

“It All Rolls into One:” The Allure of Chaotic Synergy in Grateful Dead Improvisation and Musical Dialogue

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Grateful Dead music is renowned for its improvisational qualities. The “psychedelic synergy” characteristic of Grateful Dead improvisation was a hallmark of thirty years of constant touring, and the rapturous allure of the musical space sustained by the band’s live performances produced a veritable culture of “tour heads” in love with the sound. Deadheads will swear the Grateful Dead improvised in a style all their own. Indeed, Grateful Dead concerts became something of a fountainhead for richly attuned, mind-altering experiences. Yet mainstream discussions of musical improvisation offer only passing references to this phenomenon to suggest anything extraordinary might have been going on. In what follows, I will attempt a discussion of Grateful Dead improvisation from the standpoint of the listener immersed in musical synergy. My goal is to explore the allure of “chaotic synergy” in Grateful Dead improvisation from a standpoint of musical embodiment. While the best access to this synergistic immersion would be through the portal of a live concert, one can attempt a careful analysis of the productive tensions operating in the musical dialogue itself. To open a conceptual space for this analysis, we need a figurative portal to musical embodiment. To reveal this point of access, we will explore facets of a listener’s engagement in Grateful Dead “phase space.” As such, this analysis will constitute something more like a phenomenology than a musicology of group improvisation. The principle focus of my analysis will be the performative “plane of immanence” characteristic of Grateful Dead music. We might

think of this plane as the loosely structured “home” of the song, and each performance as a line of flight born from a subtle dynamic of group chaos.

Clearly Grateful Dead improvisation exhibits salient qualities found in more traditional forms of improvisation, which from the outset seem to require an underlying structure and organizing framework to sustain the collective focus of group conversation. We should expect to find traces of *hierarchical* improvisation in cases where the structural framework of a performance is held in place by the established boundaries of a song while allowing for intermittent spontaneous explorations. In cases where the dominant song structure is largely abandoned, we will experience traces of *associative* improvisation where a “collective” framework emerges to provide “containment” for free-form musical conversations. As key facets of improvisation, spontaneity and conversation clearly apply to Grateful Dead performances. But do they capture the special dynamic operating in Grateful Dead improvisation?

To be sure, the Grateful Dead improvised in both hierarchical and associative ways. They were improvising hierarchically any time a single soloist took off within a song framework established by other musicians in the band. Traditional blues tunes, cowboy songs, and numerous “cover” tunes allowed the various band members to improvise independently. At other times, the band’s extended jams or segues between structured tunes brought out an associative dynamic, with each musician suggesting and responding to musical ideas in conversation with other members of the band. But in addition to these two modes of improvisation, the Grateful Dead also performed a third style of improvisation, manifesting what David Malvinni terms a “transformational” quality,

which he traces to a “space and tension” somewhere “between” the hierarchical and associative forms of improvisation.ⁱ

All musical improvisation requires a certain level of musicianship and skill, not just in the individual but also within the ensemble. Players need to be proficient with their instruments, but they also need to be able to participate in a musical conversation with their band mates. They need to listen to the statements of the other players and then respond with a musical statement of their own. Grateful Dead performances presupposed both hierarchical and associative modes of improvising, but also an additional skill: each musician learned to perform without having to consciously track or respond to what the others were playing. This allowed each musician to pursue a line of flight within the song itself, thereby conjuring a collective “fusion” of elements inducing mildly psychedelic mind-altering experiences throughout the concert crowd.

The band recognized the tremendous effort it takes to play this way. As Jerry Garcia once remarked in conversation with David Gans, “you can’t play the way the Grateful Dead plays without working at it. It’s not something that just happened to us.”ⁱⁱ They had to practice: first to learn the structure of the songs; then to learn how each player could solo within the structure of the song (hierarchical improvisation); then to learn how each instrument and player could participate in a free flowing musical conversation no longer tethered to the structural framework of the song (associative improvisation); and finally, to make a musical statement not so much in *response* to another player’s statement as in *relation* with it –that is, dancing within the phase space of a musical journey.

Phil Lesh has described this phase in the band's development as a lesson learned by going "back the woodshed." The goal, in his words, was

to learn, above all, how to play together, to entrain, to become, as we described it then, "fingers on a hand." [In the process,] each of us consciously personalized his playing: to fit with what others were playing and to fit with who each man was as an individual, allowing us to mold our consciousness together in the unity of a group mind.ⁱⁱⁱ

Garcia echoed this thought in another conversation with Gans: "when you're working in a band, you have to try to let everybody have his own voice the way he best sees it." In this same interview, Garcia emphasized the importance of practice in cultivating this art of listening beyond the specific voices of other players in order to have a meaningful conversation as a band.

Performing on stage, the band was open to exploration, initially to expand the horizons of the musical structure, but eventually to transgress these boundaries through collective attunement to the pace and nuance of the moment. This form of improvisation could manifest a multiplicity of musical forms conveying a rich tradition of musical influences, often drawing the listener into a ubiquitous space of mental passage. This emergent formula for inducing psychedelic transportation quickly defined the band's style of improvisation.

Grateful Dead improvisation grew from an underlying song structure made to function as an orienting plane of immanence. Each musician "entrained" the ability to travel as a line of flight within the context of that structure. The ongoing experimentation bred sufficient familiarity to sustain a collective musical conversation, often allowing them to abandon the underlying structure for a fresh plane of immanence. In the process, however chaotic and haphazard, the band managed to create something more compelling than a simple "combinatorium" of musical initiatives. The chaotic

trajectories of the singular elements of improvisation actually produced a group synergy, a collective psychedelic fusion expanding like a musical bubble to envelop the concert crowd in various instantiations of rapture, ecstasy and sublime attunement.

The Grateful Dead are recognized for having cultivated a unique improvisational approach to musical performance. Complex manifestations of improvisation can be found throughout their concert performances, an overly abundant number of which are available for scrutiny and analysis as audio recordings. Thus, while the band itself is no longer a touring phenomenon, precious remnants of Grateful Dead improvisational experiences continue to ensnare the minds and bodies of nomadic spirits with tantalizing gestures wrapped in evocative melodies, spacey interludes, flowing refrains, and wandering jams. While these recordings cannot replicate the original concert setting or scene of attunement, they can articulate the spontaneity of the nomadic sojourns experienced in the music. As such, these recordings provide valuable access to a performative field of play in which mind-expanding lines of flight hold sway over the listener's musical embodiment.

Of course, the more familiar we are with a particular concert recording, the less spontaneity and rapture we can elicit from the auditory engagement. But our experience of these improvisational moments is not dependent on the element of surprise. Surprise surely enhances the Deadhead's experience, but familiarity does not diminish the musical synergy manifest in a good performance. Key lyrical phrasings are sung with spontaneous feeling and emotion, but specific phrasings punctuated in this manner often shift from one performance to another. Subtle nuances and expressive points of emphasis are afforded a voice of the moment. Rhythmic, spiraling jams are woven into

the fabric of tonic measures and followed through portals of aphorism. Nomadic jams roam between songs to “stretch out” the temporality of our experience, giving vibrancy to the immediacy of the performance even within the format of a live concert recording. If the auditory experience is fresh and provocative to the receptive ear, spatial dimensions of rapture will open up within Deleuzian “intermezzos of deterritorialization” -- as they often did in concert settings -- dissociating us from the mediating bonds of our sedentary attachments, and conveying us along new lines of flight.

Among the multitude of songs written and performed by the Grateful Dead, “Dark Star,” “The Other One,” “Playin’ in the Band,” “Truckin’” and “Birdsong” have served as particularly striking vehicles for especially evocative forms of improvisation, as have innumerable variations of what Deadheads affectionately refer to as “Space.” But there is in fact an impressive variety to the forms of improvisation revealed in Grateful Dead performances. The jams in songs like “Morning Dew,” “Wharf Rat” and “Fire on the Mountain” reveal a tight, powerful and expressive texture spiraling toward an intense crescendo. The jams in songs like “Dancin’ in the Streets,” “Let it Grow,” “Eyes of the World,” “Estimated Prophet” and “Shakedown Street” foster headier grooves dancing like rainbow spirals in the dilated pupils of our mental attunement. Songs like “Stella Blue,” “Terrapin,” “Crazy Fingers” and “China Doll” draw us closer to the heart, often suspending us in momentary rapture to poignant lyrical and musical phrasings. Engaged within these experiential fields of improvisation, the listener becomes one with a dance becoming one with the music. A stellar performance comes to life when a transversal

line of force escapes a familiar refrain to reconfigure itself as a collectively spontaneous form of expression.

Chasing the Tension

In his landmark ethnomusicological study of jazz improvisation (*Thinking in Jazz: the Infinite Art of Improvisation^{iv}*), Paul Berliner shares Buster Williams' description of what it was like to improvise with Miles Davis:

With Miles, it would get to the point where we followed the music rather than the music following us. We just followed the music wherever it wanted to go. We would start with a tune, but the way we played it, the music just naturally evolved. (Berliner 392)

Berliner seems intrigued by the “automatic pilot” phenomenon intrinsic to these collective experiences. The group synergies manifest something like a “telepathic receptivity” and produce euphoric states in the performers. As the trumpeter Herb Pomeroy explained to Berliner, “One of the most wonderful benefits of this career is the feeling you’re left with after an evening when the music is really happening.” And he continues in the same vein:

It’s an incredibly warm feeling that you have, one that you’ve shared with the other musicians and . . . the audience. And when the evening’s engagement is over, you still retain it. It fills you up inside, and you feel it like there’s an aura all around you when you leave the club to go home. It’s the kind of precious feeling that no other kind of career can give you. (Berliner 394)

And when it’s over, after a night of burning it up, the risk is that you lose your connection with “that big picture you’re able to relate to when you’re playing,” inducing mood swings, “and [sometimes] even deep melancholy, in the transition ‘back into reality’.”

Presumably there’s also a kind of etiquette to jazz improvisation, on Berliner’s account. For he contends any “operations of improvisation involving more than one person require the instant assimilation of ideas across the band’s membership.” For this

reason, he tells us, the individual performers “endeavor to interact flexibly throughout a performance in order to accommodate one another; at times modifying their own ideas, occasionally even abandoning them for other ideas complementary to the group.” He sees this “unpredictable quality of the band’s musical negotiations” as “a fundamental ingredient in every performance, imbuing its creations with uniqueness.” For Berliner, creative intercourse is the key to jazz improvisation, giving to each jazz performance the character of a “unique creative undertaking,” as he calls it (497). He likens jazz performances to miniature life pilgrimages, describing them as musical journeys of mutual support and personal expression. He notes that jazz performers sometimes “encounter turbulence” within the “larger performance’s fluid events.” But when it all goes well, “the voyage is smooth.” When jazz performers become “travelers locked into a groove” the payoff is “exciting flashes of musical inspiration.” This feeds an impetus to probe “more deeply into aural, theoretical, physical, and emotional aspects of their understanding to discover new ways of thinking about music and new ways of thinking in the language of music, all for the sake of “personal odysseys” to redress imbalances in life, “if only in a small way, by replenishing the earth’s soundscape with music possessed of beauty and vitality, integrity and soul to remind listeners of these finer universal expressions of human aspiration” (Berliner 503).

Bruce Benson offers a deeper analysis of the inner workings of improvisation in *The Improvisation of Musical Dialogue*.^v I want to highlight his discussion of the “dwelling” feature of musical performance, which interrupts our fascination with the identity of a piece of music by shifting attention to how improvisation relates the performer to a “musical space.” On Benson’s view, “the act of dwelling within [a musical] space is

simultaneously the act of transforming [this space] into a musical habitation” (Benson 149). By emphasizing the performative identity of a piece of music, by claiming that “the identity of a piece of music is constantly in the state of being improvised,” Benson’s analysis introduces a diachronic sense of identity to musical compositions. By this, he means an identity that “comes to be over time, being defined by the succession of improvised performances that actually take place.” For this reason, he suggests, “one may dwell *within* the space created by a piece of music, but the act of dwelling always means that one is to some extent ... dwelling at the limits of the space and transgressing those limits” (150).

There is a sense, then, in which musical dwelling is always on the edge: for dwelling always involves both the exploration of the boundaries of a given piece and musical practice and also the modification of those boundaries. And that practice also serves to shape – at least in some respects – the boundaries or limits of the musical piece. While the space that a piece of music creates is a kind of context in which music can happen, that context is itself a dependent one – not something autonomous. Like composition, performance hovers around the limits of the musical space created by the piece – both respecting them and altering them (which can also be a way of “respecting” them). (Benson 151)

On this account, improvisational musical dialogue is less about chasing the performance high and more about chasing the tension at the heart of the “mutual tuning-in relationship” that operates “between those making and listening to music” (Benson 170).^{vi} “As composer or performer or listener I open myself to the other when I feel the pull of the other that demands my respect.” But at the same time, “my openness to the other cannot be simply a complete giving in to the other, for then I am no longer myself and am instead simply absorbed by the other.” But this suggests a genuine dialogue is only possible “when each partner...holds the other in tension – that is, holds the other accountable – and [simultaneously] feels the tension of accountability exerted by the

other,” which is only possible to the extent one is “able to *listen* to the other” (Benson 171).

Garcia and Lesh were masters of this form of improvisation. Playing with and off each other, their musical talents gave birth to extraordinary lines of flight marking the production of rhizomatic assemblages or musical multiplicities capable of dynamic change in the face of ever-expanding connections involving what Deleuze and Guattari refer to as new or shifting “determinations, magnitudes, and dimensions that cannot increase in number without the multiplicity changing in nature” (*A Thousand Plateaus*, 8).^{vii} The cut of the diagonal dissipates “any relation to the One as subject or object,” disrupting the unity which would otherwise serve as a “pivot” for capturing music within boundaries of replication and repetition. This marks a transformation in the relation between notes (or “points”) and vectors (or “lines of flight”) in the constitution of musical passages such as we might encounter in a classic intermezzo (or diagonal line) bridging the lyrical or tonal refrains of a masterful rendition of “Dark Star” or “The Other One.” Deleuze and Guattari characterize this transformation as a “reverse subordination” of the sedentary point to a freshly liberated line of flight:

The diagonal is often composed of extremely complex lines and spaces of sound. Is that the secret of a little phrase or a rhythmic block? Undoubtedly, [for] the point now assumes a new and essential *creative* function. It is no longer simply a question of an inevitable destiny reconstituting a punctual system; on the contrary, it is now the point [e.g. the musical note] that is subordinated to the line [e.g. the musical flow]; the point now marks the *proliferation* of the line, or its sudden *deviation*, its *acceleration*, its *slowdown*, its *furor* or *agony*. (297, my emphasis)

Where most musicians endeavor to work within the limits of a stratified refrain, improvising performers work the boundaries in search of a threshold to “smooth space,” where they can be free of stratifications that otherwise bind their performance to

repetition and submission to limits. What Deleuze and Guattari say of rhizomes applies with similar force to the classic improvisational spaces in Grateful Dead music:

Every rhizome contains lines of segmentarity according to which it is stratified, territorialized, organized, signified, attributed, etc., as well as lines of deterritorialization down which it constantly flees. There is a rupture in the rhizome whenever segmentary lines explode into a line of flight, but the line of flight is part of the rhizome. These lines always tie back to one another. That is why one can never posit a dualism or a dichotomy, even in the rudimentary form of the good and the bad. You may make a rupture, draw a line of flight, yet there is still a danger that you will reencounter organizations that re-stratify everything, formations that restore power to a signifier, attributions that reconstitute a subject... (Ibid)

This is a constant menace to the improvisational impulse. The only antidote to re-stratifying pressures is perpetual transgression of boundaries. As Deleuze and Guattari remind us:

Groups and individuals contain microfascisms just waiting to crystallize. Yes, couchgrass is also a rhizome. Good and bad are only the products of an active and temporary selection, which must be [ever] renewed. (9-10)

Grateful Dead improvisation often occupied this transversal with a magnitude uncommon to most musical improvisation. Nevertheless, all improvisation captures some semblance of this radical openness, and as such plays with thresholds in a manner consistent with the deterritorialization of rhizomatic assemblage: “Music has always sent out lines of flight, like so many ‘transformational multiplicities,’ even overturning the very codes that structure or arborize it; that is why musical form, right down to its ruptures and proliferations, is comparable to a weed, a rhizome.” (11-12)

The emphasis here is on displacing the stratification of notes and replacing this structure with an “experimentation in contact with the real,” like the musical performance that eschews “a logic of tracing and reproduction” in favor of a “mapping” activity that “fosters connections between fields, the removal of blockages on bodies without organs,

the maximum opening of bodies without organs onto a plane of consistency.” The key is to see the map as an element of the rhizome. As such, “the map is open and connectable in all of its dimensions; it is detachable, reversible, susceptible to constant modification.” Most significantly, “a map has multiple entryways, as opposed to a tracing, which always comes back ‘to the same’.”(12) In this way, “the map has to do with performance, whereas the tracing always involves an alleged ‘competence’.” Analogously, the mapping of a Grateful Dead song leaves open the space for a deterritorializing line of flight; a structural tracing closes down the potential for improvisation and renders the performance static.

Through its displacement of the logic of reproduction, a full-fledged investment in improvisation “rejects any idea of pretraced destiny.” (13) In place of this dependence on a tracing repetition, the improvisational impulse adapts itself to “an immanent process that overturns the model” by outlining a map that allows a musician to perform a tune “composed not of units but of dimensions (or rather, directions in motion).” (20-21)

The defining rhizome in the case of Grateful Dead music will depend on the broadly diverse musical traditions comprising the training and performative tendencies of the specific assemblage of musicians performing on any given occasion. The rich and varied musical styles influencing Lesh and Garcia are of course well chronicled by now, and include an array of conceptual influences (including Charles Ives, John Coltrane, Miles Davis and Ornette Coleman). In the case of Garcia, we can see a rich texture of rhizomatic musical techniques emerging from his early mastery of the banjo and acoustic guitar and developing into a singular musical voice through a Deleuzian mapping of these skills onto his progressive mastery of the electric guitar.^{viii}

Letting Loose

The Grateful Dead were masters at playing within the feel of a song: the lyrical feel...the tonal feel...the emotive feel...the touching, singular feel. Each song was typically built anew in the midst of its live performance. On some occasions, the construction fell flat on delivery, but more often than not the construction was carried off in a fresh manner, and in rare and cherished moments might even produce peak musical encounters for an entire audience. Thanks to the early successes of a clandestine taping scene, word got around this was a band that could play in the moment. Songs were “opened up” for exploration. People smiled and dropped into blissful reverie. They danced on the pulse of familiar songlines and musical structures, often losing themselves in uncharted existential territory, only to reappear in a slightly new incarnation of human existence. Stories embedded within songs flowed in subtle fragments of provocative detail, touching singular lives in simple, intangible ways.

While not everyone who attended a concert found their way “on the bus,” many in the audience were attracted to the festival atmosphere and drawn into a sensual community of musical embodiment. Light shows pulsed to the feel of the music and waves of sound percolated through the dancing rhythms like ocean waves lapping at the portal to a lover’s heart. When improvisation kicked in, the music became kinesthetic, collapsing the gap between sound and affect, and lodging the sound in a flow of musical embodiment. Embodying sufficient organizational complexity, the transversal experience became incarnate, transforming the attentive listener into a virtual participant in the production of the music.

Reflecting on circumstances like this, Deadheads will insist the jams were an “emergent property” of their musical embodiment. In a charitable moment, we might say these listeners became “all ears, all body.” In the process, they entered what complex systems theorists like David Borgo call a “phase space.”^{ix} The concept of “musical phases” can be thought in relation to improvisational practices that embody “an often more flexible approach to temporal, tonal, and timbral dimensions” and which “imply a huge number of degrees of freedom and an enormously complex phase space..” Borgo identifies these “musical phases” as “phenomenologically distinct sound worlds...articulated by a pronounced textural, harmonic, temporal, or timbral quality” (Borgo 70). In regard to Grateful Dead improvisation, we might find ourselves suddenly dancing (or typing) along as Garcia explores a phase space spiraling his way along the tonal pathways of a “Let it Grow” jam. Lesh might be exploring a phase space somewhere below, in the deeper regions of the jam. The drummers might be finding their own respective phase spaces, and Weir, too. We can perhaps sense that each musician is exploring his own phase space, and that somehow out of the combination of these mutual explorations a group musical phase space has coalesced around the jam. Within a region of this group phase space, one or another “strange attractor” is “pulling the behavior of the complex system toward it, as if magnetically” (Borgo 70). The strange attractors driving the phase dynamic in most Grateful Dead performances flowed primarily from the musical embodiments (and guitar playing) of Garcia and Lesh.

Some of the most engaging phase space in Grateful Dead “musicking” experience^x arose in the expressive space jams characteristic of songs like “Bird Song,” “Playin’ in the Band,” “The Other One,” and “Dark Star,” but it could easily surface in a rapturous

rendition of “Wharf Rat,” “Stella Blue,” “Terrapin,” “Days Between,” or “Morning Dew.” Songs like “Let it Grow,” “Truckin’”, and “Eyes of the World” also harbored entries to engaging musical phase spaces. The most intriguing point of entry might have been through “Space” itself. Of course, “Feel Like A Stranger” and “Shakedown Street” opened yet another type of phase space; and what list would be sufficient without a nostalgic reference to “Scarlet Begonias” => “Fire on the Mountain”? All the same, one might question my notion of incarnate music and the corresponding privilege I accord to musical embodiment when situating the locus of music produced by group improvisation. Consider the following line of questions, thinking perhaps of a crescendo jam cresting in ecstasy, like that stellar “Other One” jam from McNichols Arena (8/13/79):

Is the object of my perception outside me? If it is, why am I so deeply touched by it? If it isn't, why is it that other people can experience the same thing? Do I experience the ascending event as “out there,” *and* [separately] a feeling which is “in here”? Isn't it rather the case that the ascending event and the feeling conspire to constitute a single meaning, and that the self and the event merge in the formation of a single locus?^{xi}

Most Deadheads who attended the Atlanta Fox Theatre show on 11/30/80 will tell you there was one singular locus of musical embodiment in the glorious transition jam from “Scarlet Begonias” into “Fire on the Mountain,” one masterful group musical phase space comprising numerous individual phase spaces dominated by Lesh and Garcia, but including the rapturous crowd nirvana, as well (the crowd space itself comprising all the individual phase spaces of the holy riveted dancers basking in the flush measure of their singularly adulating smiles).

In this example we have a classic instance of a complex system, which by definition comprises “an aggregation of simpler systems” capable of working independently and

yet clearly also operating in phase: “a whole made up of wholes”(Borgo 192). Complex systems are known to “exploit errors or unexpected occurrences, [to] assess strategies in light of their consequences, and [to] produce self-changing rules that dynamically govern.” But they must also “strike an uneasy and ever-changing balance between the exploration of new ideas or territories and the exploitation of strategies, devices, and practices that have already been integrated into the system”(Borgo 192).

Such concert involvement exemplifies an instance of *nonlinear musical embodiment*. Listening to classic Grateful Dead concert recordings, we can sense the strange attractors in this musical phase space drawing the crowd in through a portal of Mandelbrot notes emanating from the musical interplay of Garcia and Lesh. Think of a pulsing jam in the midst of a youthful, exuberant version of “Eyes of the World.” The nonlinear embodiment reflects our suspension in a dancing phase space; our attunement expresses a collectively singular mode of existence comprising the musical phase space of the crowd; and when the band was “on,” the crowd and the band did in fact “merge in the formation of a single locus” sustained by several interlacing trajectories of musical improvisation. The rich interplay between the strange and the familiar, the open-ended element of surprise lurking in the texture of each musical phrasing, helps to keep us locked in.

In the midst of live improvisation, each musical gesture “can conceivably produce rather sudden and dramatic shifts in the ensemble sound and approach; in other words radically divergent and nonlinear effects”(Borgo 72). A conversational relation opens between the various performers. To facilitate the ongoing conversation, “the musical iterations in performance are allowed to feedback into the system, [flowing back into]

the content of the music,” and “even a small shift in the first performance gesture – a shift in dynamic level, attack, or articulation – can lead to a sudden divergence from the evolution of a system started with nearly identical conditions”(Borgo 73).^{xii} The song may remain the same in its identifiable form; it is, after all, an “Eyes of the World” jam, not a “Let it Grow” jam. But the performance simultaneously acquires a layering of novel form that begins “playing” with the familiar and expected:

Like other complex dynamical systems, the exact development and structure of an ensemble improvisation is inherently unpredictable, and yet through certain shared understandings, nuanced interactions and interconnections, and a shared cognitive ability to attend to and parse musical sound [on the fly], dynamical orderings can emerge that are both surprising and comprehensible. (Borgo 74)

These performances call for acute sensitivities within the band to underwrite their capacity to “transition as a group from one musical ‘phase space’ to another,” which typically occurs “at moments of unexpected synchrony when the ensemble’s combined explorations seem to coalesce around a common set of ideas,” or when someone in the band senses “a need for new complexities (or more comprehensibility)” (Borgo 74).

Thinking largely of “free improv” jazz, Borgo suggests that “contemporary improvisors”

tend to favor ‘strange’ musical attractors to those that rely on periodic cycles or predictable interactions. They avoid low complexity regions (called “basins of attraction”) while constantly creating new patterns, or patterns of patterns, in order to keep the energy going, all the while working to maintain the coherence of the performance. They metaphorically surf the “edge of chaos” . . . to ensure continual development and excitement without exceeding the cognitive abilities and aesthetic interests of listeners. (Borgo 74-5)

Known for taking these tendencies to the true edge of chaos, Ornette Coleman made the following claim (in 1959) about the improvisational spirit of his group:

When our group plays, before we start out to play, we do not have any idea what the end result will be. Each player is free to contribute what he feels in the music at any given moment. We do not begin with a preconceived notion as to what kind of affect we will achieve.^{xiii}

As Borgo points out, the result of this style of performance can only be “highly surprising and unpredictable,” and even the moments of attraction where the music might seem to be “working together toward a shared musical end” are bound to be “interrupted or compounded by intentionally disruptive or dissociative behavior from others,” leading at times, though not always, to a “dramatic transition in the music” (Borgo 75). The feedback system will keep the group from settling down too long in a “musical attractor.” By continuing to explore the “micro details” and “personal variations” of the shared musical phase space, each musician embodies the “edge of chaos” by fueling the performance with “interactive, adaptive, and constructive qualities of improvisation” (Borgo 87).

Grateful Dead performances were known to occasionally “surf” the “edge of chaos,” which Borgo rightly equates with negotiating “the balance point between stability and extreme turbulence”(84). Nowhere was this more apparent than in performances of “Space,” which developed initially as the inner dynamic of songs like “Dark Star,” “The Other One,” “Playin’ in the Band” and “Birdsong” before settling into its own position as a transitional musical phase most commonly surfacing before, during or after the drum segment of a second set jam sequence. What strange attraction drew these musicians and their audience to embrace this nonlinear interplay of stability and turbulence, and to experience it as a “generative or organizing force?” (Borgo 72)

Borgo characterizes the process of improvising music as a dynamic form of “musicking-in-the-moment.” It requires the ability to “synchronize intention and action and to maintain a keen awareness of, sensitivity to, and connection with the evolving group dynamics and experiences.” He values most those moments when musicians

synchronize “their energies, their intentions, and their moments of inspiration” in the form of a complex musical embodiment:

During the most complex and dense passages of collective improvisation [we might think here of a '69 Dark Star], a swarmlike quality...emerges, in which individual parts may be moving in very different directions and yet the musical whole develops with a collective purpose. The health of the community of improvisers also depends on the ability of individuals to synchronize, or come together for an evening of musicking. Yet at the same time, improvisers must act in swarmlike ways such that new dynamics and configurations can percolate through the community, producing a delicate state in which individuals acting on their “local” information can produce complex global behavior. (Borgo 9)

The excitement produced by the resulting uncertainty actually serves to enhance the “degree of intimacy” experienced by the performers and audience. The “open and attentive listening” underwriting this enhanced intimacy is “essential to creating and maintaining the flow of the music.” But it is also fundamental to the attunement of audience members engaged in a creative reception of the unfolding musical dynamic (Borgo 26). “Improvised music is unique in that it asks the listener to continue the creative process of interaction.” That is, “the listener, too, must improvise.”^{xiv} Quoting Borgo again:

Improvising music, it appears, is best envisioned as an artistic forum, rather than an artistic form; a social and sonic space in which to explore various cooperative and conflicting interactive strategies. It highlights process over product creativity, an engendered sense of uncertainty and discovery, the dialogical nature of real-time interaction, the sensual aspects of performance over abstract intellectual concerns, and a participatory aesthetic over passive reception. (34-5)

As Thomas Clifton notes in his phenomenological study of musical listening, the result is not a consciousness *of* music but rather a “consciousness *in* music,” or what I have been calling an instance of nonlinear musical embodiment.^{xv} The “*Requium Space*” performed in Oakland on 10-27-91 was not so much *about* the death of Bill Graham as it was a *living embodiment* of the very *interruption* posed by death: the resulting phase

space took us straight to the heart of dissonance and contingency, not as a *commentary* on the fragility of human existence, but *as a living instantiation* of this fragility, transfixed in musical rapture, in lived-immediacy with the music. Creative and tragic forces fell into alignment for one brief, entwining embrace, paying our respects to unspoken possibilities lost and gone forever in one crackling thunderbolt of crazy California lightning. Everyone in that crowd knew it; everyone felt it; everyone was exposed. The fragile investments instantiating this performance of “*Requiem Space*” (and four nights later the equally chilling “*Eulogy Jam*” with Ken Kesey) coalesced to gather the concert participants into a sublime phase space of mind-altering music.

In moments like these, the musical locus of the concert setting clearly “rolled into one,” but in a *collectively singular* way: each member of the audience remained an active listener, transfixed in musical rapture, drawn into a relation of lived-immediacy with the music. And when it was over, the phase space transitioned to the healing powers of the Beast, like a mountain stream working its way downhill. Strange attractors indeed! In times like this, the band members and their audience were indeed “all ears, all body,” collapsing the gap between sound and affect, and lodging the dynamic life of the soundscape on a plane of immanence comprising our collective musical attunement.

ⁱ David Malvinni, “Now Is the Time Past Believing”: Concealment, Ritual and Death in the Grateful Dead’s Approach to Improvisation,” in *All Graceful Instruments: the Context of the Grateful Dead Phenomenon*. N. Meriwether (ed.). (Newcastle: Cambridge Scholars Publishing, 2007), p. 5.

ⁱⁱ David Gans, *Conversations with the Dead: The Grateful Dead Interview Book* (Cambridge, MA: Da Capo Press, 2002), p. 68.

ⁱⁱⁱ Phil Lesh, *Searching for the Sound: My Life with the Grateful Dead* (New York: Little, Brown and Company, 2005), p. 56.

^{iv} Paul Berliner, *Thinking in Jazz: The Infinite Art of Improvisation* (Chicago: University of Chicago Press, 1994).

^v Bruce Ellis Benson, *The Improvisation of Musical Dialogue: A Phenomenology of Music* (New York: Cambridge University Press, 2003).

^{vi} The reference is to Alfred Schutz, "Making Music Together," in *Collected Paper II, Studies in Social Theory* (The Hague: Martinus Nijhoff, 1964), 73.

^{vii} Gilles Deleuze and Felix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia*. Trans. Brian Massumi. (Minneapolis: U of Minnesota Press: 1987)

^{viii} See Blair Jackson's discussion of musical influences on Garcia and Lesh in *Garcia: An American Life* (Viking: 1999), pp. 107-08; Dennis McNally's *A Long Strange Trip: The Inside History of the Grateful Dead* (Broadway Books: 2002), pp. 91-92; and Phil Lesh's autobiographical reflections in *Searching For the Sound: My Life With the Grateful Dead* (Little and Brown: 2005), pp. 17-48.

^{ix} David Borgo discusses the phenomenon of "phase space" in *Sync or Swarm: Improvising Music in a Complex Age* (Continuum: 2005), pp. 69-75. His focus is primarily on the experiences of the performers, but his analysis clearly relates as well to the experience of the listener who is engaged at the level of musical embodiment and thus locked into the phase space of the group improvisation.

^x See the discussion of musicking in Christopher Small's *Musicking: The Meanings of Performing and Listening* (Wesleyan: 1998)

^{xi} Thomas Clifton, *Music as Heard: A Study in Applied Phenomenology* (Yale Univ. Press: 1983), p. 8.

^{xii} Regarding the notion of ecstasy inherent in the experience of peak musical phases, Frederic Rzewski writes: "Ecstasy, the state of perception in which one seems to be outside of oneself or to be in more than one place at the same time, is a fundamental element of free improvisation." "Little Bangs: A Nihilist Theory of Improvisation," *Current Musicology* 67/68 (2002), reprinted in *Audio Culture*, ed. by Cox and Warner (Continuum: 2006), p. 269.

^{xiii} Ornette Coleman, liner notes to *Change of the Century* (1959 album release: Atlantic SAD 1327).

^{xiv} Steve Day, *Two Full Ears: Listening to Improvised Music* (Soundworld: 1998), p. 143.

^{xv} *Music as Heard*, p. 281. See also p. 19, where Clifton remarks, "If we hear the music at all, it is because we hear the grace, the drama, and the agony as essential constituents of, and irreducibly given in, the music itself. It is not even accurate enough to say that these constituents are what the music is *about*: rather, they *are* the music."