

# Musical Archetypes and Collective Consciousness: Cognitive Distribution and Free Improvisation

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After a concert of freely improvised music, the most common questions I get are “Was that ‘all’ improvised?” and “How do you do that?” The first question is easily answered with a simple “Yes.” I find the second question is much more difficult and much more interesting to answer in conversation with audience members, but in fact both questions are inextricably intertwined. What is it that happens when a group of musicians improvises together? How do they do it? As in many activities of an artistic nature, there is a mystical element to musical improvisation. This mystical element is sometimes enhanced by the artist’s own desire to be seen as a kind of isolated genius with an exclusive access to the Muse. There is obviously no empirical way of discovering or describing this process, but perhaps it is less mysterious than we generally believe. As C.G. Jung put it in *Modern Man in Search of a Soul*,

In dealing with the psychological mode of artistic creation, we never need ask ourselves what the material consists of or what it means. But this question forces itself upon us as soon as we come to the visionary mode of creation. We are astonished, taken aback, confused, put on our guard, or even disgusted—and we demand commentaries and explanations [ . . . ]. The obscurity as to the sources of the material in visionary creation is very strange, and the exact opposite of what we find in the psychological mode of creation. We are even led to believe that this obscurity is not unintentional. (158)

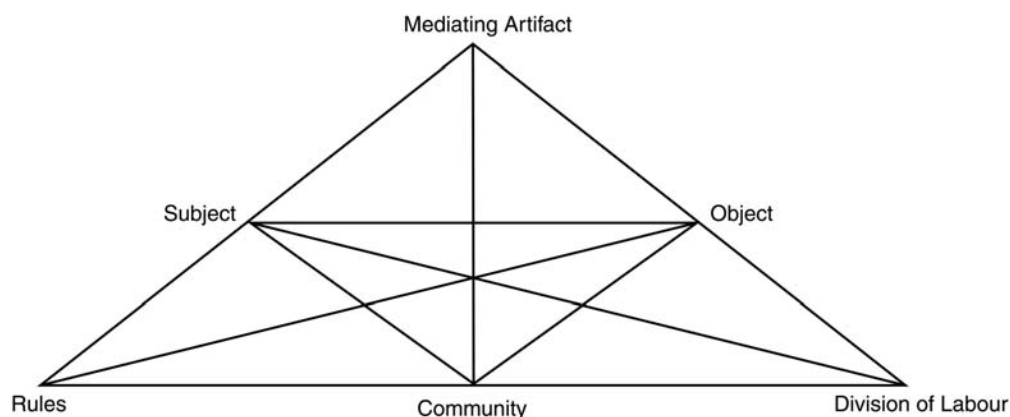
By “psychological mode” Jung means creation at the level of craftsmanship or manipulation of elements within a pre-defined system – the conscious construction of the art work. “Visionary creation” refers to the inexplicable core of artistic endeavour – what is expressed and why. My research on this topic of visionary creation consists of many years of performing as an improvising musician and a lot of thinking about what it is that I do. By applying the ideas of cognitive distribution and activity theory (Engeström, Miettinen, and Punamäki) to my own performance experience I hope to gain some insight into the questions of how improvisation produces music and what goes on within and between improvisors.

## Cognitive Distribution

Though my initial research into cognitive distribution was prompted by the work of Engeström, Miettinen, and Punamäki, this concept was pioneered in the early 20<sup>th</sup> century by George Herbert Mead, Wilhelm Wundt and Lev Semenovitch Vygotsky. As I investigated the origins of this concept, I discovered that writings of the latter three authors were more fruitful when speaking about music. The idea of cognitive distribution helps us understand that human cognition occurs not solely in the mind of the individual

but rather that objects and environment play a critical role in thinking and feeling. In *Outlines of Psychology*, Wundt suggests that it is impossible to account for complex mental functions without examining social, mythological, and historical factors which form the background and structure for such functions. Through his experiments with children's problem solving skills (documented in *Mind in Society*), Vygotsky tried to show how the development of what we consider to be purely mental processes like problem solving or imagining a work of art can only develop through, and are in fact dependent on, physical processes. This is a radical notion that has generally been taken to mean that social interactions, and interactions with objects and symbols, significantly affect and are integral to cognition. On a deeper level, there is embedded another more metaphysical notion that cognition may literally be shared among individuals through the mediation of objects, tools, symbols, and signs. To say that cognition is distributed between mind and object or between two or more minds is to imply that there is some unexplainable connection at play, that there is a "something" there which defies quantitative descriptions but which is essential. I will refer to this something as the collective conscious.

A group improvisation is a complex social phenomenon. During a performance, there is a subtle, web-like interplay of individual psychological needs and intentions, technical tasks and difficulties associated with playing musical instruments, awareness of the audience (if the performance is public) and, most centrally, conscious and unconscious reactions to sound stimuli. Cognitive distributions in this context occur between musician and instrument, between or among two or more musicians, and between musicians and the music itself. Vygotsky developed a model which showed the dialectical relationships among mediational artifacts, stimulus, response, and action. It was he who first demonstrated how higher intellectual functions are dependent on and develop from social and physical environments, gradually becoming what we often think of as purely mental processes. Beyond notions of development, Vygotsky's research suggests that any activity, such as making music, which involves the intellect in conjunction with physical processes, is essentially connected to and inseparable from operations in the physical and social world. Engeström, Miettinen, and Punamäki, show how such cognitive distributions may be mapped on a "mediational triangle," as in Fig. 1 below, in order to represent how mind is thought to interact with various elements of the activity system. The lines represent connections and interrelationships among aspects of the activity.



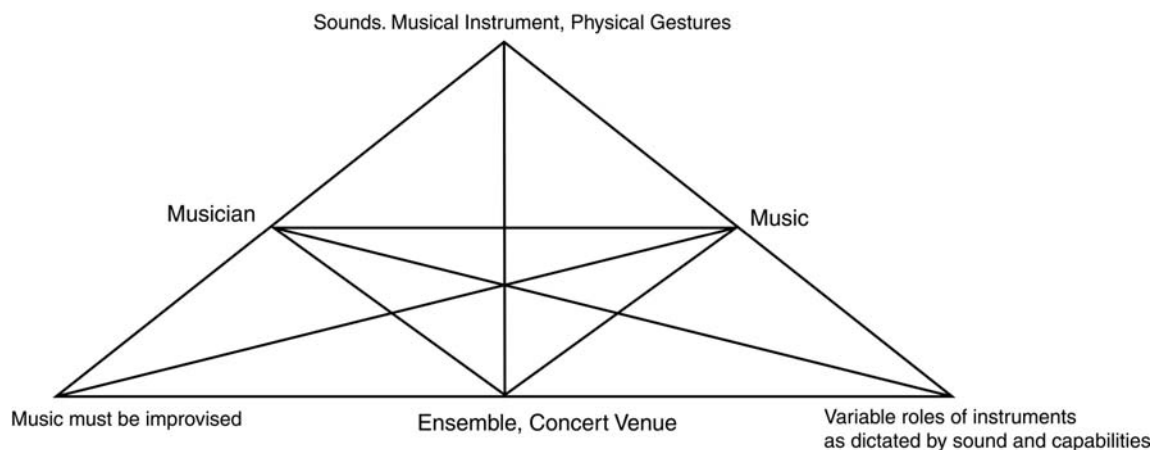
**Fig. 1. Mediation Triangle**

The mediational triangle in Fig. 1 expands on Vygotsky's initial research with mediational artifact, stimulus, and response to include social factors such as rules, community and division of labour. This helps us to understand cognitive distributions within more complex social interactions. The kind of analysis represented by Fig. 1 has come to be called activity theory. This model has proved itself valuable in analyzing a wide variety of activities and with some qualifications and modifications we can use it to help understand the elements at play in a musical improvisation.

### **Improvisation and the Mediation Triangle**

Of course the triangle model (or any kind of diagram really) is based on a rational conception of knowledge which relies on labeling and pinning down elements of a complex phenomena and as such is problematic in a discussion of something as elusive as music. I have no interest in rationalizing the activity of music-making through empirical observation, nor do I think it is possible to understand improvisation through identifying its constituent parts. Nevertheless, there are some questions and problems that arise through the highly rational diagramming process which help to show the complexity of improvisation and give us certain insights which will increase our understanding of it.

If we take the Subject to be an individual musician (without making the distinction between mind and body, conscious or subconscious aspects of mind) and the Object of the activity to improvise a piece of music, a first attempt at mapping a mediational triangle for improvisation might look like Figure 2. The improvising quartet with which I perform, and which will be the subject of this analysis, consists of Rob Kohler (string bass), Sonya Lawson (viola), Alex Kelly (cello), and me (guitar). With this ensemble in mind, let us begin asking questions about the mediational triangle.



**Fig. 2 Modified Mediation Triangle**

First of all, what is the mediating artifact? On the simplest level, the artifact is the musical instrument itself. The instrument is the immediate link between the mind of the musician and the community outside. A musician's thinking is intimately tied to the instrument simply because it is the thing which produces sound. The limitations of the instrument and the performer's ability are central in determining what is expressed to the community. The musical background of the player is obviously key in determining how they understand and use the instrument. Each instrument also has unique sonic characteristics which cause the player to use it in a different way from other instruments of the same type.

The instrument is also of central importance in determining the division of labour in the activity since each instrument has distinctive features that make it more suited for certain tasks. For instance, in our group the cello is more capable of long sustained tones than the guitar, so I assume that Alex will use this quality while I make more use of the guitar's inherent harmonic capabilities. Similarly, Sonya is limited by how low she can play given the viola's natural range. This limits her cognition in the sense that she knows that there is no point in thinking about notes that are lower than the ones she can play. Of course, any of us is quite likely to try and subvert these qualities in order to produce a musical effect, but in that case the fundamental division of labour is a point of reference against which to push.

There is a small problem with placing "instrument" where it is in Fig.2. The problem is the obvious fact that the instrument is an intermediary between mind and sound. The triangle does not do a very good job of showing hierarchical relationships such as the one present here – especially since we usually think of the items at the top of the triangle as being more important and this is clearly not the case here. The "sound" produced by the instrument is clearly the most significant mediating factor in the overall activity. Music is made up of sound and sound is the central medium of cognitive interaction among musicians. What we learn about the triangle model here is that even elements of the activity which we group together at one "point" are as interdependent as the other elements whose connections are shown by lines. We could quite easily

continue by drawing several other triangles, or flipping this one onto its various sides to show interrelationships between elements or further levels of complexity at each point of Fig. 2. Upon closer consideration, we can see another hierarchical relationship that is problematic. Is music really the object or could the object simply be the production of sound? Is there a difference? Could music be “both” object and artifact? These potential confusions cannot be accounted for in this diagram.

Let us explore the triangle a bit more. The diagram states that all the music must be improvised. For the groups that I play with this is the simplest and most obvious rule since we do not rehearse, do not discuss the music and do not use notation of any kind. There could be other approaches to improvising which might require more or different rules, and in our group we might elaborate further rules based on the conditions which usually prevail in our performances:

- the musicians should have instruments (including their voices)
- the musicians should play together in the same room
- the musicians should listen to one another and use listening as a basis for the creation of further sounds

These rules are generally held and determined by the community of four performers which we are discussing. The community may include an audience if the performance is public. There would be other rules imposed by the presence of an audience which might possibly include the following:

- the performance will last about one hour (or some other specific time)
- the musicians will play more or less continuously with a few short breaks
- the musicians are the performers and the audience members are the spectators (though it is equally possible that some artists may view the audience as participants)
- the audience will listen and sit quietly

Let us try the model by examining a “script” of a brief moment of an imaginary performance. The script is written from the perspective of one of the group members; let's choose Sonya, the violist, as the subject.

**THOUGHT/FEELING:** the idea (or perhaps the feeling of a need) for a loud, screeching sound originates in Sonya’s mind. This sound may have been discovered in some previous physical process (past practice or performance sessions) or it could be discovered in the moment of improvising. This demonstrates that we cannot even begin to describe improvisation as a purely mental activity; sound is physical and the imagination and reproduction of sounds requires a physical process. Improvisation is of necessity rooted in the nature of the sound-producing tools: instruments and bodies.

**ACTION:** Sonya begins the piece by violently drawing her bow across the strings,

creating a loud, high, screeching sound.

**MEDIATIONAL EXPERIENCE:** The sound is created by the instrument (mediators of the idea or feeling), hence becoming part of the music (the object of the activity).

**COMMUNITY REACTION:** The sound is perceived as loud and harsh by other group members. Sonya may be indicating that she wants this to be the overall feeling or direction of the piece – hoping to elicit similar sounds from members of the group – or it could be that she is inviting others to present some kind of contrast. Rob and Jared both choose to play low and quiet sounds to contrast with Sonya's screeching. Jared chooses the contrast because it would be really difficult to make his acoustic guitar screech. Rob could make pretty good screeching sounds on his bass through utilization of certain techniques but he is tired and would rather play gentle low sounds. Alex, on cello, likes Sonya's opening gesture and chooses to add some screeching sounds of his own.

**SONYA'S REACTION:** she is pleased by the sound – she realizes that it was louder and even more obnoxious than she hoped. She was hoping the whole group would get into loud, harsh sounds and is somewhat disappointed that Rob and Jared have decided to go in another direction. Nevertheless, she also likes the contrasting sounds which make her idea seem quite wild.

**MUSICAL RESULT:** the music now consists of two contrasting types of sounds. The group reacts not only to Sonya's initial gesture (it is subsumed in the overall object of producing a piece of music), but also the interesting textural contrast that has occurred. This becomes a kind of musical sign and a stimulus against which further reactions take place.

Obviously, these events listed in such a linear fashion would happen more or less simultaneously and similar chain of actions and reactions would occur for each person in the group. A cognitive distribution has occurred; initially a simple distribution of Sonya's opening gesture to the group, but then a much more complicated set of distributive interactions among members of group and the music itself. This process then proceeds with various players adding their contributions. As each new element is added, it becomes subsumed in the overall tapestry of aural stimuli, and these stimuli form the basis for further thought and action. Because all members of the group both react and contribute to the same set of stimuli, their cognition is linked in a profound fashion. Once certain sound-actions have been brought into play, the players construct a kind of group meaning from those actions.

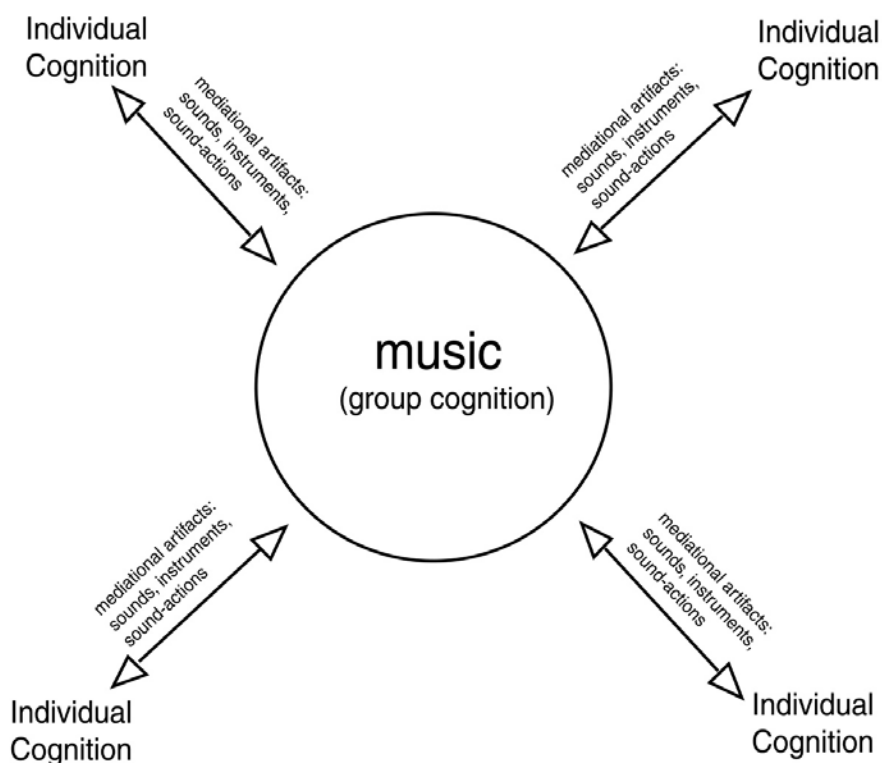
Vygotsky described a similar process when he observed that many young children are not able to name exactly what they are drawing (a house, or a cat, and so forth) until after the drawing is finished. He suggests that the process of drawing is distributed between the external materials and activity of drawing and the internal, mental desire to make the work of art. In this case, the mind produces its own stimuli through interaction

with crayon and paper, reacts to the resulting visual stimuli, and then produces another set of stimuli based on the new information – a recycling of action and reaction. The child gradually forms those experiences into a kind of catalog of activities or cognitive tools based on the effects they produce. These cognitive tools form the basis for more abstract planning and reasoning about art. The child's drawing proficiency increases with her experience of cause and effect interactions with the materials. Of course, we know that if the child continues to draw, perhaps becoming a great artist, this process of discovery through doing may "seem" more and more deliberate and calculated. While people are capable of building a wide repertoire of drawing skills and ideas related to the activity, it is the actual act of drawing and seeing the results which is most central to the activity. The drawing can be planned or conceptualized in the mind, but it must always be realized in the physical world; the art in the mind cannot exist without mediating tools of pen and paper.

Mead saw the development and implementation of such higher mental functions as rooted in just this kind of social interaction. He describes the nature of what might be termed "social cognition" in this way: "Thought not only involves communication, but also the production in the individual of the very reaction he provokes in others. One partakes in the process that the other individual carries out, and one guides one's actions from this participation" (qtd. in Monteil and Huguet 126). The centrality of the physical act is more clearly demonstrated when other participants are brought into the activity. A dramatically slowed-down, visual analogy might be a group of weavers improvising the weaving of a tapestry with no pre-determined design or pattern. All the participants can see the total result of their efforts, but none can be sure of what the contributions of the others will be. Similarly, there is no group idea of what the sound of an improvisation will be until after it is begun, at which point each player defines the sound in terms that make musical sense to them. No matter how carefully the players plan or think about the sounds they would like to make, no matter how skillful they may be, they cannot escape the fact that sound must be produced in the physical world and perceived with the ear.

### **An Alternative Model**

My alternative to the mediational triangle is Fig. 3. It shows the relationships among players and music through the kinds of mediational artifacts we have been discussing.



**Fig. 3. Group Cognition**

Fig. 3 shows a kind of hierarchy of mediations which is a bit more accurate than the triangle. Both arrows and circles represent mediational relationships of different kinds. The two-way arrows show the contribution and interchange of musical ideas between individuals – through the mediating influences of instruments and sounds – to the central circle, the aural tapestry which is a kind of nexus for distributing cognition. Unlike the triangular model, Fig. 3 shows that music is not just the object of the group activity, but is also the mediational artifact central to the activity.

Proficiency as an improviser must comprise the ability of the performer to react to aural stimuli and contribute her own ideas and sounds while weighing the complex range of possibilities presented by the group of players and instruments. The experienced improviser often makes certain musical gestures with the intention of directing the outcome of the musical performance by altering the aural tapestry in ways that may suggest actions to the other members (as in Sonya's initial gesture in our example). Improvisational skill is also based on the ability to "predict" the musical result of personal sound-actions or the actions of others based on previous sound-actions manifest in the remembered aural tapestry. These predictions may be subverted or confirmed by the actual outcomes of group interplay.

This model of improvisation does account for some of the ways in which group members interact but it also exposes some fundamental questions. What is it that allows the musician to interpret his sound-actions or those of others in a way that allows for the production of a coherent, musical, group statement? Do certain sound-actions



function as signs which can be universally interpreted? After a recent concert, Rob was speaking to an audience member about our performance. The audience member had asked something along the lines of our initial "How do you do it?" question. Rob told the person that our playing was like "a conversation with an old friend." In good conversations with old friends, one does not have to think about when to stop or how to proceed. In a conversation, such matters seemingly take care of themselves. The dialogue proceeds not by planning or conscious direction, but through a complex set of conscious and unconscious signals between conversants. Despite its essentially dialectically negotiated nature, a good conversation generally develops an overall narrative structure, usually around certain issues that seem important at the time (relationships, children, money problems, and so forth). Certain comments or subjects provoke ideas, feeling, or directions in the conversation. As with Vygotsky's drawing child, we don't know what the conversation will be like until we are finished. If we have known our conversant for a long time, there will be many things such as shared experiences, knowledge, or previous conversations which we do not need to discuss or explain. In fact, the literal semantics of the conversation may be almost peripheral to the real emotional substance of the interpersonal exchange. There is an essentially spiritual element to communication between friends. Let's keep his analogy in mind as we continue with our exploration.

## **Musical Archetypes**

Thinking of musical gestures as signs or elements of a musical vocabulary is an attractive idea on the surface. It suggests that musicians could learn a repertoire of these signs and formulate actions or reactions based on durable meanings. The same sounds can have radically different effects in different contexts. Sounds cannot hold consistent meanings outside of predetermined and highly organized tonal or rhythmic systems. We could "construct" a system, such as the Western tonal harmonic system, where sounds might acquire certain meanings, or demand certain outcomes, but such a system is not "essential" to making music. Such a system could not be present in a group improvisation among players of divergent backgrounds who have never played together before, yet such groups often make wonderful music together. After a performance, an audience member will often ask, "How do you know when to stop?" I usually respond, somewhat cheekily and to the obvious chagrin of the well-intentioned inquirer, by saying, "We stop when it is finished." This is a seemingly simple, yet critical exchange of information which goes to the heart of the matter; it reminds us of the conversation once again.

If we follow the activity theory of improvisation we have just produced, there must be present some sound or sound-action, either produced by one player or an emergent quality of the aural tapestry, which suggests that a piece of music should stop. Yet, as in the example of the child not naming her drawing until it is finished, the players really don't know how it will end until it seems complete. What is it that completes the music? In a tonal harmonic system, there are specific root movements and voice-leading events which indicate stopping or coming to rest at a certain point. In the Indian *tala* system,

the performance derives its distinct shape and structure from the agreed-upon rhythmic cycle in use and the piece inevitably ends at the beginning of a repetition of the cycle. Without such predetermined systems, the array of possibilities for “ending gestures” becomes infinitely large. For example, let us imagine the ending of a group improvisation from our quartet. A very quiet, sustained sound is produced, sustained by the cello, bass, and viola playing with their bows while the guitar quietly and slowly plucks a single note. How do we know when or if the piece should end? Perhaps the sound will simply fade out, perhaps one player will stop playing and others will decide to stop in turn, perhaps someone will make a single loud contrasting sound that will shatter the mood and stop the piece. We could go on imagining possibilities for a very long time and would find that there cannot be a single gesture linked to the idea of ending, yet somehow we do come to the end.

Whatever occurs to end the piece, the “ending gesture” must be cognitively distributed from one or more players to the rest of the group, or collectively produced as an emergent “ending quality” in the medium of the music; communicated through the perceived aural tapestry to other group members. In this case, an activity theory model, a system of stimuli, actions, reactions, and interactions, does not adequately explain what occurs. Indeed, activity theory fails in this respect because its logic is derived from an essentially scientific viewpoint. It is concerned with describing the qualities of an observable process, and there are many phenomena connected with improvisation which are simply not observable.

In our “how do we end” example, there is clearly a deep level of connection which allows improvisors to come to collective decisions about the direction and general harmonic, rhythmic, textural, and timbral features of an improvisation. As I mentioned before, the very notion that cognition can be distributed implies a connection that goes much deeper than a simple stimulus-reaction explanation. I suggest that the process of hearing and making improvised music constructs its own time-dependent meanings – let’s call them short-term archetypes – specific to each improvisation.

Terms such as “language” or “vocabulary” have more specific and durable meanings and relate to a system of signs and symbols which is far too specific for music (see Burrows, Graham, Robinson). In his use of archetypes in interpreting dreams Jung wholeheartedly embraced the irrational worlds of religion and myth as central metaphors for understanding human consciousness. For Jung, archetypes are recurrent thematic elements of the unconscious which help explain the general currents and directions of unconscious thought. Jungian archetypes help us construct meanings in a flexible and general way. Similarly, the musical archetype is any kind of generative or recurrent thematic element which helps to explain the structure or emergent qualities of a piece of improvised music.

In our quartet performance script, Sonya makes an initial sound-action (the loud screeching sound). The players immediately perceive and, more importantly, “remember” the sound. They “interpret” the sound in various ways and Sonya’s screeching sound becomes part of a temporary set of meanings specific to the

improvisation at hand; it is a mini-archetype representing different ideas to different players. Each player now relates further sounds in terms of similarity to or difference from that archetype, perhaps associating other screeching, harsh, or loud sounds with Sonya's initial gesture. Some players may graft certain emotional or intellectual reactions onto this archetype. For instance, Alex associates the sound with his own predilection for noisy and jarring sounds which he feels provide the music with excitement. Rob and Jared classify this sound as contrary to their mood, something against which to react. In this sense, the sound acquires a general character which is created and remembered by each individual and becomes a part of an emotive sound-vocabulary with meanings dependent on the time of the performance. Sonya's screeching sound thus acquires a kind of meaning which will hold for a period of time determined by the memory of each player in the group. The meaning is further defined by the kind of emergent qualities it tends to produce in the aural tapestry – if you make sound x then y is likely to occur. In this respect, the archetypal sound-action has a collective as well as an individual meaning. The collective, more general meaning is “negotiated” in the aural tapestry while the individual meaning is “constructed” in the mind.

Because sounds acquire this kind of time-specific archetypal meaning, improvisors can use these meanings to form a structure in which the sound-action archetypes are key elements. Because the retention and cataloging of sounds and their meanings is dependent on memory, stronger, more obviously different and distinct sound-actions are more likely to be retained. Since they are retained in memory, these more distinctive musical gestures are also likely to acquire the strongest and most durable meanings. A very short list of some distinctive sound-actions sorted by category might include:

- Contrasting sounds – very loud or soft sounds, very short or long sounds
- Unusual sounds – unexpected timbres, particularly dense harmonies, unconventional use of instruments
- Highly organized sounds – recognizable melodic, harmonic or rhythmic relationships such as drones or ostinatos, tonal tendencies
- Sounds with idiomatic character – habanera rhythm, Alberti bass figurations, polka or waltz rhythms, popular melodies, blues licks

The success and coherence of our quartet improvisation then relies on the fact that each player in our group has a highly distinctive musical “signature” and that each makes consistently strong and imaginative musical gestures. Curiously, this creates a kind of structure that is both dialectical and narrative. It is narrative because the sound-action archetypes form a kind of “collective conscious,” a developing story or, more broadly, a narrative arc which is understood as the background against which events take place. At the same time the structure is dialectical because new archetypes can be introduced and meanings and archetypal roles may shift. The structure will also be dialectical in the sense that the kinds of archetypal meanings that may arise and the kinds of reactions to or manipulations thereof are fundamentally dependent on the cumulative experience of the individuals involved, as well as the divisions of labour and community which we discussed earlier.

In the conclusion to their extensive studies of social cognition, Monteil and Huguët suggest that “to adopt the point of view of a social psychology of cognition entails the recognition of others as elements of individuals’ personal histories and, hence, as one of the determinants of cognitive expressions and functionings” (144). Thus, the act of improvisation simultaneously creates and is created by a dialectical negotiation of archetypal meanings. In a sense, the narrative formed by the group becomes a part of any future improvising activity – a kind of musical cycle in which new ideas are subsumed and recycled in ongoing acts of musical creation.

Mead and Vygotsky were primarily concerned with the “development” of higher mental functions in a social milieu. My use of their work depends on the idea that not only do higher mental functions develop through social interaction, but they also work through social mechanisms on an ongoing basis. I do not believe that higher mental functions ever exist in the mind of the individual independently of the situations which created them; the idea of purely internal, abstract, cognitive processes is an illusion. If certain forms of cognition develop socially then it follows that ongoing use of such faculties will depend on or will be triggered by similar social interactions. In the case of the improviser, this means that the kinds of musical cognition which develop through group improvisation are permanently and inextricably linked to the activity of improvisation. This is not to say that the improviser might not make conscious use of ideas gained through improvising for later use in other musical activities. I am simply suggesting that the kinds of meanings and associations attached to certain musical gestures in an improvisation have specific associations unique to the context in which they arose. Removing such musical ideas from their original context can significantly change their meaning.

For example, in the course of improvising with the group, Alex discovers a new harmonic combination of notes which he had never heard before and later he composes a piece of music which develops that discovery in various ways. The new harmony has distinctly different functions in the improvisation and the composition. In the improvisation, the new harmony is produced in direct response to certain aural stimuli produced by Alex and the group. In that context it also serves to provoke responses from others in the ensemble. Other group members continue with their improvisation by attaching short-term archetypal meanings to Alex’s gesture. This may or may not affect the overall direction of the group improvisation. In the context of the composition, the new harmony becomes a central organizing factor in the music (this “might” also happen in the improvisation). Because he can write down the new idea on paper in a compositional setting, he can carefully construct a series of associations and meanings based on the implications of his discovery independent of the input of the other players. Whatever he chooses to do with his discovery, the musical result will be Alex’s alone. The archetypal meanings ascribed by other group members could not possibly be a factor in Alex’s composition (unless he records and transcribes the improvisation or has a “very” remarkable memory) and so the musical ideas which develop will be distinctly different from the results of the group improvisation.

Of course, within a group like ours that performs together over a long period of time, more durable archetypal meanings may emerge at conscious or unconscious levels. So, if we continue with our Jungian analogy, the collective consciousness produced "in the moment" and applicable to a single improvisation may move into the collective *unconscious* musical interactions of the group over time. This musical collective unconscious would then consist of musical archetypes which have more or less consistently produced similar results in the course of improvising. This suggests that, even without thinking, members of the group can make musical gestures that direct the course of an improvisation. This was evident in Rob's idea of a conversation between old friends. It is also possible that other unconscious musical archetypes may factor into the group's interactions. For example, if all members of the group are schooled in the Western tonal harmonic system (as the members of our quartet are), they may unconsciously react to notes which produce harmonic tension by unconsciously moving to release that tension. There are many other variables, far too many to describe, that might contribute to the attachment of meaning to elements of music and it is quite possible that individual players might well find that certain archetypal gestures may hold similar meanings or elicit similar responses in other groups.

## Conclusions

Musical archetypes are useful in helping us make sense of the process of improvising. They allow us to attach roles and significance to what may seem to be randomly thrown together musical gestures. Nevertheless, this kind of labeling is only a way of interpreting the interplay of sonic elements. And music is much more than a combination of sounds. Almost all musicians that I know will describe their musical interactions in emotional rather than purely musical terms. There is something emotionally and spiritually satisfying, perhaps even cathartic about the process of improvising. In a very small measure, musical archetypes help us understand "how" music means – or at least how meanings may be constructed for improvising musicians. "What" music means is another matter. While I think the circular model I proposed in Fig. 3 is superior to some of the others we have looked at, it is still essentially an heuristic device; it points us in the direction of further questioning and discussion. It helps us understand the kind of connections we are looking for in thinking about musical group interaction.

In the same way that Jungian archetypes help us understand the social and mythic origins of feelings and unconscious states, musical archetypes are a way of understanding deeper interactions in the collective consciousness of a performing group; they point to the way in which emotional and spiritual elements interact. According to this idea, musical archetypes don't just have structural and narrative significance in musical terms, they stand for emotional states or conditions of the psyche. Of course, it is impossible to point to durable, universal meanings for musical archetypes; the dialectical nature of the improvisational process and the essentially subjective nature of musical perception deny such associations. At the same time, most experienced improvisors often feel a sense of unity of purpose and even emotional state

with their fellow players. This unity of purpose and emotional state is the collective conscious, the essentially metaphysical quality in improvised music.

The collective consciousness achieved by improvisors is a higher state of consciousness which can be shared through an intense focus on the medium of sound and the activity of listening. Although we can achieve through analysis a sense of deeper understanding of the activity of music making, all of our work at labeling and deconstructing the improvisational process leads us in the end to the fundamentally mysterious power of improvised music to consciously and unconsciously connect the thinking and feeling of musicians and listeners. There is at the center of improvised playing, and other kinds of music making as well, a spiritual core. The kind of deep interpersonal connection that can occur in the process of creating improvised music with others is about “being” and “becoming” together.

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