

Musicians United for Superior Education - People Page

THE UNIFYING CONSEQUENCES OF GROOVING: AN INTRODUCTORY ETHNOGRAPHIC APPROACH TO UNITY THROUGH MUSIC

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It don't mean a thing if it ain't got that swing.

-Duke Ellington

The central problem in musical theory is the problem of description. Neither musicologists nor ethnomusicologists have yet devised a system of analysis which is sufficiently powerful to explain what we can know intuitively as a result of experience in culture....

-John Blacking

Background

Grooving

This essay is about grooving and music. 'Groove'-a word still maintaining slang status-is hard to define, whether in reference to music or other activities. It is perhaps easier to describe what 'grooving' is like. Most people, musicians or not, have some sense of grooving, so groove is not only a musical term. People claim to get into gardening, studying and house-cleaning grooves. Athletes talk about being in 'the zone' and in 'the groove' interchangeably. Groove also resembles The Way or Uncarved Block in Taoism (Kaltenmark 1965, Mitchell 1988) or the dissolution of the ego into the Beloved in Sufism (Rumi 1986, 1988, 1993). As saxophonist Ornette Coleman puts it, "I am so busy and absorbed when I play that I am not aware of what I'm doing at the time I'm doing it" (1960). Most people have experienced something like this state of participation. People in a groove experience a kind of altered state of consciousness, perhaps a light trance.

Socially, people grooving together are unified. No matter how elusive groove is, it refers to a common human experience which deserves the study that it's just beginning to get.

Webster's gives various slang definitions: "n. an activity to which one is especially well suited; a settled hum-drum routine; a very pleasurable experience; v. to take great pleasure or satisfaction; enjoy oneself; to react or come together harmoniously" (1988:550). That these definitions are slang is significant because, "[s]lang is based not on theories, but on immediate experience" (McLuhan 1964:viii). So is grooving. Most people believe that saying "groove" or "groovy" in reference to music grew out of African-American vernacular-perhaps out of the California jazz scene during the late 1930's (Mingus 1992)-but it is impossible to pinpoint that beginning. 1 Groove is synonymous with swing (Hodier 1956), pulse, process, vital drive (Keil 1966), feel (Progler 1995), rock, timing and push. Some of these terms are unique to certain American popular music sub-cultures: e.g., jazz swings; funk grooves; heavy metal rocks; bluegrass has drive and timing; polka has push; techno has pulse; blues players have feel.

Most musicians play in more than one style and are familiar with more than one kind of groove. Across these stylistic and sub-cultural boundaries, musicians are conversant about groove in general. I know of seven distinct ways that most musicians talk about groove:

1. a thing ("I heard a great groove")
2. a quality that music can have ("that's a groovy song")
3. powers which people possess ("you've got a hell of a groove")
4. an aspect of musical ability ("...and you sure can groove")
5. something people generate ("we had a good groove going")
6. an activity ("we were grooving")
7. a modified state that people enter into ("we were in a deep groove")

This essay focuses on this last conception of groove because the people I interviewed talked mostly about groove as a modified state. Unless otherwise

specified, I will use groove to mean 'a modified state that people enter into' from now on.

Locating Groove

First and foremost, groove exists in human perception. In *Emotion and Meaning in Music*, Leonard Meyer suggests that emotion and meanings are in music. A different perspective incorporating a strict insistence on human participation might argue that emotion and meaning are in people, or more precisely result from people's perceptions. Music itself is just sound, sonic vibration, stimulus until at least one human perceives it. Grooves are no different. Grooves arise when at least one human engages music. When we say that a song is sad we mean that we are sad when interacting with, or participating in, the song at a particular point in space and time. Groove then, like sadness, ultimately exists in human perception, and results from human participation in music. "In vernacular a 'groove' refers to...a perception of a cycle through time" (Feld 1988, cf. Keil and Feld 1995:127). When a radio plays music in a forest, is there a groove?-only if at least one human who feels it is there.

This notion of groove as an emotional or intuitive response suggests that musicians who groove may have a more or less articulate "collective representation" (Barfield 1965), or a communal conception of groove, one which exists not just within individual minds but between people as a shared reality created through group participation in, and discussion of, "musicking" (Small 1987). Such shared notions of groove shape individual perception just as those perceptions shape shared reality. As people participate in music and feel grooves, commonalties between their individual perceptions emerge as a consensus about the "nature" of groove. Groove in this sense is no different from any other aspect of cultural reality.

Subjectively there are as many ways to experience music from moment to moment as there are people experiencing it. Some will feel groove while others will not. One person may be enjoying some music, claiming to be in a

deep groove, while the same music turns another individual off (see Crafts, Cavicchi, Keil et. al. 1993, Feld 1994:77-95). Likewise, group consensus will vary. One group will agree that a certain musical process is groovy, another rejects it outright as unmoving, bland or bad.

Such disagreements make it hard to say what groove is and easier to say what groove does. Like music itself, groove is more verb than noun, more process than thing (Small 1987). "It's not the notes, it's the jam between them" (Carducci 1990:16). Locating groove in human perception points away from abstract or concrete things and toward participatory processes with people at the center. Drawing on a few experimental ethnographic interviews, this essay will describe some of those processes, which I call "unifying consequences of grooving."

Approaches to Grooving

To my knowledge, in 1866 Henri Herz was the first to discuss "groove." "I have pondered the mysterious law of rhythm which seems to be a universal law...In obeying the need to put rhythm in their music the blacks act by some sort of instinct" (quoted in Cantwell 1985:92).² This sense that there is a "mysterious law" governed by "some sort of instinct" unique to music in general suggests several questions about groove. How does groove work? How do people get into a groove? Where does a groove come from? How does groove relate to and affect music, people and society? Why bother studying groove? How do we begin to study groove? Some theorists, mostly ethnomusicologists, have begun to answer these questions (Waterman 1952, Hodeir 1956, Shultz 1964, Keil 1966, Chernoff 1979, Jairazbhoy 1983, Rheinholdsson 1987, Small 1987, Stewart 1988, Carducci 1990, Sloboda 1985, 1992, Keil & Feld 1994, Hamm 1994, Alén 1995, Progler 1995, Keil 1995, Lis 1996, Frith 1996).

Music, "Musicking" & Human Behavior- Waterman defines metronome sense as "habits of conceiving any music as structured along a theoretical framework of beats regularly spaced in time" (1952:211). Metronome sense is

an interesting concept in relation to understanding groove because it directly links physical musicking to mental participation in it. "The maintenance of a subjective meter, in terms of metronome sense, requires effort," mental effort mostly (Ibid.:213). Frith distinguishes between internal (mental) and external (physical) musical time, stating that, "inner times must be shared and coordinated (1996:146, see also Shultz 1964, Chernoff 1979, cited in Frith 1996). These issues become important later in this essay when I speculate about the relation between physical and mental grooving.

Andre Hodeir (1956:195-209) argues that producing swing is "essential" to good jazz, and that the jazz musician must personally achieve a certain level of "relaxation" (but see footnote 3). Relaxation is analogous to groove in that both are a state into which people enter. People playing together generate swing and constantly re-negotiate it during a jazz performance. Hodier discusses swing as a quality of the music; yet, because he contends that the musicians must enter a state of relaxation, Hodier also invokes notions of groove as a modified state into which people enter.

Alan Merriam insists in *The Anthropology of Music* that "music involves not only sound but the human behavior which is a prerequisite for producing sound. Music can not exist on a level outside the control and behavior of people..." (1964:14).

In 1966, a century after Herz's inquiry, Charles Keil published "Motion and Feeling Through Music" in response to Leonard Meyer's book *Emotion and Meaning in Music* (1956). Keil argued for a new paradigm in musicology which concentrated less on "information" (Meyer 1967:5-21) or "meaning" (1956) and more on "engendered feeling" (Keil 1966). He compared the syntactical (structural) to the processual (rhythmic) interpretation of music, hinting at the importance of textural quality (timbre). The syntactical approach emphasizes what is played (notes, counter point, harmony, melody, etc.), whereas the processual approach stresses how music is played (stiff, loose, swinging, pushing, laid-back, etc.).

This simple but drastic shift of emphasis recalls Christopher Small's arguments for the verb "to musick" over the noun "music" (1987).³ Small's "first assumption is that music is not primarily a thing, or a collection of things, but an activity in which we engage" (ibid.:50). A verb, then, is appropriate. The words 'singing,' 'playing,' 'dancing,' 'painting' and 'acting' all suggest the usefulness of 'musicking.' From now on I will use 'to musick' and 'musicking' when appropriate.

How people go about musicking constitutes style as much as syntactical music structures do. When musicians versed in different musical styles play the same notes, rhythmic patterns, harmonies and melodies (i.e. syntax) we must turn to analysis of groove to answer questions regarding stylistic distinctions. Writing of ragtime, for example, Hamm states that, "[a]lmost any song, then, might be perceived by audiences as a 'ragtime' song if performed in a 'jerky' style" (1994:149). In other words, the structure of the tune takes second seat to the process in determining whether it is ragtime or not, and, as Hamm notes, audiences perceive style as musicians perform it. Style is a sensation; so is groove. Ethnographic investigation can bring us closer to understanding how players and listeners sense musical style and grooves. To understand groove as a state into which people enter, it is important to emphasize the human aspect of musicking because conceptualization of music as human behavior-as musicking-focuses on people, and it is people who get into grooves. For this reason, too, ethnographic methods are useful when investigating groove.

Anthropology of Groove- Steven Feld's fieldwork in Papua New Guinea leads him to summarize Kaluli musicking in terms of groove, which he defines as "an intuitive sense of style as process" (Feld 1988, cf. Keil & Feld 1994:127). Feld takes Kaluli music as an example of how musicking shapes style. He contends that how Kaluli do what they do (dulugu ganalan , lift-up-over sounding) is simultaneously style, content and structure. Kaluli generate an "iconicity" (ibid.) of how they do things by doing things such as musicking and getting into grooves. "The medium is the message" (McLuhan 1964:23-

35). Feld's understanding of groove underlies his attributing musical style to something other than structure or syntax.

In 1987, Keil published "Participatory Discrepancies and the Power of Music," trying to pin-point the sources of groove and developing a set of research questions. His stated purpose was basically the same as in 1966, to overturn the dominant syntactical paradigm and replace it with a processual one. A participatory discrepancy is 'a slight human inconsistency in the way that a musician executes rhythm, pitch and timbre (see Frith 1996:152, 313). In this new article, Keil demands that playing "slightly 'out of time' and 'out of tune'" is the way to play powerful music. Performing with slight rhythmic fluctuation and timbral inflection generates groove. Discrepancy (syntactic imperfection) rather than Platonic precision become important for musicians, musicologists, ethnomusicologists, listeners and critics.

Nazir Jairazbhoy (1983), Olavo Alén Rodriguez (1995) and Joe Progler (1995) measured participatory discrepancies in tabla drumming, Tumba Francesca and jazz respectively.⁴ Jairazbhoy (1983) measured linear time in music and found micro-discrepancies which he calls "nominal units of time" or "NUTS." He constructed a system based on percentages by which one might plot actual musical execution against an abstract and assumed standard. (Ibid.:114) Alén (1995) demonstrates how Cuban drummers subtly but regularly fluctuate the temporal execution of drumming patterns to generate an expressive feel. Jairazbhoy's and Alén's studies confirm the presence of patterned discrepancy in tabla and Tumba Francesca drumming of one performer, but neither show how two or more musicians might collaborate. Progler's analysis (1995) shows the ways that two or more musicians can work 'off of' each other to collaboratively generate swing.

Many people, myself included, have reservations about micro-measuring, segmenting, abstracting, deconstructing and demystifying music this way. I remember finding out that some neurobiologists depict my emotions as chemical reactions, and my response to Progler's results was similar: "there

must be more to it than that?" (Certainly grooving is more than playing before or after "the beat.") This sort of measurement moves toward what Barfield calls "beta-thinking," or "secondary consciousness" (Barfield 1965:22-27). It entails a loss of immediacy in our understanding of, feelings about and experiences with groove. Still, their point is not to pile up such measurements, nor simply to use technology to prove that process and texture belong above syntax in musicological hierarchies of concern, but to discover how participatory discrepancies pattern groove so that we come closer to knowing how music works.

Ethnographic Findings

Fieldwork

One way to get a clearer understanding of what being in a groove is like is to ask people in whose lives grooving is important. I have yet to meet a musician who has nothing to say about grooving (or an equivelant modified state⁵), so I interviewed five friends from my career as a musician. All five are white men between the ages of 18 and 35 who play rock, funk, jazz, blues, hardcore, alternative, bluegrass and any combination thereof. This study is a first step toward an ethnographic approach to groove and introduces some novel ways of thinking about some old concepts like person, song, band, performance and spirit possession.

Relying on close friends and asking for personal experience made the inquiry interactive and personal. It became necessary not only to study what was said, but to take into account who said it and my relationship to that person. My understandings are born of interaction with the subject (groove), the subject-materials (interviews) and the subjects (interviewees). I asked open-ended questions-like "What is groove about for you?"-with the intention of keeping interviews unstructured so that the interviewees were free to roam their minds for any conceptual tid-bits they had about groove.

Asked to define groove, each interviewee was eloquent about what grooving felt like and about what groove does. None gave a dictionary-style definition.

I gave up the search for a definition. Instead, I began to try to understand the effects of grooving.

Unifying Consequences

A "unifying consequence" is an effect of grooving. "Unifying consequence" is an imposed (etic, not emic) working term for this essay. Four distinct unifying consequences emerge from the interviews: person, song, band, and performance. I order these phenomena from small/individual (person) to large/social (performance) to illustrate how a groove can radiate and become a unifying social force. Additional unifying consequences can be inferred ethnologically: these include unification with the natural environment, with the supernatural and "the universe."

Unifying Consequence-1: Person

- "groove n. top form (a great talker when he is in the groove)" (Websters 1971)

- "groove n. a very pleasurable experience" (Webster's 1984)

The first unifying consequence to emerge from the interviews is the completion of the individual person through a healing of the classical Western mind/body split. Musicians do not work through the mind/body split, however, but rather retreat from it to a state that precedes that separation. One musician describes groove as a state in which, "...what you're thinking and what you're doing become one thing...it's like you just don't want to think about it; you just want to merge...[groove] is a synthesis of what you're doing and what you're thinking, and you're becoming, basically, in phase with what you're doing...I feel complete" (Gallick 1993).

Other people describe unifying consequence-1 in terms of thoughtlessness. "It's a very subconscious situation...I've never known how my mind gets into the rhythm, it just does it" (J.C. Farmelo 1993). "You're not really concentrating when you're playing and that makes you a good musician" (Rizzuto 1993). "My hands...I don't even feel that I'm telling them where to go, they just go there" (Kelly 1993). A musician within a groove may not be

concentrating, but is focused. Within a groove, the mind and the body seem to become one. This reunification through groove allows the "new" entity, the unified person, to focus on musicking because the mind is no longer concentrating on the body but is one with it. Conversely, "[t]here is evidence suggesting that as people engage in formal music training [i.e., concentrating on structure], they move from a holistic mode of processing music to a rather more analytical mode of processing" (Slaboda 1992:114).

Having often experienced this "thoughtless focus," musicians can talk comfortably, yet cryptically, about the effortless nature of getting into a groove. For example: "Everybody gets into it and it just kind of happens" (J.C.Farmelo 1993). "Deep groove is achieved with some kind of intuition as to where it's going...you know it when you get it and you know it when you lose it" (Dunn 1993). "I don't have [a goal]...it's just about doing it" (Gallick). Musicians don't think their ways into grooves; they play into them.

People thinking and talking about groove emphasize musicking, "energy" and "just doing it" (i.e., verb/activity) rather than music (i.e., noun/thing) and ideal Platonic types. None of the people I interviewed mentioned musical structure, note sequences, rhythmic patterns, harmonies, time-signatures or even songs which were particularly good for getting into grooves.⁶ "I'm not thinking 1*2*3, 1*2*3 and all this hoopla" (ibid.). Rather they spoke of their own participation. "Your energy precedes what actually comes out; it's actually more important than what comes out" (Gallick 1993). That groove depends on musicians' "energy" more than it does on attributes of the music they play does not mean that musicians forfeit the quality of their performance in order to get into grooves. Rather, grooving is a heightened state in which musicians sense that they are performing well—that is, effortlessly, with little thought, and as a whole person.

Applying Unifying Consequence-1-Sacks states that, "...again and again, one saw Parkinsonian people who couldn't walk but could dance, couldn't talk but could sing and who could generally be engaged in a rhythmic or melodic way.

In some sense, a mechanism is being bypassed, and she is just suddenly in another mode" (Sacks 1993:11). It is arguable that this other "mode" into which Parkinsonian patients are entering during participation in music is related to unifying consequence-1. If so, musical therapists may find grooving, and particularly the concepts surrounding unifying consequence-1, important in helping their patients. Sacks' observations, which led to the book and film *Awakenings*, show how musicking can re-integrate sick people into social and motor-functional arenas from which, without music, they are excluded.

Physiological Perspectives on Unifying Consequence-1-The autonomic nervous system regulates involuntary processes like the heartbeat and unconscious breathing. It may be important in unifying consequence-1 as well. External and internal stimuli may affect the operation of the central nervous system just enough so that a person enters another mode in which the autonomic nervous system temporarily dominates bodily functions. Lex describes the effects of "driving behaviors" (e.g. repeated sounds of a shaman's drum) on the human nervous system as "tuning" the central nervous system so that a human may enter trance (Lex in d'Aquili 1979:117-151). Grooving may involve light trance.⁷

Conclusion: Unifying Consequence-1-In summary, unifying consequence-1 (unification of mind and body) happens when people are musicking in grooves. Descriptions of grooving suggest that the Cartesian paradigm does not apply to this phenomenon, or that grooving undermines it. Unifying consequence-1 can also be seen as a "mode" into which the musician enters, which may be a light trance. **Unifying Consequence-2: Song**

The mind and the world according well, May make one music as before, But vaster (Tennyson, from "In Memoriam").

[Y]ou could be on two separate planets and playing the same rhythm, but you have to be more closely intertwined in order to get a real deep groove (Dunn 1993).

- "groove n. an activity to which one is very well suited" (Websters 1984)

The second unifying consequence to emerge from the interviews is the unification of separate musical parts into song. I use the phrase musical part for any sound any individual or group from within any cultural context recognizes as musical⁸; song for the larger whole a sequence of sounds creates. I do not mean 'song' as a composition which one could write down, but as a performed musical phenomenon. Different cultures will recognize different sounds as musical or non-musical, as song or not (Merriam 1964:Ch2). Here, however, I am more concerned with a general perspective on the relationships between musical sounds. Just as unifying consequence-1 refers to a common human experience, unifying consequence-2 refers to a common musical phenomenon.

Although the musicians I interviewed sometimes talked about groove as something they could hear in music, all agreed that musicians had to be in a groove in order for the music they were playing to have a groove. Simply, grooving musicians make grooving music. What is grooving music? "When you hear a groove, or are playing a groove, it's about the two parts being greater than each on their own" (Dunn 1993). "With the band's individual musicians each...supplying their element, the sound made together can become more than the sum of its parts" (Carducci 1990:28). Just as groove unites a person's mind and body, groove unites different musical parts (e.g., a drummer's drumming and a bassist's playing) into song. Song is the result of people musicking in a groove.

Musical Parts in Detail-Musical parts can be:

1. physical (sounded/sound waves vibrating the ear drum)
 - a. human (a singer's singing, a drummer's drumming)
 - b. mechanical (metronome click, recording, drum machine)
 - c. natural (sounds of animals, wind, rain, rivers, etc.).⁹
2. mental (un-sounded/music in the head)¹⁰

These are broad categories into which fit all kinds of musical parts. A groove usually requires the presence of at least two from any category. "To make something really interesting I need something to play off of" (Kelly 1993). "...groove...[is] about the two parts...complimenting each other" (Dunn 1993).

Of the various types of musical parts, a synthesis of any two will carry certain potentials and limitations. The merging of two or more human-physical musical parts will result in the greatest potential-that is, people sharing sounded music generate socially empowering grooves, and those grooves can radiate beyond the music and the musicians to resonate an expanding, socially-unifying force. Two unsounded mental musical parts in two separate heads could, and probably would, have nothing to do with each other; any materiality or dialectical synthesis is unlikely.¹¹ Similarly, since no humans need be involved, a combination of solely mechanical musical entities could result in no unifying consequences. Mental or mechanical rather than sounded/human/physical musicking can impede grooving into broader social unification (e.g., band, performance, possession).¹²

Figure 1 is speculative and suggestive. It seeks only to sketch how a theory of music might incorporate the unifying consequences conceptually. Note the trend of increasing abstraction from the upper-left box (human/sounded) to the lower-right box (human/unsounded).

[FIGURE 1 ATTACHED]

Participatory Discrepancies -Understood in terms of grooving, song is dialectical. "Grooves come from resonance between two or more things..." (Dunn 1993). It is born of tension and resonance between two or more sounds, and these tensions may be understood as patterned participatory discrepancies (Keil 1994 & 1995, Progler 1995).

Progler (1995) gives examples of the typical range within which physical-human-collaborative-discrepancies (see Figure 1) fall as people play jazz. This range is somewhere between 30 and 90 milliseconds. At this point we can

broadly discriminate three levels of discrepancy: the smallest, which go unfelt; those promoting the groove; and those which become too large and fall into the "mistake" category.¹³ According to Stewart (1987), Keil (1987, cf. 1994, 1995) and Progler (1995), groove lies somewhere in a range between an absence of participatory discrepancies and participatory discrepancies that are too large. However, across cultures this range may vary. The "lift-up-overing" (Feld 1994) of Kaluli in Papua New Guinea creates the sense that there are more voices than are actually present precisely because they do not sing in unison. Their groove criteria are loose compared to a jazz rhythm section. Perhaps this looseness is the egalitarian version of the jazz musician's 30 to 90 millisecond discrepancies.¹⁴

Music Isn't Groovy-No one has notated participatory discrepancies so that musicians can read how to perform in a groove from sheet music. Musical structures written down do not imply discrepancy.¹⁵ During performance, discrepancy emerges. "What makes any performance interesting are the slight fluctuations in duration, loudness, pitch, and timbre which together constitute expressive performance" (Sloboda 1992:109). We might say that "music" doesn't groove, but that musical performances can.

However, if no one finds a performance interesting or groovy-if the discrepancies spark nothing in the perceiving human-then we have performance with discrepancy but no groove. That is, the person hears the sounds but does not feel them in a way that activates a lively, participatory feedback loop between her/himself, other people and/or the music. In this sense, even performances aren't inherently groovy. People must negotiate groove again and again in real time between each other and the music they make.

This does not mean that participatory discrepancies are not important; they may be essential to groove. To engage someone, performers and their music had best be engaging. However, there is no evidence to answer the following:

1. How does performance lacking discrepancy engage someone?

2. Why does one person groove on a performance when another does not?
3. How can the same person find a recording groovy one day and not the next?

Groove in music, then, may always rely on people entering grooves who then perceive the music as groovy.

Conclusion: Unifying Consequence-2-Unifying consequence-2 is, in summary, the phenomenon of separate musical parts coming together to form song. As a musician perceives the music happening around her or himself, the unification of the different elements in the soundscape is one important aspect of that music. Participatory discrepancies, executed within certain stylistic boundaries may be, in terms of rhythmic patterning, essential to the modified state of grooving.

Unifying Consequence-3: Band

...individuals, eager or reluctant, are integrated into a group...by the sharing of pleasurable emotions through participation in formalized, repetitive, precisely performed interaction forms (Lex in d'Aquili 1979:141).

"In their singing, clapping their hands, and dancing, the people are united...people unite and dance together whatever the state of their feelings," Even if they hurl accusations at one another in the course of the dance, "the next moment, the people become a unit, singing, clapping, moving together" (Marshall 1969:380 in Rouget 1985 [1980]:146).

- "grooving v. to react or come together harmoniously" (Webster's 1984)

Music as Metaphor-Christopher Small (1987:62, 1995) suggests that music is a metaphoric plane on which people play out their relationships in ideal fashion. Musical sounds represent the humans (or machines) that make them. Unifying consequence-2 can be thought of as a metaphor for unifying consequence-3 in that the relationships between musical parts parallel the

relationships between people. "There is a harmony in the interaction of the musicians and what they are producing" (J.C. Farmelo 1993).

Bands-Just as separate musical parts join to become one entity, song, separate musicians join to become one entity, band. A band is a group of musicians performing song. A "one-man-band" is also a possibility-in this case, the arms, legs and voice are typically the separate music-makers. "A groove for me while I'm playing the drums is having each one of my limbs doing something different, and that's a groove" (Rizzuto 1993). Usually, bands consist of more than one person. "[Groove is about] creating a relationship between two or more musicians" (Dunn 1993). When interviewed, these two musicians (Rizzuto and Dunn) played together in a band (RedDogSeven) as a bass/drums rhythm section; taken together, their comments show how grooving as one person (unifying consequence-1) and grooving together (unifying consequence-3) are integral. Individual play parts; bands play song. Groove forms bands (bonds) between individuals.¹⁶

Unifying consequence-3 is not only a social phenomenon but also an immediate musical one; that is, musicians negotiate the relationships between themselves by melding the sounds that they make together. This melding is not just communication, or the processing of information (Meyers 1967:Ch1), but communion. "Rock reaches the spiritual by way of the physical...It wasn't Presley that was rock and roll, it was his band." A "band is effecting a transubstantiation nearly as sublime as any priest's" (Carducci 1990:28, emphasis his).

Social Arrangements: Band as an Activity-Bands exist while the members are not grooving together, or even when they are not on the same continent. An extended and shared agreement (e.g., "we are a band") is integral to bands as social institutions. Lawyers draft bands as legal and financial corporations. Conceptualizing bands in terms of groove displaces the permanence of bands as institutions and corporations and posits band as an activity.

Fascism & Bonding in Time-Musicking in grooves with other people is

musicking as one unit. The people I interviewed did not explain how this happens, but were able to describe what grooving with other people is like. "Once you're both locked into the same rhythm and you're able to predict and read into the way each other are playing...that would be a groove. [Groove is] something when you're both thinking along the exact same lines. So...it would be a kind of symbiosis" (Dunn 1993). Some military activity locks people into the same rhythm (see McNeil 1995). The dissolution of self into a troop is integral to a successful war machine¹⁷, so plenty of marching, maneuvering and singing in time together are everyday boot-camp exercises. Similarly, 'thinking along the same lines' is a kind of fascism, a bonding of many into one, and the military promotes this sort of bonding as well. Grooving is dangerous only as political ideology-when it is very dangerous indeed.¹⁸ But, unlike basic training, grooving embodies the duality of community: individuality made stronger through group participation, and vice-versa.

Semi-Automated Bands-Units other than bands also create song. A modern example is karaoke. The singer unites with the machine that plays the accompaniment and the two become cyberorganically related. Just as a musical part can be human or mechanical, the source of the musical part can be human or mechanical. Technology has only recently made it possible to mediate musical parts and song (see Keil 1994:247)¹⁹ create song through interaction with automated mechanical devices. In Malaysia, by the 1970's, the Btsisi' bands which played at weddings accompanied tape recordings of Btisi' music (Dentan 1996).

Conclusion: Unifying Consequence-3-Cross culturally, concepts of what forms a band vary. The interest that unifying consequence-3 introduces, though, is the relationship between the bonding of individual musicians into a band and the real-time bonding of their individual musical parts into one sound, or song. Unifying consequence-3 climaxes in the connections among people who foster and enter grooves while generating song and unite as bands.

Unifying Consequence-4: Happening, Party, Scene

Like the last echo born of a great cry, Sounds as if some fair city were one voice (Tennyson, from "Passing of Arthur").

I've disappeared like a drop of vinegar, in an ocean of honey (Rumi, from "The Ruby").

The fourth unifying consequence of grooving is solidarity between a band and an audience during a live performance. The event becomes bigger than the sum of its parts. People sharing grooves at parties, concerts, dances and ceremonies create a unique happening. An audience member can take part in a number of participatory activities that effect some sort of communion with the band and the song: dancing, singing, tapping a foot, mentally singing along. The level of participation can intensify from just listening to the music to contacting the supernatural beings (unifying consequence-5, see below) which many people think musicking summons (see Plato 1987:157-61, Guthrie 1955:145-83, Lex in d'Aquille 1977, Rouget 1985 [1980], but see Dentan 1996). Grooving at this level is based upon unifying consequence-1, -2 & -3. Unifying consequences pile up to create a broad-reaching completeness.

From the musician's standpoint, performing for people generates different energy. "Well, half the time ten percent of my brain is concentrating on playing. That's just rehearsing, but when you play out it's a totally different magnitude of playing; everything is hyped up and you're excited to play. For me, I'll play faster, which is not necessarily good, but that's what happens to me when I get excited; I hit a certain level of playing for me" (Rizzuto 1993). A live show is a two-way sharing process: the band shares its music with the audience; and the audience members share their energy with the band. Dancing is, perhaps, the most obvious form of audience participation because the band can see it. Dance is both participation in, confirmation of and contribution to the grooving.

Conclusion: Unifying Consequence-4-Unifying consequence-4 falls into line with unifying consequences-1, -2 and -3 in that it unifies separate parts, audience and musicians, into a larger whole through grooves. The unification in unifying consequence-4 is obviously embedded in a larger cultural setting. As global communication and urban isolation increase and tight cultural communities wither, musical events draw many different people together and unite them on intimate levels like unifying consequence-4. Here, I believe, lies the connection between this ethnographic discussion of the consequences of groove and the stress Small, Keil and Feld put on human participation in musicking. Entering modified states of unity through grooving, people are (re)united in ways that television and other media can not recreate (Mander 1978).

Ethnological Speculations: More Unity

Though the people I spoke with did not mention unification with the environment, the supernatural or the universe, I include them as immanent degrees of groove. I speculate that these three levels might be related to groove, and I pose them as unifying consequences-5, -6 and -7. Participatory consciousness, the experience of a human participating knowingly in a larger unity (person, song, band, community, local environment, planet or cosmos) and dissolving into that broader realm is, perhaps, grooving in its most intense expansiveness.

Unifying Consequence 5: Environment

Steve Feld describes Kaluli musical participation in their rain forest environment as a groove (1994:109-150, cf. Roseman 1991). Participation in the sounds of an urban landscape may be similar (e.g., in the case of "industrial music"). People are immersed in planetary sounds and rhythms night and day. Musicking can and does reaffirm that reality for people in many cultures, and such reaffirmation typically involves something similar to what I would call groove. As the quantification of natural resources has reduced some people's consciousness of their environment to graphs on a

computer monitor, musicking with one's environment may be a means of re-establishing some humane contact with the planet.

Unifying Consequence-6: Supernatural

Rituals in which humans contact the supernatural (shamanism) or the supernatural contact humans (possession) may be related to grooving. "As a general rule, possession fit or trance is accompanied by music, and music is almost always regarded as being more or less responsible for its onset" (Rouget 1985 [1980]:73).²⁰ Distinctions between shamanism and possession rest on different uses of music and on who is performing; possessed people do not make their own music; shamans do. In either case, the supernatural and the human plane come together, linking different levels of the cosmos.²¹ For the Batek of Malaysia, "[s]ometimes singing and trancing ceremonies were carried out...when...superhuman beings felt comfortable descending to earth" (Dentan, Endicott, Gomes, Hooker 1996:25). The light trance of groove may prompt participants to go further, to visit their dead ancestors, to ask the gods for some answers or to just experience blissful consubstantiation.

Unifying Consequence-7: The Universe

For individuals in cultures without formal rituals, trained diviners or even belief in supernatural beings, a sense of one-ness and harmonization with larger forces still emerges through musicking, sometimes. When jazz musician Red Mitchell talks about swinging, he depicts a radiance of grooving which might be thought of as a culmination of the unifying consequences into a sense of "cosmic unity."

Everything is vibes, yes, and when it's happening [unifying consequence-2] as we hope it will, we are in communication within ourselves [unifying consequence-1]...with each other, among each other [unifying consequence-3] and, starting with the audience, the rest of the world [unifying consequence-4]. And there are times when the moment most to be desired is reached when we reach what I call the fourth level of consciousness, the super-conscious, when we're really in tune with the vibrations of the universe, I'm just talking

about the fact that there are times that we feel at one with the universe [unifying consequence-7] (Red Mitchell:1992, bracketed phrases mine).

Problems With Conceptualizing Groove

It's Hard to Say

As stated above, musicians don't think their ways into grooves; they play into them. Because of this, how one gets into a groove is difficult to express. The irony of studying phenomena associated with groove is that, to discuss how they are all united in real-time, the theorist must break them into pieces. Without divisive categorization, there is no way to talk. "The obvious reason behind this is that in so doing, one is inevitably translating from the affecting realm to the intellectual realm, and the two are separate universes of being" (Armstrong 1970:75). For example, in unifying consequence-1, I recognize the mind and the body as separate entities, but during musical participation they are one, the complete human being, the whole person. When asked, "What is music about for you?" Dunn answered:

Damn! Conceptual question. OH NO! I don't know. I never thought about it before...I have to talk about music in reference to what other people do because I don't think that conceptually about what I do. For some reason... [music is] something that is always communicated in real-time; it's as if it's actually happening no matter when you're listening to it. It's not something that can be set aside and examined more thoroughly later. It can be re-examined, but its always in real-time as if it's happening again. I think that's part of its power.

J. C. Farmelo adds, "I think it's such a simple, basic thing that I have a hard time over analyzing it. To me it's just a normal thing." And Ornette Coleman writes that, "In music, the thing that matters is whether you feel it or not. You can't intellectualize music; to reduce it analytically often is to reduce it to nothing very important" (1960).

Ontological Tautologies and Infinite Progress

Music moves through time, and some of the difficulties with measuring or analyzing music also happen throughout time. It would appear that some theories devised in an attempt to explain music's meaning also represent issues that do not lend themselves to the static realities of measured (scientific) time, but rather aspects of phenomenological time where more holistic and conceptual approaches seem warranted (Madsen & Fredrickson 1993:47).

Conceptualizing groove ignores the circularity of the grooving moment. To try and grasp theoretically the musician's sense of the groove is to run in theoretical circles that look something like this:

- grooving unifies mind and body; unification of mind and body generate groove
- grooving unifies separate musical parts; unification of separate parts generates groove
- grooving unifies separate musicians; the unification of separate musicians into band generates groove
- grooving unifies band and audience; the unification of band and audience generates groove

These non-descriptive tautologies, by distorting causality, demonstrate how groove works in these particular cases as well as coming as close as I can imagine to spelling out the sensibility of grooving in real-time. This feedback is an infinite regress in which we are always moving back a step in the linear sequence to find a first cause. In real time, for musicians, this motion is an infinite progress, always moving forward and regenerating itself. This situation may be better intuited holistically than understood linearly.

Conclusions

Amenable, Applicable and Extendible

The seven unifying consequences discussed in this article are the beginning of a promising area of study. Do recording and live-sound engineers and producers claim to become one with the band they record or amplify? Can groove unite unborn babies with their awaiting world? Does groove unify musicians and their instruments? Answers to these questions (and others) would amend the unifying consequences of groove.

As a theory, a way of looking at things, the notion of the unifying consequences of grooving could be applicable to different musics separately and comparatively. What are CC-1, 2 and 3 like for bluegrass musicians as opposed to polka musicians? Are the unifying consequences localized among white men in Buffalo, where the interviews occurred; or are there cross ethnic, cross gender and cross cultural regularities? Do children feel the power of music in the same ways as adults, or do different developmental stages carry with them different experiences of groove?

Forget about music altogether...what about athletics, unaccompanied dance, science, poetry, prose, theorizing, zoo-keeping, stock brokering, auto repairing, engineering, nursing, reading, driving, cooking, cleaning dishes, sexual intercourse²² or typing? This list of "ing's" could and should go on and on. Rhythms and textures exist for all activities in daily life. "Oh, I had a rough day." "I've really hit my stride with this new project." The unifying consequences, or similar modified states, may be available to anyone, whether a musician or not. This alternative may prove to be important as we move further and further into an increasingly mechanized and personally atomistic reality.

Social Consequences

In the United States alone, millions of people buy millions of records and spend millions of dollars on concert tickets. MTV is one of the largest successes of the century. I fear, however, as does Progler (1995), that the future promises further mediation, commodification and standardization of grooves. The unifying consequences may be addictive, making the grooves

that produce them a precious commodity. Recorded music junkies exist, and "the industry" sells music as a commodity to a wanting consumer body (music is property by legal definition in the United States) . Yet, active, physical, human participation in the processes of live music and dance affirms life in ways that can not be bought or sold.

I'm not a sociologist or a psychologist, just a lapsed musician, yet I am inclined to think that the unifying consequences encompass phenomena that some people might be missing in their lives as citizens of the industrialized world. "It's like poetry and trying to put more emotion and meaning into life than just your daily activities do for you....It's much more completely removed from life as we know it, and it's centered on much deeper and instinctual feelings...A person always reads himself into music more, and also it seems to ring deeper in people..." (Dunn 1993). Perhaps the daily grind should be countered with the grooving grind. People want to feel that they are part of a larger whole to which they contribute and in which they actively participate.

In a world in which authoritarian power is maintained by means of superior technology, and the superior technology is supposed to indicate a monopoly of intellect, it is necessary to show that the real sources of technology, of all culture, are to be found in the human body and in cooperative interaction between human bodies (Blacking 1973:116).

The unifying consequences are processes through which people get in touch with their bodies, selves, arts, communities, environments, religions, universes and especially each other. Working toward some social and technological rebalancing for a less mediated life where culturally rich communities could nourish their grooves and their unifying consequences may be difficult, but it is not romantic.²³ Rather, it is romantic to imagine that people can go through life healthily and happily without some groove-like experiences and all the consequences that those experiences can entail.

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1) That people think of groove as an African-American word is important. Investigation of the validity and implications of that claim would be an interesting look at race relations in the US and elsewhere.[Back](#)

2) Herz's racism is irrelevant when it comes to understanding music. Understanding groove, might make us less anxious about racial "intuitions" such as Herz's. Hodeir's discussion of swing (1965:195-209) is similarly littered with racial categorizations that imply an inherent ability to relax which is built into Africans and African-Americans and absent in Anglos.[Back](#)

3) Small notes that the verb "to music" appears in the OED up until the 15th century. The French verb musiquer "is hardly used nowadays, but...was used not so very long ago and figures in the well-known French Littré dictionary" (Rouget 1985:103). Why these words have fallen out of use is an interesting question. I speculate that rising commodification of and declining participation in music since the industrial revolution has something to do with it.[Back](#)

4) Alén used an older analog Winckel machine back in the 1970's; Jairazbhoy used an oscilloscope during the 80's; and Progler got his micro-view of participatory discrepancies digitizing on a Macintosh computer during the

early 1990's (See Jairazbhoy 1983, Alén 1995, Progler 1995).Back

5) Musicians playing the Western canon, for example, do not talk about grooving, but they do recognize transcending technique as a way of playing with "feeling."Back

6) Consideration of groove as a quality located in music (i.e., groove as an audio phenomena) and how musicians talk about that still begs investigation (but see Progler 1995). Some who write about music mention something like groove (Cantwell 1984:Ch 3-4). "Rock reaches the spiritual by way of the physical; it requires an aesthetic of fully integrated completion" (Carducci 1990:28). Still, such claims beg for ethnographic back-up because groove is contingent on perception.Back

7) While grooving, a person's knowledge of how to make music might shift from one part of the brain to another, and, if this is true, brain studies could be another kind of empirical groovology. Entering trance may involve "a shift to the mode of consciousness characteristic of the right cerebral hemisphere, associated, according to Ornstein (1972:178), with perceptions of unity and holism" (Lex in d'Aquili 1979:144). Sloboda suggests the same thing in the opposite direction, speculating that an analytical approach to musicking may cause "an hemispheric shift, from right to left" (1992:114). Note that Lex, Sacks, Sloboda and the people I interviewed all report something like a different mode which musicians enter while musicking.Back

8) Among the people I interviewed, "part" is a common term meaning the contribution of each musician to the whole. For example, "the drummer's part is really great on that section of the song." Distinguishing between part and song is most relevant when two or more people are playing together; each will play musical parts, but the song between them is something else all-together. Richard Middleton (1990) calls musical parts "musemes," meaning "repeated sound particles that provide the rhythmic `layers' of jazz and r&b" (Frith 1996:151).Back

9) The last dichotomy suggests that humans are not part of nature; and for that reason I am reluctant to use it. However, when discussing human activity as it intermingles with the rest of an environment's activity, these categories will be useful. Due both to the content of the interviews, which did not include nature, and in order to focus on human interaction, I will mostly discuss human and mechanical sources of sound. Steve Feld's writings about the Kaluli of Pupa New Guinea indicate that music is being shared/created with animals, rain and the many other sound makers of the rainforest (see also Roseman 1991).Back

10) Mental musical entities are, of course, only human products, though, paradoxically, they are silent. The only evidence supporting the existence of mental musical entities are accounts of songs, tunes and sounds in people's heads and a personal, introspective comprehension of music happening in my own head without corresponding vibration of my eardrums; most people will recognize this description of the experience. "There's constantly music going on in my mind" (J.C.Farmelo 1993).Back

11) However, Blacking, speaking of Venda drummers, notes that, "if two drummers play exactly the same surface rhythm, but maintain an individual, inner difference of tempo or beat, they produce something more than their individual efforts" (1973:28). Perhaps unsounded mental musicking is important in material grooves for Venda drummers.Back

12) Recorded music often gives rise to participatory dancing, though the feedback loop between audience and band is missing. DJ's have the ability to tailor their musical choices for the dancers. Live musicians do the same thing, though from moment to moment live bands have two distinct advantages: 1) they can tailor their performance on the spot; 2) they can model unity for the dancers.Back

13) Stewart devised a "feel spectrum" which charts various kinds of groove with various millisecond increments as the gradation scale (1987, cf. Progler 1995:24).Back

14) Following Alan Lomax (1959), global categorization of musical style is an interesting way to investigate social structures and how they form patterns. Measuring participatory discrepancies in different cultures might give us some sense of how social structure bears on human grooving. One might speculate, as does Charles Keil (personal conversation), that oppressive social structures which muffle personal autonomy and over-specialize daily routines characterize societies which need more grooving and get the least. [Back](#)

15) Computer generated representations of participatory discrepancies imply—as does musical notation in general—that participatory discrepancies are in the music, not in the musicking. This happens, I think, for two reasons: 1) we often refer to 'recorded performance' as 'recorded music;' and 2) visual representations of sonic phenomena are too abstract and, paradoxically perhaps, too stable to be very good. Ethnographers transcribing taped interviews recognize this problem (Tedlock 1972:xviii). Linguists, too, understand the limitations of computer generated representations of sound phenomena. [Back](#)

16) The interaction of musicians within a band is analogous to that of an athletic team. Bill Monroe, the Father of Bluegrass, set up baseball teams with the same members as his band (Rosenberg 1985:59-60). Given that my ethnographic work was with men only, and that sports analogies are gender specific, I cite Karen Linn: "Bluegrass has been a male-dominated music, and performances, especially for informal pick-up bands, tend to have the competitive spirit of an athletic contest (another traditionally male-dominated world)" (Linn 1991:148). Groove, however, is a human phenomenon, only gender bound because of socialization (i.e., boys play baseball; boys play rock-n-roll/girls do gymnastics; girls dance ballet). [Back](#)

17) The military reasoning behind moving together in time has as much to do with dissolving the self in order to reduce fear of personal slaughter as with a "well oiled machine." [Back](#)

18) Hitler, for example, knew and used the power of musicking and marching

together as a way toward thinking alike.[Back](#)

19) Mechanical music has been around longer than recordings (e.g. player pianos, music boxes). Recordings can reproduce the sounds of what was, only at the time of the recording, people musicking. Schafer describes this schism between performance and reified sonic experience of the performance (i.e., play-back) as "schizophonia" (1977:90).[Back](#)

20) Rouget makes use of the French verb, *musiquer*, meaning to music. This word is no different than Small's rejuvenation of the old English verb to music, however it should be noted that they each use the verbs as means to different ends. Where Small emphasizes the idea that musicking is human action, thus warranting the use of a verb over a noun, Rouget emphasizes that some people are musicians and musicants while others are musicated. Small's verb is intransitive, taking no objects while Rouget's verb is transitive, taking direct objects. In this grammatical distinction lies an important difference between two very different theories.[Back](#)

21) Rouget makes the case for a fusion of physiological and cultural explanations of trance: "If one particular rhythmic is thought to trigger trance in one region, and in another quite a different rhythmic performs the same function, the reason must be that any rhythmic, or any rhythmic system...can do the job as well as any other...If this were the case it would mean that the action of rhythm-and therefore of music-in triggering trance is of a physiological order. Everything points to the contrary: the relations between rhythm and trance operate at the level not of nature but of culture" (Rouget 1985 [1980]:90-1). Groove results from human participation in the musicking. What Rouget's argument clarifies is that the effects of music on people depend on their participation not only in the musical act but also in an entire cultural framework. [Back](#)

22) Sexual intercourse is an obvious and commonly recognized parallel to the creation of music, especially the formation of a groove between participants, the presence of rhythm and a desired but deferred gratification. See also,

Dentan (1996) on the sexual overtones of Semai seance and musicking and Frith (1996:157).Back

23) I owe my distinction of what is romantic and what is not to Jerry Mander's book *Four Arguments for the Elimination of Television*. In this critique of TV, Mander explains that the romantic vision is that of a technologically based society in which the participation of individuals is reduced to staring at the tube in a trance.Back

References Cited

Alén, Olavo.

1995. Rhythm as Duration of Sounds in Tumba Francesa. *Ethnomusicology*, 39:55-72.

d'Aquili, Eugene G., et al.

1979. *The Spectrum of Ritual: a Biogenetic Structural Analysis*. New York: Columbia University Press.

Armstrong, R. P..

1970. *The Affecting Presence: An Essay in Humanistic Anthropology*. Illinois: University of Illinois Press.

Barfield, Owen.

1965. *Saving the Appearances: a Study in Idolatry*. Hanover, New Hampshire: Wesleyan University Press.

Blacking, John.

1973. *How Musical is Man? Seattle and London*. University of Washington Press.

Brown, E.J..

1993. "Talking with Oliver Sacks: Physician and Storyteller" (and interview) *Advance for Speech-Language Pathologists & Audiologists*, Issue February 15, 1993:11.

Cantwell, Robert.

1984. *Bluegrass Breakdown: The Making of the Old Southern Sound*. New York: Da Capo Press.

Carducci, D. Joseph.

1990. *Rock and the Pop Narcotic*. Chicago, Ill.: First Edition: Redoubt Press.

Chernoff, John Miller.

1979. *African Rhythm and African Sensibility: Aesthetics and Social Action in African Musical Idioms*. Chicago: University of Chicago Press.

Clark, Michael.

1996. Untitled course paper. Department of American Studies, SUNY Buffalo.

Coleman, Ornette.

1960. From the liner notes in "Change of the Century" as told to Gary Cramer. California: Atlantic Records, Atlantic 1327.

Crafts, Cavicchi, Keil et. al..

1993. *My Music*. Hanover & London: Wesleyan University Press.

Dentan, Robert Knox.

1996. *Dealing with Demons*. Manuscript in author's possession.

Robert Knox Dentan, Kirk Endicott, Alberto G. Gomes, M.B. Hooker.

1996. *Malaysia and the Original People: A Case Study of the Impact of Development on Indigenous Peoples*. Boston: Ally and Bacon.

Dunn, Michael.

1993. Interview with Allen Farmelo. Fall 1993.

Farmelo, John.

1993. Interview with Allen Farmelo. Fall 1993.

Feld, Steven.

1988. *Aesthetics as Iconicity of Style, or 'Lift Up Over Sounding': Getting into the Kaluli Groove*. *Yearbook for Traditional Music: International Council for Traditional Music*.

Frith, Simon.

1996. *Performing Rites: On the Value of Popular Music*. Cambridge, Mass.: Harvard University Press.

Gallick, Lawrence.

1993. Interview with Allen Farmelo. Fall 1993.

Guthrie, W.D.C..

1955. *The Greeks and Their Gods*. Boston: Beacon Press.

Hamm, Charles.

1994. *Genre, performance and ideology in the early songs of Irving Berlin*. *Popular Music* 13, No. 2. Cambridge University Press.

Herz, Henri.

1866. *My Travels in America*. Trans. Henry Bertam Hall (Madison, Wis.: Historical Society, 1963). Originally published in Paris as *Mes Voyages en Amerique*.

Hodeir, Andre.

1956. *Jazz: Its Evolution and Essence*. New York: Grove Press.

Jairazbhoy, Nazir A.

1983. Nominal Units of Time: A Counterpart for Ellis' System of Cents. *Selected Reports in Ethnomusicology* 4:113-124.

Kaltenmark, Max.

1965. *Lao Tzu and Taoism*, trans. Roger Graves. California: Stanford University Press.

Keil, Charles.

1987. Participatory Discrepancies and the Power of Music. *Cultural Anthropology* 2 No.3.

1995. The Theory of Participatory Discrepancies: A Progress Report. *Ethnomusicology* , 39:1-19.

Keil, Charles & Feld, Steven.

1994. *Music Grooves*. Chicago, IL: University of Chicago Press.

Kelly, Geoff.

1993. Interview with Allen Farmelo. Fall 1993.

Koetting, James.

1970. Analysis and Notation of West African Drum Ensemble Music. Selected Reports in Ethnomusicology 1/3:116-46.

Linn, Karen.

1991. That Half-Barbaric Twang:the Banjo in American Popular Culture. Urbana and Chicago. The University of Chicago Press.

Lis, Eduardo.

1996. Creating a New Tradition: The Brazilian Jazz Experience in North America. Thesis (M.A.), York University.

Lomax, Alan.

1959. Folk Song Style. The American Anthropologist 61:927-54.

Madsen, Clifford K. & Fredrickson, William E..

1993. The Experience of Musical Tension: A Replication of Nielsen's Research Using the Continuous Response Digital Interface. Journal of Music Therapy XXX (1) by the Association for Music Therapy, Inc..

Mander, Jerry.

1978. Four Arguments for the Elimination of Television. New York: Quill.

Marshall, Lorna.

1969. The medicine dance of the !Kung Bushmen. Africa 39:347-81.

McLuhan, Marshall.

1964. Understanding Media: The Extentions of Man. New York: McGraw Hill.

McNeil, William.

1995. *Keeping Together in Time: Dance and Drill in Human History*. Cambridge: Harvard University Press.

Merriam, Alan.

1964. *The Anthropology of Music*. Illinois: Northwestern University Press.

Meyers, Leonard B.

1956. *Emotion and Meaning in Music*. Chicago. University of Chicago Press.

1967 *Music, the Arts, and Ideas*. Chicago. The University of Chicago Press.

Midleton, Richard.

1990. *Studying Popular Music*. Milton Keynes: Open Univeristy Press.

Mingus, Charles.

1992. *Purple Heart* (includes "Groovy" from the unpublished sections of *Beneath the Underdog*) on *Hal Werner Presents Weird Nightmare: Meditations on Mingus*. New York: Columbia Records (52739).

Mitchell, Red.

1992. *Interview with Charles Keil*. March, 1992.

Mitchell, Stephen., trans.

1988. *A New English Version of "TaoTeChing"*. New York: Harper and Row.

Plato.

1987. *The Republic*. London: Penguin Books.

Progler, J.A..

1995. Searching for Swing: Participatory Discrepancies in the Jazz Rhythm Section. *Ethnomusicology* 39:55-72.

Reinholdssen, Peter.

1987. Approaching Jazz Performances Empirically: Some Reflections on Methods and Problems. In A Gabrielsson ed., *Action and Perception in Rhythm and Music*. Royal Swedish Academy of Music, No. 55.

Rizzuto, Lawrence.

1993. Interview with Allen Farmelo. Fall 1993.

Roseman, Marina.

1991. *Healing Sounds from the Malasian Rainforest: Temiar Music and Medicine*. Berkeley: University of California Press.

Rosenberg, Neil.

1985. *Bluegrass: a History*. Illinois. University of Illinois Press.

Rouget, Gilbert.

1985 [1980]. *Music and Trance: A Theory of the Relations between Music and Possession*. Chicago: University of Chicago Press.

Rumi.

1986. *Unseen Rain: Quatrains of Rumi*, trans., John Moyne and Coleman Barks. Brattleboro, Vermont: Threshold Books.

1988. *These Branching Moments*, trans. John Moyne and Coleman Barks. Providence, RI: Copper Beech Press.

1993. *Love is a Stranger*, trans., Kabir Helminski. Brattleboro, Vermont: Threshold Books.

Schaffer, R. Murray.

1977. *The Tuning of the World*. New York: Alfred A. Knopf.

Shultz, Alfred.

1964. *Making Music Together*, in *Collected Papers, Volume 2*. The Hague: Martinus Nijhof.

Sloboda, J..

1985. *Expressive Skill in Two Pianists: Style and Effectiveness in Music Performance*. *Canadian Journal of Psychology* 13:326-376.

1993. *Musical Ability*. *CIBA Foundation Symposium* 178:106-118.

Small, Christopher.

1987. *Music of the Common Tongue*. London: John Calder (Publishers) Inc.

1994. *Whose Music Do We Teach Anyway?* (A paper originally presented to the Music Educators' National Conference in Washington, D.C., March 28th, 1990) Buffalo, NY, *MUSE LETTER #2*, Keil & Farmelo editors.

1995. *Musicking and The Pattern that Connects*. A talk presented by The State University of New York at Buffalo Music & American Studies Departments on March 20th, 1995. Buffalo, NY.

Stewart, Michael.

1988. Creativity, Recording, and the Conscious Mind. *Electronic Musician*, November 1988:44-8.

Tennyson, Alfred, Lord.

1993. "Idylls of the King: The Pasing of Arthur," in *The Norton Anthology of English Literature*. New York: W.W. Norton & Co., Inc..

1993. "In Memoriam," in *The Norton Anthology of Literature*. New York: W.W. Norton & Co., Inc..

Waterman, Richard.

1952. African Influence on the Music of the Americas. In *Acculturation in the Americas*, ed. Sol Tax, 207-18. *Proceedings of the Twenty-ninth International Congress of Americanists*, vol. 2. Chicago.

Webster, Merriam.

1971. *Webster's New Collegiate Dictionary*. Springfield, Mass: G&C, Merriam Company Publishers.

1984. *Webster's New Collegiate Dictionary*. Springfield, Mass: G&C, Merriam Company Publishers.