

ON THE IMPROV MIND STATE
AND
ON THE ETHICS OF MUSIC COMPOSITION

BY

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Preface

"Music can never be an abstraction, however thoughtful and objectless—for its object is the living man in time—nor can it be accidental, however improvised ... because improvisation is not the expression of accident but rather of the accumulated yearnings, dreams and wisdom of our very soul."

Yehudi Menuhin¹⁵

About 2:00 A.M. 1977, at a party in Los Angeles, somebody put on the Grateful Dead 1972 European Tour album. There were some disgruntled protests, "Why are you putting on that *trucker* band?" Indeed, songs like "One More Saturday Night" and "Tennessee Jed" are the type of laid-back country songs which appeal to the low-brow contingent of the Dead's following; but the connoisseurs in the room knew that there is another side of the Dead which explores the sensitive, the religious, the cosmic issues which have come to occupy the cultural and intellectual mainstream since the 60's. In songs like "Saint Stephen," "The Golden Road," and "Sugar Magnolia" the Dead demonstrate that far from being merely a frivolous, commercial, trucker band they are capable of contemplating subjects of depth and significance; the same subjects which set apart the Beatles' "Let It Be" and "Come Together" and Bob Dylan's "Blowin' in the Wind" from the trivial fare of most commercial pop music.

The side began with the "Prelude." This is a free-form jam which, with flamboyant style, makes the statement that the Dead know their Coltrane, maybe even their Stockhausen. It cannot be said that this piece is atonal because all the figures are familiar finger patterns which are tonally oriented; but the contrapuntal freedom of the individual parts gives the performance a polytonal and polyrhythmic character which is most unusual for anything like a rock 'n' roll context. For about fifteen minutes, the music ebbs and flows into and out of vaguely defined tonal vortices until it begins to slacken and bits of D major start flaking onto the proscenium like snow settling on a windowpane. After such a long period of tonal instability, it is a relief to hear a straight D major in 4/4 time. The transition into "Morning Dew" continues its leisurely

¹⁵ Menuhin, Yehudi, 1972 *Theme and Variations*. New York: Stein and Day, (taken from *The Wordsworth Dictionary of Musical Quotations*. Edinburgh: Wordsworth Editions Ltd., 1991 (p. 100)

progress until the words, "Walk me out in the morning dew, my honey," invoke a delicate wind-blown landscape upon which early-morning-up-all-night thoughts play across the horizon of a golden grassy-shimmering dawn.

As Garcia's first solo emerged out of the texture, I found that I could hear the guitar interpreting, re-articulating the ironic, lonesome, almost desperate words, "You don't know those people anyway." My mind started hearing the words coming out of the notes of the guitar and this paradox led me to a heightened sense of the significance of the words. By the time the second solo arrived I had entered an altered state of consciousness where I was outside my body observing the smoke-filled scene from above myself; the phonograph was somehow further away from me than it had been a minute ago, and I had so completely identified with the music that I was having trouble telling where I ended and the music began. For the moment I am the Grateful Dead, I am Jerry Garcia wailing on the guitar, I am this dazed protagonist contemplating the immensity of this dew-swept terrain and his own insignificance in the cosmic scheme. As the final phrase peaks out in a wall of D major and the final accent proclaims, "It doesn't matter anyway," I am snapped back to present time and the experience is over except for the residual tingle and the feeling that I know myself a little better having lost myself for awhile.

Later, out on the freeway, the whizzing lights flashed the memory of this experience back into my brain and I considered what it was that had happened to me. I remembered the famous saying of J.S. Bach, "You have to hit all the right notes at the right time and the instrument plays itself."¹⁶ For years I have understood this passage to mean that when you train your body so thoroughly your mind does not have to occupy itself with giving your fingers routing instructions, you may achieve a state of mental transcendence in which you can observe your body from above making the music happen while the essential you is somewhere else taking it all in, unencumbered by physical involvement. This is, indeed, a familiar experience for me, but that does not diminish the surprise and the delight of it every time it happens. The experience is always the same, but it is also always different. Just as, in the *Paradiso*, Dante observes the timeless, changeless face of God changing with every change in himself,¹⁷ my experience of my transcendent self changes as time passes and the

¹⁶ Crofton, Ian, 1985 *A Dictionary of Musical Quotations*. New York: Schirmer Books (p. 107)

¹⁷ "Not that there was more than a simple appearance
In the living light which I gazed upon
And which is always as it always has been;

subject of the experience (me) knows more about what is happening to him. It occurred to me that the experience of losing myself, my consciously defined ego¹⁸, is a subject that deserves comment in writing, and I put the idea away for future reference.

Years later, in graduate school, I took a musicology course on improvisation and once again found myself wondering how this experience could be described in words. I knew that I was not unique, that most musicians have had similar feelings, but I also knew that such feelings are considered too difficult to talk about without using the jargon of mysticism or parapsychology which smacks of anti-intellectualism at best, flaky unscientific double-talk at worst. This was annoying to me because it seemed unfair that the accepted tone of academic writing should forbid discussion of subjective experiences which, however abstract, are very real. I craved a language which could bestow upon this subject the dignity of disciplined academic research but which still did not sidestep the issue of physical transcendence.

I decided to abandon the music library in my search for supportive material and to explore the fields of psychology and physics for research which might help me say what I wanted to say in language that had the proper academic ring to it. To my surprise and delight I found a wealth of material which precisely explained my

It was my sight which was growing stronger
 And as I was looking; so what looked like one
 Worked on me as I myself changed.

Dante Alighieri, *The Divine Comedy*. trans. Sisson, C.H. 1980 Chicago: Regnery Gateway (p. 498)

¹⁸ "We shall now look upon the mind of an individual as an unknown and unconscious id, upon whose surface rests the ego, developed from its nucleus the Pcpt-system. . . .

It is easy to see that the ego is that part of the id which has been modified by the direct influence of the external world acting through the Pcpt-Cs: in a sense it is an extension of the surface-differentiation. Moreover, the ego has the task of bringing the influence of the external world to bear on the id and its tendencies, and endeavors to substitute the reality-principle for the pleasure-principle which reigns supreme in the id. In the ego perception plays the part which in the id devolves upon instinct. The ego represents what we call reason and sanity, in contrast to the id which contains the passions."

Freud, Sigmund, 1923 "The Ego and the Id." in Rickman, John, ed. *A General Selection from the Works of Sigmund Freud*. New York: Liverwright Publishing Corporation 1957 (p. 215)

experience very much in the language of science; in the fields of psychology I examined basic works of Jung,¹⁹ Bergson,²⁰ Chardin,²¹ and Freud,²² and in the field of quantum physics I studied books by Capra,²³ Friedman,²⁴ Wolf,²⁵ and Bohm,²⁶ which were filled with equations and charts which look just like science but which certainly approach an articulate method of describing supernatural and super-personal experience. In particular, I found that Tony Bastick's²⁷ masterpiece, *Intuition*, supplied me with concepts which, in combination with the writing of other psychologists and philosophers, provided me with a key to unlocking the mystery of the transcendent experience without resorting to mere subjective opinion. Bastick's

¹⁹ Jung, Carl. 1959 *Aion: Researches into the Phenomenology of the Self*. New York: Random House

²⁰ Bergson, Henri. 1908 *Matter and Memory*. trans. N.M. Paul and W.S. Palmer, 1991. New York: Zone Books

²¹ Teilhard de Chardin, Pierre
1971 *Christianity and Evolution*. New York: Harcourt, Brace, Jovanovich

²² Freud, Sigmund. 1923 "The Ego and the Id." in Rickman, John, ed. *A General Selection from the Works of Sigmund Freud*. New York: Liverwright Publishing Corporation
1957 (p. 215)

²³ Capra, Fritjof 1975 *The Tao of Physics*. Boston: Shambhala Publications, Inc.

²⁴ Friedman, Norman. 1990 *Bridging Science and Spirit*. St. Louis, Missouri: Living Lake Books

²⁵ Wolf, Fred Alan. 1988 *Parallel Universes*. New York: Simon and Schuster
Wolf, Fred Alan. 1996 *The Spiritual Universe*. New York: Simon and Schuster

²⁶ Bohm, David 1985 *Unfolding Meaning: A Weekend of Dialogue with David Bohm*. ed. Donald Factor. Gloucester: Foundation House Publications

²⁷ Bastick is an English psychologist following very much in the footsteps of the great F.C. Bartlett. *Intuition* is his only full-length book (over 400 pages), and he has published only a few articles. In spite of this abbreviated presence in the current literature, Bastick's knowledge of the field of experimental psychology is staggering; reading *Intuition* is like reading a review of the entire field since the 60's. To my knowledge, Bastick's views have not been taken up by any mainstream school of thought—perhaps the extreme specialization of language has made the book seem forbidding to many a casual reader (including the critic who wrote the one review of it)—but his conclusions are backed by the most thorough possible scholarship, and it is possible to predict that the significance of his contribution to experimental psychology will be more generally acknowledged when more people in the field catch up with him.

"Theory of Intuitive Response" made it possible for me to create links between intuition and other more abstract mental states, such as those referred to in Jung's "Theory of the Collective Unconscious" and Chardin's "Theory of the Omega Point."

Therefore, with these authorities behind me, I now attack the problem of the personally transcendent experience in music, attempting to show that there is at least the possibility of reconciling inarticulate mystical realities with mind states which have been thoroughly discussed in scientific language by acknowledged experts in the fields of psychology and physics.

I have written two articles which explore discrete aspects of this vast subject. These efforts, admittedly, do not come to any completely unequivocal conclusions on any front, but it is hoped that my insights might be at least thought-provoking if not totally convincing. The first article revisits my Jerry Garcia experience, using it as a special case for the more general problem of ego-dissolution in service of higher aspects of personality. The second article takes these assertions and draws from them conclusions of an ethical nature; the ethical imperative of these conclusions prescribe certain activities for composers which I feel would improve the climate of musical creativity in general and the atmosphere of the academic creative world in particular.

It is my hope that these two works will contribute to the ever-growing body of literature which attempts to bridge the gulf between science and spirit;²⁸ moreover, it is hoped that my comments will provide musicians with a vocabulary for talking about the transcendent experience in terms which are at once rationally coherent and spiritually truthful. Thus, as I propose this "Theory of the Transcendent Experience in Music" I encourage the reader to try to remember that one special time when music made him/her feel, for a moment, that he/she was both more and less than he/she once thought he/she was.

²⁸ Such as the works by Bergson, Chardin, Wolf, Friedman, and Bohm cited above.

Introduction

What do improvisers do? What is the difference between a composition that is worked out and written down with a high degree of conscious control, and a piece that just flows out of the performer, "off the cuff"? What is the difference between following someone else's written instructions and following one's own unwritten instructions? How do we answer such questions? A critical examination of an improvised solo offers a unique challenge to the theorist, because the techniques typically employed in arriving at an objective musical analysis of a written composition often fail when applied to music created extemporaneously; although it is easy enough to sense that something is happening in an improvisation, it is, when compared to more literate musical creations, much more difficult to say just what.. What tends to elude verbal description—it slips out of our conscious frame of reference like Rhine maidens through the slippery fingers of the Nibelung—it is like a subtle *deja vu*, a whispered intimation, a face you can almost remember, whose form almost defines itself on the inner screen of memory, but then abruptly dissolves into a mist .

A large body of literature is devoted to exploring the question "What do improvisers do?" Some of it is written by well-known improvising musicians themselves,²⁹ some by musicologists,³⁰ and some by objective observers from other disciplines.³¹ This literature explores the topic of musical improvisation from many angles, ranging from straight musical analysis (as in Maraire's article on Mbira music, 1971), to the examination of psycho-motor action and reaction in performance (as in Pressing's article on generative processes, 1988), to the sociological significance of group improvisation (as in the Keil-Feld study of the Kaluli "lift-over sounding," 1994). Although a literature so varied in orientation must naturally contain an extensive array of plausible answers to the question "What do improvisers do?" my understanding of one generally upheld view of improvisation is:

²⁹ For instance, Racy, 1991, and Berliner, 1993.

³⁰ Maraire, 1971, Nettl, 1974, and Gushee, 1981, to mention but a few.

³¹ Such as the anthropologist Merriam, 1964, the psychologists Leon K. Miller, 1989 and F.C. Bartlett, 1932, cyberneticist Kosslyn, 1980, and structural linguist Mukarovsky, 1977.

musical improvisations are mainly composed of familiar stylistic elements, bits of melodic and harmonic formulae which have been passed down through a well-established tradition; thus, the anomalous quality of any single improvised solo results from the way it blends discrete elements taken from various (often disparate) ideational and kinaesthetic domains.³²

A theory of improvisation, then, must deal with two main issues:

- (1) the raw materials out of which the music is made; and
- (2) the way the materials are mixed together.

Much of the literature on improvisation focuses on the character and (especially) the origin of the musical materials; this is particularly true of musicologically-oriented writing. Great pains are taken to identify the pedigree of each of the various stylistic elements, as they occur in an interwoven pattern of iconographic references, with respect to both their stylistic origins,³³ and their place in the individual player's on-stage performance-thought formation. Discussions of the latter range from hind-sight guesswork about the performer's intentions, to descriptions of the musical consequences of the physical act of playing—descriptions which sometimes entail measuring (in 100ths of a second) the performer's last-moment responses to the input of other players.³⁴ Such accounts are couched in a language of apparent precision and objectivity, rendering what must be admitted to be perfect photographic representations (sometimes microscopic representations) of the mechanics involved in the improvisation process—the outer surface, or design, of the events in question. The implicit assumption seems to be that knowing the heredity of a language bit is sufficient for an appreciation of it, as it occurs in the weave of an improvisational fabric.

Such a descriptive approach is in keeping with the general tenor of the objective, impersonal writing style that has dominated 20th-century scholarly works; this style

³² Throughout this paper, indentation and italics are use for emphasis. When there is an indentation and the font size stays the same, the indented passage is by me. When there is a change to a smaller font and a citation the passage is a quotation.

³³ Maraire, 1971, p 2.

³⁴ Pressing, 1988, 16-18, 40-46.

promotes an illusion of legitimacy which, for two hundred years, has been attributed to anything that seems to be based on science and reason. For instance, consider the detailed study of Ives' compositional procedures in *All Made of Tunes*, by Peter Burkholder. We are given a list of all the fourteen different ways that Ives uses quoted material; this list is amplified by the name and approximate date of the first piece in which Ives uses each technique (p. 4). The list itself is a *tour de force* of cataloging technique, but, in over 300 pages Burkholder never commits himself to any interpretation of these categories; whenever he uses the word "meaning" he refers to the relationships between his categories not to the "meaning" of the passages themselves in terms of what Ives is trying to say to his audience. The implication of this is that Ives (possibly the greatest composer-philosopher who ever lived) is a mere tune juggler, and a description of his tune juggling techniques sums up everything it is possible to say about what his music "means."

If this were an isolated case, it would be one thing, but the fact is that most academic works go this far and no further; the reason that such a work as Burkholder's exists at all, not to mention why it is so respected among Ives scholars and ubiquitous in academic music libraries, is that it conforms to the current standard of respectable anonymity which pervades the academic world. It is, of course, possible to find exceptions to every rule, but a walk down the dissertation aisle in any college library in the country will demonstrate that doctoral committees would always rather support statements which can be backed up with proof than take a chance on opinions that are merely felt. Morton Feldman allegedly once said, "I don't care what a student thinks, I only care what he knows!" That pretty much sums it up.

To some it may seem totally ludicrous to negatively criticize rationalism since it was the birth of the scientific mind set which brought mankind into the modern age of culture and convenience and ended a multitude of horrors which superstition was certainly powerless to curtail. As Arthur Koestler, in his *The Sleepwalkers*, says of the birth of the Golden Age of classical Greece:

A March breeze seemed to blow across this planet from China to Samos, stirring man into awareness, like the breath in Adam's nostrils. In the Ionian school of philosophy, rational thought was emerging from the mythological dream-world. It was the beginning of the great adventure: the Promethean quest for natural explanations and rational causes, which, within the next two thousand years, would transform the species more radically than the previous two hundred thousand had done. (p. 22)

Certainly, without science there would be no graduate school to apply to for a Doctor of Musical Arts degree, but for what price has man bought his civilized toaster ovens and valet parking? Is Prometheus still the hero he once was? Is there to be found anywhere in us residuals of our distant caveman grandfather hovering with intoned incantation over an offering to the river god? If so, what makes us think our fancy, objective descriptions of phenomena are either so fancy or so objective?

Such objective descriptions of musical events are not bad. As a starting point in the critical process they are good and necessary; without them we would have nowhere to begin our research, and no physical foundation upon which to ground our feelings. However, since very few of these descriptions attempt to account for the internal forces which motivate the mechanical events discernible in the surface activity, and little effort is exerted to show how music creates links between its various components, or why, it might be necessary to probe deeper and take a chance on a statement which is not so easy to prove.

Moreover, such objective descriptions fail to address several important issues associated with improvisation because:

- (1) they purposely situate themselves outside the improvisation, denying the reader (or the audience) the experience of identification with the music;
- (2) they do not adequately explore the possibility of shifts from one mode of thinking to another, (that is changes one to the other (of relative density or intensity) from different types of mind states or subjective experiences of the self); and
- (3) they fail to explain why certain characteristic events happen in an improvisation, or to address what our personal experience of the meaning of these events might be.

This paper attempts to contribute to the general theory of improvisation by exploring the relationship of musical materials to various levels of human consciousness—in particular, the musical consequences of perceptible shifts from the normal (hereafter referred to as literal) consciousness state to altered mind states which might be termed "collective" or "intuitive." At various points throughout the paper, appropriate analogies will be drawn from concepts found in the field of quantum physics; it will be suggested that the various elements of an improvisation behave, with respect to each other, in the same way that waves and particles behave. From this will come a general theory of consciousness which uses psychology and physics to set forth principles which describe and predict the activities, and reveal the meaning to be found

in a musical improvisation. The paper will then examine an improvised solo played in 1972 by Jerry Garcia during a performance of the Grateful Dead song *Morning Dew*, indicating how the Garcia solo illustrates the principles set forth. Although it is tempting to treat the Garcia solo as an anomalous event, and this paper as a description of that event, it must be pointed out that the principles set forth in the main body of the paper were devised before it was deemed appropriate to return the Grateful Dead so many years after the epiphanic experience described in the Preface. Therefore it must be emphasized that this paper is not just about the Garcia solo, as it is *not* just about improvisation.

This paper explores the relationship of mind states commonly referred to as "spiritual" to musical improvisation as a special case; those relationships might therefore obtain between the spiritual mind states and any type of music-making, or, indeed, any type of creative act or experience. The paper also attempts to add to the growing body of literature (seen primarily in the realms of popular physics and parapsychology) which attempts to reconcile the disparity between objective, scientific detachment and subjective, mystical experience. It is appropriate, then, for this paper to begin with a discussion of a term taken from the spiritual domain, but which has, nevertheless, been traditionally associated with improvisation: soul.

I. Meaning and Identification

The term "soul" is a traditional fixture in the jargon of jazz. Jazz musicians talk about soul ("this guy plays with soul," "this guy's got no soul") in the same way that Indian musicians talk about ecstasy, or Christian musicians get blessed. But what is soul, and how is soul manifested in musical improvisation? How do we recognize it? Why does music with "soul" seem to mean something, and music without it seem to be a lifeless shell, form without substance?

The question of meaning is a very big question to address in a short article, but let us be bold and work our way down to a very simple definition that is at once short, safe, and suggestive. For simplicity's sake, let us agree that a word's meaning is embodied in the physical object to which it *refers*: "Dog" refers to that scruffy four-footed being that steals food off your plate when you are not looking. In the mind, a word like "dog" equals a concrete thing—the concrete thing is the "referent" of the word, hence every word may be said to mean what it refers to. Abstractions, like "love", "justice", "democracy", etc., have more complex referents; the meanings of such words are not embodied by concrete things, rather, by dynamic interactions between concrete things; although you cannot put your finger on what "democracy" is, you can witness it, as a process, in operation.³⁵ Now, some people do not respond to concrete words like "dog" with a preset mental image; conversely, some people respond to abstract words like "democracy" with fairly vivid mental pictures. Nevertheless, whether or not one has an immediate response to certain concrete words or abstract words, it must be admitted that it is not possible to see an image of a "dog" in the same way it is possible to see an image of "democracy." Hence, we can see that mental images appear within the proscenium of inner perception in varying degrees of complexity, and that the elements of language which make reference to items on a spectrum from the discrete to the dynamic make refer, in some degree or other, either to physical things or to the relationships between physical things; words can exist either in isolation or in a dynamic relationship to other words, creating composite meanings or meta-meanings. Either way, the meaning of an expression, linguistic or musical, is equal to the referent of the expression, whether that referent is a discrete physical object or a complex set of relationships. Thus meaning, or significance, in the language of an abstract art medium, is acquired in exactly the same way that verbal

³⁵ Can it be that abstract nouns act like verbs? The examination of the quality of abstract reality will prove to be a central concern below.

expressions come to mean what they mean: the elements of the language make reference to something.³⁶

Now, what about these expressions whose meanings obtain from the relationships between physical things? Such words—abstractions—engage the subject's mind in the process described by the word; there is suggested not one mental image, but a sequence of images. To the extent that the purpose of language is to convey information from one intelligence to another, the communication value of the word may be said to be its ability to get the subject to duplicate, internally, the synthetic effect of the word. If the subject can identify with the activity inherent in the word's sequential referent, the subject will have appreciated the word's meaning. Even a simple verb like "walk" does not refer to a concrete thing, but to a dynamic association between subject and object, an activity in which somebody moves his body through space from somewhere to somewhere else; the word "walk" does not summon a particular picture of a thing in the mind of the subject, but, rather, it invokes a sequence of kinaesthetic memories. More complex words, will naturally invoke longer, more complex sequences.

Such sequences do not exist as objective, discarnate fantasies in the mind of the subject, but rather register as measurable, physiological states which possess a kind of potential energy of position capable of being converted into kinetic activity; when the subject internally duplicates the synthetic effect of a word, he/she rehearses, at least in memory, the sequence of activities suggested by the word in terms of his/her own personal experience. If words take their meaning from experiences stored in memory, it could not really be otherwise. From this we must conclude that it is the nature of conceived relationships to be taken personally.

In *Matter and Memory*, Henri Bergson attempts to blur the dualistic mind/body distinction by emphasizing the intrinsic physicality of mental material:

Take a complex thought which unrolls itself in a chain of abstract reasoning. This thought is accompanied by images that are at least nascent. And these images themselves are not pictured in consciousness without some foreshadowing, in the form of a sketch or a tendency, of the movements by which these images would be acted or

³⁶ The question of how the witnessing of such a thing as a set of relationships becomes iconicized into an "idea" and an idea into a "something" has been explored by philosophers since Kant onwards. There can be no question that on some level of consciousness an idea has a *concrete* character, and it is the concrete character of the idea that is the referent of an abstract expression.

played in space— would, that is to say, impress particular attitudes upon the body, and set free all that they implicitly contain of spatial movement. (13-14)

Thus, the meaning of concept words like "democracy" is not only grounded in actions and involve ever more compressed descriptions of complex interactions between subjects and objects, but sometimes actually activate the relationships themselves. With certain words (like "democracy" for instance), the word becomes the relationship. Thus, via the actions of the subject, the word "democracy" creates relationships in the real world which did not exist before; because the duplication of the meaning of the word in the mind of the subject can cause the subject to respond outwardly in ways sympathetic to the meaning of the word.

Abstract realities may become physicalized because human beings have the capacity to identify with them. A word has no power if the subject does not relate to it personally—but if the word creates an inner reality in the mind of the subject, that word becomes a living force capable of tangibly influencing the outer world, via the actions of the subject; the identification of the subject with the abstraction causes the subject to duplicate the dynamics of the word by reacting on the outer world, in harmony with the signification of the word, initiating physical activity and change. The musical implication here is that musical expressions, like literal words, refer to something; as with other forms of language, it is the extent to which the subject can identify with the referents in the expression that determines the extent to which the music achieves an internal resonance in him.

Thus, the word "soul" is a bloodless abstraction when there is no one around to identify with its complex of significations; but when a conscious, living person, an ego-center, identifies with the word, that inner reality creates its own outer reality as that person responds, through action, to the implications of the word. Since an idea becomes real only when a living mind identifies with it (like a tree falling in the forest), the character of a specific musical idea will vary depending on the personality of the ego-center that is currently relating to it.

Now, the more complex the set of relationships to which a word refers, the more abstract that word may be said to be. Indeed, as we approach an appreciation of "soul" we must come to an understanding of the dynamic character of abstraction, especially as it applies to music. As was mentioned in the introduction, very few descriptions of musical improvisations attempt to account for the internal forces which motivate the mechanical events discernible in the surface activity; it is generally acknowledged that

an improvisation creates links between various linguistic components,³⁷ but how or why this restructuring takes place is an apparent mystery. To state the problem in the jargon of quantum physics: we seem to have been finely tuned in to the musical element's identity of position as a particle, but we have been insensitive to the element's energy of motion as a wave; in other words, we have observed and defined an element's objective qualities by freezing it in time, but we have then been unable to free it in time (thus losing some its definitive resolution), so that we might be able to appreciate its dynamic effect. To understand this, remember that a wave in motion is more energy than it is definitive resolution; relationships are active because they are sequential. Indeed, in his The Spiritual Universe (1996), physicist Fred Alan Wolf proposes that structured movement in time is the defining feature of mind itself:

I see mind as the birth of the temporal sense—the sense of time so intimately connected to thought. Much as in the special theory of relativity, in which space occupies three dimensions and time the fourth, an imaginary spatial dimension, mind takes up the imaginal dimension of time while the other five senses take up the sense-based or physical dimensions of space. (p. 249)

Thus, as we move away from static, particulate forms into the realm of dynamic mental activity, the referential field becomes more and more abstract. In fact, there may be a point where a word's relational referent becomes so abstract, so dematerialized, that it may be said to have transcended its physical attributes altogether and entered a super-material, or super-natural, state. If a subject can identify with such a referent, it may be that the subject can transcend his own physical attributes, his self-imposed ego definition, and duplicate the super-natural status of the referent in himself. But, if this occurs, what, then, is the subject, and with what is it identifying? We shall soon propose that personality need not be manifested by solitary ego-centers only; as an ego becomes less physically defined, it may well become a generalized, abstract entity whose material attributes have been replaced by a dynamic activity. The transcendent quality we associate with "soul" may be attributable to the resonant activity which occurs when identification with an abstract relationship leads an ego-consciousness to a super-personal state. Thus:

³⁷ As, for instance in Nettl, 1974, (italics Nettl's): ". . .we can say that each culture has its set of macro-units, e.g. songs or pieces, or modes (*ragas, maqamat, dastgahs*) as performed by a particular musician, and that the degree to which the sound realizations are the unit varies with the culture . . ." (p. 9)

musical "soul" may be described as a particular type of personal resonance that is activated by the identification of the subject with the abstract referential reality of the music; that is to say, the identification of the subject with the music permits the music, paradoxically, to express the subject .

II. Comments on the Term "Collective"

The search for musical soul is intimately involved with an investigation of states of consciousness. We have already seen that meaning obtains at several different levels of information density from the concrete to the abstract, and it is certainly easy enough to associate these levels with different states of mind. Furthermore, since music often employs a highly abstract vocabulary, it seems likely that musical meaning will be associated with a state of mind that is, in effect, super-personal. Many philosophers have proposed that the quality of consciousness may be defined by linguistic structure; indeed, for the last 200 years, the relationship between consciousness and language has been something of a philosophical preoccupation, from the transcendental deduction of Kant³⁸ to the linguistic psychology of Wittgenstein.³⁹ Different styles of consciousness have long been associated with differences in vocabulary and the syntax. In the case of music, if such differences can be observed, it may be possible to show that the experience of music involves shifts from one mind state to another. Such shifts in mind state necessarily imply corresponding shifts in meaning, since meaning is determined by the referential significance of expression, and referential signification is intimately associated with the transforming action of syntax on content.

Normal or literal consciousness, immediate and material, expresses itself with concrete terms like "dog" and "house;" it is the exclusive expressive domain of the ego-centric personal consciousness. In this consciousness state the personal realities of different individuals overlap very little, since the images of physical things invoked by concrete terms largely depend on the subject's exclusive, personal memories of those things, often filtered through his exclusive image of himself. However, as language leads a subject further and further away from the ego-centric state, the abstract realities it invokes tend more and more to be of a shared type. Psychological research that suggests the idea that mental images, especially images in transition, tend toward an

³⁸ Kant, 1781, pp. 131-134

³⁹ Wittgenstein, , pp. 149-151

average, or essential character that is based on cultural convention.⁴⁰ In fact, many modern linguists maintain that all meaning, literal or otherwise, is culturally determined—that the mental images of "dog" and "house" are shared inner realities which vary more from place to place than from person to person.⁴¹

In any case, it is evident that the extent to which a linguistic expression defines and undefines a subject depends in part on the expression's level of abstraction. The personality, the ego, is a state of the self which is constantly and fluidly redefined from one articulated level of consciousness to the next, by language and thought. In "literal consciousness mode" the mind can perceive, and aggressively seeks to impose limits on itself, such that there is a clear demarcation between self and other, self and not-self. Other modes of consciousness observe the world and objects or events in the world with different levels of ego resolution; it may be that perceived levels of ego resolution are related to the level of dynamic mental activity. Bergson points out that it is the increased mental activity of abstractions which enhance one's sense of inner life:

That which is usually held to be a greater complexity of the psychical state appears to us, from our point of view, to be a greater dilatation on the personality, which normally narrowed down by action, expands with the unscrewing of the vice in which it has allowed itself to be squeezed, and, always whole and undivided, spreads itself over a wider and wider surface. That which is commonly held to be a disturbance of the psychic life itself, an inward disorder, a disease of the personality, appears to us, from our viewpoint, to be an unloosing or a breaking of the tie which binds this psychic life to its motor accompaniment, a weakening or an impairing of our attention to outward life. (14-15)

It seems, then, that as human consciousness focuses itself on the inner world of abstraction, there is a complementary extension outward from the particular subject to modes of understanding which are of a more general nature, the ego-centric boundaries between individuals is crossed, and the consciousness of one subjective reality blends into another. We have already seen how ego definition may become blurred by a process of abstraction; it remains to show how singular personalities may be transferred into a corporate super-personality. A Newtonian proof would demand that

⁴⁰ Bartlett, 1932, p. 174. Bartlett's "schematic" conception of memory indicates that as the specific details of a memory fade with time, the mind tends to substitute conventionalized features for the original, literal features.

⁴¹ Saussure, 1988, p.6; Bahktin, 1988, p. 140-141

this super-personality be observed from outside; but in the post-Newtonian world of quantum physics the observation of wave like abstractions is impossible because to observe is to freeze in time, thus eradicating energy of movement.⁴² The difficulty with the concept of super-personal identities, by analogy, is that their existence, by definition, cannot be literally described.

Yet, the experience of a corporate memory, a so-called collective memory, is really quite familiar; most of us have had the experience of somehow knowing certain things without ever having been taught them, or of spontaneously understanding symbolic expressions we have never seen before. In *Christianity and Evolution* (1971), Teilhard de Chardin proposes a rather fantastic-sounding theory⁴³ (as yet unproved) to explain this experience. Chardin says that a human mind generates a kind of magnetic force-field, and that all the minds of mankind, all those little force-fields, exert an attraction on each other, creating a kind of merged consciousness. The energy of all those individual minds creates (or, at some point in the distant past, created) a magnetic vortex which draws (drew) all similar minds into it. This vortex manifests itself as a kind of magnetic cloud that hovers over the world of man, a cloud into which an individual mind may reach to access information, or to make personal contributions. Living beings thus constantly rebuild or modify the corporate content of this cloud, which manifests not only in individual consciousnesses but in an anomalous super-personal mind-space of its own.

A powerful analogy for Chardin's image is to be found in quantum physics and chaos theory: the idea is that every explicate or manifest order, an order articulated randomly, has a higher implicate order overseeing it, an order that is not random. Hence, though the elements of the lower-level explicate order may not relate directly to each other, at the higher implicate level they each have a role in a coherent, grand design (Friedman, 1990, pp. 58-6).

Wolf links Chardin's theory to contemporary physics even more explicitly:

Perhaps the soul is like a magnetic field, but not as produced from a bar magnet. Instead, I believe it is like the magnetic field arising from a photon or particle of light. Such a field needs no material source for its existence. The mere propagation of the photon through space generates an ever-changing twisted pair of snakelike electric and

⁴² Wolf, 1988, pp. 63-67

⁴³ Chardin, pp. 237-243

magnetic fields that continually give and take energy from each other. Perhaps this metaphor also applies to the out-of-body soul in its relationship with the body. (p.38)

Whether we accept this theory or not, there can be no doubt that mankind has reached a general agreement about a lot of things, some of which seem fairly permanent, and some of which seem to change with the tides of time. The activity of the information in this state of agreement is like the flow of water down a riverbed: the current carries the central shared attitudes steadfastly down the mainstream, while side issues float away for awhile, and swirl back in dizzying eddies, before they disappear. Now, if there were such a thing as a corporate mind entity, some kind of central warehouse for storing artifacts of human consciousness, it might not necessarily need to be thought of as a discrete, personal super-consciousness, but rather as an environment where subsidiary symbolic formulations are in flux, objectified ideas are twisted and turned, and new relationships among familiar materials are derived, all in accordance with a consistent set of principles. This environment acts, in accordance with its higher implicate structure, like a formal template which constantly permutes the new, explicate expressions contributed by the individual human minds which feed it; thus, an endless variety of juxtapositions of explicate expressions is produced within this environment which may then be accessed by individual minds.⁴⁴ This environment might thereby be seen to be always adding vocabulary to its dictionary of referential expressions, while its structuring patterns, its grammar, remains constant.

It was Carl Jung, who first described this library of shared-human-consciousness artifacts as the collective unconscious. In Jung's view the unconscious, the existence of which, admittedly, cannot be proved, contains three categories of unconscious mental content:

first, temporarily subliminal contents that can be reproduced voluntarily (memory); second, unconscious contents that cannot be reproduced voluntarily; third, contents that are not capable of becoming conscious at all. Group two can be inferred from the spontaneous irruption of subliminal contents into consciousness. Group three is hypothetical; it is a logical inference from the

⁴⁴ Again, the new physics bolsters our argument with a couple of analogous terms: holomovement, and superimplicate order. These analogous terms refer to a kind of cosmic template which organizes particle-like bundles of "stuff" into wave-like radiations of dynamic activity. Bohm, 1985, p.14; Friedman, 1990, pp.61-73.

facts underlying group two. This contains contents which have not yet irrupted into consciousness, or which never will (Jung, 1959, p. 3)

A central proposition of this paper is that the consciousness of a musical improviser is constantly changing states, slipping fluidly between levels. Although this proposition does not require a rigid adherence to Jung's three categories, it does imply a special interest in the third—contents which may never become conscious. To become "conscious," in Jung's usage, contents must form part of what we have called "literal consciousness"; that is they must be expressible in a language of tangible referents. But since we have argued above, abstractions have no tangible referents, it may be inferred that the musical consciousness entails at least the possibility of entering Jung's third collectively unconscious state.

The language of this state is called "collective" because of the shared, inherited vocabulary that defines it (mostly symbols with very ancient pedigrees, symbols which Jung calls "archetypes"), and "unconscious" because of the domain in which it is stored. Our responses to collective symbols, Jung asserts, are unlearned or, possibly, learned at such an early age that we have no recollection of learning them; furthermore, these symbols reside in memory in a place that is difficult to access by way of normal, verbal thought processes. Although this area, called variously the subconscious, unconscious, or preconscious, has been the subject of much study, no one, thus far, has been able to chart or locate it. We know it is there simply because in certain mental states we find ourselves experiencing it; we find ourselves thinking in the symbolic language of the collective, and sharing unlearned knowledge with strangers.

Our responses to symbols received from the collective mind are not like our responses to expressions like "dog." Concrete words like "dog" induce us to generate on the inner proscenium of memory a picture of a scruffy little being that eats food off your plate; the narrative of literal language proceeds through a succession of such pictures. Our response to archetypes, however, is not constituted of pictures, because an archetype encompasses too much information to be represented by a literal term, a single image; an archetype refers to too much at once. An archetypal symbol usually invokes a composite of many different pictorial images or kinaesthetic impressions, a composite which exists in a dynamic state of flux; the meaning derives from the relationships either observed or "felt" between the images, and even more importantly, the process (in time) by which these relationships unfold.

This process of unfolding creates an environment in which symbols apprehended from different consciousness modalities combine and recombine in a layered,

somewhat three-dimensional arrangement; literal symbols for concrete referents may occur in sequential patterns encompassed by more abstract symbols, or by archetypal symbols drawn from the preconscious. In describing the experience of this environment, it is useful to borrow a term from contemporary criticism (especially literary criticism): "resonance" (literally "resounding"). An art work is said to be "resonant" if it creates in the audience a complex of responses on more than one level of consciousness at once, responses which vibrate (resound) together to create an experience which would be impossible to define in literal terms of narrower scope.

An art work's resonance, then, can be imagined to result from its vibration in sympathy with the potential psychic energies of an audience—energies which may be generated and mobilized by the interaction of the subject's identity with the multiple levels of the work's unconscious material.

As this material tends more and more toward the abstract, the resonance of the work invokes more and more the collective mind state, initiating (as Jung says) an irruption of subliminal contents which may well have no material referents.

III. Collective Material vs. Collective Mind

It is necessary to remember that the archetypal symbols, which comprise the vocabulary through which the collective mind communicates with the literal mind, all have dynamic referents—referents whose meanings derive from the relationships they create between physical objects, not the objects themselves. Thus, before we continue, it is necessary to distinguish between two nuances of the word "collective" of which we will be compelled to make use in this paper.

First, we will be using the expression "collective material" which hereafter must be thought of as the inherited "stuff" which resides in our concrete records of written literature; the outer articulate form of all musical clichés, style attributes like cadence figures, common melodics, chord progressions, mainstream formal patterns, etc., fall into this category. This collective material, having been frozen in time, is no longer collective information, it is literal information because it has been taken out of its dynamic, super-physical context and become objectified; it is the corpse of the previously living, moving, dynamic reality. However, that same symbol may be resurrected in a new incarnation at some later date; the same form is reborn if the same dynamic energies operate on the same or similar literal material. In other words, it takes two conditions for inherited collective material to become an archetypally referential symbol :

- (1) it takes the inherited symbols themselves, expressed as they are in literally defined forms, discernible shapes, patterns, etc.,
- (2) and it takes the collective mind state's characteristic restructuring operation on the material; this restructuring operation creates a context in which the forms no longer appear mechanically juxtaposed in a meaningless sequence of concrete referents, but, by virtue of the newly discovered relationships, are transformed into resonant symbols referential of higher mental realities.

Such restructuring is "collective" in the second sense: it results from the action of a "collective mind" which both creates meaning by establishing relationships, and derives meaning by interpreting relationships. The activity of the collective mind is

regulated by a kind of syntax, and the application of this to literal material generates the relationships which constitute new archetypes, new collective referents. Therefore, the Theory of Transcendent Experience in Music proposes that collective material encompasses two very different things:

- (1) inherited, objectified artifacts drawn from the subject's literal memory,
and
- (2) new dynamic relationships which result from the grammatical manipulation of literal artifacts by the collective mind.

The collective mind, then, functions most importantly in creating new relationships or forms. Artifacts inherited from the collective consciousness of past generations are necessary to this process, but less important than the action of the collective mind. Formalized bits of inherited collective vocabulary are easily recognized, since they occur repeatedly in much the same particularized forms; but these forms are less significant than the shape and rhythm of the unfolding dynamic relationships that obtain between them.

Fritjof Capra offers this attractive wave-particle analogy in these summary statements from *The Tao of Physics*, 1975:

A careful analysis of the process of observation in atomic physics has shown that the subatomic particles have no meaning as isolated entities, but can only be understood as interconnections between the preparation of an experiment and the subsequent measurement . . . (p. 68)

Relativity theory showed that mass has nothing to do with any substance, but is a form of energy. Energy, however, is a dynamic quantity associated with activity, or with processes. The fact that the mass of a particle is equivalent to a certain amount of energy means that the particle can no longer be seen as a static object, but has to be conceived as a dynamic pattern, a process involving the energy which manifests itself as the particle's mass. (p. 77)

The definitive collective forms, then, as fixed, literal, somewhat physicalized entities, would be analogous to subatomic particles, while the action of the collective mind, as a dynamic process, would be analogous to the quantum event. The collective mind acts on literally defined material at ever higher meta-levels resulting in an ever

greater variety of synthetic residual forms, while the basic dynamic process remains constant. Thus, the articulate form, fixed in time, exists as a momentary, observable representation of the action of collective mind, while the collective mind itself, in a constant state of temporal flux, exists as Capra would say, as "patterns of interconnection probabilities" (p. 68).

The collective mind can be seen as a kind of global attitude of the highest subjectivity, choosing different types of raw material not only on the basis of human thought and feeling, but also of desire, hope, will, and love. The collective mind may therefore re-create versions of ancient archetypal symbols which have endured for centuries, or it may consist of completely anomalous emanations recently absorbed into the mainstream of literal vocabulary; vocabulary which may persist or simply disappear into the faceless void, the briefest of candles.

Thus, when attempting a critical analysis of an improvisation, the chief problem is in the determination of whether the created form is merely a literal copy of a mainstream archetypal symbol (thus a lifeless, soulless thing), or a new dynamic relationship sprung from the living collective mind. If the living collective relationship and the inherited artifact are placed side by side, out of context, the undiscerning eye will find them to be identical. However, as per Wittgenstein's discussion of context, where he points out that the word "is" in the sentence, "The rose is red," does not mean the same thing as in the sentence, "2 plus 2 is four,"⁴⁵ sometimes the context makes things of identical outward manifestation function very differently, internally. In short, sometimes a banana is just a banana, and sometimes it is more than just a banana. Thus, as we approach our actual discussion of music, we will be distinguishing sharply between

- (1) inherited material merely quoted from literal memory, and
- (2) the action of the collective mind on such material creating new, anomalous material .

⁴⁵ Wittgenstein, pp. 149-151

IV. The Intuitive Response

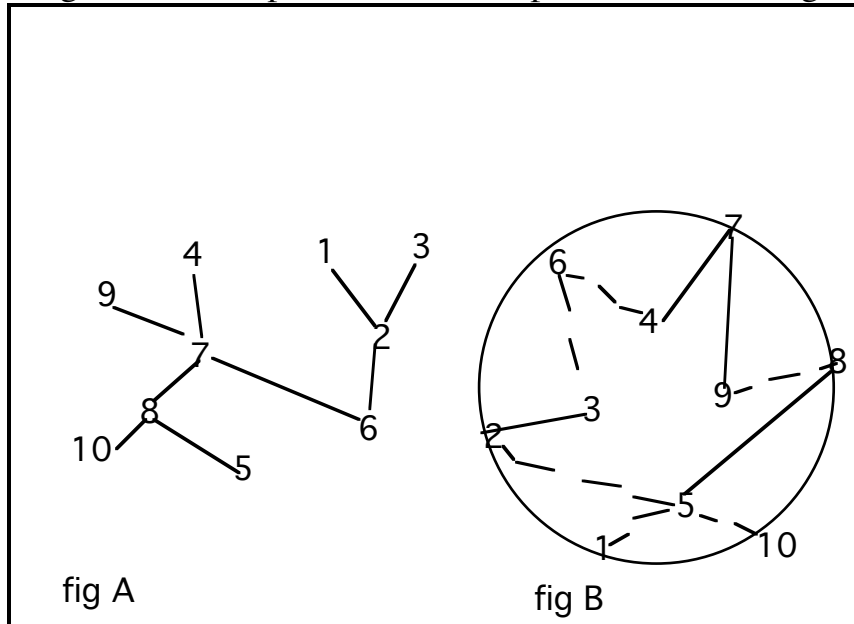
If the outer forms of quoted literal material and living dynamic material can be identical, how can they be distinguished? The meanings of collective expressions, we have seen are largely defined by context; and the literal mind, we have shown, is inadequate to apprehend contexts of any substantial size. Another mode of consciousness is needed, one which has been termed by psychologists as the intuitive response. It is the intuitive response that puts us in touch with the collective unconscious, that enables a personal ego consciousness to approach a higher super-personal state of consciousness; it is by means of intuition the mind responds to the symbolic language in which collective expressions are represented. What the literal mind cannot frame, the intuition apprehends in a flash of insight, so that a single ego-center can flow, unencumbered by critical thinking, from one mind state to another.

The intuitive response is motivated in part by the emotional charge associated with each of the components of the expression; and emotional charge is closely related to "feelings" not only as emotional states, but as tactile sensations. Experimental psychology has established that tactile or kinaesthetic sensations are closely linked to emotional states; in fact, by measuring electrical activity (as with a lie-detector, for example), it is possible for psychologists to link even very subtle kinaesthetic responses to emotional states. Psychology, therefore, has established feeling as a legitimate factor in the analysis of an intuitive response. It is plausible, then, that the study of feeling might also bear on the analysis of music, especially an improvisation, which is always guided not only by musical considerations but also physical ones?

The intuitive response has been analyzed in depth in Tony Bastick's *Intuition* (1982, John Wiley and Sons, New York). Basically, Bastick proposes that intuitive responses occur when the mind is involved in problem-solving. Each element of the problem is invested with an emotional charge, and the relationships between the relative magnitudes of these charges motivate the resolution of the problem. The elements, with their charges, are grouped into emotional sets, and the mind seeks to resolve the tension inherent in a problematic emotional set by reordering its elements to obtain the greatest possible reduction in resistance. Bastick calls this process "recentering," and defines it compactly as follows:

Recentering is a change in the structure of the subjective relationships between elements associated with an emotional set. This is often caused by incorporating an element whose subjective associations are with a different emotional set. (p. 76)

In this diagram Bastick provides an example of such a change of structure:



Key :

_____ Represents given relationships.

----- Represents additional relationships inferred by the solution.

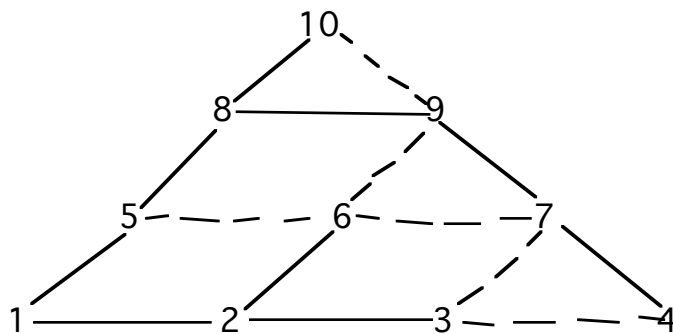


Fig. 2.3/1 Restructuring of relations in recentering (p. 73)

The subject transverses his network of emotional sets whose transition probabilities give the most probable paths. As he transverses his network he

'refreshes' that part of the network in the same sense of refreshing a cathode ray tube display but changes it by this rehearsal. Some concordant responses' concomitant stimuli are carried along with the changing occupation of each emotional set. *The carried response tendencies and present response tendencies combined with the concordant response tendencies of the next extant emotional set in the network give continuity and reinforce the transition probability to the next emotional set.* (p. 70)

Elsewhere, Bastick describes the relationship between recentering and intuition (italics are Bastick's):

Recentering is the Unlikely Combination of Similar Emotional Sets.

In problem-solving the elements of the problem are known and an end condition is required. This condition is called the '*means-end relationship*' (Ausubel, D.P., 1968; Hutchinson, E.D., 1941, etc.). *The problem is solved when a relationship is found between the elements of the problem and the end condition..* An intuitive solution involves satisfying subjective feelings which is the relationship between elements. In contrast an analytic solution involves demonstrable logical connections as the relationship between elements. In a correct intuitive solution *both relationships exist..* In an incorrect intuitive solution the elements are related by satisfying subjective feelings of association within the emotional set of the solution, but the logical connections between the elements are incomplete, not demonstrable, or are non-existent. (p. 70)

Bastick continues by exploring the nature of links between emotional sets. "When an emotional set occurs which is similar to the original 'problem' emotional set, i.e. has the same 'feel'," he writes, "then a new link is made. The pathway is opened up and the present 'solution' emotional set is combined with the 'problem' emotional set to produce recentering insight with its recognition of the present emotional set as the solution. This is often triggered by some slight inaesthetic experience giving that final similarity of feeling causing recentering." (p. 70) In Bastick's view, then, links between emotional sets depend upon resemblances between emotional sets. He describes three ways in which resemblance is established:

- (a) through empathy, or common emotional tone;
- (b) through projection, a crossways intersection of parameters; and

(c) through responses in common, or the presence of parallel relationships between two responses to a third event.

These three methods of defining resemblance will be extremely useful when we get to musical analysis, because the character of a tune's derivation will also determine, to an extent, its emotional charge. Since it is the emotional charge of the psychic material that arranges it in consciousness, an awareness of this arrangement provides important insight for understanding how the recentering action of the intuitive response discovers the ultimate means-end relationship.

V. Redundancy, Functional Fixation, and Psychological Regression

Bastick also explores the importance of redundancy to intuitive thought (italics are Bastick's):

The Theory of Intuitive Thought describes intuitions as the highly redundant responses conditioned to an emotional set, *responses made conscious by an awareness of the feelings accompanying the increase in redundancy*. The redundancy is increased by the combination of emotional sets to produce this terminating emotional set. (p. 304)

Thus, by measuring the degree of redundancy, we can trace the effects of recentering; in a musical context, we can observe the influence of intuition on the flow of musical events as they move towards an ultimate state of emotional repose. We can observe this activity because familiar musical patterns, idiomatic expressions associated with historical and personal styles, provide us with literal signposts. We can also observe (though perhaps not as easily) the recentering process which transforms clichéd concatenations of musical events into anomalous (original) progressions, progressions which provide both satisfying subjective feelings of relationship and logical connections between elements.

Intimately associated with redundancy is "functional fixation," the tension-reducing effect of the use of familiar material. Bastick explains how a fixation on familiar linguistic structures may inhibit the flow of intuitive responses:

When an object is shown in its common use this inhibits novel ideas for other uses. The subject loses flexibility because he has a course of action that is plausible. In experiments by Duncker, K. (1945), repeated by Adamson, R.E. (1952), this process is called 'functional fixation'. This is related to field dependence . . . functional fixation acts in opposition to recentering.

Functional fixation as it is used in problem-solving is explained here as the possession of a solution that reduces any tension that might otherwise give intrinsic motivation to find another solution. (p.72-73)

Functional fixation is essentially the converse of originality, that quality with which most musicians strive to infuse their work. In effect, familiar musical material, whether momentary or extended, may inhibit the generation of intuitive responses, and therefore suppress the manifestation of original ideas. The use of familiar material is an attractive, safe, alternative because it provides a tension-free, literal-minded solution to a musical problem—a solution in which very few intuitive choices are made.

Because functional fixation reduces the likelihood of an intuitive response the mere parroting of stylistic clichés, or other literal material, will not engage the collective mind in the creative process. Adherence to textbook examples of harmonic progressions, for instance, will not challenge the mind to seek an unfamiliar end-condition, so the emotional tension necessary to produce an intuitive response will be lacking. However, the reduction of tension by the use of clichés, results in another condition which Bastick calls "psychological regression."

In psychological regression, consciousness turns back—regresses—to a more primitive state of awareness. The regression itself may well produce a momentary lapse in attention or effort, typically associated with the use of clichés; but it is precisely at such a moment that the mind is open to new possibilities for recentering and originality. Bastick traces the evolution of his notion through several previous writers (*italics are Bastick's*) :

Rothenberg, A. (1970) in a study of "inspiration, insight and the creative process" says that "Ernest Kris applies his term 'regression in the service of the ego' most particularly to inspiration" (p. 173). Pine, F. and Holt, R.R. (1969) use Kris's (1952) idea of "regression in the service of the ego" as ". . . a momentary and at least partially controlled use of primitive, non-logical and drive-dominated modes of thinking in the early stages of the creative process" (p. 370) which agrees with what we have already seen in this section, namely that the early stages of the creative process are intuitive. Creativity being a primary process is supported by Hammer, E. F. (1973) who says that creatives have to be ". . . attuned to more *primary thought processes* while maintaining touch with reason and reality." This also necessitates control of change and constancy of ego state. Hartmann, H., et al. (1947) consider primary-process

thinking as regressive and productive modes of intuitive thinking which give rise to novel and creative ideas (p. 320).

There is an interesting paradox here. On one hand, functional fixation causes a decrease in tension; by imposing familiar, clichéd solutions, it works in opposition to recentering. On the other hand, the psychological regression resulting from functional fixation ultimately leads to a state of accelerated thinking, or at least some kind of highly compressed synthesis of material, with a concomitant increase in tension. It follows, then, that fixation on musical clichés, with the resulting psychological regression, may be precisely what is needed to call the collective mind into operation, to open the individual mind to a "primitive," preconscious state, and to allow super-personal material to surface. Perhaps it is the general, archetypal character of these collective expressions that is the most profoundly human aspect of art; perhaps the content of these expressions crosses the line between material reality and spiritual reality.

Merriam comments on Jung in regard to the "primitive preconscious state" (*italics Merriam's*):

Jung, of course, argues for the existence of archetypes which are common to man. These archetypes represent the constellations of the collective unconscious, and they appear out of the unconscious especially in a state of *reduced consciousness* as in dreams. Since, he argues, the so-called primitive mind always operates in a state of reduced consciousness, the *archetypes come easily to the fore*. Myths are invented by primitive people because of this reduced state of consciousness, and they reflect the archetypes which are suppressed more successfully in "higher" human beings who are in better control of the conscious (Jung and Kerenyi 1949:99-103). (p. 257)

Psychological regression produces, in effect, a state of reduced consciousness; it draws forth basic collective material to the forefront of consciousness, and provides the emotional impetus for drastic recentering effects. The experience of recentering, then, is closely linked to the experience of the collective mind. But how are the two related? Is recentering a mechanism by which consciousness is accelerated to a new plane, like an electron reaching escape velocity and making the quantum leap to the next higher orbit? Or does recentering occur when the higher super-personal energy of the collective mind touches and re-organizes the literal mind's psychic content? Does the

choice between these alternatives, in fact, matter? Either way, the moment of recentering is the moment when the personal subjective reality and the super-personal reality meet and mingle, each affecting and transforming the other, each experiencing itself in terms of the other.

It must be emphasized that in a communicative expression, the presence of acceleration and/or compression in the flow of ideas is the clearest indication that intuitive recentering is taking place—that the collective mind is exerting its influence on consciousness. In the following musical analysis, it will be demonstrated that moments of stylistic redundancy very typically are succeeded by a disproportional acceleration in the rate at which new ideas are presented. The acceleration has the effect of compressing the musical information in psychological time, thereby altering the relationships between the ideas, and, ultimately, the meaning of the musical utterance. Indeed, by calling forth the collective mind, the acceleration is itself the maker of meanings. Thus, as suggested earlier, if meaning is the referent of the symbol, and if the collective mind expresses itself through our identification with it, revealing itself in us, then this presence becomes its own meaning, it is its own referent.

Suggestive analogies to this mental acceleration/compression can be drawn with physics, on several levels. Consider, for example, a celestial body, orbiting elliptically, around a gravitational center. Its speed will not be constant; at the apogee (the extreme outer edge of the orbit) it travels most slowly, but as it sling-shots around to the perigee (the extreme inner edge) there is an intense acceleration. In a similar way it may be that the acceleration which leads to recentering is the natural, cyclic successor to the deceleration inherent in psychological regression—that, as we ying-yang our way through life, spinning round the central core of being, our orbital tempi must oscillate if we are to stay in contact with the lowest and highest extremes of our multi-dimensional personalities.

Consider, also, the principles of quantum mechanics as described by Fred Alan Wolf in The Spiritual Universe. Fundamental to quantum mechanics is the assertion that the observer affects what is observed. Analogously, a subject who observes his own intuitive response, alters it. The intuitive response proceeds most effectively, therefore, when the subject turns away from it; with the literally conscious observer out of the loop, psychological regression may occur, permitting recentering to take place unimpeded by the conscious influence of the subject. Indeed, as Wolf explains, too much observation can prevent any discernible change of state altogether:

If a quantum system is monitored continuously, we could say vigilantly, it will do practically anything. For example, suppose you are watching a quantum system in an attempt to determine just when it undergoes a transition from one state to another. To make this concrete, think of an imaginary subatomic "quantum pot of water" being heated on a similarly-sized stove. The transition occurs when the water goes from the calm state to the boiling state. We all know pots of water boil, given a few minutes or so. You would certainly think the watched quantum pot would also boil. It turns out, because of the vigilant observations, the transition never occurs; the watched quantum pot never boils. (1996, p. 257)

In Capra's work, the orbital and the subatomic analogies merge:

Whenever a particle is confined to a small region of space it reacts to this confinement by moving around, and the smaller the region of confinement is, the faster the particle move around in it. In the atom, now, there are two competing forces. On the one hand, the electrons are bound to the nucleus by electric forces which try to keep them as close as possible. On the other hand, they respond to their confinement by whirling around, and the tighter they are bound to the nucleus, the higher their velocity will be. (69-70)

Similarly, the psychologically confining (or stabilizing, or articulating), effects of redundancy lead to:

- (1) an acceleration of mental activity,
- (2) a period of psychological regression in which the subject's ego-definition ceases to focus on itself, thus allowing the "unwatched pot to boil," and
- (3) an end condition which entails the super-conscious restructuring of material: that is, recentering.

Under most circumstances it is collective material which is restructured; and it is important to recall the distinction between collective material and collective mind:

- (1) Collective material is constituted of inherited musical expressions, often discoverable by style analysis, and usually made coherent only through socio-historic consensus.
- (2) The "collective mind" is a trans-cultural superhuman intelligence⁴⁶ which enables the collective material—Bastick might say emotional sets—to be

⁴⁶ It may be that "intelligence," in this context, is too strong a word; intelligence often implies personality, i.e. ego. We are making no such claim that the collective unconscious has a defined personality, like Grampa God with a full, grey beard (we are not *not* making that claim either).

restructured in ways which permit the creation of statements whose referents transcend material reality.

The archetypal symbols of collective material point toward an idealized or spiritualized human condition, precisely by virtue of their summational character. Because the ego consciousness is always limited to terms of personal experience, it is the collective consciousness, approached through regression and reduced ego-consciousness, which reveals primordial realities, previously hidden in the collective memory, to an expanded inner vision. These hidden realities, though unavailable to the literal consciousness, easily come to the fore when consciousness regresses to a primitive mind state.

In his chapter on Jung and the collective unconscious, Bartlett gives a very similar summary of these two aspects of collective materiality/mentality:

- (1) There are images, ideas, formulae and laws which are extra individual. These express the views of our ancestors about the objective world. We all possess them, or submit to them. They are to be treated as objective, and together they make up the objective part of the collective psyche.
- (2) There are also conventions, tendencies, established forms of reaction which any person shares with others of his own group, or even with society in general. These are no more to be treated as objective than any other kind of function may be, but they are not specific to the individual, while nevertheless they are in him, and he, to that extent, is in the collective psyche. (p.287)

Note that Bartlett's assessment of the collective mind focuses on the objective or static character of the inherited "material" while the fluid, process-like character of the collective "mind" (in action) is emphasized.

Although Wolf never speaks of the collective unconscious, he does write an entire book in which "soul" is equated with the unified consciousness of the entire

However, there can be no doubt that the consequence of the organizing action of the collective mind on personal psychic content *makes sense* (perhaps by definition), and therefore ought to be designated as "intelligent."

universe. He draws a sharp distinction between the manifest, particularized entities of material reality (matter, the ego, the self) and the world-soul. "The soul's fundamental purpose is the shaping of knowledge into material form," he writes, (p. 28), thereby emphasizing the organizational role of super-personal mentality. In some passages he calls into question the very existence of individuals: ". . . all these nearly countless separately conscious souls are illusions, reflections of one soul with singular consciousness lasting throughout the span of time that our universe persists." (p. 29)

To integrate so mystical a view with twentieth century physics, Wolf proposes that the soul's being rests on:

" . . .the existence of an 'intangible, irreducible field of probability'—the quantum wave function, from which all physical matter and energy arise . . .

The quantum wave function demonstrates what I mean by *virtual process* — one that has an effect even though it is not a result in fact. Thus this wave function, although never measured, has extremely important physical consequences. The soul arises alongside this intangible field of probability—as *virtual processes* in the vacuum of space. These processes appear much as reflections of so-called real processes occurring in everyday life. However, these virtual processes have a life of their own, and even though they are never observable themselves, they account for even the simplest things that we do observe.

In other words, the soul is a virtual process and not an entity. (p. 31)

Wolf (1996) even offers an elegant description of the mechanism by which the literal mind communicating with the collective mind, turns fluid mental activity into fixed symbolic representations. The mechanism is, again, a consequence of the impact an observer has on quantum mechanical events—in particular on the inevitable conversion of virtual processes into real ones:

WHAT IS MATTER?—NEVER MIND WHAT IS MIND?—NO MATTER

The double-meaning double-question and answer leads to physical brains and all matter non consciously existing on the both/and worlds of quantum physics until mind—and that means mind alone—comes along, pops the question, and makes an observation. When that happens, matter becomes conscious, so to speak. Where does this leave us? It doesn't matter who asks. It doesn't matter where or when the measurement—the action of mind—takes place. Knowledge's entrance into

consciousness stops the buck there and then, and the both/and worlds are immediately reduced to a single, either/or, black or white, world.(p. 277)

To concisely summarize the suggested pattern of collective/literal mind interaction:

- (1) the mind loses its literal definition through regression;
- (2) the collective mind recenters the material (meanwhile accelerating the sequential flow),
- (3) then the literal mind refocusses, fixing the event in time by observing the end condition.

In this way, through this fixing, a symbolic representation of a psychic experience becomes an articulate expression.

Bastick's theory of intuition, then, not only describes a psychological process but also suggests a number of links to other domains—to cosmology, to quantum mechanics. In some cases these links are mere analogies, but in others, such as music, Bastick's theory seems easily adapted for direct application. In all cases, an account of intuition seems to lead inevitably to a consideration of collective material, the collective mind, and the relations between them.

Such an analysis must examine at least the following:

- (1) The vocabulary of the musical expression, including not only the isolation of characteristic sounds and motives, but also the identification of associated referents and contexts.
- (2) The physical effort involved in performing neurological routines during the act of playing.
- (3) The emotional content of the referents which are in operation behind the artificial facade of the symbolic language; this includes emotional sets related synesthetically (through a combination of senses) to musical material, and emotional sets associated with the kinaesthetic memory. The emotional content of the expressions is experienced astension which the search for relationships seeks to release.
- (4) The explicit and inherent relationships between the emotional sets,

including in particular the means-end relationship. Relationships may be discerned in at least three ways :

- a. through empathy, or common emotional tone,
- b. through projection, the intersection of musical parameters, or
- c. through responses in common, or the parallel derivation of two different responses from a third event.

- (5) The relationship between redundancy and entropy. As the mind seeks a balance between entropy and redundancy attempts are made simultaneously to enliven the expression with new material, and to create stability by repeating the familiar.
- (6) The presence of functional fixation, which is associated with redundancy, and of the psychological regression, which follows. The latter in turn exposes the literal consciousness to material which is normally present only in primitive, preconscious memory.
- (7) The moment of recentering, when the higher vibratory energy of the collective or intuitive consciousness brings forward into literal consciousness cultural artifacts which are normally suspended in the preconscious. At this moment solutions harmonious with the means-end relationship are devised for the musical problem on every architectonic level. The consequence of recentering is repose.

5. Analysis of "Morning Dew"

from the Grateful Dead 1972 European Tour Album,
second guitar solo by Jerry Garcia

"Morning Dew" is a slow, country-rock song with a meditative feel produced by the slow tempo and repeated plagal cadences. The chord changes for the entire song are : D/CG/D/D/D/C G/D/D/, F/CG/D/D/F/CG/D/D. Garcia's second guitar solo is based on the last four bars of the tune, beginning with the second F chord. The words preceding the solo are "I guess it doesn't matter anyway." The solo is heard over seven statements of the four-bar progression; on the eighth the words "I guess it doesn't matter anyway" are reprised and the song ends. Since the last eight bars of the song contain a pair of identical four-bar phrases, it is also possible to hear the solo over three-and-a-half repetitions of an eight-bar phrase, but certain aspects of the solo make it more convenient to divide it into four-measure units.

Although the notated version presented here, transcribed by the author, is faithful to the performance, it has some limitations. A number of idiomatic features (scoops, percussion effects, distortion effects, and arpeggiando effects) have been omitted, since they are not crucial to the solo. Moreover, especially since contrapuntal-improvisation is such an important element in the style of The Grateful Dead, a complete analysis ought to take into account the contributions of the other players; however, in this context, significant group counterpoints are fairly momentary, and they are accordingly mentioned only in the commentary, without being notated in the score. The piece is in D, but since there is not a single C# and the repeated section starts on an F chord, it is notated without a key signature. Accidentals carry through for the entire bar in which they occur.

The vocalist's last words before the solo begins, and the words he sings on the climactic note of the solo, are, "I guess it doesn't matter anyway." Therefore, since the entire solo may be thought of as a meditation on these words, it is no surprise that its opening recalls several of the vocalist's versions of that sentence. This is the first occurrence of projection in the solo. Noting the parallel relationships of musical materials gives us not only insight as to a tune's derivation, but, more importantly, it gives us an idea of the degree of redundancy we are dealing with. Noting the projection of previous material into the opening of the solo gives us a point of reference from which we may observe the up's and down's to come.

After the initial reference to the vocal, the solo contains all its own distinct material, except, perhaps, for the d-c motive at the beginning of the second phrase in m.5. Later on, the 2nd guitar plays this motive five or six times (in mm.25-26) at the climax of the solo, suggesting that its use may actually be a planned part of the band's arrangement; in this case Garcia's quotation of it could be a conscious, rational, structural preparation. However, it is known from reports of their activities in San Francisco in the 60's, from interviews, and from alternate recordings of songs that the Grateful Dead did not usually work that way; they prided themselves on spontaneity, on doing things differently every time. This suggests another, less reasoned interpretation, in which the collective mind is already creating happy accidents by telegraphing fragments of the rehearsed end-condition into the very beginning. Garcia plays the two-note motive quite tentatively, almost as if he arrived at this thematic preparation by accident; this tentativeness might be intentional, it might just be a mistake, a momentary confusion, but it sounds to me like the first slowly emerging vocalization of collective mind in the solo; it looks to me like the watched pot beginning to boil.

Furthermore this d-c motive is preceded by an energetically played but derivative country-blues motive (m.4, beats 1-2), and followed by a contrasting phrase (a D⁶ arpeggio on beats 3-4) which is a motivic non sequitur. These two motives are empathically related in that both manifest an intense physical energy, but the functional fixation evidenced by the use of two such clichés, without motivic justification, suggests a moment of psychological regression in which the collective mind supplies Garcia with a motive he did not intend, in effect, by seeing into the future.

After this prescient moment, the solo continues. The kinaesthetic memory of the high A at the opening of the solo results in a parallel musical shape for phrase 2 (mm.5-8). M.2 and m.6 contain very similar lines moving down to the e through f from g. The arrivals on D in m.3 and m.7 both have a similar physical energy. M.4 and m.8 appear to have little in common except physical intensity, since m.4 reaches down and m.8 reaches up. However, these two measures are analogous, and in terms of emotional sets, the effort required by either is capable of producing a release of tension in a flash of psychological regression. The arrival at m.9 is neither as mysterious nor as provocative as the one at m.5, but since m.9 brings to a close the first main section which reaches a significant point of repose at m.11, it is plausible to suggest that the most intense psychic activity occurs approximately midway through the phrase.

In the first section of the solo, then, there appear one projection derived from the earlier vocal material, two parallel phrases, two distinct stylistic clichés (inherited

collective material, expressing literal ego consciousness), in addition to two short moments (m.4) and one extended moment (m.8) of functional fixation resulting in two moments of collective mind intervention. The latter coincide with the beginnings of phrases, as might be expected; the recentering by which intuition transforms emotional sets tends to occur most naturally at structural elisions between phrases.

Although m.11 articulates the end of the first period, it serves also as the beginning of the second phrase, since the redundancy of the resounding d in mm.11-12 produces in an emotional tension which seeks release in another country-blues cliché and an acceleration of physical activity (m.12, beats 2-4). Although rhythmically exciting, this moment contains little significant information; however, the energy directed at functionally fixated material opens the pathway to collective mentation, and a beautiful original phrase emerges in m.13. This moment consists of a slantwise projection of the triplet from m.12, while providing an empathic parallel to m.1. This time the influence of the collective mind extends across two entire measures; the psychic repose achieved in m.13 continues through m.14 as the energy spends itself.

A single long note is even more redundant than a number of repeated notes, lacking, as it does variety of attacks and durations, so the moment in m.15 when the music stops also induces the mind to collect itself in preparation for another effort. The flurry of notes in m.16 is based on two contrasting guitar finger pattern clichés which somewhat parallel the two patterns in m.4 (thereby also reinforcing the link between m.13 and m.1); m.16 also presents the same mix of surface excitement and functional fixation as m.12. The increasing rhythmic activity culminates in the climax of the solo, which extends from m.17 through the beginning of m.19., and which offers an inspired sequence of six clichés drawn from collective material:

- (1) a dramatic leap from low a to f, (m.17, beat 2);
- (2) an obsessively redundant four note motive (a g f g), stated three times and compressed into two beats (m.17, beat 3 and 4);
- (3) the triplet figure projected from m. 13, (m.18, beat 2);
- (4) a rapid chromatic finger pattern (m.18, beat 3);
- (5) a pentatonic cliché, (m.18, beat 4); and
- (6) the country-music passing-note 32nds found at m.19, and in various forms throughout the solo (m.4, m.10, m.11, m.17, and m.20).

Morning Dew - 2nd Guitar Solo

The musical score is written in treble clef with a key signature of one sharp (F#) and a common time signature (C). It consists of five staves of music. The first staff begins with a measure marked '1' and includes an 8va instruction above the staff. The second staff starts at measure 4. The third staff starts at measure 6 and features a 3:2 triplet. The fourth staff starts at measure 8 and includes an 8va instruction above the staff and a 3:2 triplet. The fifth staff starts at measure 10 and includes an (8va) instruction above the staff, along with 3:2, 5:4, and 3:2 triplets. The music is characterized by intricate sixteenth-note patterns and melodic lines.

MORNING DEW

(8va)-----

13

Musical staff 13-15: Treble clef, starting at measure 13. Measure 13 has a 3:2 triplet. Measure 14 has a 3:2 triplet. Measure 15 has a 3:2 triplet. The staff ends with a whole note.

Musical staff 16-18: Treble clef, starting at measure 16. Measure 16 has a 3:2 triplet. Measure 17 has a 3:2 triplet. Measure 18 has a 3:2 triplet. The staff continues with eighth notes and a final eighth note.

8va-----

17

Musical staff 17-19: Treble clef, starting at measure 17. Measure 17 has a 3:2 triplet. Measure 18 has a 3:2 triplet. Measure 19 has a 5:4 triplet. The staff continues with eighth notes and a final eighth note.

(8va)-----

19

Musical staff 19-21: Treble clef, starting at measure 19. Measure 19 has a 3:2 triplet. Measure 20 has a 3:2 triplet. Measure 21 has a 3:2 triplet. The staff continues with eighth notes and a final eighth note.

chords :-----

22

Musical staff 22-26: Treble clef, starting at measure 22. Measure 22 has a 3:2 triplet. Measure 23 has a 3:2 triplet. Measure 24 has a 3:2 triplet. Measure 25 has a 3:2 triplet. Measure 26 has a 3:2 triplet. The staff continues with eighth notes and a final eighth note.

27

Musical staff 27-30: Treble clef, starting at measure 27. Measure 27 has a 3:2 triplet. Measure 28 has a 3:2 triplet. Measure 29 has a 3:2 triplet. Measure 30 has a 3:2 triplet. The staff continues with eighth notes and a final eighth note.

These ten beats are closer to pure collective mind, transcending learning, literalism or rationalism, than any other parts of Garcia's performance. A possible conclusion from this is that the ecstatic character of the material, both physically (way up high, very intense, very fast), and conceptually (the rapid rearrangement of many different fragments of collective language into a complex, abstract formal pattern), points to a moment of expanded consciousness in which the artist, in the high-speed, hyper-relaxed state of psychological regression, ventures into preconsciousness to mobilize collective materials and discover recentering solutions. It must be emphasized that it is the acceleration of the sequence of the disparate language fragments that is the most telling sign, and which is responsible for the most significant transformations of meaning in this whole process. Each of these six musical figures comes with its own established pedigree, its own battery of associations; since context is a major factor in interpreting symbols, when the fragments are placed in an atypically close proximity to each other, the referential identities normally associated with them change. With the index of normal referent meanings askew the possibility that what is being said, musically, will be perceived as rational, that is, adhere to basic patterns familiar to us from previously inherited expressions, is seriously subverted. The structures made of collective material by the collective mind are not rational because they are not based on material referents. The pronounced differences between each of the six figures pointed out in mm.17-19 makes the accelerated cycling through them appear to be fantastic, irrational, other-worldly. Thus, the presence of the collective mind is discernible, in the arrangement of disparate elements, as its own referent.

After m.19 the quality of information content in the solo gradually declines. The band continues to build all the way to m.29 where the voice reenters after a forte-piano attack; but after m.19 the solo guitar seems to have joined the collective mind entirely, losing altogether its own ego-voice. A modest attempt is made to reaffirm a soloist energy at m.21, but this overridden by the ensemble energy, and Garcia joins the stream, playing tremolo chords with the band. One lovely soloistic touch occurs m.26, when the two chromatic 32nds echo the lines in m.2 and (especially) m.6; but after that Guitars 1 and 2 differ only in the series of pulsing portamenti Garcia inserts before the three D chords in m.27.

In Garcia's "Morning Dew" solo, then, can be found clear instances of most of the concepts discussed in this paper in a fairly neat package. Of particular significance is how we can note the appearance of various types of relationships of motives to each

other (empathic, projection, and responses in common) and then predict the type of music that will follow; we saw several times how a certain level of redundancy would result in a corresponding level of originality. Most importantly, we saw that psychological regression can result in an acceleration in the sequence of archetypal images that pass before the inner eye of imagination, such that the inherited meanings are necessarily altered by virtue of their compressed proximity to each other.

The techniques used in this analysis are identical with the those used in most other types of analysis—we looked for similarities and differences in the musical elements and then tried to find a pattern that made sense; however, the present method requires that we look, ultimately, for an effect that does not make sense, because the collective mind cannot make sense to us in the material dimension. The best that we can hope for is to be able to note the quality of the material (collective or original) as it is exposed, and making use of the few analytical tools discussed here, be able to predict when the irrational moment will take place. It is the rate of change, and the quality of the relationships which ultimately determine the depth of the expression's resonance.

I chose this solo to analyze because the Grateful Dead idiom is based on collective materials, and because of their public endorsement of altered consciousness states, including, of course, drug states. I thought that the Grateful Dead might enjoy ecstatic moments in their music that are more than usually obvious, since mind states are their stock-in-trade. I also thought that they might be easier to analyze, since these issues are all up front with them. Since writing this paper, I have had occasion to apply my analytical technique to other contexts, improvised and otherwise, and I have seen very similar effects; I have seen the same casting about in the attic of memory for old rusty expressions which eventually accelerate, cycle through eccentric sequences, then taper off, comfortably ensconced in conventionality.

It may be that music just flows out of people in a universal, standard form, and that what I am noting is merely restating the obvious. On the other hand, I have noted a much greater variety of effects, in terms of the formal juxtapositions, than I have noted possible form-creating patterns. This disparity between the variability of material and the invariability of form indicates that there is some super-personal intelligence at work. If, indeed, inspiration can be linked to a prescribed rate of change of psychic events, and the emotional charges of such events can be determined not only by the strength of their associations but also the impact of context, then we will have arrived at a method of musical analysis which really touches the soul of the matter.

6. Soul

In conclusion, let us broadly recapitulate the main premise of this article: we have suggested that discernible differences in the referential content and the syntactical structure of linguistic elements (in this case, musical elements) may be interpreted as indicators of shifts in consciousness modality. We have attempted to show that the intuitive response, specifically the moment of intuitive recentering, can be considered a crucial moment in the sequence of mental operations, the moment when the ego-centric literal mind achieves a state of identification with the super-personal mind state we refer to as the collective mind. In the analysis of the *Morning Dew* solo, we attempted to trace a line in Jerry Garcia's thinking from a purely literal mind state to a collective mind state. By proposing a few theories based on psychological research, and fashioning a few simple analytical tools based on these principles, we were able to generate certain expectations which were more or less fulfilled by the results of the analysis. It is hoped that the reader, through close identification with the materials of this solo, has come to duplicate, internally, Garcia's musical experience, thereby recognizing the operation of the collective mind in his playing, and identifying with it. It is hoped that the experience of the super-personal energy, so identified with in this solo, will be recognized as soul.

As all these scraps of inherited language parade by, the meaning of this soul must be pieced together from those myriad associations we hoard in memory and something else: the meaning is the consequence of the an experience of a higher reality. When we internally duplicate all the referential material in an artwork, the artwork only helps us achieve a transcendent state if we internally duplicate a transcendent state. When the irrational effects of the collective mind are experienced, this internal duplication allows the subject to identify with the collective mind, thus experiencing a super-personal aspect of himself. Thus, as previously stated, identification of the subject with the music permits the music, paradoxically, to express the subject; the ultimate referent of the archetypal symbology, therefore, is the I am of existence, the who expressed by the what.

If this analysis had been presented without the preceding discussion of the collective mind, it would still have a certain substance, because the events described in the analysis are merely literal events, easy enough to confirm; the cited logical connections between motives and phrases are likewise merely technical descriptions of literal features about which there can be little disagreement. Music is music, a banana

is a banana. However, without the added resonance of the soul discussion, the arguments presented engage the literal mind only, and do not account for the emotional charge with which so much of the solo is richly invested. The feeling in the solo is what we want to subjectively duplicate in our experience of it, and feelings cannot be captured by literal description.

Are we right back where we started then? Scratching ink on paper, bandying empty words about, coffins for ideas we cannot bring to life? The answer is "Yes," if the reader is unable or unwilling to duplicate the experience described in the analysis. This article is not intended to be a piece of intellectual property—it was intended to inspire the reader to apply the principles included here and try to feel the energies herein so literally described; it was intended as an instruction sheet. Only by anticipating shifts in consciousness modality, and being prepared to duplicate them internally, can an audience feel what Jerry Garcia felt when he played his song.

If we join Jerry Garcia in a meeting of minds, our minds must necessarily wind up where his went. If there is a really-out-there point where the personal mind of the individual meets the collective mind of all humankind, the experience that led Garcia to his moment of transcendence is equally available to all of us. The archetypal symbols are not the goal, nor even a particularly attractive incentive, they are merely signposts; they lead the way by offering the mind all it ever really wanted—a hand in the dark, guiding the way toward freedom—freedom from the physical limitations we needlessly impose on ourselves through narrow literal self-perception.

In what sense is the reader to involve himself in the collective mind by reading about how some rock musician happened to start combining ideas a little faster toward the climax of a solo? The answer is: through identification. Every word we read, every note we hear, every memory we remember becomes a subjective reality when we internalize it. The magic of this topic is that the subjective realities of a collective nature exist in psychic terrains of supernormal/super-personal ego identification. By using the personal will to focus literal attention on the musical materials discussed here we can enter into a mind state that subverts our normal tendency to contain ourselves within definable limits.

The vast library of archetypal forms that is made available to the literal consciousness during psychological regression contains symbols which perfectly express the eternal now of man's undying soul, and the temporal now of man's changing state of self-reflection. These symbols are in a constant state of transition and evolution, while continuing to magnificently summarize the human condition in

static, spiritual terms. As we enter the collective mind state, these symbols instruct us, humble us, and enlighten us.

7. Conclusion

Thus, in this short paper, we have proposed a Theory of Transcendent Experience in Music which attempts to reconcile the familiar but inarticulate, subjective mystical experience of ego-dissolution with concepts from psychology and physics. The aim throughout has not been to prove anything (science is still quite far from any unequivocal demonstrable proof of the existence of such subjective realities as higher mind and corporate consciousness) but rather to provide the musician, by analogy, with a vocabulary that takes into account current trends in the sciences. Such an upgraded vocabulary may lend not only credibility to discussions of the fluid condition of the subject's ego definition during the musically creative act, but also direction for teachers of music who, as the best Hindu guru, wish to re-create in their students, through rational instructions, a transcendent experience. If I truly have any ax to grind here, it is that musicians should be able to relate to each other on the extremely intimate terms implied by the concept of the collective mind without the socially embarrassing conflicts of religious catechism and dogma which we have inherited from our forebears. If rationalism has created an unbridgeable schism between our literal consciousnesses and other minds states, then it must be time to approach irrationalism with fresh attitudes and renewed courage. If what I say is even remotely true, then on primary conclusion is that spirituality can be taught to musicians—that inspiration has detectable features which can be recognized rationally as well as emotionally.

The Garcia solo is just one example of the principles here set forth. Space permitting, other worthy projects would be to analyze and compare other performances of *Morning Dew* by Garcia, including solos that he plays elsewhere in the same composition during the same performance. Certainly analyses of other improvisations by other performers would be instructive, but even more exciting would be an analysis of a composition by a Mozart or a Beethoven to see if the presence of the collective mind can be detected in a through-composed piece in the same way or to the same degree as an improvised one.

It is my opinion that this is not only possible, but that the collective mind is in fact an even more significant presence in finished compositions than in improvisations. This proposition, that the collective mind plays an active and essential part in the production of art music, sets the stage for my next paper which draws many

conclusions of an ethical nature from the idea that humankind exists not only as a group of anomalous individuals but as a corporate mental identity.

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