvisation.

The Art Ensemble of Chicago, formed in 1965, were also a part of the same movement which draw ostentatiously on world music as an inspiration. They sported the slogan "Great Black Music: Ancient to the Future", and to underscore their ecunemical ambitions they surrounded

themselves with dozens of primitive instruments,
occasionally dressing up and painting their faces in
accord with African custom. That most of their material
can be traced to various periods in the history of jazz is
unquestionable, but even if this outweighs considerable
borrowings from European atonality, Asian scales and
African rhythms, the result is a modern American
selectivism.

John Coltrane, in his later years, was drawn to world
music as source of inspiration. Many have commented on
the similarity of his soprano saxophone style with the
nasal timbres of Middle Eastern and North African reed
instruments and their music. In June 1965 Coltrane
collaborated with Juno Lewis, a drummer, drum maker and
singer from New Orleans, to record Kulu Se Mama. Lewis,
intensely proud of his African ancestry, conceived the
piece as a dedication to both his natural and his earth
mother. Nat Hentoff describes the performance as "an
absorbing, almost trance-like fusion of tenderness and
strength, memory and pride. And fitting its ritual nature
the singing and much of the playing by the horns have the
cadences of a chant." (18) Other non-western influences
become more prevalent in Coltrane's late music, in his
approach to ensemble texture. He said of that period, "I
always thought using two basses sound like an African
water drum." (19). Both in the concern with stasis as

exemplified in much tribal music, and the sustained

textural density and intensity typical of the free jazz

movement, the listener, in a sense, guides himself on a

selective path rather than being more or less compelled to

hear things in a certain way by the emergent articulation

of contrasts.

In a recent interview, Cecil Taylor acknowledged certain

world music influences on his early development:

> "An important element in my own development
> came when I heard the Balinese Orchestra in
> New York, for their conception of compositional
> space, and then Kabuki Theatre, for the idea of
> what they did with vocal timbre, and with movement."
> (20).

While both free jazz and art music retain firm links with

a sequential understanding of time in terms of structure

or performance duration, because of the density of musical

events the listener is often required to be selective, and

this process of self-guidance could be made cyclical, for

example, so no matter where one enters the stream, one

would eventually come upon the same set of conditions.

Terry Riley considers his semi-improvised performances to

be manifestations of different stages in a continuous

metamorphosis of the same piece. In an interview with

Robert Ashley (21) he explains how he works out patterns

which are then practised for a long time, becoming ingrained on his aural and muscular memory. These become gradually changed in his mind, often over the course of several years, into new and different patterns sometimes completely superseding the old ones. There is no urgency for change and development, but an intuitive creative process which is allowed to evolve at its own natural pace. Certain forms in Oriental and African music are purposely redundant so that one may come and go (player or listeners) as circumstances dictate without losing the essence, and often, because of performance length or nature, it may be impractical to stay for its entirety or to be alert to every moment. Thus a more ambivalent, less time-bound relationship between music and people could become the norm, particularly in free improvisation which is not concerned with finite structures.

The emphasis of this thesis will be on free jazz as this is, arguably, a more integrated and consistently developed field of improvised music than that which has arisen out of or in opposition to notated forms. The abstraction of thought and conformity to extra-musical patterns and systems implicit in notation have had a detrimental effect on the attitude of art music towards improvisation in many cases (22). While art music embodies certain ideals of 'correct' technique, 'good' tone, etc, jazz has not been so preoccupied with uniformity of sound production.

Indeed, a distinctively individual sound is often an important goal. Whereas the classically trained wind player will devote years of study and practise to eliminating inconsistencies of tone and to overcoming the idiosyncrasies of the instrument, a jazz player is more likely to make use of these quirks and accidental sounds as a richly expressive resource. Similarly, in Japanese shakuhachi music, in which the 12-note scale produced by controlled adjustment of finger positions over the five holes is not consistent with a standard chromatic scale, the player will explore the varying timbres and strengths of each note, using the instrument's timbral heterogeneity to the full. Thus the avant-garde and the free jazz groups of the 60s can often be seen to differ considerably; the former concentrating on sound exploration per se, and the other going a step beyond this to explore ensemble energy with the drive and extroversion of jazz but without its formal principles.

However, improvised music now has such an eclectic genealogy that maintaining such distinctions may well be irrelevant. Yet it is that diversity of background that has proved fruitful in the rapid growth of this music during the latter 70s. The pioneers of free jazz clearly understood that improvisation should be bold and confident, to which end is directed all the energy and passion or recordings such as Archie Shepp's "Fire Music"

(1962) and John Coltrane's "Ascension" (1965). It became
clear that freedom meant a particular kind of alertness to
group intercommunication and was not simply synonymous
with license. But one of the principal difficulties of
this music has been its existence in a rigidly defined and
maintained performer/audience separation. It has
frequently been criticized as a 'closed shop' to all but
the initiated few, a musicians' music with nothing to
offer a novice listener - precisely those conditions which
Musica Elletronica Viva and The People Band sought to
break down. The divisions of inside/outside and of
comprehensibility/impenetrability are two aspects of an
aesthetic misunderstanding, a metaphor of separation,
about which neither logic nor psychology are in any
agreement.

The problem is as much with the performance situation as
with the music itself; that improvised music has usually
been forced into a mode of presentation, with all its
cultural expectations, which is unsuitable. To begin
with, this problem was often side-stepped by exclusion of
listening public. Musica Elettronica Viva and The Scratch
Orchestra worked initially on this basis, and the later
inclusion of audience created unforeseen problems. The
'closed' group situations, were able to play a kind of
experimental domestic music, a "musica practica" in
Barthes' sense of the word. Here the need for

'projection' is overcome by total participation within the system; a music that is:-

> "....very little auditory, being above all manual (and thus in a way much more sensual). It is a music which you and I can play, alone or among friends, with no other audience than its participants (that is, with all risk of theatre, all temptation of hysteria removed); a muscular music in which the part taken by the sense of hearing is one only of ratification, as though the body were hearing - and not 'the soul'." (23)

Another way out of the awkwardness of the formal concert situation has been to question, implicitly or explicitly, this performer/audience relationship. Audience participation on a fairly simple level has been an important element of soul and rock concerts (hand clapping, call-response patterns, etc), as it has always been in English folksong using verses and choruses. Don Cherry often makes greater demands on his audiences, asking them to "help him out" by clapping a rhythmic pattern or singing a melody against which he will spontaneously compose a counterpoint. One of the more explicit questioners of performer/audience roles has been Steve Beresford, who started out as an improviser of vignettes, using various instruments, toys, found objects and noise-makers of all descriptions. Using humour and pastiche he would make a commentary on what, perhaps, musical performance is about, often using contrasting tableaux or accumulated details to demonstrate the fact

that he had no particular technical/instrumental skills that he wished to show off.

Other British improvisers have been concerned with restructuring conventional forms of presentation by performing in different environments, exploring musical interactions with unusual or exotic locations, such as Trevor Wishart in "Beach Singularity" and "Forest Singularity". Paul Burwell creates a kind of dialogue with the natural sounds of the landscape chosen for a particular performance, and like the natural sounds, the man-made sounds are equally expendable i.e. if the sounds of human instruments and voices are dissipated by the sounds of wind and waves, what is left is still a valid artistic statement. Of the type of work Burwell writes:-

> "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
> concert hall is a closed unit, excluding all other
> sounds and activities except the music, which itself is
> usually tightly structured and closed, relating only to
> its own laws." (24)

The Aeolian instruments of Paul Burwell, Max Eastley and David Toop represent a similar breaking away from the normal environments and time spans associated with music. It is a curious irony that a society that accepts background music as an indispensable part of commerce

should still consider these alternative and informal modes
of music presentation as controversial.

This type of environmental improvised music occupies an
uneasy middle ground between the two segregated sound
systems of our society: the symbolic communication of
humans (speech, gesture, music, etc.) and the less
tangible 'arbitrary' sounds of nature. In some cultures
this division is less distinct. In New Guinea, for
example, music is closely linked with natural sounds:-

> ".....wind sounds are associated with the supernatural
> - the sounds of bullroarers are often attributed with
> spiritual properties, blowing through the mouth is an
> essential part of many magic spells, and so on.
> Similarly, flute blowing is used as a mediator between
> the human and spirit worlds in many parts of New
> Guinea." (25)

Certainly the art of the improviser has elements in common
with the flow, spontaneity and randomness of natural sound
systems (David Toop emphasised this connection in his
writings on bisonics), but it has more than just this. In
improvisation however 'free', the mind naturally functions
as a duality: a recording instrument recalling acquired
skills and musical vocabulary to complement the
creative/spontaneous elements. Free jazz, therefore,
would assume some aspects of the styles, ideas and
techniques of jazz, and thus differ considerably from an
improvisation by, say, Stockhausen's musicians. A degree

of maximum unpredictability might appear to offer the most
'freedom' to the player, but in real terms to make music
using this principle as the axiomatic basis would be
unsatisfactory and probably quite impossible since musical
preferences will naturally assert themselves in some form.

Improvised music is an aural language, bypassing the
filtering mechanisms of notation, and as such has more in
common with other non-literate musical cultures of the
world than it does with Western music. Its immediacy
allows a greater degree of aural complexity and thus
'difficulty' for the listener more accustomed to the
filtering and standardising effects of notation. Edward
Sapir, the distinguished American linguist argued that a
language will automatically determine, and to no mean
extent, the thought that it seeks to express:-

> "The fact of the matter is that the 'real world' is to
> a large extent built up on the language habits of the
> group. No two languages are ever sufficiently similar
> to be considered as representing the same social
> reality. The worlds in which different societies
> live are distinct worlds, not merely the same world
> with different labels attached...... We see and hear
> and otherwise experience very largely as we do because
> the language habits of our community predispose
> certain choices of interpretation." (26).

The point is here that determinate notation - the mnemonic
device - being elevated to a position of primary
importance, puts severe restrictions on diversity of
expression as it is basically geared to certain forms and

time scales. By its very nature it eliminates the
immediate, face-to-face communication of non-literate
musical idioms. As with the written word, musical
notation reduces the language to a rational objectivity
and restrains its capacity for much higher rates of
change; in this way pre- and post-notative musics can
appear 'incomprehensible'. The subtle rhythmic nuance of
Ghanaian drumming or Balinese gamelan, for example, defy
accurate transcription into standard notation. Similarly
the extreme density and speed of much free jazz
performance belongs to quite a different language from
that which can be written down. I think that it is by no
coincidence that the language of new improvised music has
gravitated towards certain un-notable qualities: complex
rhythms, intricate and vibrant yet unattached to metre,
and speed, not just in terms of notes per second, but
speed of change in articulation coupled with the timbral
variables in any one sound. This notion of speed in
relation to keyboard playing will be examined in Chapter
5.

Because of the piano's versatility if can fulfil a variety
of different roles, rhythmic, harmonic and melodic, but
its position in jazz has always been a dichotomy. As jazz
began with ragtime, and ragtime being a pianistic music,
one could conjecture that jazz began with the piano. On
the other hand, as the piano could not be incorporated

into the early marching bands of New Orleans, the early
jazz that derived from street music rather than from
ragtime (which was essentially a solo music of the bars,
cabarets and 'houses') omitted the piano. Its potential
in a band context remained unrealised until the fusion
with ragtime which took place in the 20s, brought about
largely by Jelly Roll Morton.

Though New Orleans, Kansas City and Chicago are regarded
as the principle centres of early jazz (until the late
20s), Harlem of the 1920s was also a breeding ground for
jazz piano, with musicians such as James P. Johnson,
Willie "The Lion" Smith, Duke Ellington and Luckey
Roberts. Theirs again was a solo music making full use of
the instrument's tonal range and its melodic and
polyrhythmic potential. Much later, in bebop, this
richness and full sound was, to a large extent,
subordinated to the ideals of group homogeneity and a new
style of playing emerged (instigated mainly by Bud Powell)
in which sharply etched, horn-like lines in the right hand
are set against sparser chordal/rhythmic interjections in
the left hand. The hands separate out; the right hand
moves closer to the front line instruments imitating their
tone, range and phrasing, while the left hand forms an
integral part of the rhythm section. Joachim Berendt
writes:-

"The more the pianist adopts the phrasing of the
horns, the more he relinquishes the true potential
of his instrument - up to a point which can represent
'pianistic suicide' for anyone familiar with pianistic
virtuosity in European music." (27)

Though Powell is too great a figure to be capable of the

'pianistic suicide' of which Berendt speaks, it did exist

within the piano style he represents. As we move towards

free jazz piano through such figures as Tristano, Nichols

and Monk, a much more eclectic approach emerges drawing on

earlier, more 'pianistic' styles of blues, boogie and

stride piano as well as the bebop sense of highly

articulated dynamic line. From then on we are into a

process of discovery or rediscovery of the piano's

potential - its lyrical and percussive timbral

possibilities and its capacity for harmonic and rhythmic

complexity.

I shall be looking at this music from a formal and

technical angle; how pianists have opened up the

improvisatory possibilities of the instrument since the

late 50s, and how the piano has become re-integrated to

occupy a central place of importance in the new music.

For a working definition of technique I turn to Matthay:-

"Technique means the power of expressing oneself musically..... Technique is rather a matter of the Mind than of the fingers.... To acquire technique therefore implies that you must induce and enforce a particular mental-muscular association and co-operation for every possible musical effect." (28)

Using this interpretation of technique, i.e. as an aesthetic as well as a physiological phenomenon, this thesis will examine the changing role of the piano as it relates to recent improvised music. In chapters 2-4 attention will be focused on different manifestations of form, starting with the inter-ensemble relationship of piano to other instruments, and new concepts in overall form - how these depart from the accepted structures of bop. Chapter 3 will take a closer look at the smaller components of modular improvisatory structure - the fertile motifs, composed beforehand or generated spontaneously. Chapter 4 takes a step closer still, as it were, to look at individual piano tones, their unique qualities of sustain and resonance and their changing patterns of distribution within the instrument's range. This chapter will look at 'space'; firstly in the sense of the piano's 'singing' tone and the pianists who have exploited this particular characteristic, and secondly, the physical space involved in the act of playing, the sense of movement or kinaesthesis. Chapter 5 will concentrate on the dynamic and percussive aspects of free jazz piano. Chapter 6 turns from the physiological to the

psychological processes of improvisation; how the opposing

forces of habit and originality assert themselves in the

improviser's art. Chapter 7 will be a brief conclusion.

NOTES FOR CHAPTER 1

(1) John Litweiler: "The Freedom Principle" p 14-15.

(2) see writings of Frank Kofsky, LeRoi Jones and
     Mingus's autobiography "Beneath the Underdog"

(3) Ira Gitler: "Jazz Masters of the 40s" p. 235

(4) Gary Giddins: "Rhythm-a-ning" p. 215

(5) A.B. Spellman: "Four lives in the Bebop Business"
     p. 153-177

(6) op. cit. p. 169

(7) Herbie Nichols Trio (Blue Note 1956) Composer's
     sleeve notes.

(8) op. cit.

(9) op. cit.

(10) John Cage: "A Year from Monday"

(11) Morton Feldman: "Between Categories" The Composer
     1:2. September 1969.

(12) Lukas Foss. Musical Times 103 (Oct.1962) p. 684-5

(13) Musics 23 p.14

(14) op. cit.

(15) In Steve Beresford's articles about the People Band
     in Musics 16 and 17 is included a letter from Alvin
     Curran (Jan. 1978) describing his encounter with them
     at a Musica Elettronica Viva concert at the Purcell
     Room in 1969:

>   "....inviting themselves past the stage
>   doorman, the PB installed themselves quietly
>   on stage during the intermission. There was
>   no problem, as we were expecting the band to
>   show up to help us out with "The Sound Pool"
>   in which the audience would be invited to
>   participate. And they did. Within 15
>   minutes the whole hall was a divine madhouse
>   of singing, playing and dancing. The
>   establishment got terrified and called the
>   police and fire departments to quell us."
>   (Musics 16 p. 16).

(16) Cornelius Cardew: "Towards an Ethic of
     Improvisation"
     p. 18

(17) David Reck: "Music of the Whole Earth" p. 42

(18) Nat Hentoff: Sleeve Notes to "Kulu Se Mama"
     John Coltrane.

(19) J.C. Thomas: "Chasin' the Trane" p. 152.

(20) The Wire (Issue 46/47 Dec, 1987) p. 59.

(21) From Robert Ashley's video series: "Music with Roots
     in The Aether".

(22) In Misha Mengelberg's essay, "Werdegang der
     Improvisation" he quotes "the Dutch composer
     Louis A. asked Iannis X. what he thought of
     improvisation. X. replied 'Improvisation is
     banal'." (1979 trans. Glyn Perrin)

(23) Roland Barthes: "Image/Music/Text" p. 149

(24) Paul Burwell: "Radical Structure." Studio
     International Oct/Nov. 1976 - p. 321.

(25) Ragnar Johnson/Jessica Mayer: Notes to
     "Sacred Flute Music of New Guinea: Madang"
     (Quartz 001).

(26) Edward Sapir: "Selected Writings in Language,
     Culture and Personality", 1949 - p. 162

(27) Joachim Berendt: "The Jazz Book" - p. 247.

(28) Tobias Matthay: "The Visible and Invisible in

Pianoforte Technique." p.3.

CHAPTER 2

The most significant change in attitude in contemporary
music which has revitalised the art of improvisation is
the wider interpretation of 'form'; the way in which we
formulate and structure aesthetic experience. The ideas
in sonata form of resolving conflict (inherent tensions
directed towards a potential resolution) and the setting
up of architectural symmetry and proportion (even though
direct auditory cognition of such formal intricacies is
doubtful) continue in one way or another in much
contemporary written music. However, in more experimental
developments we find a discontinuity with these deeply
embedded ideals of form and proportion as music has turned
in upon itself to focus on the creative process rather
than on end result. There now seems to be less emphasis
on contained, finished objects that reflect established
cultural models, and the formalised nicety of defined
beginnings and endings. There is a tendancy away from the
desire to frame and package, towards a less constraining
mode of presentation. As E.Kris has written:-

"There is a trend in modern art to consider the work
of art as a documentation of the creative process
itself; ashift in the traditional or previously
existing relation between the artist and his public".
(1).

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Jackson Pollock realised that means and end were one and

the same; that the physical involvement with paint and

canvas dictated the painting's form:-

> "When I am in my painting, I'm not aware of what I
> am doing. It is only after a sort of 'get acquainted'
> period that I see what I have been about. I have no
> fears about making changes, destroying the image, etc.,
> because the painting has a life of its own. I try to
> let it come through. It is only when I lose contact
> with the painting that the result is a mess. Otherwise
> there is pure harmony, and easy give and take, and the
> painting comes out well." (2)

Just as the abstract expressionist's canvas documents his

gestures, the improvising pianist's keyboard might be seen

as a calligraph displaying and recording a particular

state of mind. The contemporary acceptance of change as a

norm has diverted attention from the permanent art object

to the transient creative act.

John Cage's view of composition is that of an empty frame

containing transient possibilities. He writes:-

> "....an activity integrating the opposites, the
> rational and the irrational, bringing about, ideally,
> a freely moving continuity within a strict division of
> parts, the sounds, their combination and succession
> being either logically related or arbitrarily chosen."
> (3)

Form by this definition is virtually synonymous with

duration. The aesthetic experience of the artist can

reflect the sense of time passing and of 'natural'

rhythms; it may exist before and after the particular
occasion when it is sampled. With such flexible time
referents the frame can become irrelevant and dispensable.
Improvised music is concerned a priori with transience and
spontaneous ideas, a fact that its practitioners have been
at pains to stress. But also, conceptual frameworks
become established, patterns of relationship crystallised,
so that improvisers can 'speak' to each other. This
process of refinement of improvisatory language can be
seen as constraining or liberating, but it is more or less
inevitable. I shall look first at some of the ways in
which form has manifested itself in this most informal or
anti-formal music, with particular reference to the
changing pattern of relationships and associations of the
piano in this context.

The rise of free music is a fairly recent phenomenon. One
may attribute it to various sociological, philosophical
and political causes, but observed from a musicological
standpoint it is due, at least in part, to the
disintegration of a musical language, or rather the
'rules' governing that language. In jazz there was a
breakdown of harmony, the set patterns of changes,
formulaic melodic line, and later, tonality and metre were
also cast aside in the search for a more spontaneous style
of expression. The spirit of black consciousness in the
60s found a paradigm in the liberation from the formalised

structure in jazz, and while some of its innovators, such as Archie Shepp, were in tune with social events, others, such as John Coltrane and Sun Ra, had a more cosmological view, though in both instances freedom from a 'repressive' musical form was an underlying ideal. Herbert Read, writing on form in visual art, argues that this freedom is a positive inspiration rather than, as commonly assumed, a -loss of essential control. He asks:-

> "But can we assume that chaos itself, the original formlessness and limitlessness of being, is without positive significance of any kind? We have seen that the unknown is the source of terror and Angst - in other words, that it acts upon human sensibility in a most powerful though incoherent manner. Why do we exclude the possibility that chaos was from the beginning a source of emotions of an aesthetic kind? In other words, must we logically associate art with an emergent consciousness of form?" (4)

Clearly Read believes that creativity emerges from chaos and that order is something superimposed later after reflection. In improvised music there is no predetermined structure or material, ideas evolve unpredictably from moment to moment. The 'form' may be rationalised in retrospect, perhaps from a recording, though the overall shape of the improvisation would probably not be an important concern at the time. The improvisation creates its own autonomous material through the friction between individuals and environment, in this way defining a framework through the temporal manipulation of that material. Distinct areas may recur, consciously or

unconsciously, and ideas may be restated if only coincidentally as part of an individual vocabulary which has its own inherent structure. But it is not merely a matter of adding together self-contained vocabularies. The coherence of the group improvisation comes about through mental cross-fertilisation, the extent of mutual interference between players in the course of which hidden axioms, techniques, implied old codes may suddenly stand revealed and are subsequently dropped. So the form arises not 'accidentally' but from specific player relationships which can range from being 'friendly' to confrontational. The adding together of known and unknown quantities has been a 'creativity formula' in many fields. As Koestler writes of the nature of scientific discovery:-

"Out of creative anarchy emerges the new synthesis." (5).

The beauty and appeal of free jazz in the early 60s lay not so much in the absence of 'rules' and the stringent technical requirements that they necessitated (in fact many of the musicians who turned to free jazz were highly proficient in bebop), but in the fact that the music was immediately opened up to exploration of sound and an uninhibited expression through the use of sounds which were previously considered as 'noise'. These were now valid artistic criteria which prompted LeRoi Jones to boldly, and rather misleadingly claim:-

"The Black musicians who know anything about the
European tempered scale no longer want it, if only
just to be contemporary." (6)

Jones uses the word 'primitive' in the sense of 'first' or
'new' to describe the music of Duke Ellington (his "jungle
style") and of Albert Ayler who said that he no longer
wanted notes but the total articulation of sound (7). He
cites other examples of free jazz turning towards African
roots, rather as Picasso and Jackson Pollock turned to
primitive art as their main inspiration. But as for
dispensing with the influence of Europe, the reverse is
often true. Musicians working in the field of free jazz
often espouse the sounds and compositional techniques of
the European avant-garde, and see nothing wrong with
plundering these resources as well as the ancestral past.
Jones' statement also throws an unfavourable light on the
piano viz. the keyboard is a graphic representation of the
equal tempered scale, and short of preparing or retuning
the instrument it cannot help but remain so. The piano
was, in many instances, left behind or left out of the
early stages of this evolution, developing later along its
own course which stems from a tradition of solo music,
from ragtime and Art Tatum. Because of its fixed
temperament it was unsuitable to many aspects of the new
aesthetic. Ornette Coleman, one of the prime movers in
the free jazz revolution, found the timbre and tuning

restrictive and incompatible with the more expressive free style that he was developing with its flexible, non-tempered tuning. He therefore ceased to use pianos in his ensembles from 1959 on. Other popular new techniques also could not be assimilated by the piano: the bending and cracking of notes, different types of attack and decay, multiphonics, etc. The predominance of the 'horns' in this music eventually produced a backlash of experimentation in keyboard playing, with pianists turning first to earlier styles of jazz for ideas.

Clyde Hart (1910-45) was among the first to directly influence the new music. While a member of Lionel Hampton's small group in the late 30s he would improvise on the chord sequence rather than on the melody, applying subtle variations to the basically simple harmonic patterns in what was then a uniquely individual style. Instead of using the left hand to maintain a steady rhythm, this function was taken over by the bass. The harmonies were played in 2-hand block chords in irregular rhythms. In a solo, Hart's left hand was free to imply the chord changes and to punctuate the improvising right hand, so broadening the range of harmonic deviations from the structure of a given composition.

Thelonius Monk, whose style was indebted to Hart, began to use extra chordal interjections for gaps in the melodic

line, insuring a degree of continuity in the
improvisations of the front line instruments. By doing
so, Monk moved the piano closer to the front line, while
at the same time introducing clashing discordant elements
as a type of deliberate opposition. In 'Misterioso', he
transforms a simple, straightforward 12-bar blues by a
recurring low ninth interval in the bass and the repeated
use of a flat 3rd/major 7th interval in the tonic bars.
Pulse and line are separated in 'Evidence', where the
isolated, delayed, abstracted tones of the theme are
suspended over the rhythm section's medium pace.

The changing inter-ensemble relationship of piano to other
instruments was not confined to free jazz. The trio that
Bill Evans founded in 1959 with Scott LaFaro and Paul
Motian was concerned with maximum freedom of bass and
drums, albeit within a fairly conservative style. It was
Evans' aim that they should all be equal voices, not a
solo piano with rhythm section backing:-

> "I'm hoping that the trio will grow in the direction
> of simultaneous improvisations. If the bass player,
> for example hears an idea that he wants to answer, why
> should be just keep playing a 4/4 background?" (8)

This was taken a step further by the Paul Bley trio (9) in
the early 60s where bassist and drummer play out of tempo
over long time spans, providing a textural rather than a
rhythmic support, and sustaining a mood of quite austerity

to complement Bley's piano style. For most of the time the three are metrically independent.

In free jazz the piano occupied a rather uneasy position because of its tempered scale and timbral limitations. Its reintegration was brought about largely by Cecil Taylor, who, from the outset, resisted the obvious temptation to employ 'extended techniques', playing inside the piano, etc. Instead he concentrated on developing a new approach to form, which he defines as 'constructivist' and a highly original technique of extreme speed and facility. He explains:-

> "The emphasis in each piece is on building a whole,
> totally integrated structure. In doing this we try
> to carry on - in ensemble as well as in solo sections -
> the mood of a jazz soloist. I mean that principle of
> kinetic improvisation which keeps a jazz solo building.
> What makes jazz unique is the compression of that
> energy into a short period of time, and that, in turn,
> is a reflection of what the machine has done to our
> lives in the metropolitan areas in America." (10)

The critic Zita Carno thought that Taylor was a bad, overly busy accompanist (11). But this was missing the point of his concept of group homogeneity. Solo and accompanimental roles now overlap into each other's territory. Even in his early recordings of 1956, Taylor shows himself to be always at the centre, never 'comping' in the background. His intention was to transfer the soloistic intensity to the ensemble en bloc to initiate a

more flexible and complex web of ensemble
interrelationships revolving around the piano. In
founding his style on percussive energy rather than on the
instrument's resonant, 'singing' qualities, the harmonic
and timbral functions are changed, bringing the piano
sound in closer empathy with the drums, while an unusually
full left hand technique overlaps with, and to some
extent, undermines the traditional role of the bass. It
is interesting to note that in the trio recordings of
1960-61 he does not use a bass player at all. The use of
rapid runs partly overcomes the piano's natural decay
characteristics, creating an illusion of continuous sweeps
of sound similar to the saxophones. Thus the piano
pervades the ensemble at many different levels and this
ambivalent relationship with the other instruments led the
way to a developing of sophisticated musical structures
which deviate sharply with standard forms.

Taylor's music is not as 'free' as one might at first
think. It is full of formalistic detail and his pianistic
style derives from a certain compositional attitude of
mind (in which notation plays little or no part) combined
with an extraordinary muscular facility in which physical
energy predominates. A tension is created by the
fluctuation between these two poles - the compositional
structuring and the 'automatic' free playing where the
actual notes do not matter - and yet each is inextricably

linked with the other so that transition from 'theme' to improvisation is virtually indiscernible.

The stylistic conventions of the 1950s demanded a certain structural conformity. Beginnings and endings were generally fixed - the theme would open and close and the central section would comprise the improvisation. In the case of bebop the harmonic cycle (most often 12 or 32 bars) would continue, if only by implication, throughout the improvisation before the restatement of the tune. Of course there were deviations to this practise; Bud Powell, for example, would sometimes substantially vary a recapitulation and add on extended out-of-tempo codas. Miles Davis in his early modal style (c.1960) dispensed with themes and melodic motives entirely but generally retained a semblance of cyclic harmony.

However, from the start Taylor makes a break with this conventional cyclic format, preferring to explore more open-ended structures where predetermined material may come just at the beginning, just at the end, or at some interim stage in the improvisation. Without the cyclic groundplan. pieces tend towards linearity and pieces often incorporate several quite different types of material. Any actual thematic recurrences are quite obscure because of their original length and complexity, or because of subsequent variation.

In "Song",for example, the intricate theme spans some
sixty bars (0.00-1.25) in several non-repeating sections
of irregular length. Here is the first:-

Fig 1

The eventual transition from theme to improvisation is
heavily masked as each part of the line, despite
distinctive melodic/harmonic shapes and correspondances,
sounds quite improvisatory. In its linear continuity it
can establish only beginnings which lead forwards into
unknown areas, never back. Thus in keeping with this
idea, the piece ends not with a recapitulation but a brief
mosaic of condensed melodic gestures taken, out of
sequence, from the theme.

Though the harmony stabilises towards the end of this theme, "Song" is unusually melodic in Taylor's output and reflects, perhaps, an early interest in the music of Lennie Tristano (12) whose detached lines of little or no tonal reference may have provided the conceptual model for this piece. Taylor's harmonic support of the sax line is at first minimal nor is he 'accompanying' in any sense. Instead he weaves elaborate counterpoints to it, at times almost swamping it with his 'commentary'. One feels as with Ornette Coleman's music, that both sax and piano (or sax and bass in the case of the Coleman trio) are working in terms of pure melody and that the resulting harmonic alignments are coincidental.

"Luyah", recorded in 1958, is actually a 12-bar blues but here again the opening theme does not recur. It is a simple declamatory statement preceding the quartet improvisation. This concept of the "anacrusis", to use Taylor's own term, is fundamental to his later formal structures:-

Fig 2

While few would dispute Taylor's originality, his
grounding in blues remains questionable. "Luyah" takes an
A minor Aeolian scale as the starting point but in spite
of statements on the "essential blues content" of this
music this remains implicit rather than explicit. No
doubt the obscurity of this blues element is partly the
result of his initial interest in European music and a
conservatory training which preceded his serious
involvement with jazz, and while ostentatiously pushing
his European background aside (a changeover more
emphatically expressed in his words than in his music) it
was really more a process of integration. (13)

After the solo piano anacrusis, Taylor does not 'comp'
behind Earl Griffith but rather carried on a constant
dialogue with the vibraphone with both chords and lines.
Indeed he deliberately jeopardises the functional identity
of the chords by their density, thereby relegating the 12-

bar pattern to a metric cycle only. In the first three
choruses of the piano solo (2.50-3.25) the harmonic
changes occur in their customary place but their relation
to blues chords is tenuous:-

Fig 3
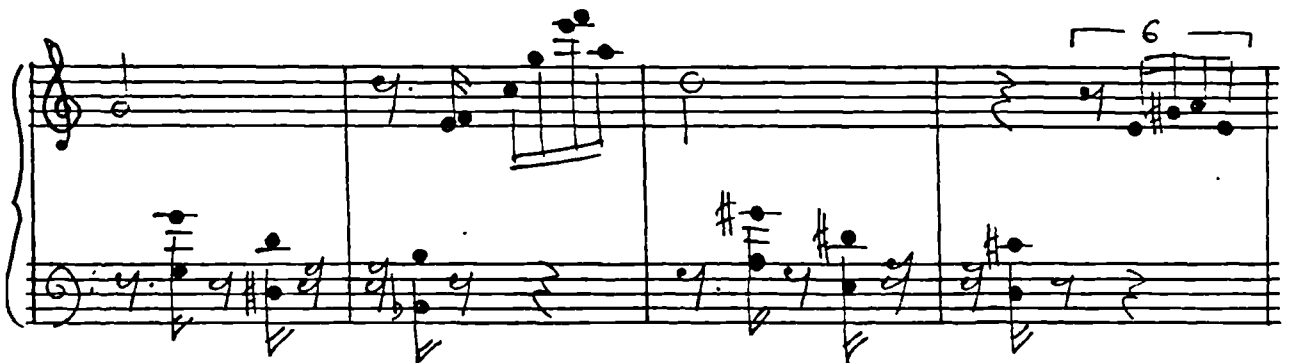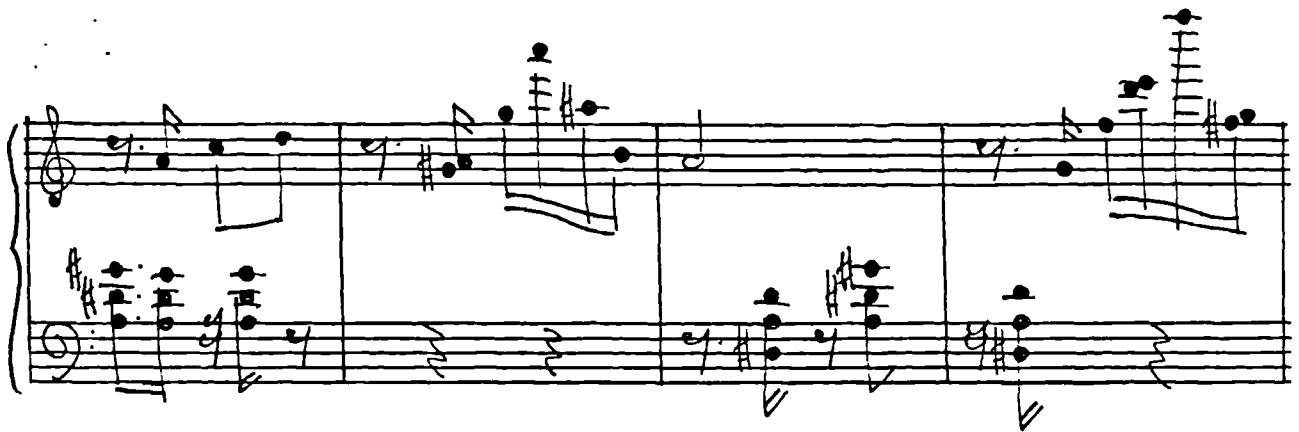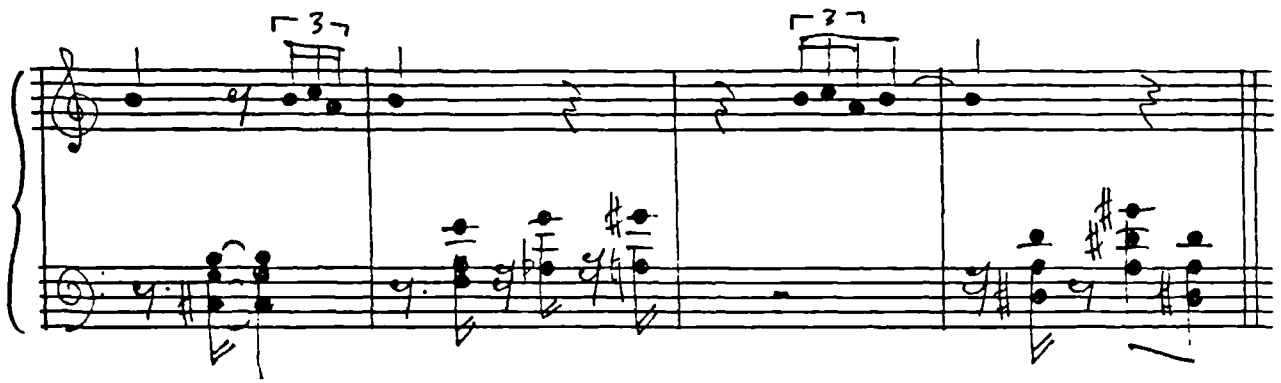
As the solo develops, however, so does the conflict of
interests become apparent. Taylor's harmonic references
become increasingly abstruse as compared with the tonally
'correct' bass line, and at the same time the rhythm
becomes looser, transforming the syncopated feel to non-
metrical bursts of notes which depart radically from
Dennis Charles' persistent and metronomical hi-hat. These
intra-ensemble conflicts of tonality and metric pulse v
free rhythm lend a certain frictional energy to these
early recordings, but this stylistic incompatibility
ultimately proved to be a dead end. In the early 60s,
with Sunny Murray as the new replacement drummer, Taylor's
music largely dispensed with metric pulse in favour of
urgent, dynamic chains of impulses without metre;
continuous rises and falls in energy. Curiously enough,
by getting away from the steady beat, the music took on a
more pronounced jazz character as this new type of
rhythmic drive created a forward propulsion missing
previously. This intensity became the mainstay of both
solo and ensemble playing. The latter has often been
criticised since for being overly busy and lacking in
discipline, but the point is, however, that Taylor's
supportive role is in providing not a chordal backdrop but
an up-front rhythmic energy to "feed" to the soloist. He
writes: "Rhythm is life: the space of time danced thru."

"Form is possibility" - Taylor's music is highly

constructionistic; an attitude that one might assume would

be anti-energetic in its effect, though in point of fact

his main concern has always been to create structures that

control and govern that energy, like floodgates. In

abandoning the constriction of metre, there was more

freedom to develop this idiosyncratic concept of form.

The music of this period often presents a jagged,

fragmentary surface behind which lies the formalistic

cohesion - a recondite web of interrelations for the

musician to kick off from rather than something outwardly

demonstrable. Each of the fragments or "units" has a

special tonal or rhythmic quality and these may combine,

separate, disintegrate and reappear through simple

statement, superimposition or improvisatory elaboration.

This is the approach consolidated in two important

recordings of 1966: "Unit Structures" and "Conquistador!".

On the former the obscurity of the musical form carried

over to some elusive and poetic sleeve notes which give

some metaphorical hints as to the formal breakdown of his

music. There are three contrasting strata: anacrusis,

plain and area. This tripartite division proves to be

highly flexible and can be applied with integrity to any

time scale as the alternating blocks of "plain" and "area"

constitute the main fabric of the piece.

The first section "anacrusis", always comes at the beginning and is a word borrowed from classical prosody meaning 'up-beat': introductory syllables to the normal rhythmic flow of the poetic line. In Taylor's music, then, the anacrusis does not set forth main compositional material, but sets the general tone of what is about to come, "an open field of question, how large it ought or ought not to be". The section called "plain" is the main exposition of pre-determined material. It is a flexible assemblage of small blocks and motivic fragments. Transitions from one to another often take on a canonic form as Taylor triggers the change with a piano phrase which one or more of the players will then take up and develop. New melodic and rhythmic possibilities may arise from given patterns and there is little linear continuity at this point. This happens in the third type of section, "area", "where intuition and given material mix group interaction....the paths of harmonic and melodic light, give architecture sound structures acts creating flight". The "area" is really an expanded solo, comprising usually of one instrument plus piano, bass and drums, but where all four instruments are on an equal footing. As seen in Taylor's earlier music with its seamless transitions between composed and improvised sections, the disposition of these three strata does not create boundaries and fixed forms, but organic directional flexibility.

These architectonic principles are best understood by examining the music itself. "Conquistador!" (1968) evolves from a diversity of "structural units", short self-contained blocks of material which may be stacked in various ways. They are often repeated once or twice in succession, and their formation and gradual dissociation present an overall quality of dynamic energy combined with a craggy discontinuity. But despite this, "Conquistador!" has an almost classical conception - a conflict of two different tonal areas. The tritone conflict (A-E♭) is borne out most noticeably in the "plain" sections, though it also extends into the improvisations which are often strongly modal. The two tonal centres are only resolved insofar as they are allowed to become ambiguous or spill over into the free atonality of the type exemplified in the earlier recording from these sessions, "Unit Structures/As of Now/Section". Here is the formal breakdown of the piece. Significant points of change are indicated in minutes and seconds.

Anacrusis

0.00 This is a piano solo in which the fast and jagged succession of arpeggiated runs announce the two tonal areas implicit in later material:-

Fig 4

$A^{\triangle^{-7}_{b5}} \rightarrow E\flat^{\circ^{+7}_{+5}}$

<u>Plain I</u>

00.14 Saxophone and trumpet announce the first unit
       reflecting the contour and phrasing of the
       anacrusis. Four statements of the unit are
       separated by rising cluster/runs from the piano:-

·Fig 5

0.27 While this is based loosely on the A tonality, the
      next unit, which follows immediately, shifts to the
      E♭ centre. The precise nature of these two tonal
      centres is flexible and at times vague (probably
      deliberately so). It is the sense of oscillation
      between the two that provides the structural
      foundation of the piece.

Fig 6

0.40 Taylor now answers these two units with another
pair, again separating each statement by short
cluster/runs even though the horns do not play
these. Each unit is repeated, continuing the
rather foursquare schema.

Fig 7

Fig 8

0.49

0.59 Taylor initiates a heterophonic passage between
saxophone and trumpet in a fresh tonality ('white
note' mode). These overlapping, initiative lines
are probably improvised, underscored with an
ostinato pattern on the piano (slight variations
with repetition).

Area 1

1.14 With an abrupt switch to a pattern in the other
tonality

Fig 9

Taylor signals the beginning of this section without

in any way disturbing the ensemble flow at this

point. The transition is scarcely noticeable.

Now follow the much larger units which, in

traditional jazz terminology, would be named

'solos'. These are really collective improvisations

involving piano, bass and drums and one wind

player, but Taylor remains the underlying force.

The pianist's role is "as catalyst, feeding material

to the soloist in all registers, encompassing single

notes, diads, chord clusters, activated silence."
(Taylor).

In this section Taylor continues to alternate
between two tonal centres in the context of freer
and more extended phrases, eventually favouring
the E♭ centre with the emergence of an insistent
pedal point. Meanwhile Lyons constructs an
expansive solo, at first modal, based around the
alternating chords of the anacrusis. Later the
formality is much freer as the solo and supporting
ensemble builds to a climax.

5.08 Here there is an abrupt change of pace and timbral
balance. Bill Dixon is the soloist in this slow,
contemplative section. The drums, which have been
virtually relentless up to this point, stop almost
entirely, and the basses become more prominent as a
result. It is now evident that the basses have
quite different ensemble roles, one related to the
drums - part of the rhythm section (low register
pizzicato) and the other ostensibly related to sax
and trumpet (high register arco). Together they
are a crucial link in the network of ensemble
relationships as they encompass two, sometimes
conflicting, directions of rhythmic energy and
colouristic line.

7.20 The new group of structural units begins with a
rhythmic figuration from the piano, firmly based
in E♭ minor.

Fig 10

After four solo repetitions this becomes the basis
for a new theme played by saxophone and trumpet in
unison. The tempo of line and chords are slightly
different:-

Fig 11

From what has really been just a comping pattern,
Taylor now moves to the fore to play a sequence of
units which all use a call-and-response pattern
between right and left hands. This technique of
internal dialogue is central to his solo work, and
here points towards the solo which is about to come
in the next "area" section. The interaction with
the other musicians is "phased out" - the left hand
octaves are simply doubled by sax and trumpet:-

Fig 12

Fig 13

8·15"

8.35 The final unit of this group sounds like the start

of an improvisation, but from its subsequent

treatment and variation it is clear that it has

some thematic significance.

Fig 15

Area 2

8.54 The next improvised section is taken up with a piano solo (with the bases and drums) beginning fragmentarily - a natural continuation of the preceding disjunctive kind of movement. Taylor builds a self-enclosed dialogue of short improvised units, tersely stated, restated and transformed by interaction with other units. With this restraint the tension accumulates until it bursts into rapid runs and clusters using the keyboard's extreme registers. The tonality of the solo is free, though the sense of two opposing centres is retained insofar as Taylor alternates between free atonality, and concentrating on white notes.

Plain 3

13.17 This begins in exactly the same way as Plain 2 (Figs. 10 and 11).

A bass register cluster repeated 12 times serves as a transition to a duet for the basses, one arco and the other pizz. The percussion enters while the piano interjects jagged patterns and runs in the E♭-based modality.

Taylor reintroduces an earlier pattern (Fig 9) and the

ensemble seems to move toward another free improvisation.

However, Lyons enters amidst the turbulence with a quiet,

sustained line:-

Fig 16

Dixon weaves a similar counter·line around it

synchronising for a repeated F/C to E♭/B♭ cadence point.

There now follows a short improvisation for the basses

(unaccompanied).

Finally Taylor harks back to the 2nd unit of Plain 1

(Fig 6) playing it slowly and deliberately in ninths:-

Fig 17
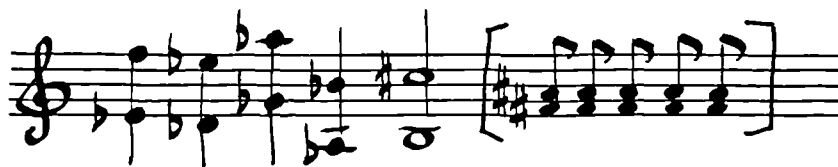
It is played three times, the third time Jimmy Lyons joins

in a tritone below the upper line. The five notes of this

unit are taken up by sax and trumpet while Taylor

elaborates and paraphrases it. As though finally to press
home the underlying tonal structure of the piece, Lyons
and Dixon interpret the unit (Fig 17) freely, one in each
modality (Lyons starting on B, Dixon on F). As this
fragment disintegrates we are left with just the
'essential' A/E♭ tritone, sustained as the piano basses
and drums come to rest.

Beneath this music's emotional impact, then, is an
intricate network of formal relations. Taylor has evolved
a workable system that combines spontaneity with
constructionism, whereas much improvised music is founded
upon a more unconscious, informal system where the "rules"
operate on many different levels. In the absence of a
specific modus operandi the morphological development of
the music must rely more on the ensemble sensitivity of
the individual improviser, the tacit "metarules" to modify
the rules, "metametarules", and so on. D.R. Hofstadter,
in discussing Artificial Intelligence, describes the
hierarchy of systems required to simulate this
flexibility, which is endemic also in the collective
improvisation situation:-

Fig 18

Cecil Taylor: "Conquistador!" Outline plan
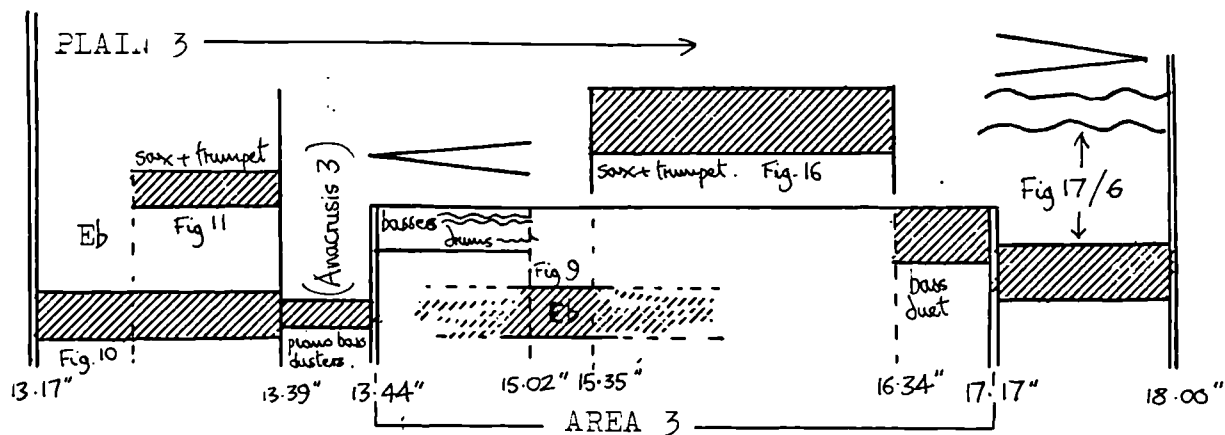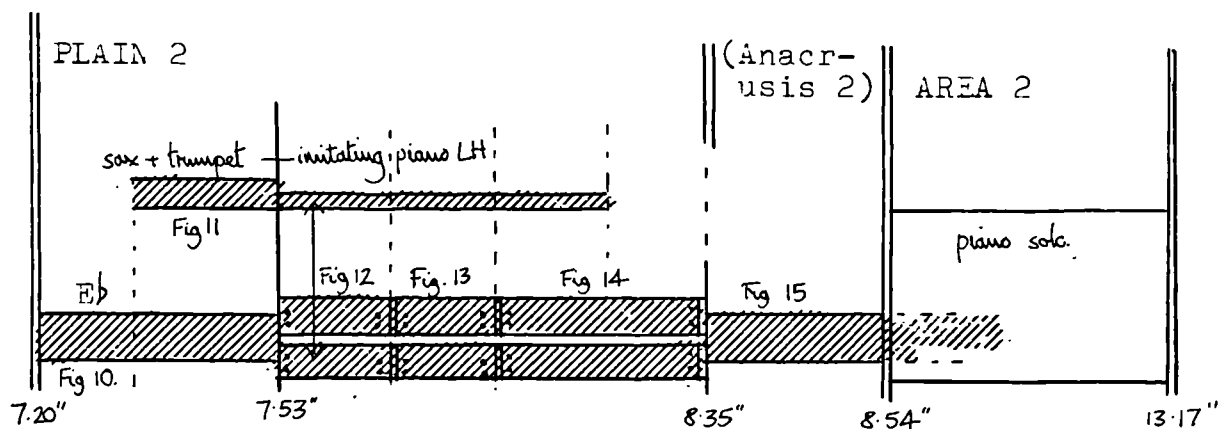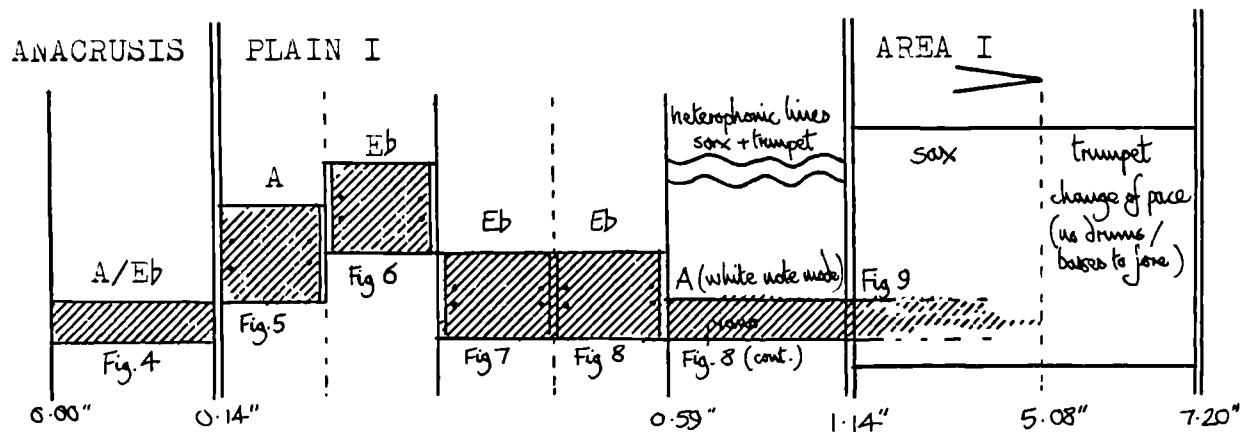
"The reason that so many rules on so many
different levels must exist is that in life,
a creature is faced with millions of situations
of completely different types. In some situations
there are stereotyped responses which require
'just plain' rules. Some are a mixture of
stereotyped situations - thus they require rules
for deciding which of the 'just plain' rules to
apply. Some situations cannot be classified - thus
there must exist rules for inventing new rules..."

(14)

Alexander von Schlippenbach has been considered to be

stylistically the closest to Cecil Taylor of the European

pianists. But the resemblance is only superficial.

Taylor's music emanates from one morphological conception,

one system of rules which here dictate a peculiar state of

nervous attention (especially as Units are learned and

played by ear and can be cued in various sequences and

situations) to prevent the intricate assemblage of units

from falling apart. Whereas Taylor has found a particular

energy and ensemble cohesion through wrestling with

formidably complex and flexible structures,

Schlippenbach's ensemble music has no comparable formal

basis, but, in the tradition of free improvisation

dictates its own form. The other significant difference

between the two pianists is the manner in which they

themselves cohere with the rest of the respective

ensembles. Schlippenbach's playing does not have the

dance-like agility nor the playful antagonism of Taylor;

it is altogether heavier and more massive, carrying less

percussive but more harmonic/timbral implication. In
ensembles he often plays the role of a "binding
ingredient", unobtrusively stabilising the diverse
activities of the other musicians and remaining in the
background, rather than being the "catalyst" like Cecil
Taylor.

In Part 1 of "The Hidden Peak" the piano enters,
discreetly adding low tremelando-type sonorities to the
already existing framework set up by sax and bass. The
piano then abruptly initiates a new direction (at 4.15) by
means of a repeated figure of falling clusters, which is
at first initiated and then developed by the other
musicians. But the piano, having surfaced just once at
this crucial point, returns almost immediately to its
accompanimental place.

Part 2 begins with a more decisive statement from the
piano, a series of disjointed fragments all within the
middle/low range of the keyboard, and whose rhythmic and
tonal characteristics recall those of Thelonius Monk's
composition, "Evidence":-

Fig. 19

This passage seems to have some thematic significance as
these chords or chord-types occur in several places. With
the predominance of drifting, rootless 7th and 9th chords
the passage actually appears to be accompanimental rather
than leading, and continues unchanged after Evan Parker's
entry. As a first statement it is "low-profile", very
different from a typical Taylor anacrusis. As the
ensemble intensity increases during the ensuing
improvisation the rate of tonal and harmonic change in
Schlippenbach's own playing actually decreases. The
moment-to-moment points of contrast seem to flatten out as
though a much slower sustained movement is already implied
in the frenetic speed. This approach to the piano is
extended to the ensemble music which has at its foundation
certain "areas" - rhythmic, timbral, harmonic - selective
vocabularies which transform slowly underneath a busier
surface movement, particular "sets" which seem appropriate
to draw from at a particular time. The interaction
between players is of a totally different kind than with
the Cecil Taylor Unit. Schlippenbach is not a 'leader' in

the same sense; he is on exactly equal terms as the other

instrumentalists and so questions of functional identity

or the extension of traditional roles within the ensemble

do not arise. Without the elaborate prestructuring and

the rapid call and response techniques, musical material

is allowed to generate in a more relaxed manner. As there

are no vital or inevitable cues to watch for, the

musicians are more at liberty to explore

interrelationships and sounds per se, individually or

collectively, and to pick up on chance meetings,

synchronous alignments that may articulate the formal

shape of the piece. To use Cornelius Cardew's analogy:-

> "Two things running concurrently in haphazard
> fashion suddenly synchronise autonomously and
> sling you forcibly into a new phase. Rather' like
> in the 6-day cycle race where you sling your
> partner into the next lap with a forcible
> handclasp. Yes, improvisation is a sport too,
> and a spectator sport, where the subtlest
> interplay on the physical level can throw into
> high relief some of the mystery of being alive."
> (15).

The bulk of the material in an improvising group will be

initially provided by styles and techniques involved which

may become transformed through continued acquaintance.

The much-used linguistic analogy to this kind of

improvisation - that it is comparable to the dynamics and

intercommunication of a spontaneous conversation - implies

a grammar, a system of rules that provide representations

and conventions for the ordering of spontaneous sounds.

The areas explored will naturally be limited to the sum total of individual grammars whose interface creates a system of formidable complexity operating on many levels. However, in the improvisation itself we find points of common reference, even at first meeting, which would seem to suggest something curiously determinate about the whole process, a point illustrated in the following passage, quoted from Stanislav Ulam:-

> "It seems to me that something more could be done
> to elicit the nature of association....There must
> be a trick to the train of thought, a recursive
> formula. A group of neurons starts working
> automatically, sometimes without external impulse.
> It is a kind of iterative process with a growing
> pattern. It wanders about in the brain, and the
> way it happens must depend on the memory of
> similar patterns". (16).

One might advocate, then, the importance of understanding higher planes of "rules" and their application to the collective situation in the capacity of formal articulation. Noam Chomsky, in discussing a theory of universal grammar, writes:-

> "What we should be seeking, then, is a system of
> unifying principles that is fairly rich in
> deductive structure but with parameters to be
> fixed by experience. Endowed with this system
> and exposed to limited experience, the mind
> develops a grammar that consists of a rich and
> highly articulated system of rules, not grounded
> in experience in the sense of inductive
> justification, but only in that experience has
> fixed the parameters of a complex schematism with
> a number of options. The resulting systems then,
> may vastly transcend experience in their specific
> properties but yet be radically different from one
> another, at least on superficial examination, and

they may not be comparable point-by-point in general". (17).

It is clear that the notion of fixed, pre-determinate form is more or less irrelevant to contemporary improvised music. However, Chomsky's concept of universal grammar, modular systems of syntactic rules that do not necessarily have precedents, is very pertinent to this music. We now have a situation where the schematic forms of historical music no longer apply for the implementation of improvisatory process will inevitably fail to generate "form", as understood by music theorists and historians. In its place we have a new type of form - a produce of certain inter-ensemble relationships which is specifically modular. We have seen that both Taylor's conscious constructionism and Schlippenbach's more unconscious interaction relate more to his grammatical concept then to specify form and/or its negation. Paul Burvell has written:-

> "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." (18)

Improvisation in which the focus is on ensemble rather than individual material will often result in an episodic form as each player alternately leads and

follows/compromises. Any individual preconceptions of the

overall shape may well be shattered in the moment of

playing, statements interrupted and cut short. But to

pursue the linguistic analogy, one may argue that a

sententially oriented form developed to allow for more

continuous streams of talk, rehearsed or spontaneous. It

is possible to set up a situation which allows for

simultaneous and possible unrelated statements from

individuals where unforeseen clashes may be highly

fruitful. This is the concept behind Leo Smith's music:-

> ".....to consider each performer as a complete unit
> with each having his or her own centre from which
> each performs independently of any other, and with
> this respect of autonomy the independent centre of
> the improvisation is continually changing depending
> upon the force created by the individual centres
> at any instance from any of the units. The idea is
> that each improviser creates as an element of the
> whole, only responding to that which he is creating
> within himself instead of the total creative energy
> of the different units. (19).

Smith's concept of the individual will taking precedence

over the collective "pool" is unusual. Improvisers tend

to be gregarious and it is perhaps paradoxical that now

solo-form is often the most problematic, whereas

historically almost all documentation of improvisation

concerns solo playing. Keyboard improvisation,

especially, gained exceptional pre-eminence in the 17th

century and all good performers would be expected to be

proficient in this art.

Free solo improvisation offers greater possibilities on

the architectonic level though, of course, one loses the

vital element of unpredictability created by the

"intrusion" of other players. It is an ideal way to

consolidate one's own musical vocabulary and grammar, as

Derek Bailey describes:-

> ".......when other more aesthetically acceptable
> resources such as invention and imagination appear to
> be absent, the vocabulary becomes the sole means of
> support. It has to provide everything needed to
> sustain continuity and impetus in the musical
> performance. It was having to deal alone with this
> type of situation - the blank areas, the creative
> deserts, which in a group improvisation are covered by
> the collective impetus and dialogue character of the
> music - which I hoped would demand a strengthened
> and extended vocabulary. I looked to the enormous
> reduction in outside information and the increased
> responsibility for overall continuity to demand and
> 'force' the development of a more comprehensive and
> and complete improvising language" (20).

It is interesting to note elsewhere that Misha Mengelberg

believes Bailey to be now more involved in group

improvisation again as solo improvisation is too close to

composition (21). In the context of solo playing one can

easily apply a particular method of formalisation which

will be at complete liberty to run its course

uninterrupted by others, but the question is, as always,

what is actually being formalised and how.

To return to Alex von Schlippenbach, "Payan" is a solo piece based on a simple foursquare theme, which is not revealed in its basic form until the end:-

Fig 20

The natural order of developmental improvisation is
reversed so that we are first presented with a remote
elaboration of this theme: an aggressive and chaotic
blues-type improvisation exploring the particular type of
pianistic gesture involved in playing rapid parallel
fifths and associated problems such as slipping off the
black notes (blues/grace notes). The tonality hovers
between E♭ and a free atonality as the jabbing bass notes
often revert to fist clusters.

"Payan", then, is roughly cyclic in form, an obscure ABA
where the "known quantity" appears at the end rather than
at the beginning. Repetition as a formal device is more
readily associated with other areas of music: in Western
literate music, where often its structural use may be more
perceptible to the analytical eye, and in certain non-
literate musics where it may be more aurally apparent. In
this latter category some musics move in cycles as a
matter of design (for example, the nuclear melody of
Javanese gamelan music, the repetitious eight or twelve
beat cycles of Ghanaian drumming or the rhythmic tala of

Indian music) influenced or determined by social, philosophical and religious outlook.

Improvised music appears to have more in common with the linear, non-repetitive time conception - its "Western-ness" takes precedence over its "non-literacy" in this respect - yet cyclic motion has been adopted by some for structuring improvisations. As a cohesive device for longer time spans it generally works and can effectively supplement the more momentary juxtaposition of certain structures.

The use of repetition need not take on the aspect of systematic ordering. It may simply represent a fluctuation between the known and the unknown. Urs Voekel's improvisations often retain a 'home ground' - a flexible thematic idea or harmonic area which he strays from and returns to in ever-decreasing circles, balancing the explorative with the familiar. This establishes a natural rhythm of tension and release. The circular, or spiralling form works to no particular time frame and the fact that the cycles, as a rule, become longer is an indication both of the improvisatory imagination "warming up" and that the internal durations are not what is important here, viz. the musical direction may change at any point that 'feels' right and "we are not spontaneously

aware of duration when we give our whole attention to the
present situation." (22).

The piece, "Chnorze", is worked around a harmonic idea: an
arpeggio (a) and a melodic idea, superimposed, often as an
upper limit to the arpeggio (b)

Fig 21

(a) separates the improvisatory episodes, reappearing in

slightly varied but recognisable forms, rather as the

Indian sitar player will strum the drone strings in

between the melodic excursions. (b), as well as its

concurrences with (a), initially defines the shape of the

melodic improvisations, i.e. these particular notes tend

to define beginnings, ends or high points of phrases. At

first the connection is aurally obvious as in this episode

which dwells mostly on the four notes of (b):-

Fig 22

Fig 22

Later the improvisations become more tonally divergent,

although the four notes of (b) still retain their function

as articulation points in the free flowing lines:-

Fig 23

"Heiweh" follows the same outwardly spiralling form and makes use of a bass motive, which is quite dissociated from the improvisatory material. It acts as a kind of pedal point, and a greater homogeneity of right and left hand material is attained when the actual gesture (C# to G & D) is abandoned and the constituent pitches used to build more spontaneous structures with free transposition into different octaves. Before giving way to freer melodic exploration some of the harmonic implications of the given motif are considered:-

Fig 24

About half way through the piece a transposed variation on
this motif begins to make its presence felt:-

This creates a textural middle ground and a greater harmonic diversity, but at the same time the momentum of the improvisation gradually slows down almost to a point of stasis and the initial musical gestures fragment and disintegrate.

Implied in any discussion of form in improvised music is a distinction between an awareness of succession and an awareness of duration; the former being concerned with the modus operandi of formal articulation, the latter with an overview of the events and their cumulative effect. The process of maturation of an improvisatory language will inevitably incorporate an overall feeling for time spans. However engrossed in moment-to-moment details, the improviser is certainly aware, at some level, of the passage of time as one idea evolves to the next. Without this retrospective frame of mind the sensual effectiveness of his materials would also be depleted. Having looked at some of the expanded possibilities of larger formal structures in improvisation, I shall now look at the smaller elemental ideas on motifs and their syntagmatic relations, which generate material over much longer time spans than it takes to actually state them.

NOTES FOR CHAPTER 2

(1)   E. Kris: "Selected Papers". Yale University
               Press 1975, p. 121.

(2)   "My Painting" from Possibilities 1 No.1 Winter
               1947-48, p.79.

(3)   John Cage: "Silence" - p.18

(4)   Herbert Read: "The Origins of Form in Art".
               Thames and Hudson 1965 - p.92.

(5)   Arthur Koestler: "Janus" - p. 131.

(6)   LeRoi Jones: "Black Music" - p. 199

(7)   op. cit.

(8)   Bill Evans: "The Village Vanguard Sessions" -
               sleeve notes.

(9)   for a more detailed analysis of Bley's music see
               Chapter 4.

(10)   A.B. Spellman: "Four Lives in the Bebop
               Business" - p.38.

(11)   Op. cit. - p. 39.

(12)   see A.B. Spellman, p. 62.

(13)   op, cit. p.28

(14)   Douglas R. Hofstadter: "Godel, Escher, Bach: An
         Eternal Golden Braid" p.27.

(15)   C. Cardew: Towards an Ethic of Improvisation.
         "Treatise Handbook"   .

(16)   Stanislav Ulam: "Adventures of a Mathematician"
         p.137.

(17)   Noam Chomsky: "Rules and Representations" p.66.

(18)   Paul Burwell: "Radical Structure 1" Studio
         International Dec. 1976 p.319.

(19)   Leo Smith: "Notes (8 pieces)" Leo Smith 1973.

(20)   Derek Bailey "Improvisation" p. 127

(21)   Misha Mengelberg: "Werdegang der Improvisation"
         Key Notes 10 (1979), p.44.

(22)   Paul Fraisse "The Psychology of Time".
         p.208.

CHAPTER 3

The criticism of 'formlessness' is frequently levelled

against free improvisation. If architectonic form is

irrelevant to the music, or at least to much of it, what

are the elements that endure to make up a cohesive

language? Even the freedom of free jazz has a natural

gravitation towards order of some kind, but generally

speaking not that which can be expressed as an overview.

Wittgenstein may hold some clues to this question:-

> "The operation that produces 'q' from 'p' also
> produces 'r' from 'q' and so on. There is only
> one way of expressing this: 'p', 'q', 'r', etc.
> have to be variables which give expression in a
> general way to certain formal relations." (1)

This observation of truth functions in logic gives us a

model which can also be applied to improvisatory form.

One starts at a point and moves, as it were, in an ex-

centric direction as the various musical choices present

themselves in the course of events (2). One moves through

time making interim decisions without necessarily being

able to envisage the precise relationship of parts with

the end result. As Derek Bailey puts it:-

> "generally speaking improvisers don't avail
> themselves of the many 'frameworks' on offer.
> They seem to prefer formlessness. More
> accurately, they prefer the music to dictate
> its own form." (3)

In a musical composition, and this applies also to jazz improvisation over chord changes, the whole course of events is prescribed to a greater or lesser degree. Free music, on the other hand, evolves from moment to moment in the logic of its own grammar. Evan Parker writes:-

> "Our music is a celebration of 'hereness' and 'nowness'.... a process which defines its own form." (4).

In other words, formal structures evolve naturally through the juxtaposition of ideas and motives in time. Rather than long-term visualisation one must have an awareness of such juxtaposition and the syntagmatic connections in the material. The mathematician, Jacques Hadamard, who wrote on the psychology of mathematical thought (5), believed that any attempt to visualise the way ahead in a particular problem only leads one astray from the real issues; decisions must be allowed to be sequential, unconscious and spontaneous. In free improvisation, as predictive and retrospective awareness guide the course of events, certain musical ideas inevitably emerge as landmarks; phrases, rhythms or textures of greater significance or prominance than their surroundings.

As has been suggested, decision-making in free improvisation is far from being an undifferentiated, purely linear process. Progress, as in Wittgenstein's

paradigm, is a movement of organic growth and branching

out without any clear view of the way ahead. Parallels in

other art forms can be found in literature (6), and in the

improvisatory approach of the abstract expressionist

painters such as de Kooning and Pollock. Pollock's vision

extended well beyond the material plane of paint and

canvas. His preoccupation with mythic images culled from

his inner world was probably stimulated by John Graham's

article on "Primitive Art and Picasso" which appeared in

the Magazine of Art in April 1937. Here Graham identified

two formative principles which apply to primitive are:-

> "First, the degree of freedom of access to one's
> unconscious mind in regard to observed phenomena,
> and second, an understanding of the possibilities
> of the plain operating space. The first allows
> an imaginary journey into the primordial past for
> the purpose of bringing out some relevant
> information, the second permits a persistent
> and spontaneous exercise of design and
> composition as opposed to the deliberate which
> is valueless. These capacities allow the
> artist, in the first place, to operate with the
> most elemental components of form." (7).

This free access to unconscious imagination is an

important part of musical improvisation which seeks to

explore territory beyond that of sound per se and to

manipulate "elemental components of form". Free

improvisation can often be observed to go through distinct

areas of generation and consolidation as new possibilities

are brought into focus from the 'chaos' surrounding the

well-formulated idea. It is interesting to note how an

experienced improviser may, from just a few notes, extract

material information far in excess of their face value.

Later in the same article John Graham goes into more

detail on the question of these elemental components in

the context of two basic traditions in art:-

> "The Greco-African culture is based on
> geometric design, it is centripetal and
> synthetic in principle....the Perso-Indo-Chinese
> culture....is based on florid design, it is
> analytic and centrifugal in principle..." (8)

In a musical context element components may be melodic,

harmonic dynamic or textural in nature. Their use in

improvisation is to spark off reactions which may change

the course of the music.

The Fertile Motif.

> "The word, 'motif'", writes Susanne Langer,
> "bespeaks this function: motifs are organising
> devices that give the artist's imagination a
> start, and so 'motivate' the work in a
> perfectly naive sense. They drive it forward
> and guide its progress." (9)

Motif is of fundamental importance in improvisation and

can be seen in two ways: (1) as a compact little image in

its own right, and (2) as a growth element from which

larger structures can evolve. In order to progress from

(1) to (2) it is necessary to transform the motif's self-

conscious and precise gestalt into something more indistinct and malleable. In rejecting ready-made 'frameworks' this music has evolved new ways of dealing with generative material in the course of which the functional requirements of that material have also changed. The motif may arise spontaneously or be consciously composed beforehand; in the case of the latter there is a general tendency to keep predeterminate material to a minimum, if not to dispense with it entirely. This is not to suggest that composed elements are now of less importance than previously, but their use is different. The motif is not equivalent to the theme of a jazz composition; the 'head', although it is a springboard for improvisation it is actually complete within itself. It has a beginning, end, neatly articulated cadence points, etc., and once having served a useful function in establishing harmonic changes and tempo, may be abandoned almost entirely. The motif, on the other hand, has something more vague and incomplete about its structure. Its frayed edges and lack of polish make it all the more interesting for exploration and development. Anton Ehrenzweig writes;-

> "A fertile motif through its undifferentiated
> structure often refuses immediate aesthetic
> satisfaction and for its justification points
> to its further development in the future." (10)

A parallel might be drawn here with Beethoven's method of composing, as evident from his notebooks; that of struggling, often over a period of years, with tiny fragments of incoherent melody until they yield more extended phrases or large-scale structures. In improvisational terms the motif may not strive for development or fruition in such a forthright way but it may take on an autonomous aspect with respect to its integration into the musical fabric and the way in which it is transformed. This process brings into play a creative faculty which Ehrenzweig terms "unconscious scanning". Here, intuitive choice, rather than the deliberate focussing on particular aspects of an improvisation guides its progress. Ehrenzweig describes this autonomy:-

> "Any work of art functions like another person, having an independent life of its own. An excessive wish to control it prevents the development of a passive watchfulness towards the work in progress that is needed for scanning half-consciously its still scattered and fragmented structure...The artist must be capable of tolerating this fragmentary state without undue persecutory anxiety, and bring his powers of unconscious scanning to bear in order to integrate the total structure by countless unconscious cross-ties that bind every element of the work to any other element." (11).

Another interesting example of the motif as creative catalyst in musical composition can be found in Wagner's invention and use of the leitmotiv. It forced the

composer to reconstruct the form of opera from within with
the motif as the smallest unit, and it broke up the then
stultified structure and set pieces of grand opera while
replacing it with an equally valid and coherent system.
The various musical leitmotivs were related organically to
the drama, spun and woven together into melody and
polyphony. The effects of such combinations of motifs was
often unpredictable. However, Wagner's disciples and
imitators were unable to successfully follow the same
recipe as the method had by then outlived its usefulness;
the leitmotiv became an assembly device for putting
together a predictable and conventional operatic form: the
teutonic music-drama.

Motif in composition.

In some of his work Howard Riley makes use of pre-composed
motifs as tangible structural and emotional starting
points. This represents a half-way stage between the
tight theme structures of jazz and the more open-
ended,'vague' motivic fragments described earlier. At the
same time this technique ensures predictable patterns of
mood change and clear divisions of tonal emphasis. In the
composition "Returning", 6 such motifs form the basis for
the sectionalised form of the ensuing improvisation:-

Fig 1

While they are treated in sequence from (1) to (6) each
motif can be extended for any length of time with the
effect that they usually become more varied and 'foreign'
to the original with each recurrence, although Riley seems
to strive to retain the particular mood of each one.

Because of this the transitions from one to another are
quite recognisable. (1) and (2) are terse gestures;
rising 5-note patterns which later become extended to more
bombastic flourishes. Here is (1) with subsequent
variations:-

Fig 2.

(3) is a more introspective and lyrical statement. The right hand melodic phrase is woven around a core of a rising sequence of three fifths; D-G, E-A and Gb-B. The more angular phrases which develop from this with their predominance of 2nd, 7th and aug 4th intervals are typical of Riley's atonal style of melodic improvisation and also echo the same intervals which predominate in the supportive left hand:

Fig 3

Fig 3 (continued)
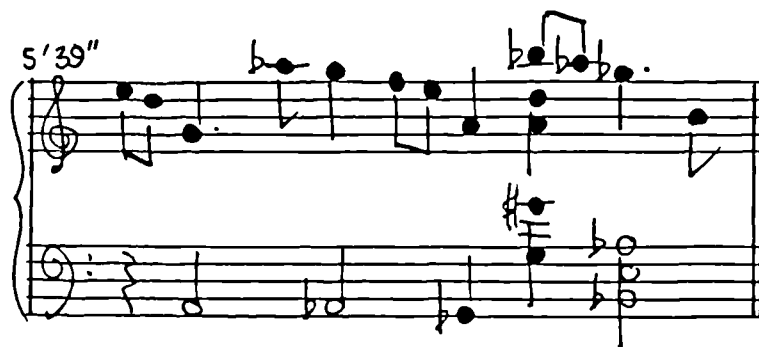
(4) which in performance becomes by far the longest of the 6 is also the most static. The left hand plays an invariant ostinato which supports a melodic improvisation constructed mainly of 2nd and 7th intervals. Before returning to the rising 5-note phrase in (6), (5) leads out of the stability of (4) with anticlimactic descending figure where the left hand retains the 4-note chromatic sequence while the right hand follows and embellishes it in various ways:-

Fig 4
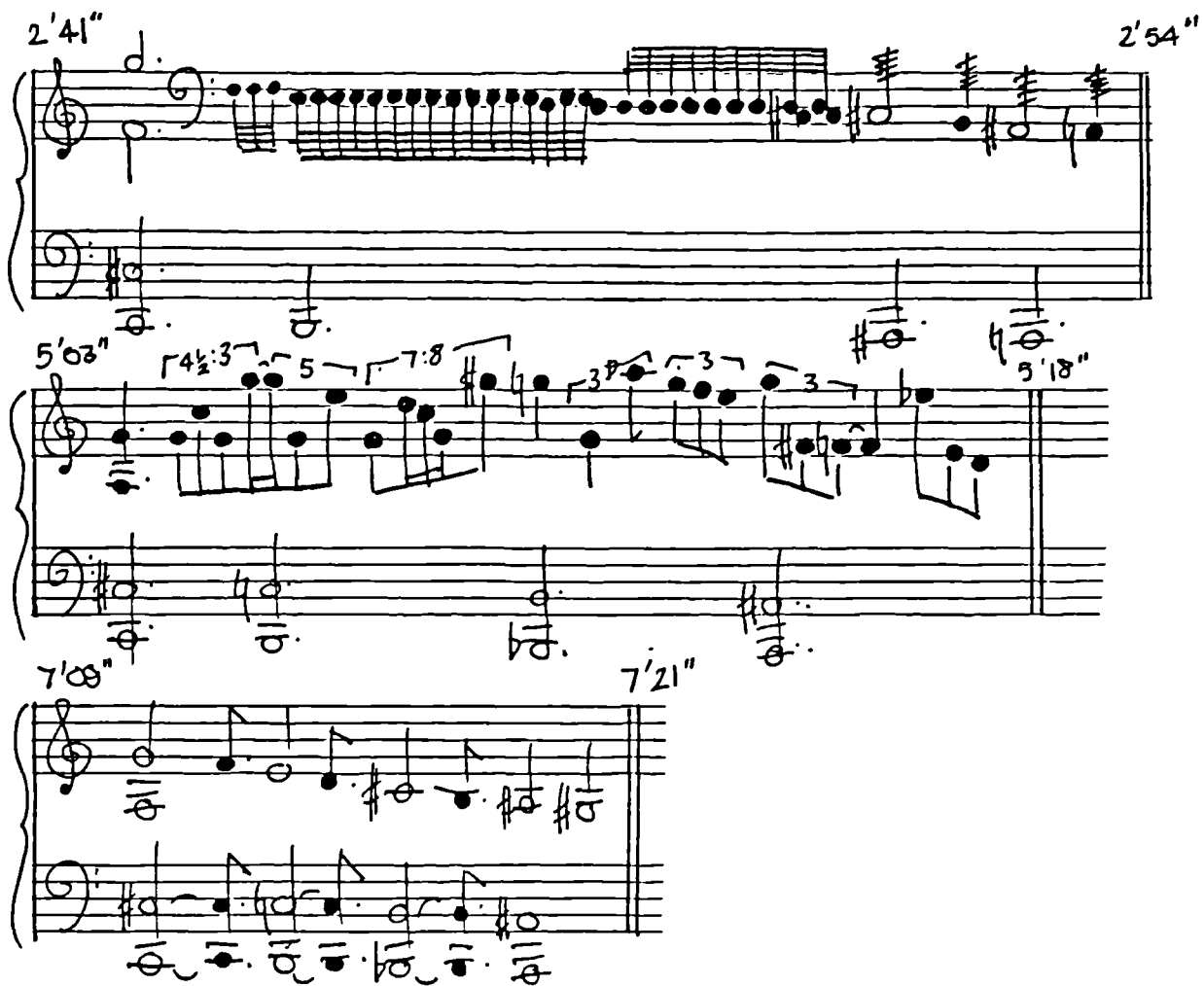
"Deflection", written the same year, uses two interconnected note-rows. Although this method has Schoenbergian overtones, and thus congenial to an atonal approach, closer inspection reveals that the rows are not truly chromatic in the serial sense. Indeed, in the resultant intervals that the two rows produce there are strong tonal associations, viz.,

Fig 5

1	2	3	4	5	6	7	8	9	10	11	12	13
GM	AM	Dm	C	B°	Bb°	Dm	Ab 7+5	G-7	F#7	B	E7	Am

The strongest tonal associations occur at the end (10-13) where we find a fifths-cycle cadence. Elsewhere in the rows the suggestions are more vague, and they lend themselves equally well to tonal or atonal treatment. Here are the two 13-note rows:-

Fig 6

Melody line

Harmonic note-row

Although the coincidence of the two rows leads to a suggestion of tonality, Riley intends that they should be treated quite differently:-

"The R.H. written material provides motivic material; the 13 notes which make up the harmonic note row in the L.H. should continue to be played in the order given in varying durations, but the player is free to build harmonies on top of them...thus the L.H. written material provides an improvised harmonic sequence for the player - but there is no time signature and therefore no repetitive harmonic rhythm."

In practise, after the three straightforward statements, the motivic restructuring of the right hand involves free transposition of intervals and the incorporation of 'habitual' motifs as well. (e.g. compare the second R.H. group of 0.43 with the virtually identical 7-note phrase at 3.15 in "Returning"). Here is the first 2½ minutes of the performance.

Fig 7   Deflection

Fig 7 (continued)

Fig 7 (Continued)

As extra notes become interpolated in the original rows

these become more and more time-extended although the

basic skeletal structure remains, rather as the quieter

embellishing instruments of the Javanese gamelan, at

slower tempos, 'flesh out' the balungan (skeletal melody).

The treatment of the composed material is empirical; the

rows are not subject to any kind of formal or serial

rigour. Beginnings are clearly recognisable while other

parts of the rows are obscured or left behind in the

improvisation. But the use of composed material in

'Deflection' demonstrates Riley's strong conviction that

the flexible approach to time in free jazz is not an
invitation to play just anything, but can actually give
rise to valid new forms which could not exist within a
metric framework.

The "fragmented state" as defined by Ehrenzweig coincides
perfectly with Cecil Taylor's constructive/motivic
approach as we have seen in 'Conquistador!', discussed
earlier. Taylor makes use of an amorphous pool of
material, composed but left deliberately fragmented, which
must undergo spontaneous and selective ordering in
performance. It is clear that Taylor found the notion of
tight, self-contained themes as a basis of improvisation
quite inadequate and so in the early recordings (1955-56),
as a first step away from this tradition, we see him
constructing themes with no discernible end. The
transition from theme to improvisation is effectively
imperceptible. In later work, however, we find short,
distinguishable motifs which are nevertheless mutuable.
In his ensemble work, as Ramsey Ameen, his violinist,
explained, Taylor often invents these figures very quickly
in rehearsal and then aurally dictates them to the other
musicians only once or twice to ensure that essential
vagueness and capacity for easy obliteration is preserved.
With unison melodic figures they go through varying
degrees of embellishment from simple or heterophonic
statement to quite elaborate variation, and the range of

this embellishment will vary from one performance to the next. In this way the motifs are kept in a state of deliberate 'unfocus', ideal for exploring their potential as material for improvisation.

Amid the craggy discontinuity of "Unit Structures/As of Now/Section" a certain logic and structural coherence is apparent on the motivic plane. By repeating certain motifs in different contexts Taylor brings fresh possibilities to light, while certain larger units are transformed or broken down into smaller fragments so that they retain an underlying relevance but whose precise derivation is often difficult to trace. After a short anacrusis Taylor announces the first unit:-

Fig 8

This is then taken up by Jimmy Lyons, transposed down a minor third (it is quite likely that this fragment is notated and that Lyons is reading the same material but in E♭ transposition). The rhythmic and melodic variation here makes it sound more like a flowing, articulated jazz phrase and less like a five-finger exercise:-

Fig 9

The same motif reappears a number of times throughout the
recording often buried within a dense ensemble texture.
Its distinct appearance towards the end of the piece
reveals yet further transformations:-

Fig 10

From an emphasis on scalar movement and the A/D♯ tritone we
can trace a definite link with another unit the first
group (Plain 1) played by brass in unison:-

Fig 11
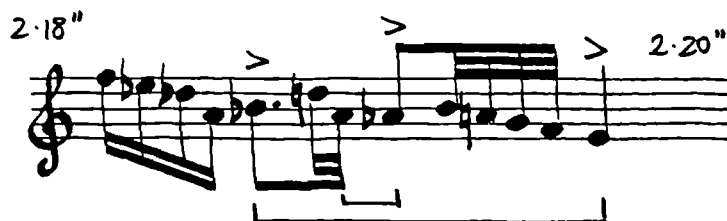
This is immediately followed by a paraphrase on the piano
- an example of the call/response dialogue which Taylor
uses constantly in preference to the idea of
'accompanying' the front-line soloists. This unit in its
turn is transformed into an ostinato pattern which
reappears in various guises in the improvised sections
(Areas 1 and 2):-

Fig 12

Another important source of motivic fragments is derived
from a thematic unit at 1.33 played by Lyons and McIntyre.
This undergoes a distinctive fragmentation process during
the first collective improvisation before an almost
straightforward repeat in Plain 2 (11.30). Certain
motivic links can be traced to Fig 11: the Bb-Ab-E
sequence of accented notes as well as the central Bb-D-A-
Ab :-

Fig 13

Fig 13 (continued)

Different versions of this unit begin and end the first

collective improvisation. The complex of Plain 1

statements is brought to a close by a new unit announced

by the front line which mirrors the staccato rising and

falling shape of the very first unit:-

Fig 14

In immediate response to this Taylor, again, answers the

statement with his own variation, and this staccato rising

motif marks the beginning of a new group of structural

units:-

Fig 15

which is imitated in terms of rhythmic phrasing and

melodic contour by the rest of the ensemble.

Because it is Taylor's intention to keep the units

shrouded in vagueness, it is often difficult to reveal the

relationships and the variations to which they are

-129-

subjected in transcription alone. As with Ornette
Coleman's harmolodic system, phrasing, 'feeling' and tone
colour are as much a part of a motif as the pitch
material. The units are of use only in so far as they
spark off improvisation into unfamiliar territory and in
so doing are almost completely obscured by it.

In his solo performance Taylor dwells on the units at
greater length, rather than the brief terse statements of
the previous example. With a more leisurely exploration
of motivic material he maintains extended passages which
are halfway between composition and improvisation. The
formal displacement of units is complex and organic;
between rapid free runs and clusters they may appear,
repeated at different octaves and freely interspersed with
other motifs. However, the different units juxtaposed in
this way affect each other directly as the improvisation
unfolds, suggesting in Taylor's words, a broad pattern of
development; thesis-antithesis-synthesis. In the
following section from the suite "Silent Tongues", two
contrasting types of material (a/c and b/d) alternate with
each other in short fragments. One is a call-and-response
figure between hands and the other consists of rapid
arpeggio-like patterns played in contrary motion. Phrase
(e) is a synthesis of the two. Apart from the grace note
diad figure at the beginning which is derived from (c),
the rhythmic articulation derives from b/d except in this

instance the hands now move in similar motion. However,
the tonal material of (e) is clearly taken from (c), in
spite of its completely different rhythmic treatment:-

Fig 16

Fig 16 (continued)

As with "Unit Structures", the generative potential of the units is unfolded through persistent repetition which at times sounds terse and austere, but in the solo context this exploration of the units is direct and undistracted. The music's multi-layered inner fabric does not have to contend with the possibility of being obscured under a solid ensemble texture. The motifs in their original form and subsequent transformations are as much determined by gestural considerations and the attempts to reproduce a phrase or idea which is slightly out of reach and not properly learnt. The previous passage from "Silent Tongues" shows contrasting patterns of movement juxtaposed. The synthesis at (e) is achieved through using the gestural structure of one with the tonal structure of the other.

Motifs are the fundamental building blocks of Taylor's music and he views these 'cells' as analogous to the forces of Nature:-

"...musical heat and energy is related to the sun, which is related to the reason why plants grow."

His idealistic interpretation of the natural order and man's place in it is echoed by this structural technique of assembling motifs; small cells grow into highly varied organic wholes, and the interaction of parts feeds the overall structure intuitively. Intuition, for Taylor is the basis of nature, and this belief has been well documented in his poetry over the years (12). This principle of instinctive creation provides Taylor's music with a gestural immediacy; a dramatic truncation of phrase energized by detailed note choices, exaggerated contour and rhythmic interaction. While they are open to manifold interpretation and reconstruction, the motifs are the cohesive and propelling force in Taylor's music, and not, as many journalists have thought, excess of energy and lack of form. Taylor draws a critical distinction between freedom and intuition:-

"The whole question of freedom has been misunderstood, by those on the outside and even by some of the musicians in the movement. If a man plays for a certain amount of time - scales, licks, what have you - eventually a kind of order asserts itself. Whether he chooses to notate that personal order or engage in polemics about it, it's there. That is, if he is saying anything in his music. There is no music without order - if that music comes from a man's innards. But that order is not necessarily related to any single criterion of what order should be as imposed from outside. This is not a question, then, of 'freedom' as opposed to 'non-freedom', but rather

it is a question of recognising ideas and expressions
of order."

In a conversation with Derek Bailey (13), Gavin Bryars

pointed out that improvisation is corporeal more than

cerebral, viz., it is not really possible for the creator

to stand apart from his creation for the music comes about

as a direct result of a specifically gestural vocabulary,

which, as Cecil Taylor observes, is part and parcel of

learning to improvise. Indeed, in transcribing sections

of Taylor's recordings one becomes intimately aware of

movement and hand positions which determine the nature and

course of the music. This gestural vocabulary has a

direct bearing on the choice of tonal material. This is

in total contrast to the avant-garde, post-serialist

school of composition; Ferneyhough, Finnissy, Dench, and

others, where intricate and complex musical gesture is

completely divorced from physical/muscular considerations

by means of overloading the system with a surfeit of

notated information. For Gavin Bryars the synonymity of

music and person in improvisation became a severe

limitation which is why he gave up improvising, from the

mid-60s until comparatively recently. But if one is

hidebound by a repertory of improvisatory devices and

habits, there are certain things that one can do at a

compositional stage to alleviate that condition.

Motif as Gesture

Fred van Hove and Guus Janssen demonstrate a use of motif
where musical intention and mechanism of production are
one and the same. The motifs are often used for their
contextual incongruity and humorous effect, as they
highlight and go against the grain of more obvious
stylistic cliche. The main concern is with the gesture; a
pattern of movement of the hands upon the keyboard which
is then subjected to transformation and development by
musical/aural considerations. .

In Fred van Hove's solo *performances the motives*
themselves ostentatiously stand out from the rest of the
musical texture, rather than being obscured by it. Their
idiosyncratic nature is deliberate and somewhat at odds
with the motoric tendencies of the hands, imposing
themselves on the improvisation as an external force. The
definition of motif here must be extended to mean physical
as well as musical gesture; a kinesthetics of
improvisation. "Compositie mit Toonladders" has no
thematic material as such but uses a wide variety of
scales; diatonic, modal, chromatic and whole-tone,
juxtaposing and overlaying them. For example, at the
beginning the left hand plays a succession of five-finger
scales:

Fig 17

over which the right hand enters with hovering chromatic
runs at a different tempo. These develop into long
descending chromatic runs while the left-hand's five
finger motif becomes a kind of Yancey-style boogie bass:-

Fig 18

Unlike Taylor, whose units function as a catalyst for
improvisation and are never left far behind, Fred van Hove
tends to use predetermined motifs as starting points only.
These become springboards for improvisation and are
quickly dispensed with, so a piece may develop
independently of its clear-cut beginnings and end in a
different area entirely. The motif is not a thematic or
architectonic device; it is a functional starting-point.
It is, in Anton Ehrenzweig's meaning, "vague, unpolished,
suggestive". (14)

Fred van Hove's second solo piano record "Verloren
Maandag" consists entirely of miniatures of between one

and five minutes. In an interview he explains his choice
of this unusual format:-

> "I try to do things with just pure sound, and I can
> only do these in silence, in solo.....I had gathered
> together many starting points, points to be developed
> which could begin an improvisation. Some of these
> points were notated." (15)

Later in the same interview he speaks of finding
"stations" during an improvisation, points of stasis in an
essentially linear progression of ideas, where certain
aspects of the music, rhythmic, textural, etc., could be
consolidated. These *stations do not often bear any*
specific resemblance to the starting point but are
selected spontaneously out of their context for closer
scrutiny and exploration, as though 'zooming in' on a
particularly fruitful idea. This type of developmental
movement with its forward motion and sudden still points
suggests a connection with Hove's earlier interest in
silent film accompaniment. He has played for many early
experimental films by Walter Bruckman, George Melies,
Leger and Picabia, finding in cinema a parallel to his
'pure' musical style, namely a principle of forward
development broken up by tableaux held together by the
magnetic power of their segmentation. Hove intends that
the "stations" should be complete within themselves, being
able to hold the listener's attention and not relying
entirely on their 'meaningful' placement in a larger

context. Roland Barthes recognises a similar aesthetic in the sequential tableaux of Eisenstein's films:-

"....the film is a contiguity of episodes, each one absolutely meaningful, aesthetically perfect, and the result is a cinema by vocation anthological, itself holding out to the fetishist, with dotted lines, the piece for him to cut out to take away to enjoy.." (16)

Some pieces on "Verloren Maandag" are built on incongruous combinations of motivic material, and while the material may be dropped, the incongruity that it establishes persists. Each particular "gimmick" is sustained for a while, taken apart, looked at *from different angles before* being replaced by something else as the centre of focus. For example, "Onheil" begins with quiet, isolated staccato notes in an upper register, interposed with crashing tremolandi in the bass. The incompatibility of right and left hand tasks - the fact that the left will always drown out the right if playing simultaneously - is explored thoroughly and impassively before finally being rejected. "Twee Hoog" works on the same principle. The motif (three slow notes in the right hand, followed by two fast ones in the left) is played three times before the hands move further apart to accommodate this idea at the extreme registers. What results is a parody and absurd dialogue (as indicated by the title), "Twee" being C/B trill at the top of the keyboard, and "Hoog" the cumbersome bass notes:-

Fig 19

The piece ends with an extended improvisation on the B and C exploring the various percussive and overtone effects.

"Old Maid in a Drawing Room" contrasts two opposing ideas which alternate but do not combine at any point. Fast repeated two-hand chords are interposed between rapid single note runs over the whole keyboard. In the preceding piece, "Hoefd - By en nevenzin" two different simultaneous types of articulation are combined into a single motif:-

Fig 20.

The motif structure of *"Wordenschat"* *is more complex.*

From the opening three separate levels become apparent:-

Fig 21.

1. The melodic motif of a falling semitone, repeated three times, pervades the upper lines of the improvisation. This motif is used to begin more extended phrases and is the basis of most of the melodic movement.

2. The left hand chords - all simple major or minor sevenths or augmented third and fourth chords makes a stylistic reference to an earlier period of jazz piano, as does the textural separation into line with supportive harmony. The separation in this case is much more marked as the chords too do not correspond to the right hand material harmonically, or indeed to each other in the sense of a harmonic progression. Quasi-cadential points arise but are unresolved (a, b and c).

3. The third motivic level is not so easily definable in sonic terms, but could be considered as "associative". In many of these pieces certain phrases and types of articulation are reminiscent of other pianistic styles. While Fred van Hove rarely indulges in idiomatic pastiche, one might contest that these pieces are quite on the level of "pure sound" which he claims. There is a certain wry humour in the way in which he will manipulate the listeners' aural experience behind a facade of simple motifs.

On the level of "pure sound" we can isolate two motifs
in "Ballade Terug":-

(a) a sustained left hand diad followed by four
staccato attacks in the right hand, and (b) a
two-part chordal structure passed from left to
right hands and repeated a few times:-

Fig 22

On an associative level, though, the persistent minor
seconds in motif (a) might seem like "mistakes", which,
together with the predominance of sixths and tenths in the
left hand and the lurching movement are reminiscent of
Thelonius Monk. Motif (b) undergoes various
transformations: reversal of hands (bar 10), simultaneity
of hands (bar 6) and later motoric treatment:-

Fig 23
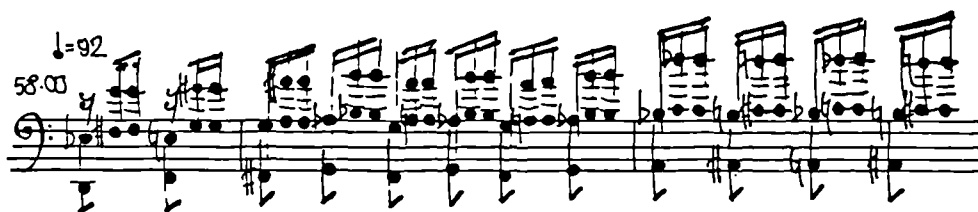
The textural effect of this "station" is qualitatively
different from the original motif. The motif is submerged
as the musical emphasis shifts from single chords to
rhythmic drive and energy. The hidden potential of such
starting points gradually unfolds as one idea leads to
another. Their connection with any arrival point is
obscure, as this is reached at the end of a continuous
chain of contiguous developments.

In Irene Schweizer's music, the obscurity of the motif in
its relation to a resultant form is greater, since its
occurrence is always spontaneous. Unlike Hove, whose

motivic material is like a springboard to kick off from,
Schweizer's motifs generally occur at interim stages.
Large sections of a performance may be taken up with
intensive treatment of one limited idea, a few notes or a
chordal structure, expanded by repetition or simple
variation. She herself has said that the decision to use
a certain idea at a certain moment is quite spontaneous,
basically determined by contextual links with its
surroundings. It is therefore quite remarkable that such
on-the-spot decisions can seem to have such far-reaching
arhitectonic consequences. In this respect Schweizer's
motifs contain an illusory autonomy. They are extraneous
to the music itself until "applied" *diachronously*. *They*
constitute a flexible motivic vocabulary which can be
drawn upon at any time which is felt to be right.

The motifs fall broadly into two types of application.
The first relates to Schweizer's crystalline a-rhythmic
playing, where the phrasing is more suggestive of a
romantic rubato than of the explosive nervous energy of
Taylor or Schlippenbach. Here the motif is embellished
and obscured, often buried under the weight of
interpolated extra notes.

In "Rapunzel...Rapunzel" a simple, descending chordal
motif appears in various guises:-

Fig 24.
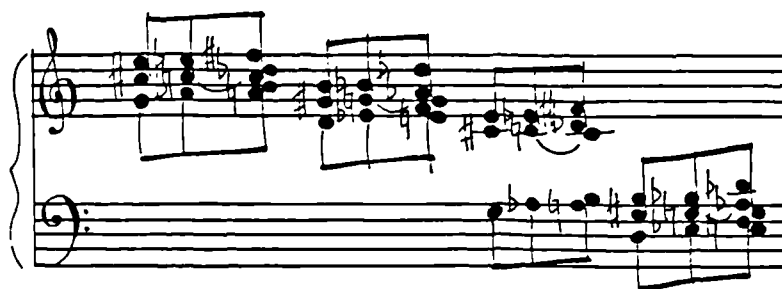
Certain elements of this form the opening flourish: the
sense of alternation between two basic tonal centres (A♭
to E♭), the general downward movement, and the
predominance of an internal progression from augmented
fourth to major third and back again:-

Fig 25

These runs tend to favour arpeggiated seventh structures,
mirroring the F-B-E chords which in this treatment
function as a substitute for the basic E♭ tonal centre.

The second type of application of the motif is with jazzy
syncopated sections which disrupt the more texturally
dense passages. Here the motif may be reduced to its
simplest and most obvious constituents in "Rapunzel" it
becomes the basis of an ostinato figure:-

Fig 26

The appropriateness to the jazzy sections is the main
requirement of the motivic material. They affirm rather
than contradict the natural tendencies of the
improvisatory hand, as Schweizer's present style is
consciously based on her traditional jazz roots. The
motifs are never notated and are subject to extensive
modification from one performance to another.

Marilyn Crispell, in her work of the last few years, has
developed a more complex system of interactive motif-types
which have quite different roles. For her, the

introduction of compositional elements into a style of
solo improvisation which was previously based on a stream-
like sense of continuity and fluctuating inner pulse, gave
rise to certain internal stylistic confrontations. These
difficulties were partly overcome by adopting a principle
of restless change and substitution in using written
material. The motifs are usually notated and practised
outside their improvisational context in order to acquire
fluency with them in all twelve keys and rhythmic
variants. Each piece is then built around a certain group
of elements, rhythmic and melodic, which are used inter-
changeably and integrated into the flow of spontaneous
ideas. Melodic elements are grouped according to their
overall similarity, so that compositional and
improvisatory variation becomes ambiguous to the listener.
No single motif sticks out from the texture or becomes
especially familiar. Rhythmic elements are developed and
extended, small rhythmic motives yielding much larger
units. Some motives are suitable for beginning a piece
while others are designed to be brought in at different
points. The ordering of these is generally flexible,
although in some pieces they have come to be organised in
a specific sequence which is now immutable. This is an
ongoing process of crystallisation affecting most of
Crispell's music: motives which have originally been a
product of improvisation eventually become well-crafted
elements in a compositional framework.

Marilyn Crispell is unusual amongst improvisers in that
notation, which calls into play the whole visual/aural
interaction, is an essential part of her music. Some
pieces work by a principle of random sighting, a technique
more commonly associated with certain "aleatoric" works of
the 50s and 60s - the eye alights on any one of a number
of notated elements scattered over the page. This is then
brought into the improvisation in some form or other,
combined with ideas immediately preceding and followed
through by another notated fragment or with some hitherto
unknown connection. Relations between certain motifs may
affect their placement on the page; similarly, a
particular visual configuration may inspire musical
connection which otherwise would not have arisen. In this
way the motifs serve in part as visual stimuli containing
elements that may be extraneous to the mechanics of
playing - another way of enlarging upon one's
improvisatory vocabulary. The motif may serve as an
occasion for the mind to produce an interpretation in
terms of conceptual structures drawn from its own inner
resources.

Marilyn Crispell has remarked on a tendency towards
oppositional friction which is responsible for the intense
energy of her playing. The motifs in their
improvisational context often give rise to some kind of
imaginary and antagonistic "opposite" and these two are

forced together under duress. The spontaneous
antithetical idea becomes gradually more "compositionally"
defined through this opposition. This could be
represented by a zigzag ladder where typology generates
actual process which in turn modifies certain in-built
"rules":-

Form   Process

The notated page

                          Formulation of motif

The set of different
realisations and
treatments in context.

                          Incorporation of "random
                          intrusions" - spontaneous
                          antithetical ideas.

Expanded formal
possibilities: dialectic
of pre-determined and
unknown areas.

                          Interaction of
                          pre-determined and
                          "random" ideas,
                          generation of new
                          motivic material.
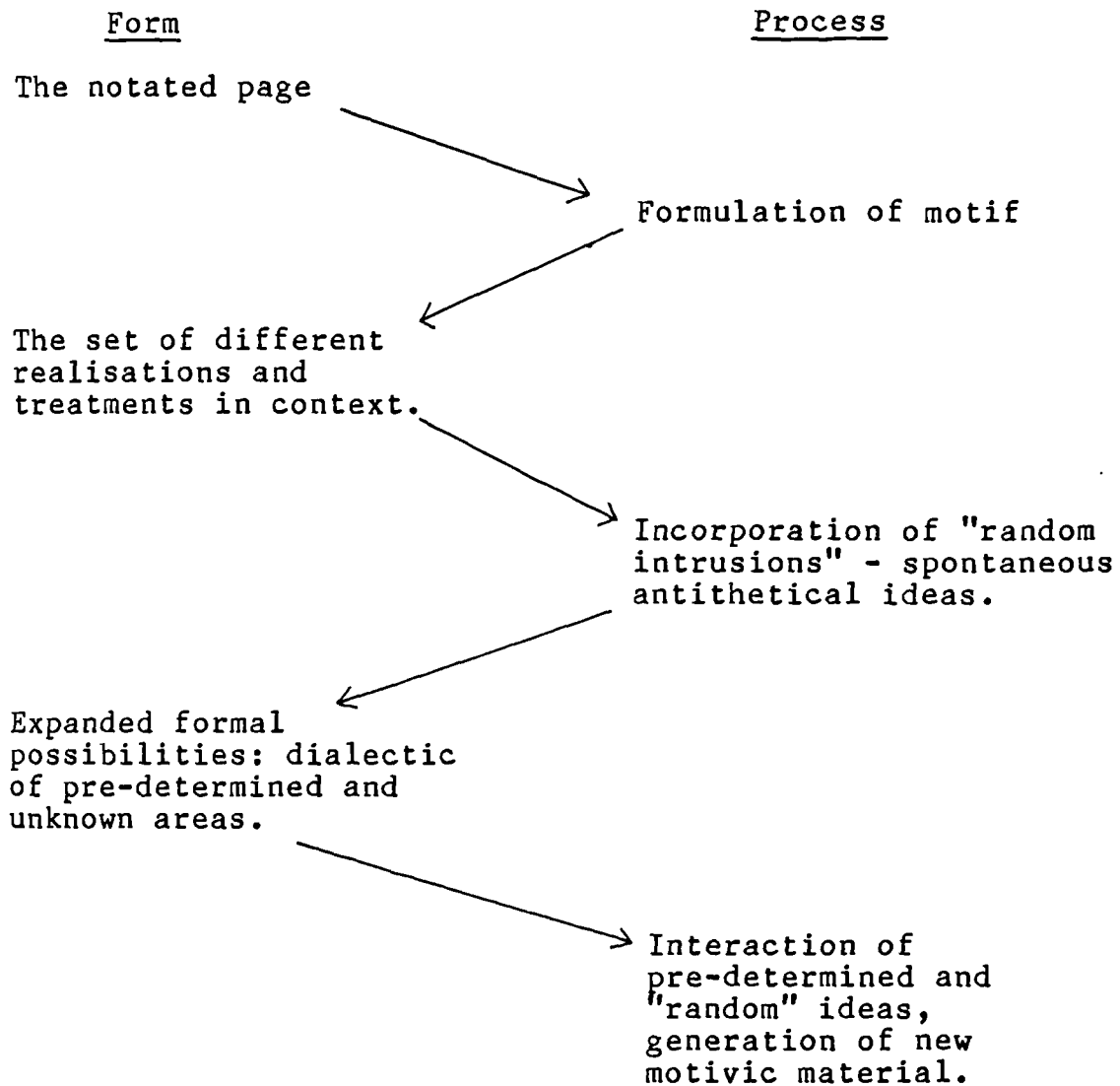
At each stage the theory, the modus operandi, is modified
by spontaneous action. This is the principle of
"feedback", a term used in biological theory to described
the whole genus of methods altering an adaptive act.

Guus Janssen is both a composer and an improviser and his
work generally has been profoundly concerned with
dissolving the barriers between his two "personalities".
His improvisatory technique is rooted in jazz with its
dynamic approach and rhythmic contrasts while his
composing is indebted to the procedures of European art
music. The proportions of composed to improvised material
varies enormously, but what is of primary interest here is
the ways in which they are combined. The specific nature
of that relationship to a large extent predesignates that
material. Janssen is perpetually exploring that dichotomy
and making the boundary-line ever more ambiguous. The
improvisation is semi-formalised so that the motif
functions in a unique, often severely restrictive context.

"Zwart Wit" is based on a downward scale of white notes in
6ths in the right hand with the black note pentatonic

scale in the left hand. This, in fact, comprises the
entire pitch material of the piece:-

Fig 27

The motif is disassembled and reconstructed in various
ways, without any change to its pitch content, with
different nuances, accents, tempi, pauses, repetition and
arpeggiation.

"Metro oom" is based on a similarly limited palate from
which only minor deviations are occasionally made. The
absurd, humorous material is treated in a meticulous and
calculated way, dealing with the variety of hand
alignments created by the two simple sequences of notes,
one in each hand. The left hand plays an ostinato
figure:-

Fig 28

with occasional harmonic variants such as
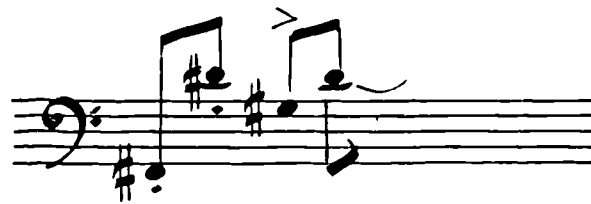
Above it the right hand constructs a line of sparse
isolated notes. Beginning perhaps as a parody of
pointillistic serialism (the melody does have certain
characteristics reminiscent of a twelve tone row), by the
interpolation of ornaments, a jaunty rhythmic line
gradually emerges:-

Fig 29

The relationship of hands immersed in their separate tasks
is unstable and intriguing. There are sections where one
or other hand gets 'stuck' mid-flight, while the other
carries on through its sequence regardless. Janseen

-152-

emphasises the inherent flippancy and humour by
grotesquely exaggerated phrasing and awkward pauses.
After a brief period of fluency around the middle of the
piece, in which the whole of the right hand line is played
with various rhythmic inflexions, the faulty machinery
just grinds to a halt.

The interface of the two hands playing non-corresponding
motifs also provides the basis for "Soft Pillow". Here
one hand plays a succession of quiet, detached G#s while
the other plays loud, rapid G^7 arpeggios (3rd omitted). An
improvisation develops from this treating the planes of
black and white notes as clearly separate and independent.
As with "Metro oom" the simplicity and directness of the
motivic material make this ostentatious distinction and
conflict possible.

In some pieces the actual motif is more difficult to
discern. Its presence is felt by suggestion as though
influencing the improvisation from a distanced source.
This allows a certain degree of structuring without
adherence to a particularly striking or recognisable
pattern of notes. "Fifth Avenue" for example is based
loosely around sequences of fifths, played at the
beginning in single notes, then building up into tentative
harmonic structures. By the strong associations that the
cycle of fifths has with many different music, this simple

motif here underlies an extraordinary stylistic patchwork which appears to sample the entire history of jazz piano style and technique. The fifths are sometimes stacked on top of one another, at other times treated as the instinctive harmonic progression of the standard. Janssen has used the fifth progression in some of his notated works, such as "Met Speod" for bass clarinet and piano. In this piece the way the tones are spaced out evokes the sound of atonal music although the structure is thoroughly diatonic. As with "Fifth Avenue" the flexibility of this system means that it is possible to make use of diatonic elements without strict tonal involvement, at the same time leaving open the possibility of interesting tonal associations.

"Kinheim" likewise develops at somewhat of a tangent to the opening gestural motif pursuing the humourous implications of familiar-sounding cliché. The whole performance is a comedy of errors. It is characteristic of Janssen's sense of ironic humour in that the chord progressions do not quite fulfil the stylistic requirements:-

Fig 30
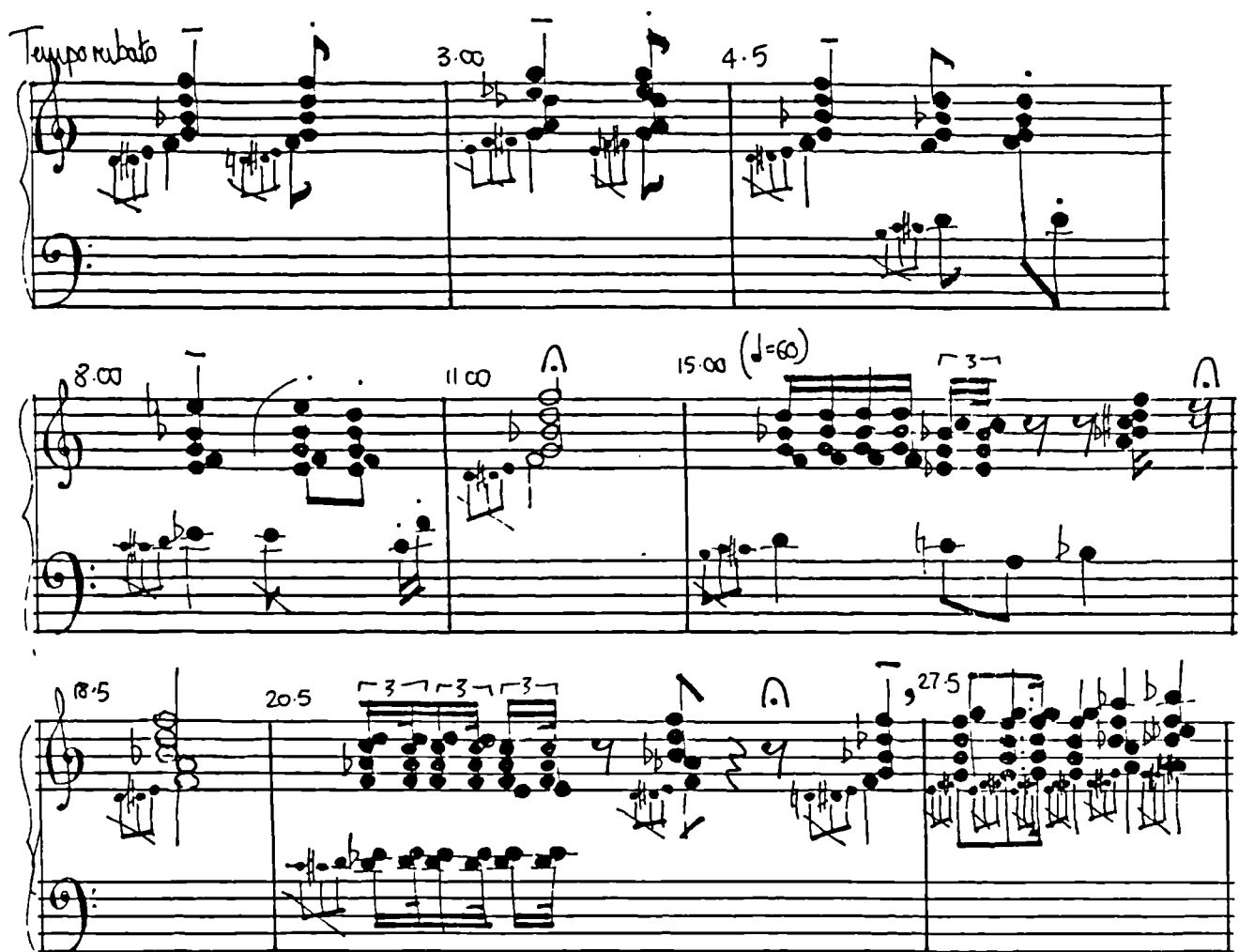
The motif itself - grace notes plus a seventh chord - is
reminiscent of the harmonic style of jazz piano associated
with Dave Brubeck or Errol Garner, but the way in which it
is used works contrary to this suggestion. The harmonic
progressions make no sense whatsoever within those
stylistic terms - expected resolutions are constantly
eluded, cadences never materialize, and the quasi-

syncopated rhythmic flow is perpetually disrupted by awkward pauses.

"Brake" has been described by Janssen as a written out improvisation which is a study in mistakes. As the pianist rushes headlong at the first few bars the octaves and seventh chords soon disappear under a welter of 'wrong' notes. The paradox here is that Janseen illustrates the apparent gross incompetence of the pianist by means of very precise notation:-

> "I have sometimes been asked why I don't present
> this idea in an improvised form. But one of the
> disadvantages of improvisation is that passages
> containing little or no information are practically
> inevitable. In Brake the information is communicated
> rapidly and in concentrated form, which makes it a
> kind of musical manifesto."

Fig 31

"Brake" (1974)
Bars 1-7

The piece is built on an A/E octave motif which becomes progressively obscured throughout the piece. From the original breakneck speed the music gradually slows down suggesting an attempt at a return to order. The first 'mistake' appears in bar 4 - a G# seemingly struck by accident, followed by a RH acciaccatura in bar 6 as though the little finger has slipped off the black key. A barrage of such accidents builds up in an accelerating frenzy and all feeling of order is lost, culminating in a passage which simulates stumbling over a sequence of difficult arpeggios. Like Janssen's improvisations, the piece is primarily a commentary on musical performance and to do this he uses motifs with strong stylistic associations in an unorthodox way. The motifs become elements in a kind of pastiche which delves, with wry humour into the incongruities of certain styles and techniques of piano playing.

An overview

A motif can be melodic, harmonic, rhythmic or textural. It may be composed or improvised and may assume varying degrees of prominence within its framework. But, most importantly, it works as a catalyst outside the normal finite vision of musical vocabulary. The purpose of this relationship between the motif and its context should be one of cohesion, joining designed and non-designed

elements together into a seamless whole. The motif is, in Paul Burwell's definition:-

> "....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 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." (17).

Paul Burwell sees the interaction of these "events" which stimulate the improvisation rather like sound 'objects' - not events that are restricted by their placement in a time continuum but more like visual or sculptural motifs that can be walked around and examined from many different angles.

The motif is distinguished by its inherent flexibility and the way in which it can establish a type of discourse between improviser and music, helping to overcome its syntactic limitations as defined earlier by Gavin Bryars. The value of the useful motif lies in its ability to stimulate the creation of new patterns and directions while at the same time disrupting a too-comfortable system of surface connections.

NOTES ON CHAPTER 3

(1)   L. Wittgenstein: "Tractatus Logico-Philosophicus"
        p. 42.

(2)   see also Kandinsky: "Concerning the Spiritual in
        Art"   p.37

(3)   Derek Bailey: "Improvisation" p 131.

(4)   From sleevenotes to "Urban Collective Calls"
        (Incus 2).

(5)   Jacques Hadamard "Psychology of Invention in the
        Mathematical Field" 1945.

(6)   Jorge Luis Borges: "The Garden of Forking Paths",
        and also Italo Calvino: "If on a Winter's Night
        a Traveller".

(7)   from Magazine of Art XXX No 4 April 1937
        p 236.37.

(8)   Op.cit.   John D. Graham.

(9)   S. Langer: "Feeling and Form" - p.168

(10)   A. Ehrenzweig: "The Hidden Order of Art" - p. 48.

(11)   Op. cit. p. 102.

(12)   see the long poem which accompanies "Garden"
        (hat ART 1993/94)

(13)   Derek Bailey : "Improvisation" - p. 136

(14)   Op. cit.

(15)   "Musics" No 18 1978 - p.14

(16)   Roland Barthes: "Image/Music/Text" - p.72

(17)   Paul Burwell: "Radical Structure I" - Studio
        International Dec. 1972 - p. 319.

CHAPTER 4

"First was actual life with its motor reactions.
Then arose a unity: the dromenon the deed done,
and this deed was either a dance, which is a
pattern of movement, or a painting or a carved
figure, which are patterns of perception, and
the life of the ritual was identical with the
life of these patterns." (1)

In his book "Icon and Idea" Herbert Read draws our
attention to two distinct parts of the creative ritual -
the action and the reflection. The Greek word for rite,
dromenon, is synonymous with performance here for in the
moment of "doing" there is no such rationalization or
dissociation of action and sensibility. However in terms
of music-language development outside the performance
situation we may apply Read's distinction of the action
and reflection in spatial awareness, i.e. the sensorimotor
awareness of space which is both linked with perception
and motor activity, and the idea of space - the symbolic
activity of intuitive thought. To begin with the latter,
having looked at macro-structure as well as motivic
elements in improvised performance, I shall proceed by
looking at the individual piano tones, their particular
qualities in the different registers and their changing
patterns of distribution within new stylistic contexts,

then look at the kinaesthetic experience of piano
improvisation.

Howard Riley, in a conversation, described the limitations
of older styles of jazz piano as being related to the
circumscribing of particular areas of the keyboard to
particular roles. For example, the optimum register for
one type of left hand chord voicings is quite restricted.
Below this register the chord will sound 'muddy' and above
it will sound disparate and lacking in sustain. In both
cases its harmonic value is decreased. To compensate for
such restrictions, different types of chord voicings are
substituted when the registral boundaries of one
particular voicing are transgressed. From this idea
evolves an elaborate code of practise for the density-
distribution of harmonic notes, while the improvised lines
maintain certain tacit 'rules' about intervallic spacing
and the coincidence of phrase-shape, climactic points and
register. In bebop, the piano is basically an instrument
of emulation - single-line melody with supportive
harmonic/rhythmic accents or bass line, an ensemble in
microcosm. Although it suffers certain shortcomings in
unifying all these roles, its flexibility lends it a
position of arbitrator and link between the diverse
elements of the ensemble texture, rather than giving it a
character of its own. Contemporary improvising pianists
have, to some considerable extent, realised piano sound as

a more independent voice, emancipated the keyboard from these divisions of functional territory and opened it up to a much greater variety of textures utilizing the full extent of timbral possibilities, the capacity for polyphonic layering of sound, and the unexplored regions of ambidextrous music.

Because of the rational simplicity of the keyboard, the fixed timing and attack/decay pattern there is a tendency to think pianistically in 'structural' rather than sonic terms. Because the minutiae of tonal and timbral inflexion possible on some other instruments are by-passed, attention may be focused on 'pure' pitches and rhythms insofar as they are reducible to summative procedures. However, an improviser's distinctive style is as much determined by the physical technique - the approach to attack, articulation and resonance - as by the musical material itself.

There has been considerable controversy as to whether piano tone can actually be altered by different types of key strokes. Many pianists and pedagogues are of the opinion that a wide range of tone colours is possible. Maria Levinskaya draws a connection between the varieties of touch and certain tone-colours. However, it is not clear whether such relations are simply used as imaginative devices to aid with musical conception or

whether they are physical realities (2). Tobias Matthay

is quite emphatic about the connection, and actually lists

42 distinct touches (!) (3). Physicists, on the other

hand, have argued that such supposedly qualitative

differences in touch are merely differences in intensity

i.e. the number of overtones increases in direct

proportion to the velocity of the hammer stroke. A

forcefully struck note will have a comparatively shorter

decay and it will activate higher overtones than one

struck with less energy. It is these high overtones which

are the slowest to fade and become more prominent as the

tone continues. The sustained tone alters, grows thinner.

In addition to the overtone characteristics one must also

take into account the noise element as a formant of tone-

colour, which is made up of five separate components (b)

is the most audible but (a) and (c) increase

proportionally with harder attacks:-

Fig. 1

a) finger impact noise

b) hammer impact

c) key bed noise

d) thud of

returning

noise.

e) friction noises
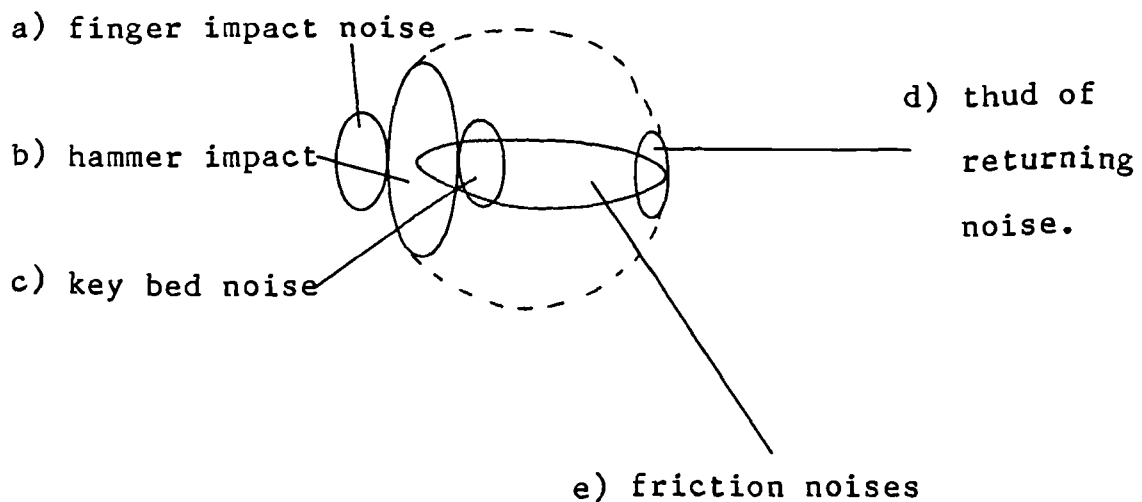
The most comprehensive study on this subject is "The

Physical Basis of Piano Touch and Tone" by Ortmann. The

author argues also that different touches produce only

differences in intensity: a quiet sound will not produce

many partials, whereas a loud one brings out many more

(4). Gat puts the noise elements into three categories -

a) hammer noise, b) the collision of key and key bed

(lower noise), c) collision of hand and key (upper noise).

He goes on to explain how categories (b) and (c) can be

"controlled" for specific musical ends:-

> "The apportioning of upper and lower noises and
> their mixing with the tone of the string depends
> upon our will: the amount of them can be varied
> according to our musical conception. The deep
> hollow sound of the lower noise is an indispensable
> requisite of representing a dark, heavy depressed
> mood, while the upper noises are needed in sharp,
> light, fresh sounds. However, their 'over-dosing'
> - unfortunately a most frequent occurrence in
> concert halls - will spoil the tone quality
> because the less the noise-effect (compared with
> tone volume) the more 'carrying' and sonorous
> the tone will be" (5)

A familiarity with these noise effects and with the

various tonal characteristics of different registers

reveals a wealth of subtle gradation and nuance in tone

colour available to the improviser, which are not

immediately apparent to the topographical abstract view of

the keyboard. David Sudnow writes of an innate

intelligence of the integrated knowing hand already

familiar with a network of spatial contexts, a physical

grasp and tactile appreciation of the sound:-

> "the piano...is no longer experienced as an
> external mass of ivory and wood and steel, but
> that it rather seems to dissolve into an inner
> acquisition of spaces to speak with. Keys are
> no longer encountered as places with lower limits
> that speak back to the hand as physical boundaries,
> but as places having sound throughout their depths.
> You come to use the instrument to speak with as you
> use a hammer, not just to hit the nail but to bond
> two pieces of wood, as you use the typewriter, to
> throw sights to another person, as you use the car,
> not merely to handle its parts but to get downtown
> in a hurry". (6).

Much free jazz has concentrated on the percussive aspects
of the instrument, an aesthetic with little precedent
either in jazz or composed music, except perhaps certain
works of Bartok or Stravinsky. Chris McGregor once
described the piano as "a drum with a melody" (7). Some
pianists, however, such as Paul Bley and Ran Blake have
preferred to explore the instruments lyrical and resonant
qualities.

The 'Singing Tone'

The piano can create only an illusion of sustained sound
i.e. unlike voice, wind or bowed instruments, the piano
vibrations are free; no energy is fed into the sound after
the initial impact of the hammer. Thus the sustaining
qualities depend upon how that energy is dissipated.
While centuries of piano pedagogy have stressed the

singing tone ideal with various methods of how to achieve
it, it was not until comparatively recently that
acoustical physicists have been able to explain this
phenomenon. When a note is struck and the key held down
the sound fades away naturally. But this decay rate is not
uniformly exponential as was once thought. It is made up
of two separate decay functions. The initial sound
disappears in a matter of one or two seconds, after which
it is replaced by a gentler decay, known as after-sound.
This is the main component of the piano's singing tone.
The decay pattern changes in this way because the plane of
the string's vibration changes. Initially a string
vibrates vertically, having been struck in this direction.
But what happens then is more difficult to anticipate.
The plane of the vibration begins to revolve because of
imperfections in the hammer or interactions between the
strings, bridge and soundboard until the string ends up
vibrating horizontally. These horizontal vibrations
become more important as the sound fades away.

Another contributory factor in singing tone is the tuning
of unison strings. Some of the best piano tuners make the
three strings of a note slightly out of tune with each
other (anything up to 0.8 cent - anything more than about
1.5 cents starts to sound 'jangly'. The explanation for
this practise of slight detuning lies in the decay rates.
If three strings are tuned precisely together the sound

disappears much more quickly than if there were only one string. The bridge, which is fixed to the soundboard, vibrates with the strings. If the strings are perfectly in tune the bridge moves three times as far and the sound leaves the instrument more quickly. If the three strings are not in tune their action upon the bridge delays the dissipation of sound. What seems to happen is that the movement of the bridge makes the strings vibrate at the same frequency, but cause the tone to decay more slowly.

Gabriel Weinreich of the University of Michegan speculates that piano tuners may intuitively vary the degree of mistuning from note to note to produce a uniform sound quality throughout the range of the instrument. He also believes the direction of vibration is quite significant in determining the quality of the tone. Because the initial vertical vibration is taken up and transmitted to the soundboard we do not notice the various idiosyncrasies of vibrational amplitude that occur within a unison group. At the start of the sound their motions are coupled. However, as the vibration continues it gathers elliptical and then horizontal movement. In the transition to horizontal vibration the movement of the strings become out of phase and they vibrate independently making up a 'singing' after-sound. Professor Weinreich suggest from his findings that these two vibrational polarisations and associated prompt and aftersound emanate from different

"antennae" and that they are altogether quite different in quality.

A third factor contributes to this after-sound. When Hermann Helmholtz and C.F. Theodore Steinway collaborated in the last century to produce the modern piano, one of the principles they laid down was that the hammer for the bottom 40 notes should be one eighth of the way along the string, and this rule is followed by piano makers today. The reason was to dampen the seventh harmonic (B above a fundamental of C) which was thought to be unduly dissonant. Now tonal analysis shows the seventh harmonic to be still present, because halving the length of a piano string does not produce a true octave, but one that is slightly sharp, and higher overtones are even sharper. This phenomenon is called "inharmonicity" and has to do with the stiffness and inflexibility of steel piano strings. This stiffness reduces the 'speaking' length of the string slightly and produces higher partials than would be normal. They are artificially increased by the stiffness and tension of the wire and are not integral multiples of the fundamental tone. The difference is cumulative: measurements have shown that the 15th partial is nearly sixteen times that of the fundamental tone on grand piano bass strings (8).

Karl Berger is a pianist more concerned with the
peculiarities of after-sound than with attack, as it
underlines his particular interest in tuning and
temperament and their effects upon the psyche. In one of
his classes he attributed the singing tone of the piano
partly to the idiosyncrasies of equal temperament and the
interactive nature of vibrating strings. The ideal tuning
system laid down by Pythagorus on the island of Samos in
the 6th century B.C. has never entered into modern piano
tuning. The 'mistuning' of equal-tempered intervals
displays a similar mismatch to the tuning of a unison
group of strings, so that psychoacoustically there is a
resistive interaction between the perfect interval and the
tempered compromise. Berger argues that because the
natural geometric ratios are no longer operative the tones
of simple intervals and chords do not lock together
harmonically: the fact that they may seem to is just an
illusion. The tones are quasi-autonomous, each requiring
(and here Berger stresses the anology with human
behaviour) a certain amount of individual acoustic space
to speak, and they never actually blend.

Berger's music tends to dwell on simple harmonic
relationships and sparse textures which give full rein to
the richness of the resultant resonances. The strings and
soundboard ring freely for most of the time in this type
of playing. The sustaining pedal is actually released at

certain points of emphasis or to delineate phrase structure. Berger is especially interested in the interactive nature of piano tones and the way in which they appear to attract or repel one another. The concept of harmony in equal temperament, he points out, is a fallacy - an aural illusion only - and to emphasise this conception, notes are rarely sounded simultaneously. This idea is also bound up with a quasi-Platonic analogy between piano playing and human society: each individual tone (person) requiring a certain amount of 'breathing space' and being autonomous to a degree, yet open to modification through relationship with others.

This socialistic vision of tuning and temperament is first encountered in the writing of Plato: in the Republic he warns of inevitable degradation:-

> "Since for everything that has come into being
> there is decay, not even a composition such as
> this will remain for all time; it will be
> dissolved. And this will be its dissolution:
> bearing and barrenness of soul and bodies come
> not only to plants in the earth but to animals
> on the earth when revolutions complete for each
> the bearing round of circles.."

Any system of tuning that uses perfect ratios of integers (Socrates' system uses 1 : 2 : 3 : 4 : 5 : 6) will degenerate unless the number of tones is severely limited. From these ratios we can derive the Greek Dorian mode, the

musical foundation of The Republic, and its reciprocal,
the major scale:-

Greek Dorian	D	C	B	A	G	F	E	D (falling)
Reciprocal Dorian	D	E	F#	G	A	B	C#	D (rising)

(major scale).

```
                    1           :           2
                    1   :           3   :   4
                    4   :   5   :   6
                        5   :   6
                          · 4   :   5   :   6
```

However, as tones are generated through the cycle of
fifths they become increasingly 'inharmonious'. When the
cycle is complete, the "second generation" of tones are
given the same name yet the tuning is out by the syntonic
comma 80:81, a micro-interval symbolising, in Plato's
metaphor the dissention between generations ("your young
will become more unmusical"). Further mismatches generate
"mad relatives" and "children of the worst births" who
must be excluded from rule in the musical city.

Despite the physical realities of equal temperament there
exists still the inherent tendency to make the perceptual
substitution for 'pure' interval. Karl Berger emphasises
the importance of thinking in terms of pure intervals in
piano improvisation as a means of balancing dynamics and

shaping phrases. The dynamic mixture of a chord is the
most perfect means at the pianist's disposal to bring out
certain pitches over others and transgress the
psychological limits of the tempered scale. This is the
deciding factor in the relative dynamics of the separate
tones of Berger's phrases. A note struck more strongly
will appear to sound higher in pitch (due to the
inharmonicity of its partials) while a note that is struck
more softly sounds lower. Ideally these differences will
correspond exactly with those between the imagined pitch
and the tempered scale. Pianists must learn to develop a
technique of greater dynamic differentiation from tone to
tone than would be required from an instrument capable of
playing in pure tuning. Tempered tuning is an
abbreviation for a much more complex system. One of
Berger's exercises to develop this awareness using any
sustaining instrument with piano is to place a single held
tone in a variety of harmonic sequences, and to make the
necessary adjustment of pitch with each harmonic change.

Whilst it is obvious that such a cumbersome structure as
the piano is necessarily a static sound source (9) there
are various factors which influence the way that sounds
are perceived in acoustical space. I mentioned earlier
Weinreich's idea of the different "antennae" for vertical
and horizontal string vibrations and that the prompt sound
(vertical motion) appears to have much more directional

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impact than the more elusive aftersound. Varese
recognised an intrinsic three-dimensional aspect to sound
which goes beyond the placement or movement of sound
sources. His remarks about the spatial quality of a
performance of Beethoven's 7th Symphony in the Salle
Pleyel are revealing:-

"Probably because the hall happened to be
overresonant...I became conscious of an
entirely new effect produced by this familiar
music. I seemed to feel the music detaching
itself and projecting itself in space. I
became conscious of a third dimension in the
music. I call this phenomenon 'sound projection'
...the feeling given us by certain blocks of
sound. Probably I should call them beams of
sound, since the feeling is akin to that aroused
by beams of light sent forth by a powerful
searchlight. For the ear - just as for the eye -
it gives a sense of prolongation, a journey into
space." (10)

We actually perceive a spatial difference between high and
low tones. Conventional staff notation reflects this
perception as does the piano keyboard (in a horizontal
plane). Piano sound and construction exhibits too a
dimensional tendency - big on the bottom, small on the top
- despite facets of its design which aim to equalise this
difference in touch and power of resonance. In an
experiment performed by C.G. Pratt over fifty years ago
(11) it was shown that high tones are phenomenologically
"higher" in space than low ones:-

"Observers were asked to locate on a numbered
scale running from the floor to the ceiling
the position of tones coming from a Western

Electric No. 2-A Audiometer. The scale was
2½ metres high and divided into 14 equal parts.
The observer sat facing the scale at a distance
of three metres, while the experimenter operated
the audiometer in back of a large screen to which
the scale was attached. Five tones were used
256, 512, 1024, 2048, and 4096. They were
presented in haphazard order at five different
positions in back of the vertical scale."

The frequencies chosen here were octaves as it is known

that the most common mistake in gauging pitch is to

confuse the actual octave register. Pratt had expected

this confusion to take place, producing reversals of

location, but in spite of the fact that the pitches were

emitted from random vertical positions such confusions

rarely occurred.

More recently S.K. Roffler and R.A. Butler carried out two

experiments (12) to investigate this phenomenon. The

first showed that complex sounds which included

frequencies above 7,000 Hz were much easier to locate than

simple or pure tones which did not. Their second

experiment supported Pratt's conclusions: that higher-

pitched sounds are perceived as originating above lower-

pitched ones.

However, none of these findings are definitive as regards

this perceived spatial character of tones being innate.

It seems likely that they are founded on associative cues.

With written music the visual associations of the printed

page might have some influence (though none of these authors make any mention of testing musically literate subjects), as might also a familiarity with the exaggerated stereophonic separation produced by hi-fi equipment which by its very nature, distorts the natural spatial projection of piano sound by dividing it into two separate sources. But the different psychoacoustical spaces that these tones occupy may help to explain the clear stratification that can be obtained in solo piano music. In jazz piano the keyboard is divided into three areas - the middle, which is the optimum range for LH chord voicings, the lower register used for bass lines or pedal notes, and the upper register for the 'front line'. This type of stratified texture is most clearly illustrated in McCoy Tyner's playing of the early 70s where roots, chords and modal improvisation represent three quite independent layers, each of which can drift freely from one tonal centre to another.

Cecil Taylor has been preoccupied with the idea of stacking independent layers, both with ensemble and solo playing, using imaginary or pre-existing registral boundaries of each instrument as a determinant of the musical structure:-

> "Each instrument has strata. Physiognomy,
> inherent matter-calling-stretched into sound
> (layers) in rhythms regular and irregular
> measuring co-existing bodies of sound" (13)

This style derives from his wish to use the entire

keyboard in his personal language of expanded tonality.

As he explained in an interview:

"When I was in the Conservatory I first hit
upon the idea of developing my own scales,
beginning with the first two notes that were
in harmony with my own personality. Then I
found the next note, that is the vertical line.
Then the horizontal, which they traditionally
called intervals, and from these intervals you
developed chords - well, perhaps the most
important people in shaping my attitude to that
were Monk and Ellington, of course - in their use
of the spatial elements which are implicit in the
measurement of intervals. Monk would use minor
2nds, Ellington would use minor 10ths and 9ths.
Also, Ellington would use the entire keyboard -
lesser players would use perhaps two octaves, an
octave and a half. So, when confronted as a
young player with the magnitude of Monk or
Ellington, the lilting lyricism of Errol Garner,
or the didactic ideology of a man like Lennie
Tristano, these were people who shook my universe
when I was 16 or 17 years old" (14).

In solo performances, Taylor creates his own "artificial"

interplay by the division of the keyboard into five or six

different fields treated at though they are separate

instruments engaged in dialogue. A technique he uses

often is to repeat one fragment in these different

registers. In this way different aspects of the same

material are revealed, like objects standing in space, not

only through their repetition and transposition but

through the changes of tone quality and sonority that these sudden leaps entail.

Ran Blake, in an interpretation of "Stormy Weather" plays the main theme in slow resonant tones with liberal use of the sustaining pedal, interpolating extra unconnected notes in a higher register. Because of the registered differentiation these notes do not confuse or interfere with the exposition of the main theme.

In "The Ballad of Hix Blewitt" the main notes of the theme (circled) are given a harder attack than the other notes which note comment on the melodic shape of the phrases and surround them with ethereal harmonic fields. The theme is not 'supported' but surrounded by the additional notes (including pedal notes) and used as the generating material for a study in different types of piano resonance. A wide variety of harmonic nuance is obtained by the holding of the A and F octaves on the sostenuto pedal while the main melodic fragments (C#-F#-C#, E♭-B♭-A♭-B♭, C#-F#-A#-G#) are reiterated at different transpositions. The entire piece is very sparse and notes are generally quite separated in terms of articulation, but unified in the blending of resonances that occur.

Fig. 2.
"The Ballad of Hix Blewitt"

The top few notes of the piano have a curious quality of their own. Clearly perceptible in the densest textures even though they may be relatively quiet. they are, paradoxically, the tones with the least intrinsic resonance and the most unfavourable tone-to-key-noise ratio. They can, however, by means of the high noise content activate a curious resonance from the whole frame when the dampers are lifted - an effect explored in Fred van Hove's "Twee Hoog" (see Chapter 3) and in Keith Tippett's extraordinary motoric improvisation "The Unlonely Raindancer", which consists of a continuous rapid stream of single notes organised into repetitive patterns almost all in the top octave. The technique and the leisurely pace of change and development within the context of motoric speed is more reminiscent of phase music. The aural effect of the motoric gesture, as used here as a continuous and unchanging texture, is quite disorientating, as though having no discernible source. It is known that our positional discrimination of sound is at its weakest around 3,000Hz, which coincides with the top octave of the piano. In the same pitch area we are maximally sensitive to quiet sounds and so they will be more prominent in dense textures. For a sound source placed, say, to one side of the listener, a high frequency sound above this c. 3,000 Hz range will be easier to locate because the period or wave length is so short that the skull acts as an effective barrier, lowering the

amplitude of the signal that arrives at one ear in relation to the other. Below this frequency, the more prominent factor in grasping location is the difference in time of arrival of a wave front and the time intervals separating all the transient components. This is the conclusion reached by Roffler and Butler in the second of their two aforementioned experiments. The presence of a large number of prominent partials in a sound helps with determining its locality.

The transient partials of piano tones are complex and differ considerably from octave to octave (although the keyboard attempts to conceal this, being built around the same scalar shifts of hand position which preserve consistent spatial relations of movement, the quality of the tones themselves exhibit no such consistency) and these contribute in the various ways described to the 'singing' quality. While free jazz has become equated with percussive playing in which the attack of the note is of paramount importance, there is a growing concern amongst some improvisers with the qualities of sustained tone and ringing aftersound: the ways in which tones connect to create the illusion of legato. In Ran Blake's playing there is a topological sense of contiguity which makes it possible to interpolate extra material into a song theme without disturbing the integrity of that theme. Strata are established and maintained, if only skeletally,

by a wide range of different touches and uses of resonance.

Paul Bley's introspective but intense improvisations are less pointilistic than Blake's and are concerned mostly with the dynamic of line. Harmony is very sparse and simple so as not to impinge upon the expressivity of the line (15). This is always used to create aural depth or to suggest direction and resolution, etc rather than to support. The line itself is mapped onto a slow and flexible pulse and the acute sense of poise and balance within the time continuum is the result of carefully considered placement and quality of each note. The fluidity of the phrases is determined by each note's dynamic, register (and relative duration of decay) and pedal resonance so that the comparatively sparse contents in terms of numbers of notes is compensated by attention to every detail and nuance of attack and decay. Bley is well aware of unpredictable peculiarly resonant properties of widely spaced diads. In the following example the left hand notes two octaves below the right hand are not so much 'harmonic' as there simply to extend the resonance of the line at significant phrase points, and also to 'highlight' the brilliance of the particular register by adding a sense of depth. This section of the

improvisation from "Closer" occurs towards the middle of
the performance.

Fig. 3

While the line and sparse accompanimental tones have
certain implications of harmonic progression (Ab^6
at the beginning of this passage to Eb^{-7} at the beginning
of the second line, also the persistent Ab right hand
arpeggios) this is skeletal enough to give the line a

sense of direction and inevitability rather than any firm support. The sketchy harmonic interrelations intimate of certain possibilities - certain expectancies are set up with each note which, at the extremely slow tempo, have time to be fulfilled or negated. Seen in these terms the rate of change in this music is quite fast as the listener, at each point on the line, can predict or imagine phrase beginnings and endings as well as reconstruct the movement and development of the line thus far. While the line is passed from the right to the left hand (at 0.41) the function of·the accompanimental tones is the same: to create additional resonance or to 'pull' the tuning in one way or other. This concept of pitch inflexion by means of dynamic stress, also encountered in Karl Berger's playing, is explained at some length by Jozsef Gat (16).

Paul Bley's technique centres around ways to maximise this sonorous aspect of piano sound, achieved by decreasing the various noise-effects in comparison with the tone volume. Although the importance of noise as a formant of tone colour is greater than is generally recognised in traditional piano pedagogy, its presence does diminish the 'carrying power' of the tone. Thus a sonorous forte can only be achieved through a particular kind of attack using weight rather than velocity. From the fact that a pianist is unable to modify a tone once sounded many theoreticians

have come to the conclusion that force need only be exerted up to the escapement level. Once the hammer has hit the string the pianist's finger may relax. However the rapid alternation of activity and relaxation called for here would undermine any control over the noise-effects and the sense of phrasal continuity, both of which rely on a close interaction between musical conception and physical motion. The steady transference of weight is more useful in controlling the shape of a slow phrase than is playing tones in a staccato sequence with legato pedal. Bley has spoken of a "clinging" sensation: a necessary intimacy with they keys. Elsewhere this has been termed "agogics" (Gat and Ortmann) and the maintenance of physical pressure on a note after the attack which may alter the players subjective idea of tone colour as it is passed from one note to another. Gat considers such motoric aids to musical conceptions to be of the utmost importance but makes a clear distinction between an objective tone colour (measurable in its overtone and noise proportions) and subjective tone colour (the interrelation of several notes with their dynamic and agogic contrasts).

> "Dynamics and agogics supplement each other in producing the subjective tone colour and may therefore, to a certain degree, replace each other. This is why the organist applies agogics in an increased degree. He marks the stresses by agogic alterations instead of changes in the tone volume...
>
> The individual subjective colour means the application of dynamics, agogics, and noise-effects

in a way characteristic of the respective player.
It does not depend upon dynamic degrees to the same
extent as the general subjective colour does,
because the accents, noise-effects, dynamic and
agogic characteristics of the individual pianist
assert themselves in all dynamic degrees." (17).

The connection which Gat outlines between the musical idea

and the muscular action (18) speaks of a deeper issue in

human creativity. Read wrote of a dual form of space:

intellectual and sensorimotor, the latter form being a

direct result of creative awareness and develops in early

childhood:-

"....a sensibility for space-as-such could only
have developed in mankind as a result of his
creative activities. Space consciousness is a
by-product of a compelling need for 'realisation' -
that is to say, for the plastic materialisation of
insight, of numinous awareness, or what might be
called 'Gestalt-free' perception..." (19)

Moholy-Nagy also divides space awareness into two

categories: dual aspects of space-time which have become

misaligned in contemporary art. It is only through an

understanding of the physical/motor space and the

intellectual/psychological space and their synthesis that

we can "re-create the path of our inner motion":-

"Besides complicated social and economic issues,
there appeared at the end of the nineteenth century
two complex areas of human experience. The one was
vision in motion; the other the discovery that the
subconscious is a part of the organic function of
the human being." (20)

His comments on the "excesses" of concern with kinematics
(Futurism, abstract expressionism and later, kinetic art)
on the one hand and the psychological sphere on the other
(Surrealism) preceded Herbert Read's well-formed theories
by ten years. Moholy-Nagy believed it to be essential to
fuse the sense and the idea of space in contemporary art
and design.

It is clear that the acoustic space and resonance of tones
is directly connected with the movements of playing - the
articulation of physical/visual space. It is this latter
aspect which has acquired a particular importance in
keyboard improvisation often to the point of being the
main structural determinant. However, the use of innate
movements is quite a logical starting-point for the
development of an improvisatory language, for if the
stylistic requirements of that language necessitated the
innervation of entirely new movements learning the piano
would be a hopelessly daunting task. Thus it is obvious
that we select from a repertory of movements those that
can be utilized and perfected to this particular end,
those by the aid of which we can most closely realise our
musical ideas.

For the individual pianist, the main prerequisite for a
particular hand or finger movement is that it naturally
corresponds to the physiological endowments of that

individual. Of course, the learning of any movement is greatly affected by spatial and aural feedback - comparison of some actual performance with some 'desired' performance - by which we can gradually attune the reflexes to respond to a certain level of mental control and to produce particular sounds at will. In free improvisation feedback can actually work conversely: uncoordinated reflexes, 'wrong notes' can give rise to new ideas. The subject of feedback in patterning motor behaviour will be deal with in greater depth in Chapter 6.

Some pianists have made a point of developing the kinetic element almost as a separate entity; a choreography which forms part of a larger associative network of musical ideas and motor reflexes. David Sudnow's first book, "Ways of the Hand" is about the process of acquiring conditioned reflexes in improvisation. While the author places, perhaps unknowingly, unnecessarily severe stylistic constraints on his learning process he nevertheless describes with considerable insight the dynamic of line (right hand) and the nature of this strange familiarity with "an external mass of ivory, wood, and steel" which later "dissolve into an inner acquisition of spaces to speak with". In his subsequent book, "Talk's Body" he draws attention to the connection between physical and psychological selves and their analogous understanding of space:-

"The pure process involves the body being caught
up in the course of movements being made, involves
two bodies conjointly moving through a strongly
shared system of inner spaces together" (21)

Cecil Taylor's use of the term "units" to describe the

self-contained compositional building blocks on which his

improvisations are based, tells us something about his

attitude to these fragments. Any unit may recur in a

performance in various guises, and such variations are

normally quite spontaneous. Rather than being an

organised system of transformation, the changes to the

units are more a matter of looking at them from different

angles. Perhaps it is because of a prevailing anarchic

spirit in ensemble improvisations that Taylor regards the

units as a ground base - solid, palpable 'objects' -

recognisable note patterns and/or rhythms which can be

observed, dismantled and recombined. This spatial

approach to compositional structure, has much to do with

Taylor's own keyboard technique. For example, he rarely

uses the sustaining pedal as he want to hear each note as

a separate entity, even at the fastest speeds:-

"the piano from my point of view is primarily a
percussion instrument....When I practise my own
technical exercises, each note is struck, and I
hear it, and it must be done with the full
momentum and amplitude of the finger being raised
and striking" (22)

He told A.B. Spellman: "I try to make at the keyboard the leaps a dancer makes through space" (23). This almost choreographic approach to piano playing represents a logical integration of his very percussive and physical technique with a fascination and admiration for combined art forms:

> "People used to snigger when Thelonius Monk got
> up and started moving, as they would when he used
> his elbows on the keyboard. I didn't find it
> funny, in fact I was rather mesmerized by the
> audacity of this man getting up in the middle of
> a composition and moving, and yet I was quite
> aware that the focus of his hand was always centred,
> whether he was sitting at the piano or moving. The
> same applied to the Kabuki Theatre from Japan. All
> of the musicians always danced, always sang. The
> only approximation we have to that is certain r and b
> and rock people who sing and dance; the so-called
> serious fine artists just sit and look glum. There
> is not much happening with their bodies. But the
> body is an instrument."

Because of this emphasis on physical movement, Taylor views musical notation as the very antithesis of the improvisatory spirit: "The physicality of looking, or learning to read, is from my point of view a division, a deterioration of creative energies. Because you have to spend half your time looking elsewhere than inside".

Taylor has sought for a full integration of kinetic elements into the units. Indeed many of them originate from kinetic rather than musical ideas, for, as is suggested in some of his writings, he is anxious to avoid

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the visual and intellectual associations with notation in
order that the music can have the effect of trance-
induction. Paradoxically though, it is through structural
complexity that this end is achieved ("trance is the
unreasoning reflection being possible thru multi-layered
rhythmical complexes"). He writes:-

"co-ordination of physique (muscles, the mind)

existing as one reasoned act thru erasure

of written note: the division implicit,

inherent; ambivalence/paper objective

paper becometh objective focal point....

Creating Music is sound within

the whole body; which must be brought

to level of total depersonalised

realisation, exciting various limbs...." (24)

Karl Berger divides his time between playing piano and
mallet instruments (vibraphone and balafon) and it is the
latter which have largely influenced his ideas on the
connection between intrinsic spatial qualities of tone and
the actual space employed in the physical gestures of
playing. "To activate tones to their fullest resonance
one touches the keys and releases them". Of course, this
really applied only to one type of playing in which
harmonies are static and the soundboard is allowed to
vibrate freely. Berger likens the free resonance of tones

to an original silence (non-action) which is the single
most important element of musical form. In classes he
encourages students to make use of silence to articulate
structure and to encapsulate ideas in space. Absolute
continuity can only result in a confused immobility where
the formal articulative power of silence is obscured, and
occurs only through exhaustion. In playing the piano he
advocates one basic motor pattern - alternating hands, as
this is one of the most natural movements to the human
body. (Our arms swing naturally in alternation when we
walk). For Berger this is related also to a background in
mallet instrument technique. To put the two hands down
simultaneously, he claims, goes against our innate
tendencies and is a gesture of dominance and repression.
It is the crudest of the piano's resources. Pianists
should explore the polyphonic and polyrhythmic capacities
of the instrument to their fullest advantage, developing
reflexes and manual independence to meet these goals. One
section of "Tuning/Timing" is a simple two-part
improvisation where the two parts develop according to
their own rules: the left hand playing a steady succession
of rising and falling semitones and the right hand playing
melodic phrases of irregular lengths which move at an
independent tempo. While it is, in effect, a walking bass
and 'solo', this type of material and texture derives as
much from Berger's interest and studies in the music of
J.S. Bach, in particular the clear two-part counterpoint

of the keyboard partitas, as it does from jazz sources.
He tries to capture here the 'floating' right hand phrases
mapped onto a more stable and foursquare bass line:- (25)

Borah Bergman has been similarly involved in developing a technique of manual independence and a pianistic choreography in which physical energy and movement become the source of musical inspiration and production. This obsession with space and kinesics derives, for Bergman, largely from visual analogy. He produces 'musical canvases', which, though time-bound are essentially static in character, and these come as a by-product of unleashed physical energy-in-motion - an idea fundamental to abstract expressionist painting. The "crude" motor responses leave finer, detailed movements to chance. Stylistically, Borah Bergman's music could scarcely be further from Berger's poise and tranquillity or from Taylor's anarchic constructionism. In its sheer, unrelenting force and density it reaches that point of "immobility" that Karl Berger has warned us against, which makes it possible to make music akin to the still canvas. Tom Johnson, for this reason, has paradoxically described Berman's music as "minimalist". But there is no pre-structuring as such - just a sudden and uncontrollable release which follows a period of intensely methodological, disciplined practise with its accumulation of ideas and mental images.

Traditionally almost all forms of piano music have assigned a melodic, soloistic role to the right hand and a harmonic, accompanimental one to the left. Bergman's

philosophy, however, stems from the premise that this division of labour is both irrelevant and inhibiting to the development of an improvisatory virtuoso technique. He has consciously abandoned these assumed roles and has developed the hands independently of each each - firstly the left for several years, and then more recently the right - so that each is capable of tackling any idea or type of material. Ambidextrousness, he believes, is the fundamental issue of contemporary keyboard improvisation. (26).

The consequences of this system are wider than they might at first appear. Firstly, it has led to Bergman's developing, by conventional standards, an extraordinarily "dexterous" left hand. To prove this he has displayed his skills on recordings of solo left hand performances. Secondly, he has achieved such a degree of manual independence that his two hands are, in effect, two separate instruments, dissociated from one another, meeting, overlapping, tossing gestures back and forth between them. Thirdly, in this music, which is born of a philosophy of stamina and callisthenics, the continuous momentum, the illusion of the indefatigable is maintained even when one or other hand rests for a few moments. The texture becomes thinned out but the essential musical thread is unbroken. Aside from being manifestos of manual independence, these one-handed improvisations which can

act as rest points for the other hand become the main
proviso for a distinguishable texture change.

The keyboard is really the ideal medium for a colloquy of
hands for there they are performing ostensibly the same
function. One hand is an automorphism of the other: that
is, we can make a mirror image of one, an illusory back-
to-front reversal, and we see two hands exactly the same.
But how can this be reconciled with the fact that the
keyboard represents a linear tonal range from low/left to
high/right? The symmetry of the keyboard is itself is
illusory as it is not aural (the African mbira comes close
to that), it is one of formal relations only. But because
of the nature of Bergman's playing this 'split' does not
necessarily manifest itself as an extra weightiness of the
bass register. The hands, liberated from their usual
pianistic roles, are freed also from their specific
domains. Each has the entire keyboard at its disposal and
yet the shapes of the phrases in one hand will always be
different from those in the other. It is partly this
concept of inexhaustible dialogue and 'not knowing what
the other hand is doing' that provides the intellectual
interest (in terms of improvisatory form) and forward
momentum.

Bergman's unique style of phrasing can be heard on his
second record, "Bursts of Joy". There is a curious

rhythmical jaggedness within these irregular torrents of
notes which seems to refer back to a much earlier period
of jazz history; it has an entirely different musical
effect from the fast but regular pulsatile rhythms of the
two-handed pummelling technique that has become something
of a trade-mark of free-jazz piano playing. Bergman
dismisses this percussive hammering with alternating hands
as rhythmically uninteresting and unpianistic, claiming
that it does not realise the true potential of two hands,
ten fingers, and the possibilities of a more sophisticated
interaction. It eliminates the angular accents and
microrhythmic inflexions and breaks - all the qualities of
that craggy discontinuity on the microscopic level which
Bergman sees as the inner life and "drive" of his vibrant
canvases. As the hands glide over the keyboard surface
they outline certain shapes, and the fingers, ready to
strike at any time can make any complex composite movement
irrespective of the particular location. Bergman
emphasises the importance of a close contact with the
keys, for only by keeping hands poised at close quarters
and by exercising the necessary control and digital
strength can one achieve variety of attack, sustain, and
touch control, and realise the true piano/forte capacity
of the instrument. This technique he views as a logical,
if extreme, development from bebop phrasing. In the same
way that Bud Powell's lines contain a wealth of
'supplementary' notes which appear to be not part of the

main argument - 'grace' notes, subliminal 'fumbles', etc - which throw the improvisation into greater rhythmic and dynamic relief, so the notes of Bergman's dense and jagged phrasing have many different levels of "presence". To recall David Sudnow's idea of "keys having sounds throughout their depths", Bergman's phrasing naturally involves keys depressed without being sounded, sounded without being fully depressed, given agogic stress by being held while others are released, all of which turn the dynamic of linearity into a continually shifting aggregate texture. This capacity for wide dynamic and rhythmic variety on a micro-level holds a fascination for him as it puts the threshold of physical possibility both of piano and pianist to the test. For example, the fastest possible sounding tremolo will cause the key to 'quiver'; the hammer is activated repeatedly without being given the chance to return to its rest position.

The concept of an intrapersonal dialogue would seem to border on the schizophrenic, but the split personality is not an invention of modern psychiatry. The two hands symbolise this split: self and other. As Mary Douglas puts it:-

> "The human body is always treated as an image of
> society and there can be no natural way of considering
> the body that does not involve at the same time a
> social dimension" (27)

Among some tribal peoples a man is believed to have another soul which embodied in some object or creature:-

> "Many primitives assume that a man has a "bush soul"
> as well as his own, that this bush soul is incarnate
> in a wild animal or a tree, with which the human
> individual has some kind of psychic identity." (28).

With Bergman the dissociation is two-fold; between the right and left hands, and between the conscious will and the reflexive, auto-kinetic movements of his improvising. He sees close difficulties between his own art and that of Jackson Pollock and the other abstract expressionists, in a shared concern for colours, shapes and kinetic energy. Like Pollock, he writes in a trance-like state of heightened awareness; thus the mental concentration is able to override immediate physical problems of stamina and strength.

> "The antic activities of the left hand offer
> gifts to the right for closer scrutiny." (29)

The metaphorical basis for Bruner's work of cognitive psychology, "On Knowing", is the symbolic definitions of right and left hands - the one the doer, the other the dreamer. The right represents light, order, logic and lawfulness; the left the darker side, intuition and spontaneity. Traditionally the left hand has been considered an awkward and clumsy counterpart of the right, its character questionable (it gave rise to the word

'sinister'). Indeed the Short Oxford Dictionary defines 'left' as "distinctive epithet of the hand which is normally the weaker". Derogatory associations with the left hand abound in many different languages and cultures, too numerous to explain here (30).

Bergman maintains that the left hand has been misused and neglected in piano literature, and that is has inherent talents that the right cannot reproduce. The second side of the record, "Bursts of Joy", is given over to three left-hand solo improvisations. · He actually considers the left hand to be superior in some aspects of its construction - the thumb is on the right so weight can be more easily angled towards the upper notes. Ravel explored the potential of this in the Concerto for Left Hand, particularly in the cadenza, where the theme is picked out by the thumb while the other fingers fabricate a complex 'ghost harmony' of runs and arpeggios. The left hand is better suited than the right to a complete melodic/harmonic framework which it can produce quite naturally (31). The musical substance of Bergman's left-hand solos is as solid as that of the two handed music. The texture is thinner yet the virtuoso element is heightened by the aspect of visual drama (witnessed or imagined). There is a connection, perhaps, between the highly developed left hand and the visual element of playing that suggests something more than a coincidence.

Bergman freely associates visual images with his music.
"The Piano", he says, "is a very physical instrument".
There exists a concept of physical design relating to
dance and other kinetic art forms, which has little to do
with the actual sound.

The clavier (dummy keyboard) is an invaluable practise
tool in this respect. (Bergman owns several claviers,
including a home-made portable one that fits into a small
shoulder bag, making it possible to practise on walks or
on the subway undetected!)

Bergman recognises a certain madness in his playing, an
exhilarated expressionism held in check only by a thorough
background of self-evolved technique and a certainty of
practise methodology and artistic aims. His prodigious
facility has been built up through a rigorous system of
exercises, drawing upon many different sources. Though he
is an accomplished jazz (bebop) pianist, his technique is
derived as much from classical sources as from jazz. But
here also he maintains a personal slant on the material
and a healthy irreverance for the pedagogical tradition.
Thus he will play Phillippe exercises substituting
expanded jazz progressions for the diminished seventh
arpeggios, apply different fingerings which are conceived
independently of the musical task (complex permutative
systems of numbers 1-5) to scales and to Hanon exercises.

This taxes the mental concentration as well as a facility
with awkward hand positions. Many exercises involve
stretching. such as parallel fifths and sixths runs with
double thirds fingering, or one-hand scales in legato
ninths. The most valuable exercises, he finds, are those
which involve holding one or more fingers down while the
other fingers of that hand improvise round them. This
develops the ability for rapid variations of touch within
phrases, and a facility for polyphonic improvisation in
each hand. To this end another exercise involves an
imaginary division of the hand into two separate areas
(1 2 (3) 4 5) which become the two parties in a one-handed
dialogue.

Bergman's exercises constitute a highly individual and
idiosyncratic pedagogy which has a direct and profound
bearing on the improvisations in terms of phrasing and
technical/callisthenic possibilities. There is an almost
overwhelming visionary aspect to the theoretical basis of
the music as it is the technique that is vigorously
pursued and formulated along its own lines and dictates,
almost as a separate issue. The sinistral obsession and
ideas on spatial manifestation in musical form might
appear to have some deeper physiological connection.
While flippantly referring to sinistrality as his "demon",
the issue of redressing the traditional imbalance of motor

skill acquired in piano-playing carries with it a
significantly expanded musical insight.

While at the present, research into the different
hemispherical functions of the human brain is still in its
infancy, There is evidence to suggest that spatial
functions are more dependant on the right hemisphere
(Milner 1962, and Kimura 1967) which also controls the
left hand, and that language too may be subserved by this
side of the brain, particularly amongst left-handed or
ambidextrous people, at the expense of spatial skills. It
has been argued that left-handed children are more prone
to specific delays in language acquisition (Arnett 1974).
Brian Byrne (32) conducted an enquiry to determine whether
this bilateral language representation interferes with
musical or spatial abilities. He found that spatial
operations and musical abilities were quite independent,
the former being affected to some extent by bilateral
language representation, but the other not. One might
draw another palpable link here between music and language
- that those aspects of language that are subserved by the
right hemisphere are functionally similar to timbral
perception and tonal memory, and hence music and language
can 'share' neural substrate. Some evidence suggests
(Unitta, Frost and Hyman 1972) that vowel discrimination
is a right-hemisphere function, and so a neurological
connection between this and timbre perception - the

various subtle qualities of piano tone in different
registers - would be quite plausible.

The aforementioned cultural discrimination against the
left hand poses the question of whether in fact the left-
right distinction is acquired by 'convention', whether
such imbedded associations actually go so far as to
determine the spatial orientation and to define the
direction of this innate manual asymmetry. It is well-
known that left and right are internal orientations
(unaffected by gravity or compass) as shown by Martin
Gardner in his explanation of why mirrors reverse left to
right but not up to down (33). The confusion with this
particular problem stems from the fact that 'left' and
'right' refer only to our own bilateral symmetry, whereas
notions of up and down entail no such ambiguity. The
mirror puzzle is resolved when left and right are replaced
by the more precise language of east and west and
coordinate geometry.

But the prima facie spatial orientation still remains open
to question on this point. The partition of handed
objects into two distinct classes is an on-going process
and leads us to believe in some ideal symmetry which
simply does not exist in the natural world. There are a
great many phenomena, like human anatomy, which are non-
mirror-image symmetrical in a de facto rather than in a

lawlike way. If we want to teach the meaning of 'left' to someone without demonstrating some left-oriented object, we could do so by means of explanation of the various characteristics associated with that orientation. Lawrence Sklar (34) considers the essential distinction between handedness attributions and global orientability by speculating:-

> "Suppose, for example, that some fairly substantial miracles occurred in the world. All of a sudden electron emission from spinning nuclei occurring with the dominant emission in the opposite direction from the present preferential axial direction. Would we then say that the clockwise direction has become anti-clockwise? That right-handed gloves had suddenly become left-handed? Nothing of the sort. We would be astonished and look desperately for some explanation of this mirror reversal of a law. But we would, I believe, still take it that we could recognise left- and right-handed objects as before, teach meanings of orientation terms by ostention, as before, etc."

Thus orientability is ultimately irrelevant to a conceptual analysis of what we think of a certain handedness attributions.

Bergman is now working on a new style of piano playing in which the two hands are even further dissociated from one another, in a situation similar to a competitive game. Directional phrasing replaces the continuous circular motion, and the hands play phrases in rapid alternation each trying to 'outdo' the other, rather than creating a vast magma, which though teeming with inner life, is

essentially non-developmental. The extensive periods of
practise concentrating on one or other hand alone has made
this 'split' possible and a truly dialectical pianism now
emerges, or as Bergman puts it, "hand-to-hand combat".

> "Space that has been seized upon by the imagination
> cannot remain indifferent space.....it has been
> lived in with all the partiality of the imagination."
> (35).

Space as a concept is connected with the present study in
a number of ways. It can mean piano resonance and after-
sound, silence (36), widely spaced intervals as found in
the work of more 'economical' improvising pianists
examined here. It is fundamental to visual orientation
and kinaesthetics. These various implications are
connected, as Jozsef Gat observes: "there must be a close
interrelation between musical imagination and physical
motion" (37). These twin notions of resonant acoustical
space and the movement in or through space which is part
of the act of piano playing are united in the creative
involvement in and attention to piano tone and how it is
produced.

NOTES ON CHAPTER 4

(1)   H.Read: "Icon and Idea" p.57.

(2)   Maria Levinskaya: "The Levinskaya System of
       Pianoforte Technique and Tone-colour". p.66.

(3)   Tobias Matthay:"The Act of Touch".

(4)   Ortmann: "The Physical Bases of Piano Touch
       and Tone" p.96-97

(5)   Jozsef Gat: "The Technique of Piano Playing". p.14.

(6)   David Sudnow: "Talk's Body". p. 7.

(7)   Radio Interview.

(8)   O.H. Stuck and R.W. Young: "Observations on the
       Vibrations of Piano Strings". JASA 15 (1943) p.1-11.

(9)   The idea of sound-in-motion has been of great
       importance in the new improvised music, with
       investigation also into acoustical properties of
       different improvisation ennvironments. Evan
       Parker uses the resonant properties of the
       performing space in arcs and figure-of-8

movements. Perhaps the most extreme example of
this is Max Eastley's "Whirled Music" - a
performance consisting entirely of bull roarers
and other instruments that can be spun around on
strings, plastic twirlers etc.

(10)   Varèse: New York Times (Dec. 6th 1936) Section L
       Part N p.7.

(11)   C.G. Pratt: "The Spatial Character of High and Low
       Tones". Journal of Experimental Psychology.
       13 (1930) 4:278.

(12)   Roffler & Butler: "Factors which influence the
       localisation of sound in the vertical plane and
       localisation of tonal stimuli in the vertical
       plane". JASA 43(1968) 6: 1255-1266.

(13)   Cecil Taylor: "Unit Structures" sleeve notes.

(14)   The Wire (issue 46/47 December 1987) p.59.

(15)   Kandinsky believed the line, in both music and art,
       to be the greatest means of expression in space-time
       (Kandinsky: "Point and Line to Plane" p.99ff).

(16)   Gat: "The Technique of piano playing" p. 18ff.

(17) Gat: op cit. p.16.

(18) op.cit. p.79.

(19) Read: "Icon and Idea" p.64.

(20) L. Moholy-Nagy: "Vision in Motion" p. 114-115.
     (P. Theobold 1961).

(21) David Sudnow: "Talk's Body" p.46.

(22) The Wire. op.cit.

(23) A.B. Spellman: "4 Lives in the Bebop Business" p.42.

(24) Cecil Taylor: "Air Above Mountains (buildings
     within)" - sleeve notes.

(25) It is interesting to note the similarities of this
     two-part texture with its clearly delineated manual
     functions with the first movement of Bach's 2nd
     keyboard partita.

(26) This "split" and the ability to maintain awareness
     of two independent bodies of sound is prerequisite
     for the performance of much keyboard phase music.
     Terry Riley has developed a capacity to play and to

improvise independent isorhythmic and isometric

lines of almost any degree of complexity.

(27)   Mary Douglas: "Natural Symbols" (Penguin 1975).

(28)   Carl. G. Jung: "Man and his Symbols" p.24 (Aldus
       1964).

(29)   Jerome S. Bruner: "On Knowing: Essays for the
       Left Hand" p.2. (Harvard U.P.).

(30)   For a summary of the various linguistic and
       cultural discriminations against left-handedness
       see:
       Martin Gardner: "The Ambidextrous Universe" p.70ff.
       Mark Brown: "Left-handed/right-handed" p.43ff
                   (David and Charles 1979)
       and
       Michael Parkin, writing for The Guardian, notes some
       interesting country dialect words, including:
       scrammy, key-paw, coochy, tegg, kay-fist, cuddy-
       wiff, cowly, dollocker, gallock, bay-fister, clicky,
       gimmicker, left-keck and wat man!

(31)   See Scriabin: "Prelude and Nocturne for Left Hand"
       Op.9, Godowky's "Prelude and Fugue on B-A-C-H"
       and transcriptions of Chopin's Etudes and also the

many compositions for and transcriptions by the
renowned one-armed pianist Paul Wittgenstein.

(32)   Brian Byrne: "Handedness and Musical Ability"
       (British Journal of Psychology 65, 2, 1974)
       pp. 279-284.

(33)   Martin Gardner: "The Ambidextrous Universe" p.23.

(34)   L. Sklar: "Up & Down, Left & Right, Past & Future"
       Nous (May 1981 p.113).

(35)   Gaston Bachelard: "The Poetics of Space" p.32.

(36)   op.cit. "There is nothing like silence to suggest a
       sense of unlimited space. Sounds lend colour to
       space, and confer a sort of sound body upon it.
       But absence of sound leaves it quite pure, and, in
       the silence, we are seized with the sensation of
       something vast, deep and boundless". p.43.

(37)   Gat: op.cit. p.79.

CHAPTER 5

Having examined the sustained, 'singing' quality of piano
tone favoured by certain improvisers, I would now like to
look at its more percussive and dynamic aspects - dynamic
in the sense of force as well as movement.

Cyclic Movement.

Paul Bley, Karl Berger and Ran Blake whose music deals
largely with a sense of stasis or time extension minimize
the percussive attributes of the piano. However, none of
this music strives towards a state of immobility as is the
case with Charlemagne Palestine. Ran Blake speaks of a
basic cyclic movement in improvising, whether freely or
over chord changes. "The ebb and flow is what is
important, to get nowhere by standing on the spot." He
imagines a line with waves and troughs, and retains links
however tenuous with a harmonic structure; the cycle which
is absolutely fundamental to the psychology of jazz
improvising. In the piano/drums improvisation "Doktor
Mabuse" Blake takes as a focal point a chord made of two
triads a tritone apart (a) and another similar-sounding
motif of two 3-note chords (b):-

Fig. 1
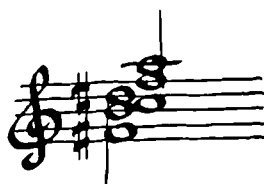
(a)   (b)

While (a) implies the F# melodic minor scale (ascending),
(b) implies the C# whole tone scale. Blake moves freely
between these two tonal areas, exploring the common notes
of these scales: A B C# D# F as well as the clash of their
mutually exclusive areas, but never drifting too far from
the cornerstones of (a) and (b).

With Paul Bley the harmonic motion can be ambiguous and
quite subtle. Because he tends to use widely spaced
chords of 2 or 3 notes, tonal centres are often defined by
the accompanying melodic improvisation rather than the
other way round. Thus the chords will circle around a
central point moving up or down incrementally by tones and
semitones. In one of the solo piano versions of "Closer"
harmonic movement is outlined almost entirely by a
progression of major 2nds:

Fig. 2

Here it is in the context of the melodic line:-

Fig. 3

In Carla Bley's composition "Ida Lupino", this same type

of shifting harmony provides Bley with an ideal vehicle

for improvisation. It is based on a 3-note chord whose

outer notes G and B remain more or less constant while the

inner one slowly shifts through four chromatic degrees,

thereby implying a wealth of different tonal centres and

scales:-

Fig. 4
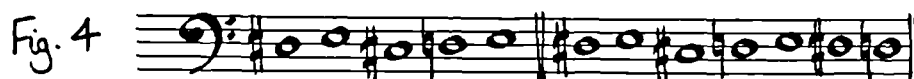
Fig. 5

Fig. 5 (cont.)

Although Bley relishes the sustaining aspect of piano tone between the attack and the decay, there is a tension/relaxation effect as melodic phrases gravitate towards changing tonal centres. The 'singing' notes in this context are not static self-contained entities but exhibit motion. They are propelled forward even when the music is extremely slow or has no discernible rhythmic impetus.

Victor Zuckerkandl has written:-

> "Musical contexts are motion contexts, kinetic
> contexts. Tones are elements of a musical context
> because and insofar as they are conveyors of a
> motion that goes through them and beyond them." (1)

Saint Augustine described the nature of music as being ordered motion, though here he draws a distinction between rhythm which is connected with the body, and 'pure' motion which is self-contained and not time-bound. This pure or

'divine' motion which is cyclic by nature has its roots in more mundane musical theory i.e. in a simple succession of tones, movement away from a central point in either direction will find us going toward that point again in another octave. Every arithmetical 'double' defines an octave 1:2. Within this octave space the arithmetical mean (M/a=1½) and its 'inverse' or 'harmonic' derivative mean (M/h=1) require 6 as the lowest common denominator, and so appear as 9 and 8 in the Pythagorean tuning system:-

Fig. 6

```
            M/h                      M/a


        6   :   8   : :   9   :   12


          ┌── 3:4 ──┐        ┌── 3:4 ──┐
          L         ┘        L         ┘

        ┌──────── 2:3 ────────┐
        L                     ┘

          ┌──────── 2:3 ────────┐
          L                     ┘
```
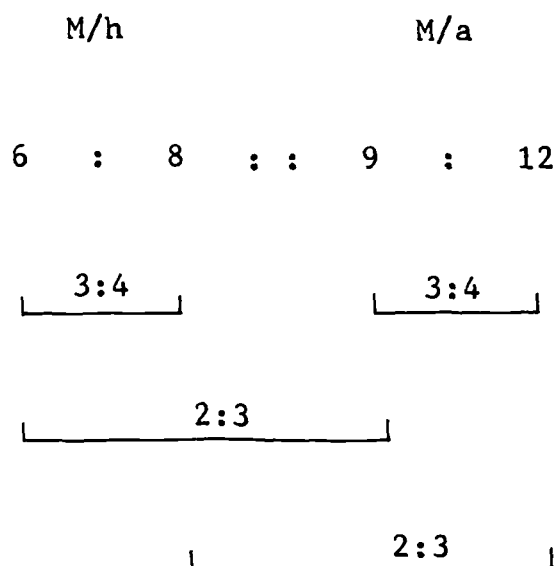
These are the only fixed and invariant elements of the Pythagorean theory and define a circle as they apply to both rising and falling sequences of pitches:

Fig. 7

```
            6   :   8   : :   9   :   12

rising   D       G           A       D


falling  D       A           G       D
```

Plato translates Pythagorean theory into geometric
imagery; Platonic cities are all circular and their models
are tone-circles. In the fourth book of the Republic he
gives an account of the ideal city:

> "The regime, once well started, will roll on
> like a circle in its growth." (Republic 424a).

In fixing his sights on the "constant revolution of
potency and its converse" we see the importance of the
cycle in Platonic cosmology as outlined in Timaeus:-

> "As it is, the sight of day and night, the
> months and returning years, the equinoxes and
> solstices, has caused the invention of number,
> given us the notion of time, and made us inquire
> into the nature of the universe; thence we have
> derived philosophy..."

These cycles find a direct analogy in music:-

> "all audible musical sound is given us for the
> sake of harmony, which has motions akin to the
> orbits in our souls, and which, as anyone who
> makes intelligent use of the arts knows, is not
> to be used, as is commonly thought, to give
> irrational pleasure, but as a heaven-sent ally
> in reducing to order and harmony any disharmony
> in the revolutions within us." (Timaeus 47)

The symmetry of the tone circle, in Plato's scheme, is both therapeutic and in important geometric image. In the octave D (which happens to be the centre of symmetry in alphabetical notation as well as one of the two centres of keyboard symmetry - the other being A /G#) A and G reverse their roles as arithmetic and harmonic means, so we arrive at a geometric projection of these proportions expressing a circular motion to and from a central point:-

Fig. 8
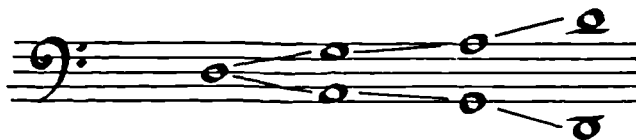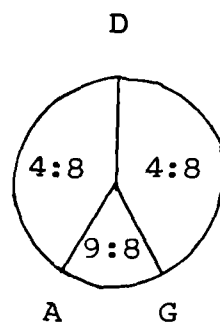
rising: D   G   A   D

falling: D   A   G   D

ratios: 6 : 8 :: 9 : 12

Such axes of symmetry can provide an important visual stimulus for the pianist, particularly those like Borah Bergman who are obsessed with the injustices of right hand

dominance! Martin Theurer makes a special point of inventing various excercises in contrary motion usually around the notes D and G#. In the recording "Ein Thema, Quarten, Kim Walzer und Mehr" he uses regular bursts of fast 2-note clusters around G# above middle C (generally between F and B) as a homing-point for more exploratory improvisation encompassing the whole keyboard. The motif here not only creates an analogy for circular movement - the physical explorations of the keyboard coming full circle, but also creates a spontaneous cyclic form in the music.

Apart from the abstract, 'timeless' motion of tones in a circle (pitch) and their rhythmic movement through time, movement is also the natural expression of the motor system and circular movement is fundamental to piano technique. Tobias Matthay, and other pedagogues since, have stressed the importance of the rotations of forearm or wrist, mostly unseen in their incidence, as the secret of technical competence. Rotation (a) redresses the imbalance of relative finger muscle power and (b) provides a workable system of tension and relaxation designed to minimize the tension element. There are two basic rotation positions: pronation (twisted so that the palm faces downward) and supination (untwisted so that the palm faces upward). When the hand is over the keyboard the outer of the two forearm bones, the radius, crosses the

inner bone, the ulna, and so the "forearm-rotation element" (Matthay) involves increasing or decreasing this arc according to phrase or fingering. Most playing involves a strong pronation. The cessation of exertion inwards towards the thumb leaves the hand and forearm free to roll outwards and hence direct the arm-weight towards the little finger thereby correcting its relative weakness of finger muscle power. Matthay explains in some detail how to apply this twisting and untwisting action (even though this action is "invisible") and assures his reader that this will render all fingers equally strong and responsive (2). Borah Bergman has discovered, without recourse to classical piano pedagogy, that a type of arm rotation is a vital element in his technique. In order to ward off mounting tension during improvisations he will move wrists and forearms in clockwise and anticlockwise circles while playing. Irene Schweizer too finds that introducing more flexibility in the wrists, especially when combined with "unnecessary" side-to-side movements, provides a release from tension.

Velocity and Tone

In "The Act of Touch" Matthay wrote extensively of the different tones that could be produced by different key-attacks. He argued that if the key-descent was executed with an acceleration rather than at a constant velocity,

the hammer would remain in contact with the string for
longer and produce a tone more "sympathetic". Helmholtz
established through careful laboratory investigation that
the length of time a piano's hammer remained in contact
with the string was one of the principal determinants of
the resulting tone quality. The more forcibly the hammer
is struck the shorter the contact with the string and also
the greater the intensity of the upper partials.
Unfortunately Helmholtz did not carry his investigations
further to determine whether different tone qualities
could be produced at the same level of intensity. It was
not until 1931 that William Braid White proved in a series
of experiments that tone quality and intensity were
inseparable, thus disproving Matthay's hypothesis,
although Matthay hedged and objected to the bitter end
(3). White concluded that "touch" was purely a matter of
control of hammer velocity. This controlled loudness, or
amplitude of string motion, and that every loudness-value
had a distinct corresponding colour-value (partial
structure). Therefore there could be no change in
loudness without a corresponding change of tone-colour and
vice versa. John Backus remarks that pianists have always
been curiously resistant to this fact (4).

The Evolution of percussive tone

It is clear that Matthay's conception of technique is firmly rooted in the piano literature of the 18th and 19th centuries and does not bear up to the scientific scrutiny of the Acoustical Society. Matthay was strongly opposed to any use of arm movement that involved hitting the keys from a distance as this emphasised the instrument's intrinsically percussive nature. For while the piano is by nature percussive, it is constructed to yield maximum resonance to defy to some extent its natural physical properties. However, jazz technique evolved along rather different lines. In small jazz combo playing in the 40's the piano was assigned its place with the rhythm section and the chords were as important for their rhythmic placement as for their harmonic content. In solos, phrasing was angular and detached. Smooth legato playing was an anathema to the rhythmic vitality of bebop. While Lennie Tristano and other later pianists brought a gentler and flowing lyricism to the angular lines and syncopated phrasing, free jazz favoured the intense hard-edged sound with little or no use of the sustaining pedal which put the piano in closer empathy with the drums. Not only was piano and drums a popular combination as we shall see later but aspects of the technique of free jazz piano playing emphasised this connection even more. As Chris MacGregor has said: "A piano is a drum with a melody".

Clearly there is a world of difference between the
contemplative playing of Paul Bley which uses tonal areas
selectively, and the highly percussive playing exemplified
by many of the European improvisers. In the case of the
small bebop group the piano is mainly a 'neutral' chordal
instrument with a vital contribution to the rhythm
section. In free jazz the rhythm and timbre take
precedence over any harmonic interest where attention to
individual notes of chordal structures is relegated to a
flow of rhythmic energy.

For Marilyn Crispell this rhythmic energy constitutes the
actual form of an improvisation. She speaks of a
heightened state of of awareness in improvising, "hooking
into a sense of continuity of energy and a pulse within
that energy which dictates where the music is going". In
working with compositional ideas it is this "energy wave"
that can redirect a train of thought to new areas. As a
member of Anthony Braxton's ensemble she often had to deal
at very short notice with dense and complex notated scores
such as Composition 98. She admits that the notation was
used more as a kind of auto-suggestion for the dynamic
momentum and physical movement around the keyboard rather
than read accurately. This position is fully endorsed by
Braxton himself who writes of this particular
composition:-

"The germ procedure underlying Composition 98
involves the interrelationship between visual
shapes and musical postulation. Improvisation
in this composition is based on the transposition
of given visual shapes - in actual notation -
into creative musical phrases....there is a music
for every visual reality - or at least the
particulars of a given visual reality has a
complementary music that services to affirm the
same vibrational postulates." (5)

Cecil Taylor was one of the first pianists to explore the

concept of percussive playing extensively. Using clusters

of just a few notes he would string them together in very

rapid runs as a type of solo line using hands alternately

in tight, closed positions rather like mallets.

Particularly when combined with his uniquely aggressive

style the clusters themselves have an intrinsic

percussiveness. They contain less extractable pitch

definition than do more 'familiar' chord shapes. The

effect of consonance or more widely spaced intervals seems

to take the edge off this percussiveness, as can be heard

by comparing a simple major triad with a tone cluster

filling in the gaps between those notes. The mallet-like

alternating hands technique as used by Taylor has been

widely adopted by other improvising pianists as the

freedom of arm movement which it implies gives scope for a

wide and rapidly fluctuating tonal and dynamic field.

The sense of the arm movement, or Kinesthesis, is of prime

importance here. In Taylor's case the alternate-hands

technique is stretched to the limit of human capability in terms of speed and amplitude. As with several other pianists the movement made is actually greater than that required to depress the keys. Taylor finds important links between this hand and arm movement in space above the keyboard, the agile and rhythmic movements of a dancer, and the spaces and silences surrounding the individual attacks. Irene Schweizer too has developed a whole area of her technique around oscillating arm movements for this style of playing which has close connections with her work as a drummer.

The facility of the arm to make rapid and repeated attacks depends on the relative inertia of the various links which make up the arm in biomechanical terms. Schultz, Ching and Ortmann assume that the larger the link the slower must be its maximum speed of oscillation, the implication here being that greater speed must be assigned to smaller and smaller links. Borah Bergman also upholds this theory in that he claims that the fastest speeds are the result of finger movement only. His individual technique is founded ultimately on finger power and strength and not on arm movements which follow a slower and wider course of parallel circles. He claims that the percussive techniques of many of the European free pianists are gross and primitive as they: (a) are an anathema to the complex polyphonic improvisation of which the instrument is

capable and (b) they completely neglect the vital links of wrists and fingers. Bergman's ideas are curiously consistent with 19th century pedagogy which advised keeping the wrist loose and the arm, as far as possible, immobile in particular for octave passages. Wieck, an advocate of "pressure-playing" bemoaned the virtuous trend for "piano-banging" and "jingling" stressing the importance of "bringing out a fine legato tone with loose and quiet fingers and a yielding, movable wrist, without the assistance of the arm." (6).

In the arm the links are in proportion with one another in that the largest, the shoulder, has the most powerful musculature to operate the whole arm, while the fingers have only small muscles. Roughly speaking all the other links in the arm display a similar proportion of joint size to musculature so a dimensional analysis reveals a constant scaling factor - the links have approximately equivalent performance capabilities. Ching comes the closest to realizing the essentials of the problem of rapid playing. he discovered through experimentation that maximum rates of oscillation are virtually the same for different parts of the same body, though he was concerned mainly with minimal finger movements. In playing the piano the key must be displaced by 1cm and if that displacement is carried out by the forearm oscillating at maximum speed from the elbow, this is roughly equivalent

to the finger moving through 1mm (which is less than the amount of 'give' in the flesh of the fingertip). This implies that in piano playing at least it is the forearm which is the fastest link.

In practise the biomechanics are more complex than this viz. the different parts of the hand and arm are not used in isolation but work co-operatively. For example the crucial moment of inertia which dictates the maximum speed can be slightly reduced by bending the hand downward at the wrist with the attack, so the wrist compensates for the forearm's inertia. As the alternate hands technique of free jazz requires each hand to contribute equally each hand on its own is really only playing at half speed. The alternation is coordinated by a neuromuscular switching from one to the other and this in effect doubles the potential speed.

Another important factor to consider is that the inertial reaction of key and arm increases with tonal amplitude. In other words in playing louder the load on the arm is increased, so under the condition of maximum frequency of the forearm's oscillation will be slightly reduced. This can be illustrated by the following diagram:-

Fig. 9
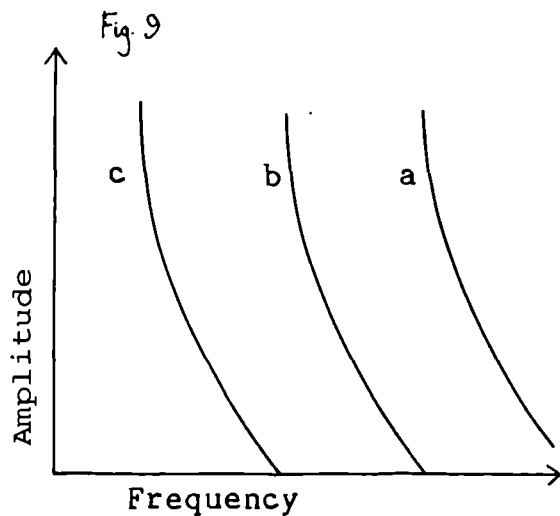
If curve (a) represents maximum effort, (b) and (c) represent the same relationships of frequency and amplitude at lesser degrees of muscular stimulation.

In other words there is a trade-off between speed and amplitude and the pianist must make a choice. Curve (a) represents the condition of maximum effort, though this is not something that can be sustained indefinitely. Fatigue naturally takes its toll, so depending on a pianist's individual strength and stamina, the longer this kind of activity is maintained the more the muscular stimulation to the arm must be reduced to compensate for the fatigue factor. Don Pullen notices this slowing down process particularly in free playing where fatigue will have a sudden impact on music and action: "it all becomes very heavy and slow-motion as though moving through honey".

While Pullen uses the fatigue factor to positive effect, to signal changes in the direction of the improvisation,

to some it is seen as a drawback especially in the rapid

forearm oscillations of 2-handed runs. Fatigue can be

viewed as the result of overloading the muscular system

and practise is partly about developing a resistance to

it. Some pianists have sought answers in traditional

pedagogy interpreting the idea of rotation in a variety of

ways. Martin Theurer uses an undulating wrist motion

which, he claims, enhances that sense of freedom to move

immediately to any part of the keyboard. Borah Bergman,

because of the extremes of muscular exertion in his

playing keeps arms and wrists in constant rotary motion,

as a way of relaxing, as a visual test of looseness, and

partly to bring about a muscular/aural dissociation - the

ears being constantly surprised by what the fingers are

doing. In order to assist the independent movements of

the finger muscles the arms must be kept free of all

stiffness and obstruction. Bergman finds that without

this rotary freedom fatigue develops quite rapidly.

Alexander von Schlippenbach, on the other hand, equates a

certain type of muscular tension with musical objectives:

by an exaggerated stiffness in his arms and wrists he

achieves a particular stylistic angularity in his playing.

Relaxation, he says, is a precondition of work and a state

of rest between its various stages, but cannot achieve any

positive action when it comes to musical performance.

Maria Levinskaya draws a distinction between Temporary

Fixation or Stabilisation: the idea of steadying the arm

in a certain position (even though this may only take a
fraction of a second) to take aim for a specific note or
group of notes, and Permanent Fixity or stiffness:
riveting a limb so tightly in a stationary position that
movement becomes awkward or sluggish. This is the
limitation which Don Pullen makes deliberate use of.
Schlippenbach aims for a state in between the Temporary
Fixation and the Permanent Fixity where an enhanced degree
of tension in the joints results in a certain type of
stiff playing full of random accents and sudden silences,
but the stiffness is not taken to a degree which inhibits
high speed repetitive movement. The heavy accents
achieved by this calculated stiffness are a direct
extension of his earlier, more conventional jazz style.
In "Payan" for example the sense of heaviness and inertia
are combined with an urgent and syncopated jazz phrasing.
Schlippenbach's use of muscular tension coincides with
Ching's argument against the "Relaxation School" (7) which
equates speed with maximum freedom of movement. This, he
argues is a faulty doctrine; the highest speeds of
repetitive movement are achieved only through increased
tension and not relaxation in the relevant joints.
Schultz (8) points out that there is no such condition as
complete relaxation or looseness. Muscles work in pairs
alternately contracting and relaxing at the required
speed. When the pairs are simultaneously contracted the

-230-

joint becomes set or stiff, and in this condition the
onset of fatigue is almost immediate.

The adoption of techniques from systems music

It was Steve Reich and later John Adams who realised the
potential for superimposing patterns of different lengths
in each hand, each simple and repetitive in itself but
together creating complex and varied lines. Perhaps the
simplest example of this can be found in Reich's "Piano
Phase" (1967) where patterns of 2 and 3 notes respectively
produce a composite sequence of 12:

Fig. 10
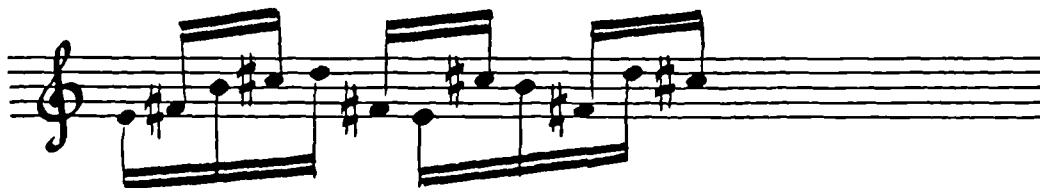
Terry Riley had been developing a similar technique in his
solo keyboard music since the early 60s (5 or 6 years
prior to this piece) but in a wholly intuitive way.
"Piano Phase" was one of the first instances of this
technique in notated music. In his piano work "Phrygian
Gates", John Adams builds many different phasing/looping
patterns into a series of changing harmonic/timbral fields
or "gates" of precomposed temporal proportions. The
texture from one gate to another is astonishingly varied:

simultaneous melodic patterns in both hands, chordal

structures in alternative hands, una corda and three

different degrees of sustaining pedal and many different

rates of articulation. One feature common to all the

patterns is the constant interruptions to the order by

'foreign' notes which throw patterns into fresh alignment

and also stand out by nature of their 'foreign-ness'.

It is this potential for disruption within order, unity

combined with sense of total unpredictability that

interests Keith Tippett. While acknowledging the

influence of Steve Reich and Terry Riley on his work he

feels his roots to be in jazz and the European tradition

of free improvisation. He often uses an alternating-hands

technique in conjunction with specific fingering sequences

of differing lengths in each hand. If 2:3, as in Piano

Phase, produces a cycle of 12 there are many extensions of

this principal available to the improviser: 3:4 = 24, 4:5

= 40, 3:5 = 30 etc. And as Tippett points out, one is not

limited to "5 finger exercises" when one starts to combine

the single-hand patterns in more complex ways e.g.:

4+3:5+1 or 5+2+4+4. The attraction of these more complex

groupings for Tippett is to "out-wit" the rational order

to achieve something quite spontaneous and unpredictable.

In this type of improvising the hands will play

alternately over the same range of notes producing

composite patterns which appear to be a great deal less

repetitive than their individual components. With the

longer single-hand sequences which are themselves prone to

fluctuation of both length, pitch content and patterning

there is an unpredictability to the direction of the

streams of notes. Tippett sees this type of passage as

having certain internal consistency which allows the

sequence to be interpreted as a 'block' - that same fusion

of stasis and forward momentum which is common to much

minimalist music.

Tippett plays these sequences with the hands directly on

top of each other so the same range or set of notes is

available to the fingers of either hand.   The resultant

stream of notes appears to emanate from a single source

when played at high speed and with an equal articulation

from each hand. But as the hands move apart to cover

different pitch fields a discontinuity causes the

perceptual system to interpret the composite sequence as

emanating from two sources. Tippett is fully aware of

this perceptual boundary and enjoys the areas of ambiguity

that this type of playing creates, as can be heard when

single streams gradually divide and the patterns of one

hand or just certain notes become isolated from the flow:-

Fig. 11

R & L Isolated   R & L Absorbed

● - RH
○ - LH

frequency

time
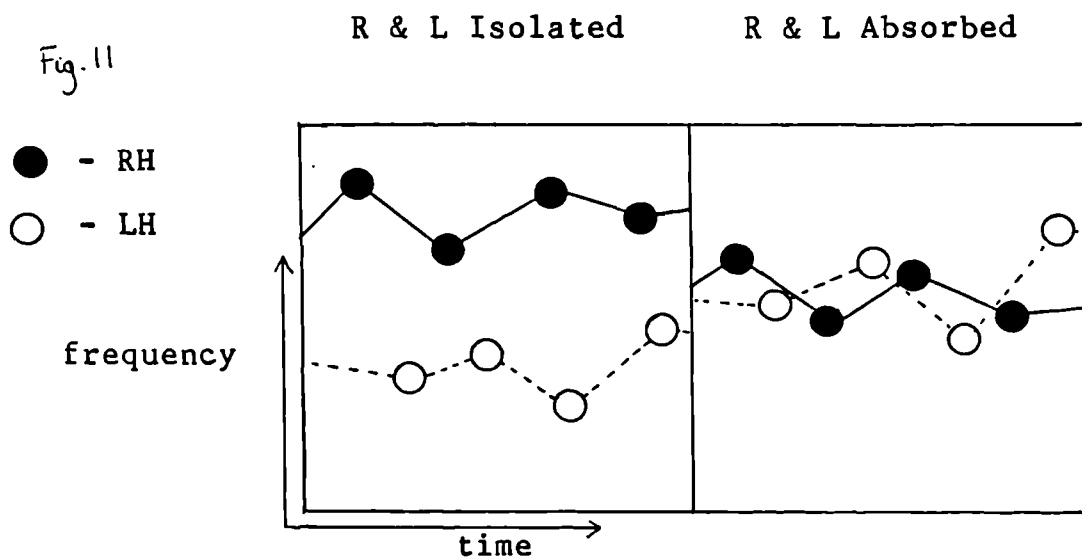
Apart from pitch there are other parameters that can segregate the flow of notes into separate streams such as articulation and relative intensity of each hand:-

Fig. 12

LH sustained
RH staccato

or

RH - loud
LH - soft
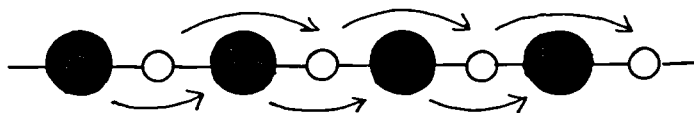
The fusion or separation of these streams is inextricably linked to attentional processes. In improvising Tippett might relax attentional effort with the result that attention might randomly alternate between the available

streams, focus on one of them individually or even play them against one another.

In the duo recording with Louis Moholo "Zimbabwe is Free" notes of the stream are isolated by timbral differentiation - they emerge as normal piano tones to either side of a confined register of prepared piano (with glass ashtrays) the rapid syncopation emerging randomly by means of the hand alternation.

The capacity for fusion into a single stream depends also on articulation; the balance and exchange between the hands and the leaving of the right amount of space in the gaps. This is as true of Keith Tippett's technique as it is in the nuclear melodies of Balinese gamelan music where a single line is divided between two instruments which play in a rapid, interlocking 'hocket' style. The reverse process - separation into streams of what otherwise would be a coherent single line - has been explored in arrangements of Bach by Varese and Webern, and more recently in electroacoustic music by the American composers Robert Erickson in "Loops" and Charles Dodge in "Earth's Magnetic Fields" where streams decompose and re-group themselves timbrally. A marked change in rhythmic articulation can be observed in Tippett's music when he moves at certain points from alternation of single notes to alternation of phrases or note groups such as in "The

Unlonely Raindancer" Part I. The percussive stream in the
uppermost register of the piano is what the ear naturally
gravitates towards rather than any discernible melodic
sequences. Here the runs and motifs are passed from one
hand to the other and so the hands are still alternating
albeit at a slower speed than with the single note
attacks.

This technique of alternate-hand single note attacks
contributing to the formation of a single line has a
direct derivation from drumming - the single stroke roll.
So far we have looked at only this one technique but there
are many other derivations of drumming which can and have
been applied to the keyboard. The adoption of the single
stroke roll, though one of the most common techniques with
free jazz piano as well as with drumming, is only one
possibility among many and some pianists have adapted
basic drum rudiments to keyboard technique with greater
degrees of sophistication. Indeed this is nothing new to
jazz piano where the emphasis, more often than not, is on
rhythmic angularity rather than on rounded legato phrases.
Lionel Hampton claims to have derived much of his keyboard
technique from playing the vibraphone with 4 mallets,
where, by means of an exaggerated forearm rotation he
treats the two extremes of this rotary movement as the
main channels of force: the two 'mallets' being the outer
fingers (thumb/4th and 5th fingers) of each hand. This

action is one in which the hand acts as an amplifier of the forearm oscillation. While employing this very simple form of "weight-transfer" technique might be considered crude by traditional pedagogues or even by Borah Bergman, reducing as it does the possibilities of ten fingers to four, its performance characteristics are more flexible in some respects than the single-note alternating-hands style because here an extra link is introduced to each hand. Apart from simply translating the double-stroke roll to the keyboard (RRLLRRLLRRLLRRLL) it facilitates the combining of single (interlocking), double and simultaneous strokes. In this new two-link movement the forearm oscillates with less displacement than before, and this combined with the new imposed rotary movement creates the right conditions for a greater resistance to fatigue and an increased capacity for speed. On the other hand the decreased rigidity of the wrist lowers the upper amplitude limit.

Irène Schweizer introduces a rotary movement into this type of passage, often combining alternate single strokes and double strokes to form rapid triplets. By thus arriving at the basic traditional rhythmic unit of jazz she is better able to make the music "swing". Either hand can lead: LRRLRR or RLLRLL or more complex patterns such as double paradiddles (LRLRLL RLRLRR), can provided a rhythmic focus for unrestrained movement about the

keyboard. The mixing of single and double attacks in this way means that the force output of the two sets of muscles can be adjusted to a constant level so that the hand oscillates at the same rate as the forearm but at the same time turning back and forth about the wrist in something like a controlled shake.

Fig. 13
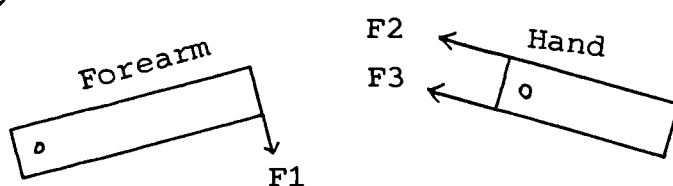
The forces F2 and F3 provide a restoring torque and a release from fatigue particularly so in improvisation as Fl and F2/F3 have the option of exchanging roles at any point.

If attentional effort is directed towards kinesthesis rather than sound, what of the music that results from this mental attitude? Although a crisp, percussive sound is Irène Schweizer's main goal, the timbre and articulation being of greater concern than pitch content, her playing is often dominated by repetitive phrases. She does not decide in advance to use particular thematic ideas; these just surface spontaneously from her former background of playing more conventional jazz. In a free improvisation ideas follow each other in a logical

progression and these ideas are either learnt or are generated then and there by kinesthetic freedom. She claims not to practise in any organised way but simply to "play" and follow her own train of thought. The "accidental" ideas arising pout of the free percussive style provide a rich and constantly changing source of creative stimuli.

Schweizer's conventional jazz background has had a marked influence on her free style: "the music sometimes gets stuck in a groove and becomes straight away more 'jazzy'. When this happens it's always a consciously used device, as my roots are in jazz music." It is interesting to note that she came to play the piano as a substitute for the drums from which, apparently she was discouraged from taking up as they were deemed 'unfeminine' (!) In recent years she has started to record as a drummer as well as a pianist, finding close parallels in technique: "I especially like the sharp rebound from a drum head - space and silence around the stroke, no matter how fast you play, which is what I try to achieve on the piano".

Martin Theurer applies drum technique to keyboard practise by adapting some of the basis rudiments:

paradiddles:	RLRR LRLL/RLLR LRRL/LLRL RRLR etc.
5-stroke rolls:	RRLLR LLRRL
drag:	RRRL RRRL/LLLR LLLR

In the case of repeated attacks from the same hand forearm
rotation is applied for greater speed. Like Schweizer,
Martin Theurer was also attracted to playing drums
believing that sticks would behave in the same way as
fingers in amplifying wrist and arm movements. However,
he found the differences in technique too great and could
not play the type of rhythms that he heard and so,
frustrated, sold the drum kit!

Piano and drums ensembles

The emergence of percussive keyboard technique have given
rise to close associations with drumming and the
piano/drums duo has become a popular combination in free
jazz. In fact in 1980 for their annual festival of
improvised music FMP records devoted the entire event to
piano and drums duos(9).

In many ways the duo is an ideal medium for a clash of
different styles of performance as it is analogous to the
most basic cell of relationship. The insights offered by
the diversity/unit possibilities of this ensemble is
comparable to the advantages of binocular vision, of a

second language, of binomial theory in mathematics or the
double proofs of geometry. For relationship is always the
product of a double description; the interaction of the
improvising duo is like the interaction of two eyes - each
can give an independent monocular view; combined a single
binocular view in depth. They can play 'together',
against each other (consciously) or quite independently:
in the case of the latter a third 'vision' may belong
exclusively to the outside listener when the players may
themselves be unaware or disinterested in the music's
composite direction. But most importantly the duo has at
its disposal the gamut of varied and unpredictable
phenomena of relationship which cannot be internal to one
person. Unlike a monologue (and in jazz the monologue
often predominates in group playing: soloist/backing), in
the duo there is a mutual interference whose friction
creates material for the continuation of the improvisation
process; a self-perpetuating chain of stimulus, response
and reinforcement. Apart from the various kinds of
dialogue and interplay possible within the duo, the
instrumental combination has interesting implications; the
piano as percussion instrument, drums as 'melody'
instrument (Milford Graves always perceives drums in this
way), their attack/decay characteristics, the jazz rhythm
section or a piano trio without bass, the historical
precedents for piano/drums duos in free jazz such as the

Cecil Taylor groups since 1961 and the Don Pullen/Milford
Graves duo founded in 1965.

Martin Theurer and Achim Goeke have played together as a
duo since 1973 and have always sought to explore and
develop points of correspondence between piano and
percussion. Thus Theurer's playing is deliberately and
consciously percussive making extensive use of fast
alternate-hands technique powered by wrists and forearms
rather than finger articulation. To this end he imitates
stick technique likening stiff fingers to vibraphone
mallets in order to bring out the key action noise and
high overtones that come from loud playing. The main
disadvantage of this, as Theurer pointed out in
conversation, is the inability to gauge intervals
accurately and play scalar runs. However, this is a
limitation that he hopes to overcome by practising major
and minor scales with alternating hands on each note,
similar to vibraphone technique. But accuracy of pitch is
not a prime concern for Theurer: "my 'aleatoric' gestures
create new sounds, new ideas."

He thinks in terms of blocks of sound rather than in pitch
sequences or harmony. While claiming that the music is
"atonal" (an atonality derived from ballistic accident
rather than from the deliberate avoidance of all that is
tonal), the dynamic extremes, the unusual use of pedal to

create thick washes of sound, the simple but very
effective piano preparations coupled with a leisurely
progression from one sound area to another lend an 'epic'
quality to the music on an abstract/timbral level which
overshadows any conscious manipulation of pitch content,
if indeed there is any at all. Achim Goeke's percussion
playing makes little or no reference to the conventions of
jazz drumming, free or otherwise, but instead takes sound
exploration and timbral contrast as its starting points.
He uses a normal drum kit in conjunction with other
pitched percussion of varying degrees of resonance and
sustain such as crotales and various found metal objects
which are hit, thrown or spun. Like Theurer he leaves
much to kinesthetic chance. While his playing has a busy
surface texture most of the time, the use of gesture gives
it a high degree of unpredictability and randomness. One
significant difference between these two musicians'
outlooks is that while Goeke sees his playing as a kind of
'performance art' where the gesture itself is a spectacle
or theatre and not purely incidental to making sound,
Theurer says that he is "just a musician" and so all
movement is directed toward that end. Though his concept
of "atonal" or "pure sound" music embraces the chance
happenings of such gestures, the movement is not an end in
itself; it is quite unselfconscious. Despite these
differences, both musicians stress the importance of
communication and paying very close attention to each

other during improvisation to reach special moments of "effective surprise" when there is a sudden shock of recognition "as though the total music is being played by one person....this is a special state we feel only occasionally."

Jerome Bruner explains this condition of intuitive familiarity as applied to scientific theory:-

> "I would propose that all forms of effective
> surprise grow out of combinatorial activity
> - a placing of things in new perspectives.
> But it is somehow not simply a taking of known
> elements and running them together by algorithm
> into a welter of permutations. One could design
> a computer to do that, but it would be with some
> embarrassment, for this is stupid even for a
> computer...'To create consists precisely in not
> making useless combinations and in making those
> which are useful and which are only a small
> minority. Invention is a discernment, choice.'
> If not a brute algorithm, then it must be a
> heuristic that guides one to fruitful combinations.
> What is the heuristic? Poincare goes on to urge
> that it is an emotional sensibility: 'the feeling
> of mathematical beauty of the harmony of numbers
> and forms, of geometric elegance'." (10)

Theurer and Goeke aim for a clear and intelligible ensemble communication - a process of formulation and of creating 'linguistic' boundaries. They speak of "pure sound" and "emotion" and of keeping a balance of these two by means of the music's self-regarding and self-regulating mechanism.

The Milford Graves/Don Pullen duo - one of the pioneer

piano/drums ensembles of the mid-60s - was motivated by

quite a different spirit from this rather self-conscious

'togetherness'. Complete freedom was the byword and

direct ensemble communication was actually avoided.

Graves dismisses this listening/reacting syndrome as

"following stagnant nerve impulses" and Pullen has

remarked: "we don't listen; we just let it happen. You

have to catch onto your own train of thought and follow it

regardless of what else is going on." This concept of

'non-listening relationship' is common to many free

improvisation groups of this period where probably

liberation from the constrictions of form and structure

was too new for such groups to be hankering after its

reintroduction in the form of justification for their

freedom of expression. This concept is explained by Leo

Smith:-

> "to consider each performer as a complete unit with
> each having his or her own centre from which each
> performs independently of any other, and with this
> respect of autonomy the independent centre of the
> improvisation is continuously changing depending
> upon the force created by individual centres at any
> instance from any of the units. The idea is that
> each improviser creates as an element of the whole,
> only responding to that which he is creating within
> himself instead of responding to the total creative
> energy of the different units. This attitude frees
> the sound-rhythm elements in an improvisation form
> being realised through dependant re-action." (11).

In the improvisation P.G. III Pullen follows an

independent pulse playing chordal structures which drag

behind the beat, reminiscent of the rhythmic style of

Erroll Garner while Graves, following another idea

entirely, plays arhythmically across this pulse. He

explains this principal of lack of conscious attention:-

> "This music will cause a Mind-Challenge-Struggle
> within the self insofar that internal control is
> needed to adjust to the spontaneous forces...
> If one tries to formulate our music, or listen
> to it with a biased mind towards rhythm-sound,
> he will only baffle himself. If you can let
> yourself react according to the natural
> principles of organic structure and free the
> mind of conventional laws of western music, you
> will cause less bewilderment within yourself." (12)

NOTES ON CHAPTER 5

(1)   V. Zuckerlandl: "Sound and Symbol" p.76.

(2)   T. Matthay: "The Visible and Invisible in
       Pianoforte Technique" pEI8FF.

(3)   see: T. Matthay: "The Act of Touch" p.137.

(4)   John Backus; "The Acoustical Foundations of
       Music" p.247ff.

(5)   Anthony Braxton: "Composition 98 Notes."
       Hat ART 1984.

(6)   Friedrich Wieck: "Piano and Song" (Boston/Oliver
       Diston Co. 1875).

(7)   Ching: "Piano Playing" p.122ff.

(8)   Shultz: "The Riddle of the Pianist's Finger"
       p.29ff.

(9)   "Wat'n bloss Duos?" see author's review in
       Contact 22.

(10)   J. Bruner: "On Knowing" p.20 (quoting Henri
        Poincare: "Science and Method").

(11)   Leo Smith: "Notes on my music" 1973 - Part 1.

(12)   Milford Graves/Don Pullen: "Nommo" sleeve notes.

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CHAPTER 6

During his European tour in 1981, Anthony Braxton kept
detailed notes on the audience responses to the
performances of Composition 98. These he catalogued into
a chart of "reception dynamics" as he found that they
emerged as a definite pattern which remained virtually
unchanged throughout the tour; such responses as boredom,
humour, curiosity, "is it jazz?", etc. What interested
Braxton about this type of documentation (and he has
remained stolidly resistant to adverse criticism of his
radical approach to composition) was the fact that it
brought up the question of competency. By mixing
conventional notation with graphic score and free
improvisation in such a way that they were
indistinguishable from each other he found that this upset
even discerning listeners as it challenged traditional
notions of performance skill. Since notation will often
act as an intermediary, in a sense justifying 'difficult'
music, the aesthetic uncertainty (of whether what is being
played was actually intended by the composer or whether
what is being improvised is stylistically acceptable to
his ears) is thrown into sharp relief by this approach.
Bertram Turetzky, the American contrabass player,
encountered a similar experience when after being
congratulated by a university professor for an outstanding

performance of a new work by Harold Budd, met suddenly
with a completely different reaction on producing the
score which consisted of a few coloured squares on plain
paper. In improvised music, where, ostensibly, anything
goes, what is the role of relevance of traditional
performance skills?

Language

Derek Bailey discusses the analogy between free
improvisation and language (1), the process of building a
vocabulary and of deciding what are the dialectics of
one's own style. Steve Lacy speaks of a "brotherhood of
language....When you hear a new player - and you make it
your business to hear anyone who comes along who has
something new- then you have to go back and re-think
everything."

Technical accomplishment, in most instances, is a
necessary or at least a highly desirable goal to
facilitate this language formulation. Alexander von
Schlippenbach stresses that individual freedom must be
tempered with self-discipline and that improvising is
concerned with combining exploration with one's past
musical experience. Freedom is not synonymous with
licence; it lies between licence and artistic order and a
balance must be maintained in order that the improvisation

can project and communicate. Schlippenbach believes that
in a performance situation free improvisation must carry
some externalised conviction in order to get across;
therefore some form of disciplined training must precede
truly spontaneous music. In more widely accepted styles
symbolic communication is accomplished by adherence to the
vocabulary of that particular style, but in a radical
style there is a danger of a similar conformity but to
individual whim, thus banishing communicative power. To
avoid this isolation there is a need for efficacy amongst
improvisers and their audiences, and good instrumental
technique is important in the discovery of new
associations and patterns.

Although some work has been done in this direction, most
notably George Russell's book "The Lydian Chromatic
Concept of Tonal Organisation", there is clearly a lack of
methodology in post-bebop jazz, and the epithet of 'free'
does nothing to encourage a structured approach. Jerome
Bruner has suggested that "the first object of any act of
learning, over and beyond the pleasure it may give, is
that it should serve us in the future" (2). While
building up skills with past material it becomes an
obligation of education to stimulate positive attitudes
toward innovative and experimental ideas. This is a theme
taken up by Bertram Konowitz who believes that the
intuitive aspects of traditional jazz improvisation can

and should be reconciled with a teaching methodology:-

"The improviser, functioning simultaneously as
performer and composer, explores conscious and
developed skills while he strives to unearth
relationships which may be part of the
subconscious." (3)

The assimilation of skill into the subconscious is the
fundamental means of building a vocabulary for
improvisation, and many improvising musicians stress the
importance of practise to this end. Arthur Koestler
writes: "an exercise of more or less flexible skill can
perform tasks only of a kind already encountered in past
experience" (4).

These developmental factors combine with other motivations
impinging upon the individual which can be depicted in a
simple system:-

Fig. 1

Training

Developmental factors ⟶

Sociocultural influences ⟶ IMPROVISER ⟶ performance

Abilities and capabilities ⟶

Immediate

Environment.

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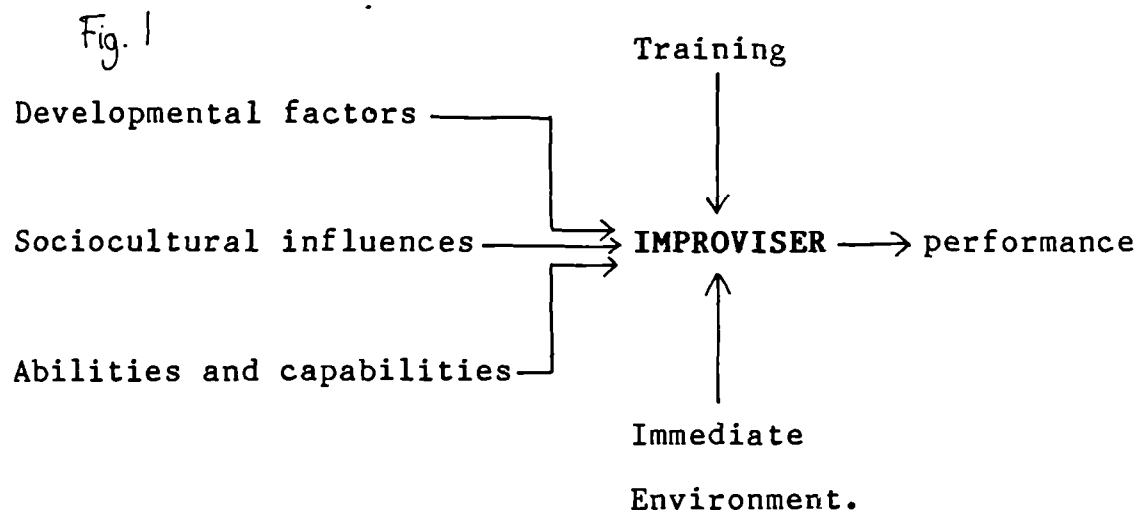
On the broadest scale, musical behaviour is influenced by social and cultural elements - whether it be American jazz, European avant-garde music etc - and these infiltrate the system manifesting themselves in the form of attitudes, motivations and outlet possibilities of improvisation. A more complete picture of this process might be illustrated thus:-

Fig. 2

Sociocultural influences

Developmental factors

Abilities and capabilities

Training

Immediate environment

KEYBOARD

| Situational and internal cues | → | Sense reception | → | Decision Judgement Perception | → | Movement Plan | → | Performance |

Memory

Feedback
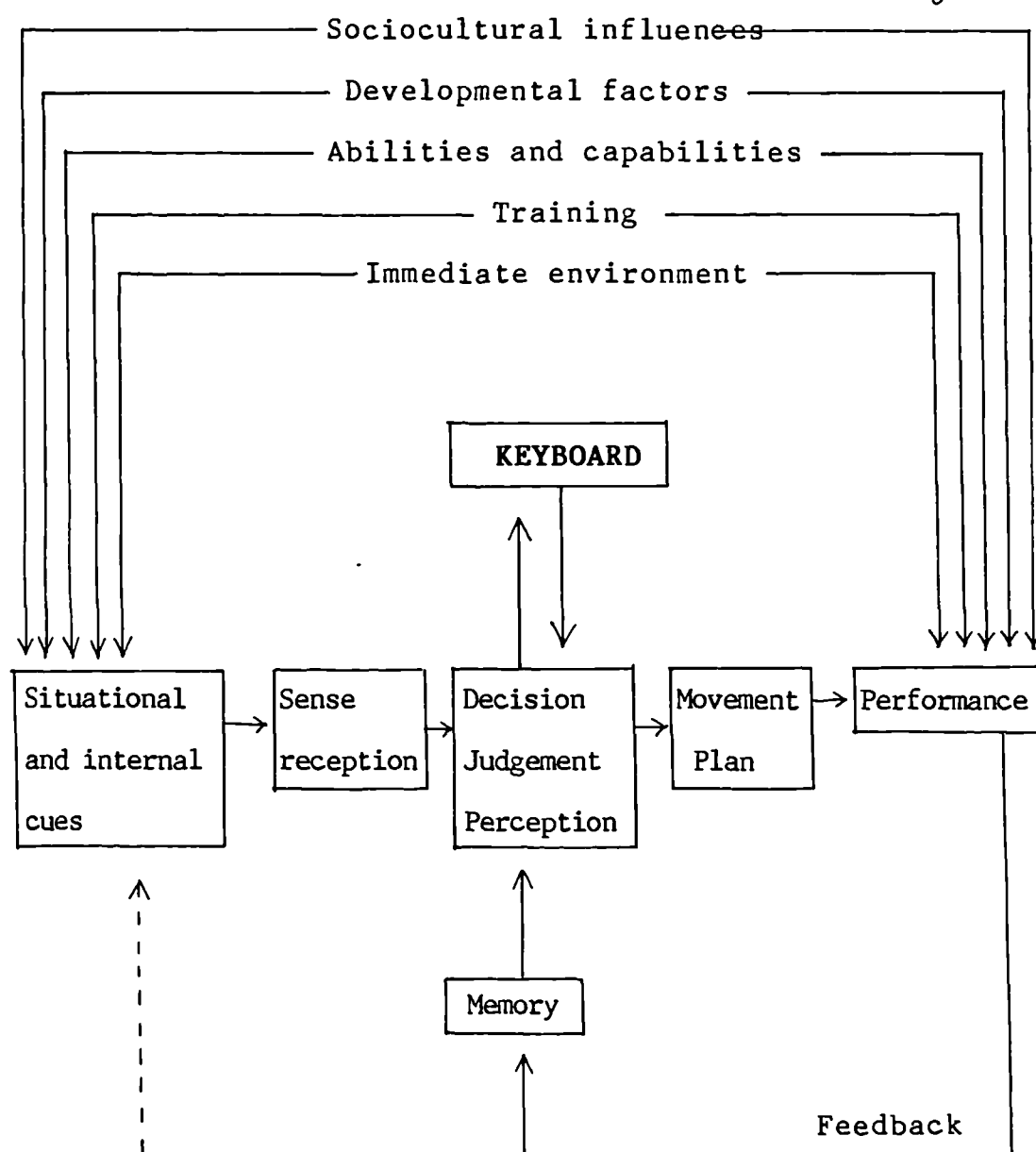
Habit and Originality

If we accept that improvisation is about skill
acquisition, it follows that the greater the mastery of
that skill the more automised it will tend to become.
This is a process that Koestler calls "the mechanisation
of habit" (5) in which awareness is a matter of degrees.
The conscious and subconscious are not separate
compartments but a continuous scale of gradations.
Spontaneity decreases and fades away with increasing
mastery of skill under stable conditions, and as the
assimilated experiences of improvisation become more
ordered and structured, a schemata of 'rules' begins to
suppress elements of surprise. This process is described
by Derek Bailey in his discussion of group playing:-

> "Even the musically successful groups seem to
> lose some of their fertility after around two to
> three years. . At this point there occurs a
> hardening of the groups' improvisational arteries;
> the music becomes too obviously a dialogue or there
> is a continuous harping on the identity of the group
> which is hard to distinguish from self-parody.
> Sometimes a self-conscious clarity takes over - a
> straining after simplicity which narrows the music
> down to what might or might not be its essentials.
> Mainly, though, the played-out improvising group
> suffers a lost of what Leo Smith describes as the
> 'independent centre' of the improvisation; that
> part of the music which exists independently of
> the performers' intentions and seems to be created
> by a sort of second-degree or sub-conscious
> relationship between the players. The indefinables
> get defined or disappear. It is inevitable perhaps
> in a music which relies so heavily on invention
> and for which the feeling of freshness is essential,
> that there should be a gradual using up of these
> resources." (6)

When ensemble interaction becomes defined and standardised
it is still possible to work under these conditions.
There are exceptions to Bailey's analysis such as The Sun
Ra Arkestra and The Art Ensemble of Chicago both of which
have remained as tightly-knit ensembles since the 60s.
Some semi-automised skills have a great deal of
flexibility already built in, so to speak, even though, as
Bailey points out, a set of rules and a malleable strategy
may not be combined with the essential spirit of
creativity. The more complex the skill, the more
flexibility it embodies, and adaptable strategies arise to
cope with changing environmental conditions and external
stimuli. T.C. Ruch writes:-

> "The cerebral-cerebellar circuit may represent
> not such much an error-correcting device as a part
> of a mechanism by which an instantaneous order can
> be extended in time........" (7)

However, an excessive sense of 'orderliness' can be
counter-productive. More often than not this feeling of
straining after order is a feeling of stagnation and this
applies as much to the solo improviser as it does to the
group. Let us consider some of the parallels between the
habitual and the original forces at work:-

Habit	Originality
Association within the confines of a given matrix.	Bisociation of independent matrices.
Guidance by an ideal of conscious clarity.	Guidance by subconscious processes normally under restraint.
Stylistic rigidity.	Stylistic flexibility.
Repetitive.	Surprising.
Conservative.	Constructive - Destructive.

The preconditions of habit-formulation arise from
unwillingness to experiment and a too-slow growth of
vocabulary. Koestler identifies two ways of escape from
this stagnation:-

1. Regression to more primitive levels of ideation,
   trance or dream states where codes of rational
   thinking are temporarily suspended.

2. Perceptive self-analysis and an ascent to new and
   more complex levels of rational involvement.

Apropos (1) he cites an interesting paradox of

subconscious control:-

> "A pianist, after practising a piece for some time,
> can reel it off 'in his sleep', as the saying goes.
> The exact opposite of this process is illustrated
> by the famous case of Tartini composing the Devil
> Trill Sonata while asleep."(8)

For the subconscious to be creative in this way it cannot

be completely inert as Bailey has suggested. The

hardening of improvisational arteries comes about through

over-use of stock reactions and responses rather than any

lack of rational involvement and analysis. The extended

performances of Charlemagne Palestine, Terry Riley and

Borah Bergman, which all involve a high degree of

motoric/aural dissociation, rely on the attainment of a

trance-like quasi-hypnotic state in performance. As Terry

Riley explained when talking about his astonishing

facility to maintain complex phasing patterns

independently between the hands:-

> "When I have mastered a pattern it can function
> more or less automatically, without thinking. The
> playing is transferred to more primitive parts of
> the nervous system, releasing higher mind centres
> for concentration on another plane."

Riley is identifying two interlinked but separate

processes: (a) the subconscious as a repository of habits

that no longer need attending to and (b) the subconscious

as a centre of intuition and a breeding ground for new

ideas. The phasing patterns he develops are the essential, concentrated bits of information for extemporisation.

The concept of ontogeny - the development of the individual, both biological development and the habits of accumulated past experience - is of particular interest to Terry Riley as his music evolves organically rather than being consciously composed. If memory-formation strips input to its bare essentials, recall requires dressing it up again. Fragments of the original memory input are patched up with new intuitive ideas that emerge during performance (9).

Borah Bergman regards his own music as a journey into the subconscious but in order to be able to 'switch off' conscious attention he has developed a fluid technique through rigorous càllisthenic practise:-

> "I would practise so that I would have absolute
> control, ease, strength, and security. I would
> practise very methodically so that I would not
> have to 'think' when I actually sat down to
> produce the work of music. I would be intuitive.
> I would touch my unconscious as they [de Kooning
> and Pollock] did. I would get inside my own
> piece. Energy came, I was free, I was flying.
> I made a series of tapes which had to last at least
> forty minutes respectively. No slowing down,
> playing as fast as I could to build endurance and
> to help me reach a state that was dream-like and
> beyond definition. And in this state my hands,
> my fingers, seemed to be going by themselves." (9)

The idea of being inside the piece is a reference to the

abstract expressionist painter Jackson Pollock whom

Bergman very much admired and identified with. Pollock

(1912-56) worked by placing his canvases on the floor of

his studio moving around and through them flinging,

spotting and dribbling pigment. He evolved a gestural

technique to paint as directly as he could, to bring more

of himself into the art work, to bring his whole body into

contact with the canvas, to be quite literally in the

painting. Pollock's images appear to have been produced

by the gyrations of his entire body. In a sense they

register his creative experience, both his 'living' on

canvas and his response to the evolving 'life' of the

painting. As he wrote:-

> "When I am in my painting, I'm not aware of what
> I am doing. It is only after a sort of 'get
> acquainted' period that I see what I have been
> about. I have no fears about making changes,
> destroying the image, etc., because the painting
> has a life of its own. I try to let it come
> through. It is only when I lose contact with the
> painting that the result is a mess. Otherwise
> there is pure harmony, an easy give and take, and
> the painting comes out well." (10)

Bergman similarly employs the reflex actions which are a

result of the complete concentration and involvement with

the physical act of playing, and because of this induced

mental state he claims that the music is always

spontaneous and therefore totally free of cliches.

Koestler suggests an alternative path, that of increased

rational involvement, to avoid the stagnating effects of habits. If we presuppose, then, that voluntary movement is of a higher order than reflex action, the exercise of the will over improvised conduct should dispense with 'known' factors such as accidents. If each movement is correlated with one musical event, then a lawlike chain of voluntary movements will be perfectly matched by a lawlike chain of musical events:-

Fig. 3

Musical event   M1   M2   M3   M4   M5

Voluntary movement   V1   V2   V3   V4   V5
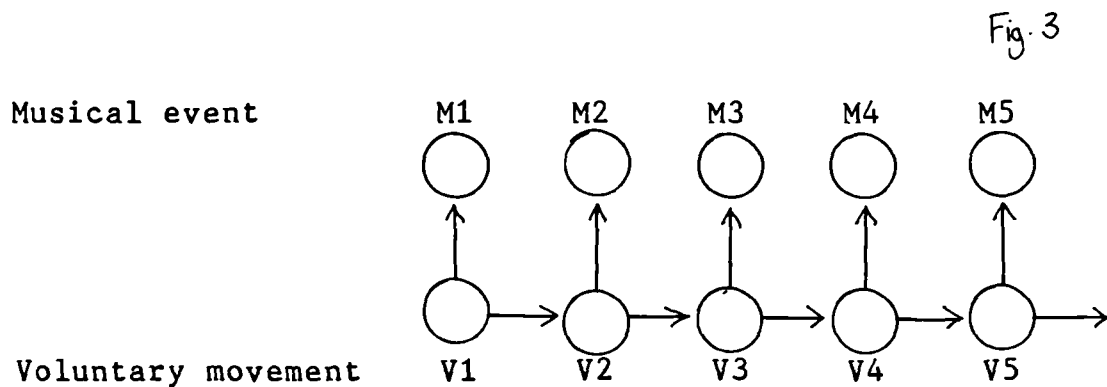
But this is a misrepresentation as it assumes that it is a closed system, which it is not. It does not take into account many other sorts of physical events and environmental influences which will constantly bring about changes in the neutral state. The system would be better represented thus:-

Fig. 4

```
Musical event          M1      M2      M3      M4      M5

                       O       O       O       O       O
                       ↑       ↑       ↑       ↑       ↑
                       |   V1  |   V2  |   V3  |   V4  |   V5
Voluntary movement     O----→ O----→ O----→ O----→ O---------→
                          /      /      /      /      /
                         /      /      /      /      /
                        /      /      /      /      /
                       O       O       O       O       O

Environmental          E1      E2      E3      E4      E5
Factors
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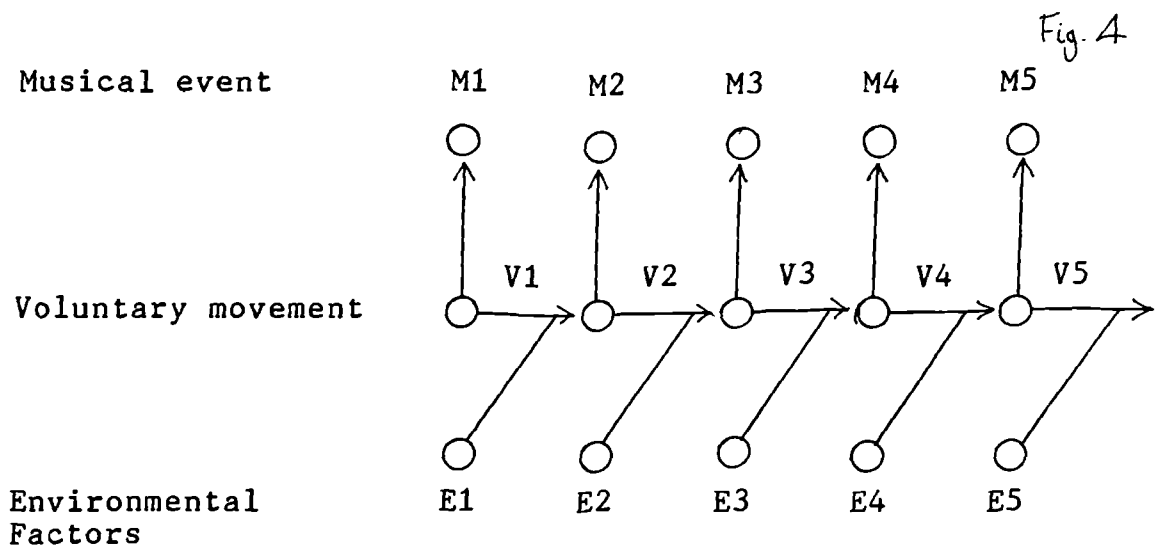
In this scheme, V1 alone is not a sufficient condition for the occurrence of V2, in the same way that M1, which is correlated with V1, is not a sufficient condition for the occurrence of M2. M1 will yield M2 only if the environmental factors, which include aural, visual and physical feedback, are taken into consideration.

Cecil Taylor uses "unit structures" as a means of introducing more rational involvement. This material, which divides up the free exploratory sections, provides a return to more conscious modes of thought, balancing the more random impulses and bringing the music 'down to earth' through the deliberate movements involved in their correct execution. Sometimes these units are notated and sometimes dictated or remembered aurally. Howard Riley is all for thinking carefully about style and language-formation. Having come to free jazz as a result of dissatisfaction with the stylistic limitations of bebop

and hard bop, he was then faced with the problem of what to replace them with. On what criteria do we judge the good and bad in improvisation? The coherence of his free style (in fact he has been criticised for sounding too coherent and therefore not free enough!) depends on having an extensive personal vocabulary which has evolved simply through a lot of playing and an aesthetic filtering process. Playing is an exploration which may further the bounds of that vocabulary. Riley speaks of development by unconscious editing: getting rid of new ideas that don't work or ideas that are no longer relevant to the present situation, between that performance and the next: "You can't stand still on the spot - by the very nature of playing an instrument you have to change". The evolution of vocabulary is intimately connected with technical capability and these two have to grow in step with one another: "the technical side of my playing is a direct reflection of my thinking.......I can only play as much as I can think or think as much as I can play."

Feedback

Voluntary movement has three basic properties: (a) it is consciously controlled (b) it is adaptive, and (c) every movement is necessitated by environmental demands. If we interpret 'environment' as piano keyboard we can represent this relationship in a simple feedback loop:-

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Fig. 5

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  ┌─> │ PIANIST │──┐
  │   └─────────┘  │
  │                │
  │                │
  │                │
  └──┤ PIANO │<────┘
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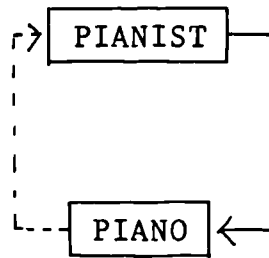
However, in improvised music where choices of action
continually present themselves there is a dichotomy
between actual and intended movement. Motoneurons
situated in the spinal cord control skeletal movement,
receive instructions and send these on in the form of
electrical impulses, to the muscle. If the muscle
contraction matches that which the higher centres have
specified then there is congruity - if not, then signals
are fed back to the motoneurons for the necessary
adjustments, and to the motor centre.

How does the muscle know what has been specified by the
motor centre? Inside the main muscle (extrafusal) is a
smaller one (intrafusal). Contractions of this intrafusal
fibre can take place independently via the motoneuron pool
but the contraction is insufficient to cause limb
movement. If after the motor centre has instructed the
muscle as a whole to contract, the main extrafusal fibres
meet with some resistance different from that which has
been anticipated, the intrafusal fibre will still follow
through with its contraction. Thus the contraction of
extrafusal fibre represents actual movement and that of

intrafusal fibre intended movement. So we have a double feedback loop:-

Fig. 6

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              ┌──>  ┌─────────────────┐
        ┌─────┼───  │   MOTOR CENTRE  │──────┐
        │     │     └─────────────────┘      │
        │     │                              │
        │     │                              │
        │     │     ┌─────────────────┐      │
        └─────┼───  │   MOTONEURON    │ <────┘
              │     │                 │
        ┌─────┼──>  │      POOL       │──────┐
        │     │     └─────────────────┘      │
        │     │                              │
        │     │                              │
        │     │     ┌─────────────────┐      │
        │     │     │ │INTRAFUSAL│ <───┼──────┘
        │     │     │ └──────────┘     │
        └─────┼──>  │                  │
              └───  │    EXTRAFUSAL    │
                    └──────────────────┘
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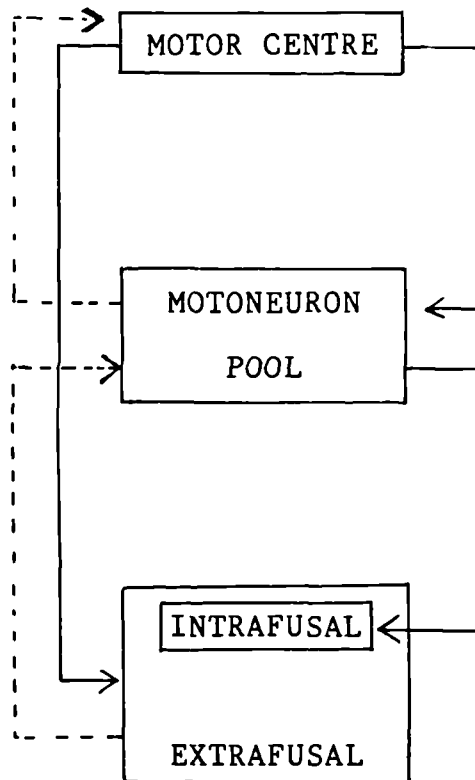
Curt Sachs, writing in "The Wellsprings of Music", gives a working definition of instrumental music which he considers to be inseparable from the activity of the motoneurons:-

> "The original concepts of vocal and of instrumental music are utterly different. The instrumental impulse is not melody in a 'melodious' sense, but an agile movement of the hands which seems to be under the control of a brain centre totally different from

that which inspires vocal melody. Altogether,
instrumental music, with the exception of
rudimentary rhythmic percussion, is as a rule a
florid, fast and brilliant display of virtuosity...
Quick motion is not merely a means to a musical end
but also an end in itself which always connects with
the fingers, the wrists and the whole body." (10)

Speed and virtuosity are underlying forces in free

improvisation, but in the high energy playing of Cecil

Taylor and others there is no time to make adjustments and

realignments as a result of aural feedback. In this case

a greater level of programming is necessary. This would

suggest:-

1. Reduced necessity to attend to cues.

2. Increased anticipation of successive stimuli.

3. Faster possible movements.

According to Howard Riley the energy level of the music

comes directly from having a well-developed vocabulary:-

"I know what I am doing as far as it is possible
to know......the energy level that I achieve when
I do a solo concert is something that I couldn't
achieve within the context of playing time because
you can compress events and get very fast flurries of
notes from the piano. But I would have to slow down
a lot to fit it into a metrical framework. The idiom
itself which doesn't have a beat behind it is the
issue; in other words, you can create very rhythmic
things but you can't tap your foot to it."

Movements may be controlled with visual/aural feedback if these movements are slow enough but with greater speed comes a greater degree of preprogramming. Steven Keele (12) believes that motor programs exist for predictable and well-learned events. Such a programme would act to control the direction, extent and speed of movements. He indicates that movements may be preprogrammed in that the particular muscle fibres to be activated, the timing of their innovation, are determined prior to the actual movement. A motor programme would exert control until a certain period of time had elapsed, at which point peripheral feedback could influence a change in the movements. Keele also speaks of a "feedforward" function that comes into play under the conditions of rapid and continuous complex movement patterns sending corrective instructions which put the muscles on the right track for the intended movement.

Deutsch and Deutsch (13) proposed that the subjects receive and use far more input from the kinaesthetic receptors than they are aware of. Greer demonstrates that subjects make use of an unconscious residual energy to make positioning movements (14). In very fast playing where there is no time to react directly to the preceding musical events, it is more a question of perfecting a type of movement through continual trial and error - what Greer calls "non-conscious kinaesthesis". Bateson calls this

type of learning procedure "calibration" and it is related

to feedback as higher logical type is related to lower.
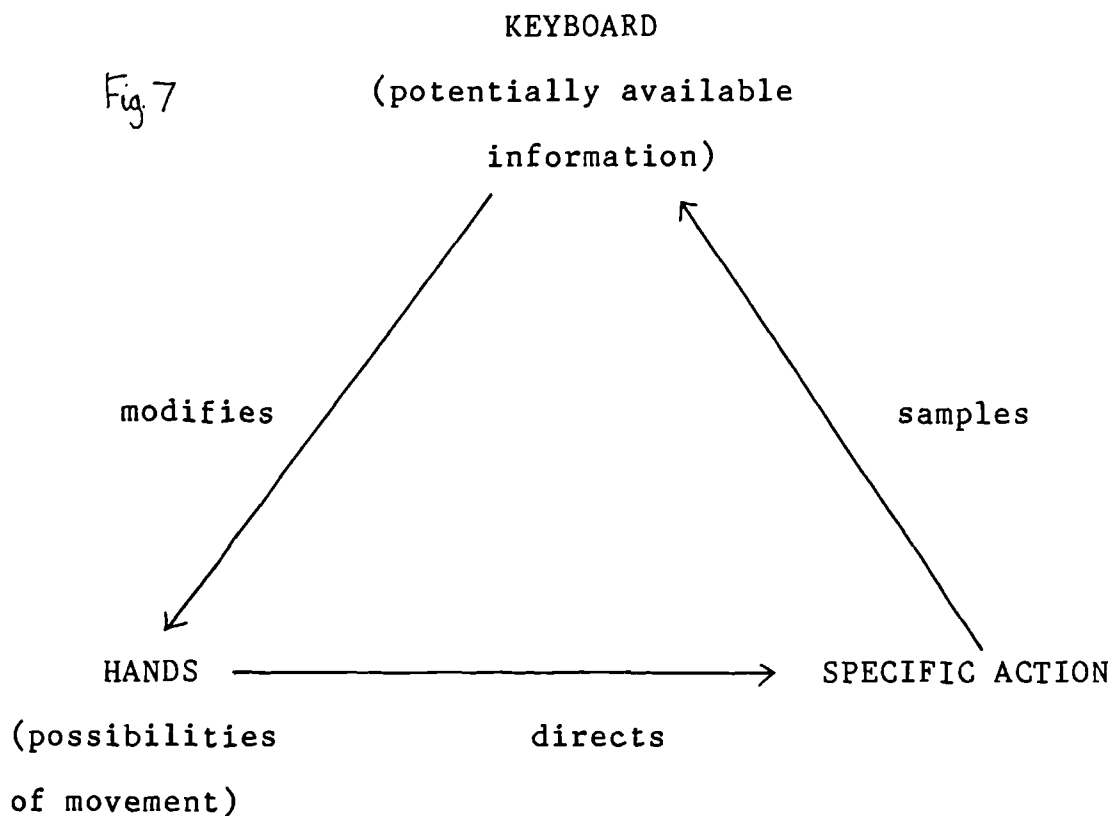
He explains the distinction:

> "Let us suppose that the act is the shooting of a
> bird. In the first case this is to be done with a
> rifle. The marksman will look along the sights of
> his rifle and will note an error in its aim. He
> will correct that error, perhaps creating a new
> error which he will again correct, until he is
> satisfied. He will then press the trigger and
> shoot. What is significant is that the act of
> self-correction occurs within the single act of
> shooting. (feedback). In contrast consider the
> case of the man who is shooting a flying bird with
> a shotgun or who uses a revolver held under the
> table where he cannot correct its aim. In such
> *cases, what must happen is* that an aggregate of
> information is taken in through sense organs; that
> upon this information, computation is completed;
> and that upon the (approximate) result of that
> computation, the gun is fired. There is no
> possibility of error correction within the single
> act. To achieve any improvement, correction must
> be performed upon a large class of actions. The
> *man who would acquire skill with a shotgun* or in
> the art of shooting pistols under the table must
> practise his art again and again, shooting at skeet
> or some dummy target. By long practise he must
> adjust the setting of his nerves and muscles so
> that in the critical event he will 'automatically'
> give an optimum performance." (15)

Bateson's explanation relates largely to visual feedback.

The motion involved in piano playing has the option of a

greater degree of visual orientation than with most other

instruments. This provides another field of information

outside the purely aural one. The motion creates visual

patterns of change, and this visual feedback can play an

important directive role. The piano is unique among

instruments in its almost diagrammatic illustration of musical possibility. To the pianist looking at the keyboard it suggests patterns of action and relationship which are motivated by anticipated consequences; it is a cognitive map implying various kinds of information. As David Sudnow describes it, in the early stages of his apprenticeship as a jazz pianist:-

"As my hands began to form constellations, the scope of my looking correspondingly grasped the chord as a whole, a consistency developed in seeing not its note-for-noteness, but the pattern of its location as a configuration emerging out of the broader visual field of the terrain. Looking's work became expansive in scope as the reaching was moving concurrently for constellations. Sitting at the piano and moving into the production of a chord, the chord as a whole was prepared for as the hand moved toward the keyboard, and the terrain was seen as a field relative to the task. The keyboard is as many sorts of places as there are activities to be undertaken with it, a rather different-looking place to the cleaning lady than to the musician who in the course of play may see past it into the music with a look that is hardly looking at all." (16)

The keyboard implies a cyclic interaction between musician and instrument:-

KEYBOARD

Fig 7   (potentially available

information)

modifies   samples

HANDS —————————————⟶ SPECIFIC ACTION

(possibilities   directs

of movement)

The feedback provided by looking at the hands and keyboard

in action helps to manage and oversee the trajectories of

movement and the choices of their direction which are open

to the improviser. J.J. Gibson called this type of

feedback "visual proprioception" (17). It is not simply a

matter of seeing the keyboard but a more fundamental

orientation through observation of the flow-pattern of

movement. David Sudnow describes this sensation:-

> "I knew what the paths sounded like, was not
> surprised by the sounds of the routes, as one may
> be startled when accidentally learning on an
> open keyboard. But what the paths sounded like
> was known in the way I was making them. There was
> not one me doing 'listening' and another doing pathway
> playing. I was listening-in-order-to-make-my-way,

in order to find as I played each day that I was
doing this jazz music. I recognised the pathways'
sounds. They had become quite familiar to me.
But it is one thing to recognise familiar sounds
you are making and another to be able to aim for
particular sounds to happen. A different sort of
directionality of purpose and potential for action
is involved in each case." (18)

This system of pathways has close analogies with the

Method of Loci, invented by the Greeks, wherein the user

familiarises himself with particular locations along some

route or path (for example, for the Ancients a walk

through a temple noting the distinctive niches and

statues). Once learned this cognitive map would be used

for mnemonic purposes by taking a mental stroll along the

path. A similar system is described by Bruce Chatwin in

his article on the Australian Aboriginals where each

Ancestor, while travelling through the country, was

thought to have scattered a trail of words and musical

notes along the line of his footprints, and how these

"dreaming tracks" lay over the land as ways of

communication between far-flung tribes. "Provided you

knew the song, you could always find you way across

country." (19).

Association Theory

In his book "New Pathways to Piano Technique" Luigi

Bonpensiere outlines a number of simple symbolisation

exercises to develop the facility of "ideo-kinetics" - a sort of associative kinaesthetic feedback. These exercises do not involve piano playing but abstract spatial movement, such as moving the hands (with eyes closed) from one object to another on a table, like a number of stations along a route. The objects are symbols of the sounds one is aiming for. The idea is that if one system is parallel in spatial structure and orientation to another, transferring from one to the other should not be a problem as it should be sensorily comprehended. Conversely, when applying the principles of ideo-kinetics to the keyboard it is possible to strip the notes aimed for of all sensory elements and reduce them to mental symbols. These might be abstract musical symbols such as an image of the written note or of the name of the note or something different entirely: sights, scents, other objects, etc. The purpose of this mental juggling and substitution is "to unfold the inner system to a point where we could relinquish both sight and touch in the attainment of space-location. As for the sense of hearing, we used the physical sounds produced by our motions only as a concluding register of our inner dynamics, like an outside instrument on which we could read what the working machinery was doing. For, so far as sounds are concerned in our Ideo-Kinetics, only those comprised in our ideation as motive end-results do actually belong to the dynamics of our system" (20).

This wilful relating of performance action to other types of mental images is a useful and creative learning device. This theory of learning has been termed association theory, bond theory or connectionism (21). This sort of familiarity with the keyboard is gained gradually, is relatively long-lasting and yet is easily modifiable. Sudnow's "pathways" represent a network of associations of keys, hand positions and movements - information which, through assiduously developed familiarity, is embedded in the keyboard, as it were. In documenting the process of familiarisation with these pathways, Sudnow argues that his music is a direct response to the will and motivation to learn and to the stimulus of various extra-musical associations along the way.

Association theory implies that there are no intervening ideas between the stimulus and the response and that the connections or "pathways" are strengthened automatically with each occurrence. The learning of notated music to a high level of proficiency can often be repetitious and monotonous, but with the ever-changing and expanding vocabulary of improvisation different response patterns will emerge from a sensitivity and awareness of these changing associative stimuli. Marilyn Crispell cultivates various mental images when playing to 'hang' the music onto. These images some of which are musical and some of which are not, provide this source of changing associative

stimuli:-

> "When I play my approach to improvising is changing
> all the time. I visualise different images and when
> I try things out on the piano, if I like them and want
> to repeat them or return to them in the future I
> return to the same mental image. The ideas are
> sometimes musical, for example hand shapes that are
> easy or natural for me to do, sometimes they are
> visual images or memories of past events. I don't
> really have to think about them or control them."

Other Models of Skill Acquisition.

Association theory implies stimulus-response connections,

fixed responses and the formation of habits. According to

this theoretical approach, repetition results in habits or

preferred reactions. This is useful up to a point in

considering the learning process prior to improvisation,

but the interpretations of behaviour from this model is

rather rigid. Through this theoretical approach it is

difficult to explain adaption or new or changed responses.

Howard Riley tells how his style changes unpredictably

over the course of time:-

> "I play a lot and obviously there is an editing
> process in my own head in what I hear, where if
> there is something that is not acceptable to me I
> edit it out for the next time, but I don't do it in
> a conscious academic way. On a bigger time-scale
> you find that your ear and your empirical instincts
> lead you towards being interested in different things
> at different times. In the last couple of years I
> have found that I am including some tonal elements
> in my playing that I would never have included 5 or
> 6 years ago. It isn't that I have suddenly said,
> 'Right, I have done with my pan-tonal period; I'm
> going to a period of tonality mixed in with it (!)'.
> It's just a question of what you are hearing in your

own music and other factors which influence you as
you go."(22)

R.N. Singer identifies several other models that are

specific to motor-skill acquisition and have relevance in

the field of improvisation. These include cybernetic,

information-processing, and adaptive models.

The cybernetic viewpoint cuts across many disciplines;

biology, psychology, communication and physiology. The

Greek origin of the word, 'kybernetes', means "steersman:

one who operates a ship and has to keep it on course".

The motor centre is such a control system and operates

mainly under the principle of feedback, which we have

discussed both in relation to learning and to actual

improvised performance. On the question of learning many

theorists have expressed dissatisfaction with the notion

that it is a sequential process conditioned by reinforced

responses to given stimuli. The cybernetic model lays

greater emphasis on spatial and temporal factors in

behaviour. K.U. Smith formulated a theory, which he

termed "neurogeometric", on the premise that all

significant behaviour is space-structured and based on

sensory feedback process. The main factors in the

learning and training of motions are not those of stimulus

or reward reinforcement (hitting the right notes!) but of

the displacement and interactions between sensory and

motor systems (23). The justification for this approach

lies in the fact that man, in most of his behaviour,

reacts to stimulus changes that are caused not by outside

agents but by his own actions. The phrase that Smith

often refers to is "closed-loop systems" i.e. the

environmental influence on motor behaviour is minimal in

specialist skills. In playing solo the improviser must

make the best possible use of his own inner resources

without the stimulus of other musicians, hence the

emphasis that Derek Bailey places on practise in order to

build the necessary vocabulary (24). Many improvisers

have turned their attention to movement, rather than to

sound, as the first area of consideration in this learning

and training process. As David Sudnow writes:-

> "....to look for the essence experientially is to
> look at the choreography of bodily movements and
> their interior organisation." (25)

Keyboard playing is a space-structured activity and

learning it is a process of establishing new spatial

relationships in patterns of motion. Bonpensiere's entire

book "New Pathways to Piano Technique" is essentially

about the training of movement both at and away from the

keyboard. Above all he stresses the exchangeability of

symbols, whether they be piano keys or other objects. Leo

Smith has evolved his own system of improvisatory music

and dance (called "aFmie") where elements of motivic

organisation are introduced by a specific notation which is applicable to both musicians and dancers. (26).

Whereas the focus in cybernetic models is on closed-loop feedback as a principal determinant in the organisation and control of behaviour, the information-processing viewpoint provides a framework for examining limitations of attention, perception, memory and decision-making. The proficient execution of a simple or complex task is dependent on the individual's capacity to discriminate effectively among a variety of cues. In any communication system, man or machine, there is a great deal of variability of what goes in and what comes out. Naturally a good system will show some relation between input and output. Certain cues will be irrelevant to a particular situation (a), some will be accepted and transmitted more or less directly (b) while some of the response will be the outcome of uncertainty, as presented below:-
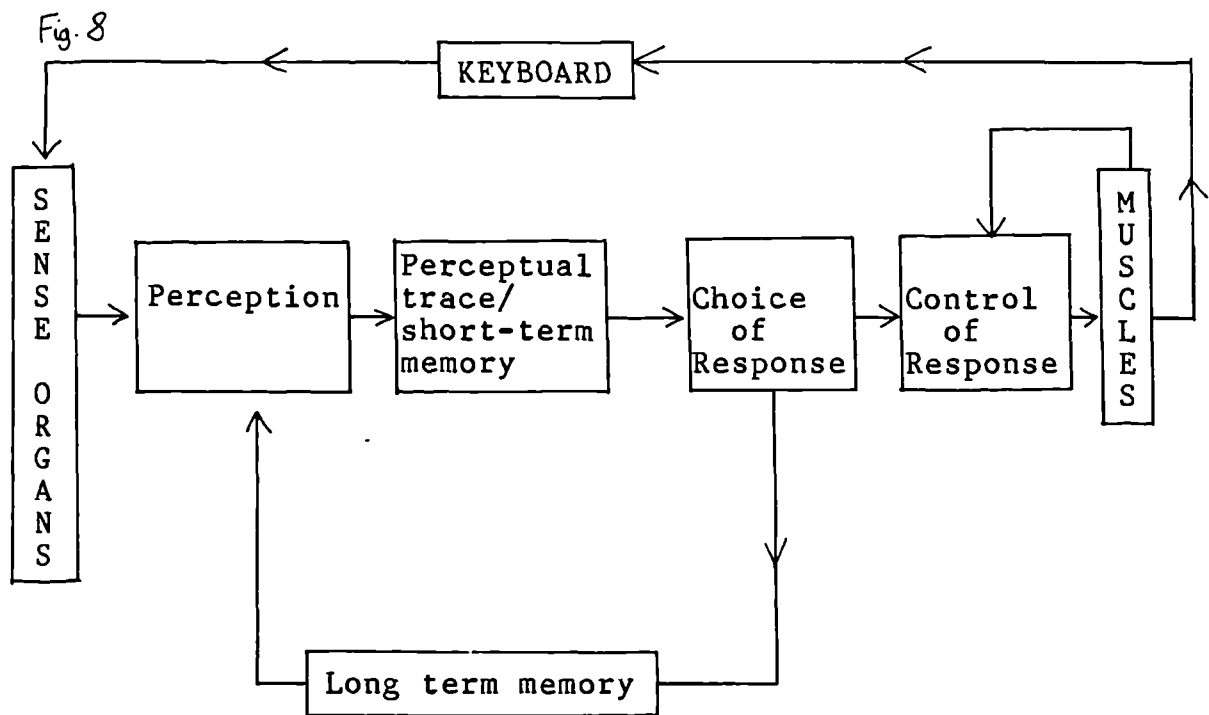
a   b   c
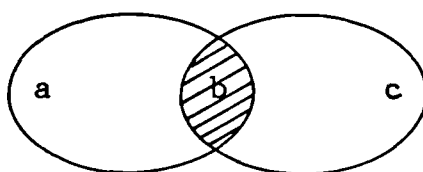
In improvisation the balance of known information and uncertainty can provide a fruitful dialogue though many improvisers are wary of feeling too 'comfortable' with well-established cues or even with repetitive material.

Borah Bergman, for example, says that improvisation is and

should be a continual struggle against any cliches and

habits that one may form in the course of technical

practise. Derek Bailey, on the other hand, remains open-

minded about pre-learnt stimuli, although he has

deliberately sought out concepts of perpetual renewal and

variation from post-1945 European composition. He

recognises the need for a continual and changing supply of

fresh stimuli which will keep the vital element of

uncertainty as the main priority:-

> "Probably the most important requirement is for the
> language to keep and open-ended evolving quality,
> which is why systematic or circular devices, if used
> at all, seem to have a very limited life. A feeling
> of freshness is essential and the best way to get that
> is for some of the material to be fresh. In a sense
> it is a change for the sake of change....Having been
> relieved of the threat of all causal or systematic
> ordering, the succession of events could be mainly
> decided by the attractiveness of their momentary
> juxtaposition, and, as a consequence, those powers
> which govern improvisation could gain even greater
> influence over the choices and decisions being made
> at the moment of performance." (27).

Guus Janssen uses repetition as a vital element in his

highly structured improvisations. While recognising the

need for change and freshness, repetition brings a formal

cohesion which throws the aspects of uncertainty in to

deliberate sharp relief. The effect is often one of self-

parody. Janssen distinguishes between two types of

memory: (a) long-term: past events, learning procedures

and composed material, and (b) a short-term memory, which

is something directly connected with the immediate past in
an improvisation; an image, like that on a television
which remains for a moment after the set has been turned
off, that has a direct bearing on the present moment. The
idea is similar to Adams' theory of the "perceptual trace"
(28). Previously executed movements leave a trace or
image and are used by the learner to modify his next
actions. Knowledge of the results of the movement is
compared to the trace and this sense of the movement
(proprioception) provides feedback stimuli:-

Fig. 8

```
        ┌──────────<──────┤ KEYBOARD ├────<──────────────<────────┐
        │                 └──────────┘                            │
        ▼                                              ┌───────┐   │
   ┌───┐                                      ┌──────> │       │  ▲
   │ S │                                      │        │ M │   │
   │ E │  ┌──────────┐ ┌───────────┐ ┌────────┐ ┌────────┐ │ U │
   │ N │  │          │ │Perceptual │ │Choice  │ │Control │ │ S │
   │ S │  │Perception│ │trace/     │ │of      │ │of      │ │ C │
   │ E │─>│          │>│short-term │>│Response│>│Response│>│ L │
   │   │  │          │ │memory     │ │        │ │        │ │ E │
   │ O │  └──────────┘ └───────────┘ └────────┘ └────────┘ │ S │
   │ R │        ▲                                          └───┘
   │ G │        │
   │ A │        │
   │ N │        │                                  │
   │ S │        │                                  │
   └───┘        │                                  ▼
        │       └──────┐    ┌──────────────────────┐
        └──────────────┴───>│ Long term memory │────┘
                            └──────────────────┘
```

The renowned Russian physiologist, N. Bernstein,
contributed many cybernetic and adaptive notions about co-
ordinated and skilled activity, mainly in relation to the
execution of various sports. However, his ideas are also

-278-

of particular relevance to improvisation. The central

thesis of his work is that a performer's changing and

adaptive movements cannot be described only by different

impulses. The prominent role of afferent feedback

(stimuli produced from responses) was recognised by

Bernstein for controlled movement:-

> "the process of practise towards the achievement
> of new motor habits essentially consists in the
> gradual success of a search for optimal motor
> solutions to the appropriate problems. Because
> of this, practise when properly undertaken, does
> not consist in repeating the means of solution of
> a motor problem time after time, but in the process
> of solving this problem again and again by techniques
> which we changed and perfected from repetition to
> repetition." (29).

This idea is of particular relevance to the improviser's

art as well as to the sportsman. To retain that essential

freshness it is necessary to come up with techniques of

practising that look at the fundamental problems of the

skill from as many different angles and with as little

actual repetition as possible. The practise of

improvisation requires a particular type of repetition

without repetition and that motor repetition by rote, if

this position is ignored, is fairly irrelevant to the

development of the skill. Many improvisers, while

realising the importance of individual identity and

continuity in their work are also wary of the pitfalls of

mechanical, repetitive practising and the staleness it can

lead to. As Martin Theurer has said:-

"In my music I am often dealing with the same
technical problems and ideas, for example how to
finger a particular kind of run or how to create
a particular type of texture that I am hearing in
my head. But I am always trying to invent different
solutions and not just mechanically repeat myself.
My music is exploring hereness and nowness and this
is what I have to practise rather than practise to
sound technically brilliant and accomplished in the
classical sense."

The following model proposes an interactive balance

between the efferent-afferent impulses and the essential

intellectual involvement of the individual developing

skill in improvisation:-

Fig.9
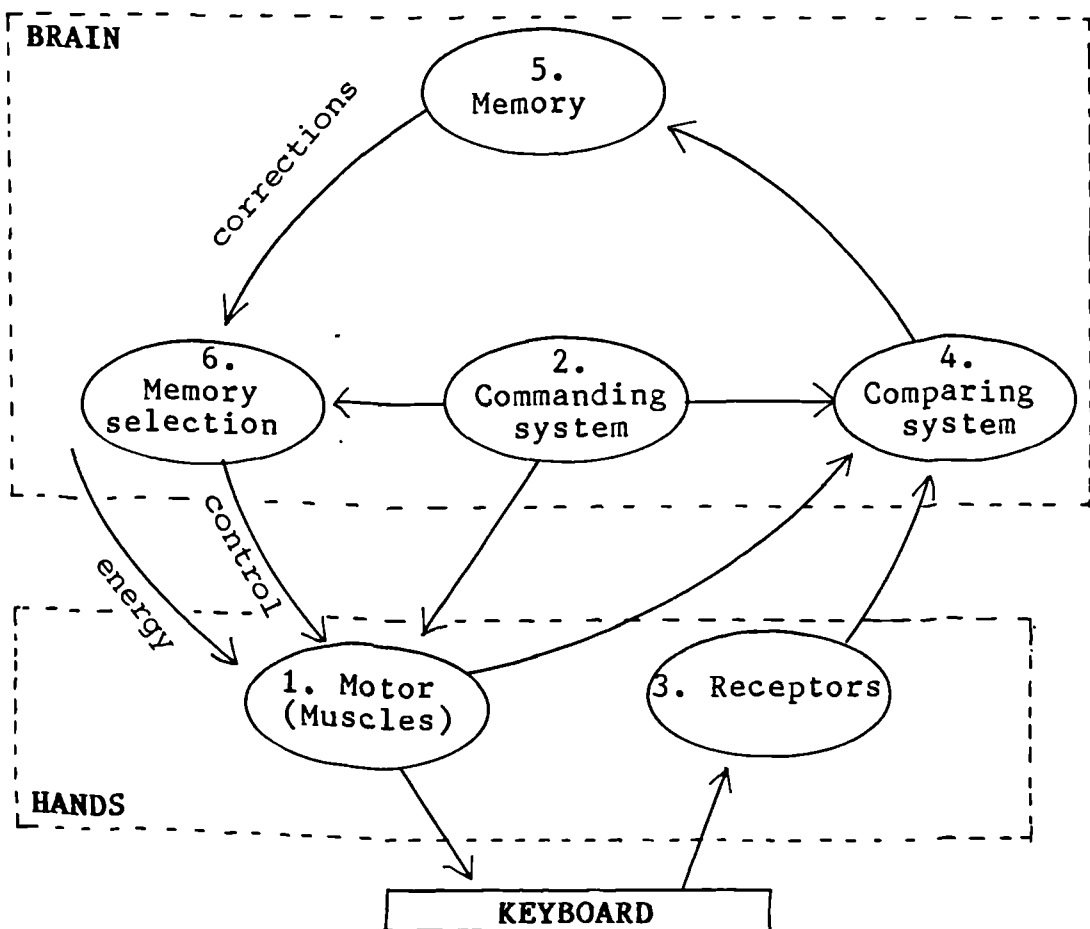
Here the control apparatus has six main sections: (1) muscles to activate the prescribed keys, (2) a control element which conveys to the system in several ways the required parameters of that muscular movement, (3) a receptor which physically comprehends what has actually been played and signals it to (4) which perceives the discrepancy between the factual and the required results, (5) and (6) which retain and reselect for further use in the cycle of the data thus provided.

The study of improvisation is obviously concerned with highly skilled and very flexible movement patterns as well as with the coordination of the appropriate parts. It is evident that there is an enormous number of "degrees of freedom" (Bernstein's term) that can be attained in successfully mastering skills and completing activities. In older styles of jazz the stylistic constraints are such that it is conceivable that it is a more finite process with ready-made and acceptable criteria. However in freer styles such constraints are minimized and so the musician, in the more personal quest for original vocabulary is required to develop great internal flexibility and technical elasticity. The more degrees of freedom that one has in an activity, the more complicated the system and the more difficult it becomes to control it. Thus, to Bernstein, coordination in movement "is the process of mastering redundant degrees of freedom of the moving

organ, in other words its conversion to a controllable
system" (30). It is the organisation of control of this
freedom and practise in free improvisation should be
geared to reflect this.

NOTES ON CHAPTER 6

(1)   Derek Bailey: "Improvisation" p 126-129.

(2)   Jerome Bruner: "The Process of Education" (Random House 1960 p.17).

(3)   B. Konowitz: unpublished D.Ed. thesis (Columbia University 1969 p.33).

(4)   A. Koestler: "The Act of Creation" (Hutchinson 1964 p.44).

(5)   Arthur Koestler: "The Act of Creation" p.155.

(6)   Derek Bailey: "Improvisation" p.145.

(7)   S.S. Stevens (ed.) "Handbook of Experimental Psychology" p.205.

(8)   Arthur Koestler: "The Act of Creation" p.156.

(9)   See author's M.A. dissertation "Slow Music" (University of California 1979) p.33ff.

(10) from "My Painting": Possibilities No 1 Winter 1947-48 p.79.

(11) Curt Sachs: "The Wellsprings of Music". p.110.

(12) Keele: "Movement Control in Skilled Motor
Performance" (Psychological Bulletin 70:
1968 p.387-403).

(13) Deutsch & Deutsch: "Attention - some theoretical
considerations" (Psychological Review 70: 1963
p.80-90).

(14) Greer: unpublished dissertation. Ph.D. University of
London. 1977.

(15) Bateson: "Mind and Nature" p.195-196.

(16) David Sudnow: "Ways of the Hand" p.9-10.

(17) J.J. Gibson "Ecological Optics": Vision Research I
p.253-262 (1961).

(18) David Sudnow: "Ways of the Hand" p.37-38.

(19) Bruce Chatwin: "Dreamtime" (Granta 21 1987 p.41-79).

(20) Bonpensiere: "New Pathways to Piano Technique"
p.123.

(21) E.L. Thorndike: "Human Learning" (Appleton-Century Crofts 1931).

(22) R.N. Singer "Motor Learning and Human Performance" p.72-101.

(23) K.U. Smith "Cybernetic Foundations of Physical Behavioral Science" (Quest 8: p.26-82) 1968.

(24) Derek Bailey: "Improvisation" p.126.

(25) David Sudnow: "Talk's Body" p.60.

(26) Leo Smith: from "Notes: 8 pieces".

(27) Derek Bailey: "Improvisation" p.129.

(28) Jack Adams: "A closed-loop Theory of Motor Behavior" (Journal of Motor Behavior, 3 1971) p.111-149.

(29) N. Bernstein: "The Coordination and Regulation of Movements" (Elmsford N.Y. Pergamon Press 1967) p.134.

(30) N. Bernstein op.cit. p.127.

CHAPTER 7

The foregoing discussion of skill acquisition in keyboard

improvisation has returned repeatedly to the question of

rules and modes of behaviour. Unlike the study of notated

musics and their 'correct' interpretation, the formalising

of such rules presents problems in an idiom which is

fundamentally exploratory. Here I turn to Hofstadter's

thesis of 'metarules' and 'metametarules': the higher,

decision-making faculties guide and make sense of an

already existing vocabulary. He writes:-

> "There is no need to rely on 'Rules that permit
> you to apply the rules', because the lowest-level
> rules - those without any meta's in front - are
> embedded in the hardware, and they run without
> permission." (1)

The absence of these rules would result in unconfident and

haphazard trial-and-error performance, which is not a

feature of the mature improviser's art. So while certain

aspects of vocabulary almost inevitably degenerate to

cliche, on the way to this ignoble end they become

features or a set of conditions of a recognisable style.

Henry Pleasants observes:-

> "Even the most finicky jazz musician will agree
> that the inventions of the Armstrongs, Goodmans,
> Ellingtons and Basies have become the cliches of the
> run-of-the-mill commercial product. But he forgets
> while deploring this dilution or commercialization,
> that it is proof of an accomplishment more momentous
> than a hundred minor masterpieces: the creation of

a style, a set of conventions born of contemporary
taste, mutually agreed to and understood by musicians
and their listeners.....Style is the prerequisite for
communication, good or bad." (2).

I should like to end as we began by considering the notion

of 'freedom' as the propelling force behind the rise of

new improvised music. One might see it was a backlash

against excessive formalisation in the 50s; the serialist

and "third stream" composers, or the emotionally detached,

refined "cool school" of jazz. As Misha Mengelberg

writes:-

"In the not-too-distant past, improvisation was an
important part of musical practise; today to a
certain extent, this is again the case. It was
during the industrial revolution (up to the 60s of
our own century) that musical developments tended
increasingly to become a manual of fixed forms.
For industrial society, music is a consumer commodity.
Thus the job of the composer is to prepare his
musical consistency for labelling and distribution.
At the moment, this job finds its optimum
realisation in the pop single." (3).

The advantages of flexible process over rigid form have

long been recognised by many non-literate musical

cultures. A process, repeated often enough, implies a

type of formalisation yet one without the authoritarian

dictates of notation or pre-programmed drum machine. In

other words, change is always possible, even though there

are plenty of clichés to fall back on. Even if the style

is very refined in terms of what is and what is not

'permissible', such as in Ghanaian drumming where the

improvised variation of supporting drum patterns follows

certain conventions, the existence of this improvisatory

freedom gives the player an immense range of creative

expression both in feeling and in form. John Miller

Chernoff explains this in relation to the music of the

Ewe:-

> "The good drummer has the strength to listen to
> all the ongoing rhythms and still find a place to
> add his own beat, balancing his accents on the
> edge of disorder and confusion, rendering a
> complementary wholeness out of the separate and
> conflicting parts. A musician can afford to take
> his time because of the openness of the arrangements
> to various rhythmic interpretations." (4)

Both the open-endedness of overall structure and the

necessity for good improvisational judgement in this music

are qualities shared with free jazz. While there is a

back-up vocabulary of patterns, ideas, etc, the way is

open to innovation.

Now 'freedom' itself has become the cliché. Since the

early 80s free jazz has gone into something of a decline,

or at least its direction has altered. Instead of the

gladiatorial anarchy of the 60s we now see trends towards

a studious realignment with the mainstream, in particular

a resurgence of such qualities as beat, melody, wit and

structure over and above the principle of self expression

per se. Amongst the new generation of jazz musicians is

an energetic rediscovery of the 'classic' styles of the

late 40s and early 50s, and the rapid rise to fame of such
players as Wynton Marsalis and Courtney Pine is evidence
of the popularity of this neoclassicism which has found a
new wider audience. With musicians who have grown up with
free jazz there are now numerous examples of a harking
back to earlier periods of jazz for new expressive
resources, from Air's arrangement of "Weeping Willow Rag"
by Scott Joplin, to Ronald Shannon Jackson's frenetic
rendering of "Bebop" by Dizzy Gillespie. Indeed, free
jazz itself has become a historical style; a style from
the 60s to be viewed dispassionately and similarly
plundered. Kahondo Style's avant-garde parodies of the
avant-garde are one example of this. Even Cecil Taylor
has been known, in recent years, to introduce sections of
regular metre into his otherwise abstract constructions
(in "3 Phasis", for example); not that this should be
misconstrued as half-baked historicism, but merely as a
recognition of the legitimacy of 'swing' in its most basic
and widely-understood form: "the traditional colouring of
the energy that moves the music" (5). Taylor, in a recent
interview, reaffirmed his debt to the hard bop pianist,
Horace Silver, for this quality of 'swing' and energy of
articulation (6). So while the jazz avant-garde may have
lost its momentum in the area of free collective
improvisation, "the hardening of improvisational arteries"
as conjectured by Derek Bailey, the field is vast for the
inventive reappraisal of jazz repertory. It could even be

argued that a long period of violent expressionism and unrestrained freedom has paved the way for musicians now to perceive the jazz tradition afresh and to approach it with agnostic curiosity free from any trace of nostalgia.

The work of Misha Mengelberg is interesting in this respect as he combines free jazz with pastiche of a huge repertoire of historical styles which are incongruously mixed of juxtaposed. Mengelberg studied composition (1958-64) at the Royal Conservatory in The Hague and towards the end of this period was very active in the "Fluxus" movement while at the same time working as a jazz pianist with his own quartet. Although he has worked for many years with improvisers he stands somewhat apart from the tradition of free music. He sees his identification as a jazz pianist as more of a 'role' within a larger theatrical domain. He describes himself as a formalist, and performance as simply a question of action - whether purposeful or not. The action is influenced by factors present in the environment, by the state of mind of the actor himself, and by unexpected events which may involve a conscious reaction or may be ignored. In the duo of long standing with percussionist Han Bennink a visual and aural theatre of the absurd is set up where the non-congruence of piano and drums (and their players) is emphasised. To quote from my review of a performance at the FMP festival in Berlin:-

"Bennink not only used the whole stage area for
hitting, throwing, bouncing, rattling and jumping,
but the entire hall. Mengelberg, on the other hand,
would spend much of the time in comparative inertia,
hunched at the piano with coffee and cigarette, just
contemplating the keyboard, sometimes tentatively
trying a few notes, a snatch of tune, listening
thoughtfully. His languor and subtle changes of
facial expression were totally opposite to the
vivacity, aggressive slapstick and enormous spatial
distribution of Bennink's playing, and that arrant
disconnection between two people who are meant to be
playing as an 'ensemble' was perhaps the funniest
thing of all. When unable to compete with the noise
level from the rhythm section, Mengelberg would walk
around, do keep-fit exercises to encourage audience
participation and applause. At times this
disconnection seemed positively antagonistic -
Bennink's yells and loud crashes in Mengelberg's
quietest moments, or one instance where Mengelberg
stormed off the stage to retaliate by rattling the
cloakroom racks of coathangers, returning only to
find Bennink applying his sticks to the keyboard...."
(7).

The elements of Mengelberg's formalism are haphazardly

assembled and the theatrical effect is calculated.

Ranging from Beethoven pastiche to parodies of stride and

bebop, sometimes with curiously elongated chord changes

and unresolved cadences, to extravagant fists-and-elbows

free jazz; all these various elements combine to create a

style which is ironic in tone and which forms the central

tension in Mengelberg's work.

Ran Blake also makes reference to various historical

styles creating a dialectic between surprise and

expectancy in his dissection of jazz standards. The very

word "standard" implies an undifferentiated or passive

listening, a normality which affirms certain expectations.
To quote Adorno:-

> "The illusion of a social preference for light music
> as against serious is based on that passivity of the
> masses which makes the consumption of light music
> contradict the objective interest of those who consume
> it. It is claimed that they actually like light music
> and listen to the higher type only for reasons of
> social prestige, when acquaintance with the text of
> a single hit song suffices to reveal the sole function
> of this object of honest approbation can perform. The
> unity of the two spheres of music is thus that of an
> unresolved contradiction." (8).

However, what Adorno sees as a quandary, Ran Blake sees as
unexplored and potentially fruitful territory. He has
always kept in close contact with his jazz and gospel
roots, viewing excursions into atonality and non-metric
rhythm as logical extensions of an otherwise traditional
style. His use of angular lines with abrupt dynamic
contrasts, registral/timbral explorations, and 'wrong'
harmonies are tessera in a sophisticated style which is
essentially tonal and jazz-orientated. Most of his
records have been concerned with exploring the
possibilities of popular standards, rebuilding their
predictable architecture and extracting from such
reconstruction elements of surprise, showing the familiar
in a new light. Blake has described himself as "a
searcher and collector of banalities", and the vehicle of
the popular song offers a wealth of material for
subsequent transformation and demystification. By his

iconoclastic recreations of "banal" music he is
manipulating the powerful effects of familiarity to his
own ends. According to the degree of manipulation the
music can still appeal to 'popular taste' while at the
same time presenting a face that is new and challenging.

In the early 60s, Jaki Byard once noted with dismay a Down
Beat critic describe his stride piano playing with the
Charles Mingus group as "tongue-in-cheek". At that time
modernism was so much the norm that recourse to earlier
styles of jazz was presumed to be intentionally comic.
Nowadays this is not only acceptable; more often the very
reverse is true: modernism is a novelty or a cause of
suspicion, and yet the keyboard techniques, styles and
structures pioneered by the improvising pianists studied
here remain to be used and developed in the wider context
of new jazz.

NOTES ON CHAPTER 7

(1) Douglas R. Hofstadter: "Godel, Escher, Bach" p.685.

(2) Henry Pleasants: "Death of a Music?" p.159.

(3) Misha Mengelberg: "Werdegang der Improvisation"
     Key Notes 10 p.44.

(4) John Miller Chernoff: "African Rhythm and African
     Sensibility" p.114.

(5) A.B. Spellman: "Four Lives in the Bebop Business"
     p.71.

(6) The Wire (Issue 46/47 Dec. 1987) p.60.

(7) Contact 22: "Wat'n bloss Duos?"

(8) Theodor W. Adorno: "The Philosophy of Modern Music"
     p.275.

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APPENDIX 1

SELECTED DISCOGRAPHY

KARL HANS BERGER

"Interludes" (solo)   FMP 0460

Recorded: Woodstock, N.Y. May 24th 1976 and

May 30th 1977 (Ex. 41).

BORAH BERGMAN

"Discovery" (solo) Chiaroscuro Records 125

Recorded: New York 1974.

"Bursts of Joy" (solo) Chiaroscuro Records 158.

Recorded: New York 1977 (Ex.42).

"Upside Down Visions" (solo)   Soul Note SN 1080

Recorded: Milan July 24th and 25th 1984 and

October 2nd and 3rd 1984 (Ex.43).

RAN BLAKE

"Breakthru" (solo) Improvising Artists Inc. 373842

Recorded: Oslo December 2nd and 5th 1975.

"Open City" (solo) Horo HDP 7-8

Recorded: Rome June 18th and 19th 1977 (Ex.38 and 54)

"Rapport" Arista Novus 3006

Recorded: Boston/New York April 28th-May 3rd 1978 (Ex. 39)

"Film Noir" Arista Novus 3019

Recorded: Massachusetts January 23rd and 27th 1980 (Ex. 44)

Blake (p); Hankus Netsky (oboe); Paul Meyers (gtr);

Jon Hazilla (d); Ted Curson (tpt); Jon Heiss (f);

Daryl Lowry (as); George Schuller (d).

PAUL BLEY

"Copenhagen and Haarlem" Arista Freedom 1901

Recorded: Copenhagen November 5th 1965.

Haarlem November 4th 1966.

Bley (p); Kent Carter/Mark Levenson (b); Barry Atlschul (d)

"Open, to Love" (solo) ECM 1023

Recorded: Oslo September 11th 1972 (Ex.40 and 45).

"Alone, Again" (solo) Improvising Artists Inc. 373840

Recorded: Oslo August 8th and 9th 1974.

ANTHONY BRAXTON

"Composition 98" Hat ART 1984

Recorded: Ludwigsburg January 19th 1981.

Bern January 24th 1981.

Braxton (ss,as,ts); Marilyn Crispell (p); Ray Anderson (tbn)

Hugh Ragin (tpt,flugehorn)

ORNETTE COLEMAN

"Free Jazz" Atlantic ATL 50 240

Recorded: New York 17th May 1961 (Ex.1)

Ornette Coleman (as); Eric Dolphy (bass cl); Don Cherry (pocket

trumpet); Freddie Hubbard (t); Scott LaFaro (b); Charlie

Haden (b); Billy Higgins (d); Ed Blackwell (d).

JOHN COLTRANE

"Kulu Se Mama" Impulse A-9106.

Recorded: New York October 1965 (Ex.13)

Coltrane (ts); McCoy Tyner (p); Jimmy Garrison (b)

Donald Garrett (b, bass cl); Pharoah Sanders (ts);

Elvin Jones (d); Frank Butler (d); Juno Lewis (voice, perc).

"Ascension" Impulse A-95

Recorded: New York June 28th 1965.

Coltrane (ts); Freddie Hubbard (t); Art Davis (b); Elvin

Jones (d); McCoy Tyner (p); Marion Brown (as); Pharoah

Sanders (ts); Archie Shepp (ts); John Tchicai (as); Dewey

Johnson (t); Jimmy Garrison (b).

MARILYN CRISPELL

"Spirit Music" Cadence CJR 1015

Recorded: New York January 13th 1982/May 15th 1981.

Crispell (p); Billy Bang (vln); John Betch (d); Wes Brown (gtr)

"And Your Ivory Voice Sings" Leo LR126

Recorded: Woodstock, N.Y. March 7th-9th 1985

Crispell (p); Doug James (drums).

BILL EVANS

"The Village Vanguard Sessions"   Milestone 47002

Recorded: New York June 25th 1961 (Ex.15)

Evans (p); Scott LaFaro (b); Paul Motian (d).

FRED VAN HOVE

"Einheitsfrontlied"   FMP S3

Recorded: Bremen 1973

Peter Brotzmann (ts); Van Hove (p); Han Bennink (d)

"Tschus"   FMP 0230

Recorded: Berlin September 14th 1975.

Peter Brotzmann (ts,as,bs,cl); Van Hove (p,acc); Han Bennink (b)

"Veloren Maandag" (solo) FMP SAJ 11

Recorded: Belgium January 9th-11th 1977 (Ex.25-30).

RONALD SHANNON JACKSON

"Decode Yourself"   Island ILPS 9827

Recorded: New York 1985.

Erik Person (ss, as); Robin Eubanks (tbn); Akbar Ali (vln);

Vernon Reid (gtr); Onaje Allen Gumbs (kb); Melvin Gibbs (b);

Rev. Bruce Johnson (b); Jackson (d).

GUUS JANSSEN

"On the Line" (solo)   Claxon 79.4

Recorded: Schevingen January 26th 1979/Amsterdam September

1st 1979 (Ex. 32-37).

KAHONDO STYLE

"My Heart's In Motion"   Nato 469

Recorded: Chantenay-Villedieu April 7th-11th 1986 (Ex.51)

Clive Bell (f,acc,whistles,etc.); Peter Cusack (gtr); Max

Eastly (gtr.perc); Kazuko Hohki (v); David Holmes (d,perc);

Siamed Jones (vln, as); Stuart Jones (vc,tpt,b); Alan

Tomlinson (tbn).

MISHA MENGELBERG/HAN BENNINK

"Einepartietischtennis"   FMP SAJ-03

Recorded: Berlin May 12th 1974 (Ex.53).

CHARLES MINGUS

"Passions of a Man" Atlantic SD3-600

Recorded: New York 1952-59 (Ex. 3 and 4).

"Tijuana Moods"   RCA (France)   FXL1-7295

"Mingus Ah Um"   Columbia   CS 8171

Recorded New York 1957.

Shafi Hadi (as); John Handy (as); Booker Ervin (ts); Horace

Parlan (p); Danny Richmond (d); Mingus (b); William Dennis (tbn)

James Knepper (tbn)

THELONIUS MONK

    "In Japan"   East Wind 702

    Recorded: Tokyo May 23rd 1963 (Ex.7)

    Monk (p); Charlie Rouse (ts); Butch Warren (b);

    Frankie Dunlop (d).

    "Something in Blue"   Black Lion BLP 30119

    Recorded: London November 15th 1971.

    "The Man I Love"   Black Lion BLP 30141

    Monk (p); Al McKibbon (b); Art Blakey (d)

HERBIE NICHOLS

    "Herbie Nichols Trio" Blue Note 1519

    Recorded: Hackenstack, N.J. July 29th and August 7th

    1955 (Ex. 9-11).

    Nichols (p); Al McKibbon, Teddy Kotick (b); Max Roach (d)

THE PEOPLE BAND

    Atlantic TRA 214

    Recorded: London October 1st 1968 (Ex. 12).

DON PULLEN

"Nommo"   SRP LP 290

Recorded: Yale University 1966 (Ex. 48)

Pullen (p); Milford Graves (d,perc).

"Solo Piano Album"   Sackville 3008

Recorded: Toronto February 24th 1975.

"Five To Go" (solo)   Horo HZ02

Recorded: Rome July 29th 1976.

"Milano Strut"   Black Saint BSR 0028

Recorded: Milan December 1978

Pullen (p); Famoudou Don Moye (d,perc).

HOWARD RILEY

"Angle"   CBS 52669

Recorded: London December 3rd 1968/January 2nd 1969

Riley (p); Barry Guy (b); Alan Jackson (d).

"The Day Will Come"   CBS 64077

Recorded: London March 1st/April 17th 1970

Riley (p); Barry Guy (b); Alan Jackson (d).

"Flight"   Turtle TUR301

Recorded: London March 20th 1971

Riley (p); Barry Guy (b); Tony Oxley (d)

"The Toronto Concert" (solo) Vinyl VS112

Recorded: Toronto February 23rd 1977.

"The Other Side" (solo)   Spotlite SPJ511

Recorded: London 1978 (Ex.22 and 23).

"Endgame"   JAPO 60028

Recorded: Ludwigsburg April 1979.

TERRY RILEY

"Happy Ending"   Warner Bros 46 125

Recorded: France March-April 1972.

"Shri Camel"   CBS 73929

Recorded: Holland 1980

ALEXANDER SCHLIPPENBACH

"Payan" (solo) ˙ ENJA 2012

Recorded: Munich February 4th 1972 (Ex. 21)

"Pakistani Pommade"   FMP 0110

Recorded: Bremen November 1972

Evan Parker (ss,ts); Schlippenbach (p); Paul Lovens (d)

"Globe Unity Orchestra Live In Wupppertal"   FMP 0160

Recorded: Wuppertal 1973

"The Hidden Peak"   FMP 0410

Recorded: Berlin January 27th 1977 (Ex. 19 and 20)

Evan Parker (ss,ts); Schlippenbach (p); Peter Kowald (b)

Paul Lovens (d).

"Kung Bore"   FMP 0520

Recorded: Stockholm November 18th 1977

Schlippenbach (p); Sven Ake Johansson (d,v,acc).

IRENE SCHWEIZER

"Early Tapes"   FMP 0590

Recorded: Munich January 26th 1967.

Schweizer (p); Uli trepte (b); Mani Neumeier (d)

"Wilde Senioritas" (solo)   FMP 0330

Recorded: Berlin November 4th 1976.

"Hexensabbat" (solo)   FMP 0500

Recorded: Charlottenberg October 8th 1977 (Ex. 31)

"The Very Centre of Middle Europe"   Hat Hut X

Recorded: Basel October 28th 1978

Schweizer (p,d); Rudiger Carl (cl,bass cl,ts,concertina)

HORACE SILVER

"Blowin' the Blues Away"   Blue Note BST 84017

Recorded: New York 1958 (Ex. 2).

Blue Mitchell (t); Junior Cook (ts); Horace Silver (p);

Eugene Taylor (b); Louis Hayes (d).

KARLHEINZ STOCKHAUSEN

"Aus Den Sieben Tagen"   Deutsche Grammaphon 2720 073

Recorded: Cologne 1973.

CECIL TAYLOR

"In Transition"   Blue Note BN-LA458-H2

Recorded: Boston December 10th 1955 (Ex. 16)

Taylor (p); Steve Lacy (ss); Buell Neidlinger (b);

Dennis Charles (d)

"Looking Ahead!"   Contemporary LAC 12216

Recorded: New York June 9th 1958 (Ex.17)

Taylor (p); Earl Griffith (vibra-harp); Buell Neidlinger (b);

Dennis Charles (d).

"Unit Structures"   Blue Note BST 84237

Recorded: New York 1966 (Ex.25)

Eddie Gale Stevens Jr (t); Jimmy Lyons (as)

Ken McIntyre (as,oboe,bass cl); Taylor (p); Henry Grimes (b);

Alan Silva (b); Andrew Cyrille (d).

"Conquistador!"   Blue Note BST 84260

Recorded: New York 1968 (Ex.18).

Bill Dixon (t); Jimmy Lyons (as); Taylor (p); Henry Grimes (b)

Alan Silva (b); Andrew Cyrille (d).

"Silent Tongues" (solo)   Black Lion FLP 40146

Recorded: Montreux, Switzerland July 2nd 1974 (Ex.24)

"3 Phasis"   New World Records NW 303

Recorded: New York April 1978 (Ex. 52).

"One Too Many Salty Swift and Not Goodbye" Hat Hut 3R02

Taylor (p); Jimmy Lyons (as); Raphe Malik (t);

Ramsey Ameen (vln); Sirone (b); Ronald Shannon Jackson (d)

KEITH TIPPETT

"No Gossip"   FMP SAJ 28

Recorded: Berlin March 20th and 23rd 1980 (Ex.47)

Tippett (p); Louis Mohole (d).

MARTIN THEURER

"Moon Moods" (solo)   FMP 0700

Recorded: Berlin July 13th-15th 1979 (Ex. 46)

LENNIE TRISTANO/TADD DAMERON

"Crosscurrents"   Capitol M-11060

Recorded: New York May 16th 1949 (Ex. 5 and 6)

Lee Konitz (as); Wayne Marsh (ts); Tristano (p);

Billy Bauer (gtr); Arnold Fishkin (b); Denzil Best (d).

URS VOERKEL

"S'Gschank (solo) FMP 0300

Recorded: Berlin 1976

APPENDIX 2

BIOGRAPHICAL NOTES

KARL HANS BERGER   b.1935 Heidelberg, West Germany.

Studied at Heidelberg University, gaining a Ph.D on the
organ works of J.S. Bach, while teaching himself to play
jazz piano. He became involved with the avant-garde jazz
scene in Paris with Don Cherry (1965-66) and then later in
New York with Marion Brown, Steve Lacy, Sam Rivers and
Rosewell Rudd. Won Down Beat international critics' poll as
vibraphonist of the year in 1968, 1971, 1974 and 1975. In
1976-82 he was the director of the Creative Music
Foundation, Woodstock, New York, and then joined the music
faculty of the Banff School of Performing Arts in Canada.

BORAH BERGMAN   - b.1934 New York City.

Studied piano and clarinet as a child but then gave up music
to pursue ambitions as a writer. He returned to music
seriously in his mid-20s keenly aware of the new forms of
expression possible with the emergence of the free movement.
Having taken some lessons in jazz piano with Teddy Wilson
and classical piano with David Hollander he set about
developing his unique virtuoso style of improvisation. On a
grant from the Ingram Merrill Foundation he furthered his

explorations into "a totally ambidextrous approach" and in
1975 released his first solo record, "Discovery" on which he
demonstrates his highly developed left hand technique. As
well as solo work (and a further 3 records) he has played
with Archie Shepp, Malcolm Goldstein, Fred Hopkins, David
Murray, Paul Rutherford, Evan Parker and Derek Bailey. In
recent years has had made many appearances in Europe,
playing at the North Sea Festival, Berlin Festival, IRCAM
and others.

RAN BLAKE   b.1935 Springield, Massachusetts, U.S.A.

An early interest in the singing of the Pentecostal Church,
the compositions of Bartok, Ives and Webern, and the playing
of Thelonius Monk, led to the later development of a very
eclectic but economical style. Blake accompanied for the
singer Jeanne Lee in the late 50s and made his first record
with her in 1961 (The Newest Sound Around - RCA PL 42863).
He toured Europe in 1963 and later joined the faculty of the
New England Conservatory of Music in Boston, becoming, along
with Gunther Schuller, a key figure in the "third stream"
school of jazz composition. On the strength of his 1980
record "Film Noir" (Arista AN 3019) he was awarded the
Guggenheim Fellowship for composition in 1982.

PAUL BLEY   b.1932 Montreal, Quebec, Canada.

Played the piano from the age of 8, led his own quartet when

he was 12 and then in 1949 took over Oscar Peterson's

accompanying job when Peterson left for the States. In 1950

he went to study composition and conducting at the Julliard

School. Spent the latter half of the 50s on the West Coast

and led a quintet in 1958 with musicians who were to make up

the original Ornette Coleman quartet: Coleman, Don Cherry,

Charlie Haden and Bill Higgins. Moving to New York, Bley

played with Charles Mingus in 1960, the Jimmy Giuffre Trio

(1960-1963) and toured Europe and Japan with Sonny Rollins

in 1960 and 1963. Has led his own ensembles since 1964 and

has concentrated on intimate, small group or solo work as

being the best medium for his subtle, reflective style. Has

made several solo records of a limited repertoire of

compositions by himself, Carla Bley and Annette Peacock.

Toured Europe in 1987 with new quartet: Bill Frisell

(guitar), John Surman (saxes), and Paul Motian (drums).

MARILYN CRISPELL   b.1947 Philadelphia, U.S.A.

As a child she was first introduced to improvisation by

Grace Cushman, her music teacher at the Peabody Preparatory

Dept. At the New England Conservatory of Music, Boston, she

took a B.A. in classical piano (1964-68) and then studied

jazz piano with Charlie Banacos (1975-77). She played with

Anthony Braxton in various combinations (1978-85) making
several records with the quartet and touring Europe in 1978
as a member of the Creative Music Orchestra. She has also
worked with Anthony Davis, Leo Smith, Oliver Lake and was a
member of the AACM Big Band. Taught at the Creative Music
Studio, New York (1980-83) and performs regularly in Europe
and the U.S.A. as a solo pianist and a leader of her own
quartet.

BILL EVANS   b.1929 Plainfield, New Jersey, U.S.A.
                    d.1980 New York City.

First came to international attention with his contribution
to two highly influential records: "Tijuana Moods" by
Charles Mingus and "Kind of Blue" by Miles Davis, and his
performance on John Lewis' soundtrack to the 1959 film "Odds
Against Tommorrow". Some of his finest work was with his
trio of 1959-61 with Scott LaFaro (bass) and Paul Motian
(drums), and although this particular trio was brought to an
end by the sudden and tragic death of LaFaro, Evans favoured
this format throughout his career. He quoted George
Shearing as the principle influence on his lyrical style.

CLYDE HART   b.1910 Baltimore, U.S.A
                    d.1945 New York City

One of the first pianists to play a bebop-style left-hand

i.e. rootless voicings with highly syncopated rhythm.

Worked as a pianist/arranger with Jap Allen (1930-31), with

singer Blanche Calloway (1931-35) and briefly with McKinny's

Cotton Pickers (1935). Settled in New York, started his own

quartet (1936) and also played with Stuff Smith (1936-38).

During the 40s he was much in demand as a side man and

recorded with Billy Holliday, Roy Eldridge and Lester Young.

When ill health curtailed regular playing he worked as an

arranger for Paul Baron's CBS Orchestra.

FRED VAN HOVE   b.1937 Antwerp, Belgium.

First studied classical music with his father and then later

went to the Antwerp Music Academy. At the same time he

developed an interest in jazz and decided to make his career

in this field. In the late 50s he earned a living playing

dance music and standards and worked for a while in a

Dixieland band. He was among the first generation of free

jazz players in Europe and played regularly in a trio with

Peter Brotzmann and Han Bennink (1966-75). More recently

composition has become an important element of his work and

he has written a series of pieces for instrumental ensembles

(brass quintet, chamber orchestra, etc) with improvised

piano parts. He works in duos with violinist Phil Wachsmann and the French singer Arnick Nozati and plays with the Belgian Piano Quartet (4 pianists at 2 pianos).

GUUS JANSSEN   b.1951 Heiloo, Holland

Studied piano with Jaap Spaanderman and composition with Ton Hartsuiker at the Sweelinck Academy of Music in Amsterdam. As a pianist he has worked with John Zorn, George Lewis, John Tchicai, Maarten Altena, as well as with the Willem Breuker Kollektief and the Netherlands Blazers Ensemble. He works mainly as a soloist (releasing "On the Line" Claxon 79.4 and "Tast Toe" Claxon 81.7) and as the leader of a septet. Several of his chamber music compositions have been recorded on the Composers' Voice label. He has given performances at various European festivals, including the Holland Festival (1981) and the North Sea Festival (1982). He received the Boy-Edgar Award for Jazz and Free Music in 1981 and the Matthijs Vermeulen Award for composition in 1984.

MISHA MENGELBERG   b.1935 Kiev, U.S.S.R.

Studied composition (1958-64) with Kees van Baaren at the Royal Conservatory in The Hague. Towards the end of this period he was very active in the "Fluxus" movement and at the same time as a jazz pianist and leader of a quartet.

During the later 60s he took an active part in various

musical-political campaigns and union activities. He

composed the politically inspired opera "Reconstruction "

together with Louis Andriessen, Reinbert de Leeuw, Peter

Schat and Jan van Vlijmen, also ex-pupils of Kees van

Baaren. He established and has been a leading figure in the

Instant Composers Pool which toured in the U.K. in 1988, its

20th anniversary year, and performs regularly in a duo with

percussionist Han Bennink.

THELONIUS MONK   b.1917 North Carolina U.S.A.
                        d.1982 Englewood, New Jersey, U.S.A.

During the late 30s he played piano for a travelling

evangelist's show and then became house pianist at Minton's

Club, New York. He worked alonside Dizzy Gillespie in Lucky

Millander's band (1944). He then went through a long period

of relative obscurity, overlooked by record companies,

mainly because of the "cabaret card" law which prevented him

from undertaking club engagements in New York. In the late

50s he formed a big band with the tenor sax player, Charlie

Rouse. This was the start of a long and fruitful

association in his subsequent quartet work. In 1971 he

toured the world with the all-star "Giants of Jazz" along

with Dizzy Gillespie, Sonny Stitt and Kai Winding, and the

night after the last concert recorded the celebrated trio

albums, "Something in Blue" and "The Man I Love" in London.

Made only occasional public appearances after this and in
1975 retired through ill health. Received a special tribute
from President Jimmy Carter at his White House jazz party in
1978.

HERBIE NICHOLS   b.1919 New York City
                        d.1963 New York City

Although Nichols was introduced to jazz audiences through a
Blue Note recording of 1955, he remained an obscure figure
throughout his life and was only posthumously recognised as
a great pioneer of modern jazz. His story has come to
public attention mainly through A.B. Spellman's research and
interviews published in "Four Lives in the Bebop Business".
Nichols' professional career was undistinguished, backing
various night club singers and playing with mediocre bands.
He rarely had the opportunity to play any of his 100 or so
unique compositions to audiences. He befriended Thelonius
Monk in the early 50s, and Monk remained a devoted admirer.
In 1960-62 he had various club residencies in New York City.
He joined Archie Sheep in 1962 and toured in Scandanavia
that year. Died of leukemia.

HOWARD RILEY   b.1943 Huddersfield, U.K.

Academic career includes University of Wales (M.A. 1966),
Indiana University (M.Mus.1967) and University of York

(M.Phil 1970), but a self-taught jazz pianist and composer
who evolved through bebop to a personal style based on
atonality or pantonality and a technique founded on a more
equal distribution of work between the hands. He has
concentrated mainly on solo and small group work, the latter
often in collaboration with bassist Barry Guy with whom he
has been recording since 1968. He has also worked with
Barry Guy with the London Jazz Composers' Orchestra. He has
toured extensively in Europe, U.S.A. and Canada and has made
many festival, radio and TV appearances.

ALEX SCHLIPPENBACH   b.1943 Berlin, West Germany.

As a pianist and composer he has been a pivotal figure in
European improvised music. In 1962 he played in a group
with multi-instrumentalist Gunther Hampel and arranged music
which departed from traditional harmonies. A quintet with
trumpeter Manfred Schoof recorded some of his compositions
in 1966, and the same year Schilppenbach put together an
orchestra of free players to perform a work called "Globe
Unity". The project developed and the Globe Unity Orchestra
has remained together on and off until the present,
enlisting most of the major European improvisers at one time
or another. Schlippenbach's other principle ensembles have
been together since the early 70s: a trio with Paul Lovens
and Evan Parker and a duo with percussionist Sven Ake
Johansson.

IRENE SCHWEIZER   b.1941 *Schassfhausen, Switzerland*

Started to learn jazz piano by ear at the age of 12 and then played in a Dixieland band while at school. After a period in England studying music and English, she settled in Zurich and formed a trio in the early 60s with Uli Trepte (bass) and Mani Neumeier (drums) playing her compositions as well as free improvisation. She has remained a central figure in the European improvised music scene and has played at many international festivals. She has a regular duo with Rudiger Carl and has played with George Lewis, Maggie Nichols, Peter Kowald, Evan Parker and Paul Lovens.

HORACE SILVER   b.1928 Norwalk, Connecticut, U.S.A.

Some of Silver's earliest professional work was with Stan Getz (1950-51) but he changed abruptly from 'cool' jazz when he teamed up with Art Blakey (1951-53) to co-lead The Jazz Messengers. Together they formed the turbulent 'hard bop' style and Silver's energetic and percussive playing was the first to acquire such epithets as 'soulful' and 'funky'. He was a seminal influence on many younger jazz pianists. He formed his own quintet in 1956 for which he wrote many excellent compositions. Played in Britain for a season at Ronnie Scott's Club in 1980.

CECIL TAYLOR   b.1933 New York City.

Studied piano and composition at New York College of Music

and then at the New England Conservatory, Boston. As his

interests turned to jazz, he was, from the outset,

determined to find a totally original style of improvising,

although his first record ("In Transition" Blue Note 1956

438-H2) does include, as a concession to 'tradition',

versions of "Sweet and Lovely" and Thelonius Monk's "Bemsha

Swing". In the late 50s his quartet had a long residency at

New York's Five Spot. Toured Europe in 1961 with Jimmy

Lyons and Sunny Murray but played only sporadically in the

U.S. during the 60s, remaining a main voice of the avant-

garde 'underground'. (This period is well documented in

A.B. Spellman's book). From the early 70s onwards he has

achieved considerable success, leading a variety of

ensembles and giving solo performances all over the world,

and enjoyed a new level of recognition as evidenced by a

Guggenheim Fellowship in 1973 and an Honorary Doctorate from

the New England Conservatory of Music in 1977.

KEITH TIPPETT   b.1947 Bristol. U.K.

Moved to London in the mid 60s after studying classical

piano and organ. Won a Musicians' Union Scholarship to

attend the Barry Summer School where he met Nick Evans, Mark

Charig and Elton Dean who shortly after made two records as

part of the Keith Tippett Group. In the late 60s he turned down an offer to become a member of King Crimson, to concentrate on putting together the 50-piece band, Centipede. After this project he led a band with Julie Tippets, Ovary Lodge, and another large-scale venture, Ark. He tours in Europe and performs regularly as a soloist and in a duo with drummer Louis Moholo.

LENNIE TRISTANO   b.1919 Chicago
                       d.1978 New York City.

Lost eyesight in early childhood and spent ten years in a state institution for the blind where he learned to play saxophone, clarinet, cello and piano. After attending the American Conservatory of Music in Chicago and gaining a B.A. he led a Dixieland band as clarinettist. He moved to New York in 1946 to work as a pianist. Led his own trio and quintet at regular club dates in New York City with saxophone players, Wayne Marsh, Lee Konitz and guitarist Billy Bauer. It was during this period that he formulated his celebrated "cool jazz" style which was imitated by many younger musicians. He settled on Long Island in 1951 and from then on mainly confined his activities to teaching.

APPENDIX 3

INDEX OF NAMES