

ALL EARS, ALL BODY:  
THE STRANGE ATTRACTION IN  
NONLINEAR MUSICAL EMBODIMENT

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In music, the only thing that matters is whether you  
*feel* it or not... If you are touched in some way, then  
you are *in* with me. I love to play for people, and  
how they react affects my playing.  
--Ornette Coleman, *liner notes to jazz CD "Change of  
the Century" (1959)*

Music, linked with ritual, provides a cultural space  
and a spiritual means for involved and willing  
participants to dissolve the apparent duality of  
self and not-self.  
--David Borgo, *"Between Worlds: The  
Embodied and Ecstatic Sounds of Jazz"*

The music's splintered fragmentation  
implies a new wholeness, its seeming chaos  
a fresh order, its complexity a ringing  
simplicity, its turbulence an inner peace.  
--Fred Bouchard, *liner notes  
to the jazz CD "Chaos" (1998)*

During the most complex and dense passages of  
collective improvisation, a swarmlike quality also  
emerges, in which individual parts may be moving in  
different directions and yet the musical whole develops  
with a collective purpose.  
--David Borgo, *Sync or Swarm*

The Grateful Dead were masters at playing the feel of a song: the lyrical  
feel...the tonal feel...the emotive feel...the touching, singular feel. Each song  
was 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 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 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.

In circumstances like this, Deadheads will insist the music was an "emergent property" of their musical embodiment. In a charitable moment, we might say they became "all ears, all body." In the process, they entered what complex systems theorists call a "phase space."<sup>1</sup> 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.." David Borgo sees musical phases as "phenomenologically distinct sound worlds...articulated by a pronounced textural, harmonic, temporal, or timbral quality."<sup>2</sup> In regard to Grateful Dead improvisation, we might find ourselves suddenly typing along (or dancing along) as Garcia explores a phase space spiraling his way along the tonal pathways of a "Let it Grow" jam. Lesh is exploring a phase space somewhere below, in the deeper regions of the jam. The drummers are 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."<sup>3</sup> The strange attractors driving the phase dynamic in most Grateful Dead musicking adventures 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 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.

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<sup>1</sup> 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.

<sup>2</sup> *Ibid.*, p. 70.

<sup>3</sup> *Ibid.*

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?<sup>4</sup>

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.”<sup>5</sup> 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.”<sup>6</sup>

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 guitar play 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

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<sup>4</sup> Thomas Clifton, *Music as Heard: A Study in Applied Phenomenology* (Yale Univ. Press: 1983), p. 8.

<sup>5</sup> *Sync or Swarm*, p. 192.

<sup>6</sup> *Ibid.*

approach; in other words radically divergent and nonlinear effects.”<sup>7</sup> 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, [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.”<sup>8</sup> 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.<sup>9</sup>

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).”<sup>10</sup> Borgo suggests that “contemporary improvisors” [thinking largely of “free improvisation” jazz]

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.<sup>11</sup>

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

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<sup>7</sup> *Ibid.*, p. 72.

<sup>8</sup> *Ibid.*, p. 73. 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.

<sup>9</sup> *Sync or Swarm*, p. 74.

<sup>10</sup> *Ibid.*

<sup>11</sup> *Ibid.*, pp. 74-5.

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.<sup>12</sup>

As David 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.”<sup>13</sup> 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.”<sup>14</sup>

Grateful Dead performances occasionally “surfed” the “edge of chaos” (which Borgo equates with “the balance point between stability and extreme turbulence”<sup>15</sup> ). 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?”<sup>16</sup>

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.<sup>17</sup>

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<sup>12</sup> Ornette Coleman, liner notes to *Change of the Century* (1959 album release: Atlantic SAD 1327).

<sup>13</sup> *Sync or Swarm*, p. 75.

<sup>14</sup> *Ibid.*, p. 87.

<sup>15</sup> *Ibid.*, p. 84.

<sup>16</sup> *Ibid.*, p. 72.

<sup>17</sup> *Ibid.*, p. 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.<sup>18</sup> “Improvised music is unique in that it asks the listener to continue the creative process of interaction.” That is, “the listener, too, must improvise.”<sup>19</sup> 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.<sup>20</sup>

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.<sup>21</sup> The “Requiem Space” performed in Oakland on 10-27-91 was not *about* the death of Bill Graham but something more like *a living embodiment* of the very interruption of death: the 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. 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 phase space instantiating that performance of “Requiem Space” (and four nights later the equally chilling “Eulogy Jam” with Ken Kesey) coalesced by gathering everyone into the music. The musical locus did indeed become one, but only in a collectively singular way. Each member of the audience remained an active listener, transfixed in musical rapture, in living immediacy with the music. And when it was over, the phase space transitioned to the healing powers of the Beast, like a stream working its way down a mountain. Strange attractors indeed!

Consider the soaring melancholy feel of that Augusta “Morning Dew” from 10-12-84. There really were times when the music *played the band* -- when the music was to the band what the crowd was *in the music*. It happened enough to draw people back again and again, year after year. Then it began to happen less and less, and finally stopped altogether. The powerful connection to the

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<sup>18</sup> *Ibid.*, p. 26.

<sup>19</sup> Steve Day, *Two Full Ears: Listening to Improvised Music* (Soundworld: 1998), p. 143.

<sup>20</sup> *Sync or Swarm*, pp. 34-5..

<sup>21</sup> *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.”

music was gone, the strange attraction silenced. I guess it really mattered, after all.