

---

## Preface

*Let's try to play the music and not the background.*  
Ornette Coleman, liner notes of the LP "Free Jazz" [20]

When I began to create a course on free jazz, the risk of such an enterprise was immediately apparent: I knew that Cecil Taylor had failed to teach such a matter, and that for other, more academic instructors, the topic was still a sort of outlandish adventure. To be clear, we are not talking about teaching improvisation here—a different, and also problematic, matter—rather, we wish to create a scholarly discourse about free jazz as a cultural achievement, and follow its genealogy from the American jazz tradition through its various outbranchings, such as the European and Japanese jazz conceptions and interpretations. We also wish to discuss some of the underlying mechanisms that are extant in free improvisation, things that could be called technical aspects. Such a discourse bears the flavor of a *contradicto in adjecto*: Teaching the unteachable, the very negation of rules, above all those posited by white jazz theorists, and talking about the making of sounds without aiming at so-called factual results and all those intellectual sedimentations: is this not a suicidal topic?

My own endeavors as a free jazz pianist have informed and advanced my conviction that this art has never been theorized in a satisfactory way, not even by Ekkehard Jost in his unequaled, phenomenologically precise pioneering book "Free Jazz" [57]. Many attempts to catch the phenomenon and its rationales have been absorbed by either political, sociological or personality issues, such as in Valerie Wilmer's brilliant treatises "As serious as your life" [110], Philippe Carles and Jean-Louis Comolli's radical sociological essay "Free Jazz Black Power" [13] or Meinrad Buholzer's personality story "Auf der Suche nach Cecil Taylor" [11]. Also most recent publications, such as Howard Mandel's "Miles, Ornette, Cecil" [64] or Phil Freeman's "New York is Now"

[36] show little if any progress in the comprehension of the phenomenon of free jazz.

We are still far from reaching an accord concerning the concept, definition and implications of what is meant by free jazz. Some call it “New Thing”, others prefer “Cosa Nova”, “Great Black Music”, “Out Music”, “Energy Music”, “Nouvelle Gauche” and so forth. The limitations of the concepts connected with such terminology rightly reflect the predominant lack of understanding of what is really happening when this radical method of creativity unfolds. I intentionally use the present tense and not the historical past tense, which refers to the first manifestations of this art in the early nineteen sixties. I do so, since it would not be sufficiently justified to write another book on the merely historical phenomenon of free jazz as it appeared in the context of those socio-political liberation movements.

My motivation for rethinking this art in fact transcends that historical context and elaborates on the art’s universal characteristics as an unprecedented collaborative endeavor that relativizes facticity—the paradigm of the ready-made objects (even in its most sophisticated form of Western cultural heritage) and the deeply engraved principles of an economy that is based upon the commercial exchange of factual objects. The question backing these perspectives is about values, about what makes a cultural achievement a valid thing, a truly human activity, and not just a placeholder for idle consumer transactions.

Free jazz, as a model for collaborative arts, with its momentum of flow in a specific gestural action space it populates, opens a new perspective that is now being addressed by creativity research, e.g. in Keith Sawyer’s concise book on Group Creativity, David Borgo’s work “Sync or Swarm: Improvising Music in a Complex Age” [9] on complex systems associated with free jazz, or Robert Hodson’s detailed account in “Interaction, Improvisation, and Interplay in Jazz” on the structural elements that differentiate free jazz improvisation from traditional jazz practice.

*Free jazz is therefore viewed and investigated as a unique example of collaborative behavior, leading to group creativity and collaborative flow, i.e., to characteristics of a groundbreaking direction of human performance, which is desperately needed in the arts, in management<sup>1</sup>, in computer programming and software design communities, and above all in the research culture. The latter is crucial with regard to interdisciplinary projects and organizations, since it is not possible to perform innovative interdisciplinary research without also changing the fundamentals of scientific behavior from individual and isolated working styles to intense exchange of data, ideas, and engagements.*

We are fully aware that our approach takes not only a musical perspective, but also a new theoretical position on the generic art of collaboration. In so doing, this book opens a discourse that involves cognitive, philosophical, mathematical or psychological threads that may not have been seen in

---

<sup>1</sup> See [43] for such an approach.

conjunction and may therefore provoke astonishment or even refusal. However, the students' positive response to the free jazz course, from which the present treatise is derived, proves that such a project may perfectly fit in the understanding of unconsumed and inquisitive minds. In this sense I also want to acknowledge the creative discourses, which my class has fostered, the creative experiments in free jazz class rehearsals, and the strong resonance I received from the workshop and CD recording session with the Tetrade group composed of the legendary and deeply grounding Sirone on bass, my long-year companion and omnidirectional percussionist Heinz Geisser, the electronically mazed sky-high trumpeter Jeff Kaiser, and me on grand piano. They have all made it possible to think about free jazz in a more complete way that transcends historical contingencies. The resulting CD "Liquid Bridges" has been included in this book as a proof of concept for the principles of flow, gesture, and collaborative spaces.

My acknowledgments go to my students of the free jazz course, who did contribute to this book by their strong interaction in class and so many inspiring thoughts and comments. I am grateful to one of my most talented and attentive students, Nathan Kennedy, who added a number of textual improvements. My deep gratitude goes to one of the students and now inspired coauthor of the book, Paul B. Cherlin, who is not only a distinguished free jazz drummer, but also carefully reviewed the entire text, added so many improvements and clarifications to my often arcane text, and has written the very last chapter: a young voice for the future. I am also very grateful to the truly encyclopedic jazz expert Mathias Rissi, my long-time musical companion and energetic saxophonist, who brought me back to jazz twenty years ago, who checked the names and dates of the jazz cats and recordings cited in this book, and who added some thoughtful comments, especially on the extension of instrumental techniques.

I am also grateful for a grant-in-aid support of the University of Minnesota, which enabled me to enrich the free jazz course by realistic artistic performances, and in particular to Michael Cherlin, the Founding Director of the University's Interdisciplinary Program in Collaborative Arts, who wisely encouraged me to embark in theoretical and practical aspects of this innovative program. Last but not least, I am pleased to acknowledge the strong and singular support in writing such an advanced treatise by Springer's Science Editor Stefan Goeller.

Minneapolis, August 2008

Guerino Mazzola

## Jazz in Transition

*All of a sudden it became obvious  
that the battlefronts had reversed themselves  
under the onslaught of Free Jazz:  
under the impact of this music  
even the most experimental serial,  
aleatoric and electronic works,  
now, belongs into the fixed world of the establishment.*

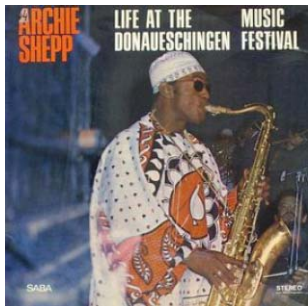
Joachim Ernst Berendt,  
liner notes to Archie Shepp's LP  
*Life at the Donaueschingen Music Festival* [92]

### 2.1 Archie Shepp's Outside Performance at the Donaueschingen Musiktage 1967

Archie Shepp's memorable three-hour concert on October 21, 1967, at the famous *Donaueschingen Musiktage* (released as LP [92], part I: 22:00, part II: 21:45 (figure 2.1) was entitled *One for the Trane*, referring to 'the father of them all' John Coltrane, who had passed away from liver cancer in July. Shepp's exquisite quintet featured trombonists Roswell Rudd and Grachan Moncur, Jimmy Garrison on bass, and drummer Beaver Harris. Shepp appeared in traditional African dress and provoked a thorough shock not only to the New Music establishment (as stated by the German Jazz expert Joachim Ernst Berendt—see our catchword above), but also to the festival organizer Heinrich Strobel.

The shock can easily be described and explained. This musically elite band transgressed such a huge space of music, after Garrison's typically flamenco-styled solo intro through Cuban rumba rhythms to a singularly melting interpretation of Jonny Mandel's standard "The Shadow of your smile", but always played from outside the traditions, namely dissolving these ready-made forms into wild and explosive free magma, unaccompanied reed

excursions and crashes of traded rhythmic walls. This “playing the tradition from outside” drove hundreds of square audience members crazy, to the extent that they actually left the concert hall. They returned only when the sublime explosions faded out and the band seamlessly transitioned into beautiful jazz traditions. This was the point of no return: Shepp proved that there is an infinite space outside those tiny bourgeois houses of predefined movements, of clichés and traffic rules. This was also what probably shocked many so-called avant-garde representatives: It was as if a huge volcano had opened its steaming throat and shown the abyss of never-imagined musical landscapes.



**Fig. 2.1.** Archie Shepp in Donaueschingen. © [113]

probably would have been less polite.” But the political aspect is not the essence of this new approach, it is more that Shepp had played the tradition from outside, demonstrating the light of a new universe. It is not by case that Krzysztof Penderecki, who had attended Alexander von Schlippenbach’s also free *Globe Unity Orchestra* performance at the same festival, was so overwhelmed that he asked to write a composition for *Globe Unity*.

Berendt closes his liner notes with this anecdote: “During the first Donaueschingen Musikfest in 1921, Richard Strauss approached Hindemith with a slight reproach: ‘Why do you compose atonally? You’ve got talent!’ Almost the same remark was made 46 years later by a Shepp shock victim: ‘Why does he have to play all that new stuff? He’s got all it takes to do anything that came before.’ Hindemith had this answer for his distinguished critic. ‘Herr Professor’, he said, ‘you go ahead and make your music, and I’ll do mine.’ In 1967, the year of the Newark riots, Archie Shepp’s reply to the above question

## 2.2 John Coltrane’s *A Love Supreme*—Opening the Modal Game

Three years before Shepp shocked his audience in Donaueschingen, on December 9, 1964, John Coltrane’s *A Love Supreme* recording [21] had set the endpoint to the modal approach to jazz improvisation profiled by Miles Davis [57], which had liberated the tonics from the major-minor tyranny. This recording was not free jazz in the sense of neglecting all rules of harmony, melody or rhythm, but it demonstrated the limits of these traditions and perhaps also first steps towards new freedoms, which were later made more explicit in Coltrane’s seminal *Ascension* [22].

We shall focus our discussion on those aspects of the composition, which point to new spaces, and which show where and how Coltrane’s concept was an endpoint of the modal tradition. For a thorough analysis of *A Love Supreme*, we refer to Lewis Porter’s brilliant essay [84]. The recording is with Coltrane’s

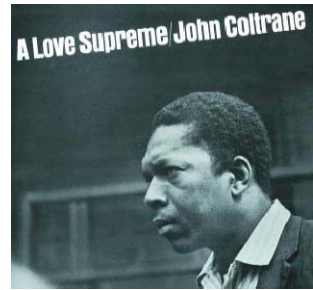
classical quartet: McCoy Tyner on piano, Jimmy Garrison on bass, and Elvin Jones on drums. The piece has four parts which are structured by four minor modes, as shown in the following table:

Part	Duration	Form	mode
Acknowledgment	7:43	prelude, free form, with song ending	$F$ minor
Resolution	7:18	increasing tension, standard, $3 \times 8$ measures	$E_b$ minor
Pursuance	10:43	fastest section, drum intro, 12 measure blues scheme	$B_b$ minor
Psalm	7:03	postlude, free poetical form, bass intro	$C$ minor

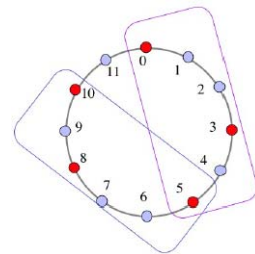
The scalar arrangement can be derived from the basic pentatonic cell  $P = \{5, 8, 10, 0, 3\}$  shown in figure 2.3 (as usual, pitch classes are encoded with  $c \sim 0, c\sharp \sim 1$ , etc.). This cell is the union of two isomorphic three-element parts,  $M = \{5, 8, 10\}$  and its fifth transposition  $T^7 M = \{0, 3, 5\}$ . The pieces basic motif  $B = f - a_b - f - b_b$  for the lyric “A-love-su-preme” is built from  $P$  as a succession of a minor third  $f, a_b$ , and the fourth  $f, b_b$ . It is remarkable that this pairing  $3 \mapsto 5$  is precisely the pairing of the consonance 3 with the dissonance 5 (!) under the autocomplementarity symmetry  $T^2 \cdot 5$  in the mathematical theory of counterpoint [69, chapter 30]. Coltrane could not have known this, but it remains an objective fact that he just relates the critical fourth dissonance with its corresponding consonance in this melodic unit.

When representing this pitch class set as a succession of fourth (under a fourth multiplication isomorphism  $T^t \cdot 5$ ), it appears as a chromatic set of five points. This set has three extensions to chromatic sets of seven tones as shown in the left part of figure 2.4. These three correspond to the diatonic scales of ionian (minor) modes at tonics  $f, b_b$  and  $c$ . This yields three of the four modes englobing the composition's four parts. The  $E_b$  minor scale of the second part (resolution) resolves the problem of completing the three scales to a symmetric configuration, as shown in the right part of figure 2.4.

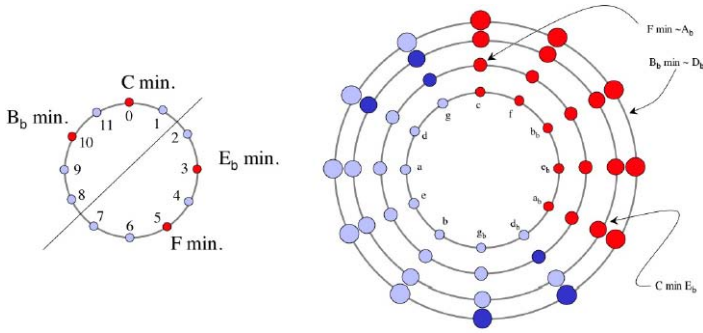
Also, Coltrane's introduction in the beginning of the first part shows a pregnant symmetry construction in that the pentatonic cell  $P$  with tonic  $f$  has a scale symmetry  $T^8 \cdot -1$  (inversion at e), whereas the material of his introduction is the pentatonic scale  $\{4, 6, 9, 11, 1\}$  with symmetry  $T^{10} \cdot -1$



**Fig. 2.2.** John Coltrane *A Love Supreme*. © [114]



**Fig. 2.3.** The pentatonic cell in *A Love Supreme* with its two shift-related three-element charts.



**Fig. 2.4.** Right: The three modes extending the pentatonic cell  $P$ , as shown in a fourth transformation. Left: The completion of the three scales by the fourth one ( $E_b$  minor) “resolves” the “symmetry problem” set up by first the three scales derived from the extension process.

(inversion at the former tonic  $f$ ) and tonic  $e$  (symmetry axis of the former scale). So tonics and symmetry axes ( $f,e$ ) of the basic scale are exchanged to ( $e,f$ ) for the intro scale.

All this looks like a delicate, not necessarily conscious game (this is the normal situation with ingenious compositions: the creative instinct may be guiding extraordinary and objectively traceable creations), with modal structures, and also a strategy of systematic extension of pentatonic cellular scales that are in turn generated from a motivic three-tone third-fourth cell to diatonic scales, yielding the variational sequence of extensions *germinal motif*  $\rightarrow$  *pentatonic scale(s)*  $\rightarrow$  *diatonic scales*.

If these constructions suggest that Coltrane is seeking extensions of known (modal) structures, the last section of the first movement (Acknowledgment) is a dramatic completion of this search for extension. It shows the dramatic reduction of the compositional display to the very kernel, namely the basic motif  $B$  associated with the three element part  $M$ . Coltrane now plays all twelve transpositions of  $B$  without any deeper strategy being visible (some sequences are related by fourth distances). The total of 28 variants of transposed motives is shown in figure 2.5.

This is not only a negative statement in that the basic harmonic framing by fourth or fifth successions is broken, but also a positive one, in that the basic motivic cell is an autonomous structural unit that need not be grounded in a global harmonic framework. It is a sort of demonstration that music can also be created without terrestrial harmonic gravitation, music of space that uniquely relies on an autonomous motivic cell. We shall see in the discussion of Ornette Coleman’s *Free Jazz* recording that this motivic perspective is an important germ for the development of the gestural aspect of free jazz.

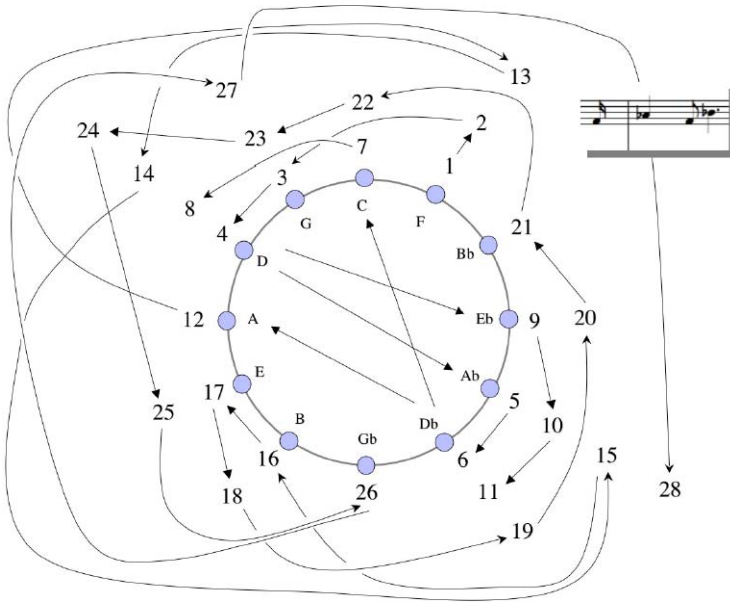


Fig. 2.5. The path of 28 transpositions of the motivic cell *B*.

### 2.3 Cecil Taylor and Buell Neidlinger: *The Complete Candid Recordings*—Conflicting Time

These recordings at Nola’s Penthouse Sound Studio in New York City took place on October 12, 13, 1960, and on January 9, 10 1961 and features Cecil Taylor, Archie Shepp, Buell Neidlinger on bass, and Denis Charles on drums (see figure 2.6). They are available on four CDs [102]. According to Nat Hentoff’s liner notes, he had met Taylor and became familiar with his innovative ideas about the dimensions of time while being a student of the New England Conservatory in 1951. During a singular seven-week gig at New York’s Five Spot in 1957, Taylor was already so advanced that musicians hearing him left disturbed, and Taylor was forced to work day jobs as short-order cook or dishwasher. He then had to practice alone and create a virtual audience. Later, he stressed the importance of communicating with oneself, but it must have been during these hard times that he invented and developed that attitude: “I have to believe I’m communicating to somebody, I have to keep contact going.” This attitude however



Fig. 2.6. Cecil Taylor’s group of *The Complete Candid Recordings*. © [115]



was essential, as Hentoff adds Taylor’s conclusion: “Obviously, music saved my life.”

Out of this historically precious collection, we want to consider take 28, the second of three consecutive takes of Taylor’s composition “Air.” This take captures and showcases the imminent dissolution of four-bar-oriented time frames. After a 20-second metrically disciplined drum intro, Taylor’s one-minute solo intro breaks all bar-oriented metrical regularities, presenting bursts of rhythmical taaah-taah-ta-ta units alternating with lyrical, non-metrical time shards (we learned this beautiful wording from Michael Cherlin’s inspiring book [17]). Taylor’s innovative approach to time and composition struck the traditional landscape of jazz with the power and impetuosity of a meteor. It is followed by the full group’s traditional play, having Shepp quoting Escamillo’s aria from *Carmen*, Neidlinger walking, and Charles keeping the four-four timing. Taylor is inserting himself in a charmingly traditional comping style. At minute 3:16, Taylor follows Shepp’s solo with a then already intriguing technique of extremely fast melodic threads, here and there interrupted by those dissonant chord clusters, which later were developed to the famous two-handed high-speed sequences of typically 10 hits per second. Although these garlands fit in the bar frame defined by Charles, one senses the deep contradiction between the tayloresque gestures and the rigid time frames of the jazz tradition.

Taylor is contained by his group’s traditional approach as a dancer would be contained by chains in a tiny prison. At minute 6:02 the dialog between the piano and drums initiates a musical call-and-response sequence where the musicians trade four-bar units. This sequence is highly musical, but nevertheless leaves one with the impression that implicit in Taylor’s responses is the sentiment “Look, this is how I would answer you if I were one of your species.” In turn, the answers of Charles are somehow funny transfigurations of Taylor’s far-ahead shapes back into the dominant drum language of metrically subdivided, but still entirely framed sets of gestures. The piece soon fades out, one hears Taylor saying “all right... one more for me” at the end of the piece (minute 8:30). He would have needed not one more piece, but other time sculptors: the drummers Sunny Murray or Andrew Cyrille. We will return later to the subject of overhauling the shaping of time and bar structure.

## 2.4 Bill Evans: Gestural Dialogs with Scott LaFaro in *Autumn Leaves*

Pianist Bill Evans, the “Chopin of jazz piano”, was not only an extremely intelligent creator of seamless harmonic transitions (quite the opposite of the not less intelligent Thelonious Monk), but also a dialogical improviser of supreme sensitivity. His duo recordings with guitarist Jim Hall, specifically *Undercurrent* and *Intermodulation*, showcase one of the finest jazz dialogs on

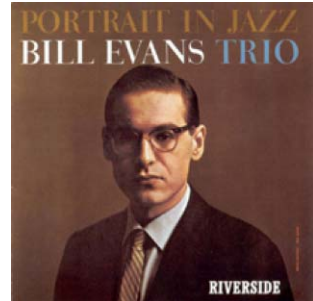
record. This approach was already germinating in his early LP *Portrait in Jazz—Bill Evans Trio* [33], recorded on October 13 1960, with Scott LaFaro on bass and Paul Motian on drums. Evans was fully conscious of the terminating state of the art of standard jazz practice. In the liner notes, he writes: “I’m hoping the trio will grow in the direction of simultaneous improvisation rather than just one guy blowing followed by another guy blowing. If the bass player, for example, hears an idea that he wants to answer, why should he just keep playing a background?” This reminds us of Ornette Coleman’s invitation to give up playing the background, although the latter had more profound changes in mind; we come back to this in section 5.1.

From this recording, we want to discuss the dialogical process for the 8:45 minute interpretation of Joseph Kosma’s *Autumn Leaves*. This performance is analyzed in great detail by Robert Hodson in [54], from which we borrow the transcription of the initial interplay of Evans and LaFaro, and also with sparse interjections, Motian. In Hodson’s analysis, three structural constituents of performance are identified: harmonic progression, phrase structure, and performance practice. In his analyses of the transition to free jazz, the changes in these three constituents are exhibited. For *Autumn Leaves*, he concludes that the third, performance practice of head arrangement and instrumental roles is broken down to a more dialogical approach. His analysis first focuses on the harmonic skeleton and then switches to the fascinating investigation of motivic and melodic contrapuntal improvisations. Whereas Hodson’s prose moves within the known vocabulary when he discusses the harmonic architecture, it switches to a remarkably different place, when discussing these melodic processes.

The *differentia specifica* is condensed in the new concept of a *gesture*, which is remarkable exactly because it is not part of the classical contrapuntal theory (and of course also not of harmony or rhythm). Hodson’s description of the musical dialog specifies a number of gestural exchanges, give and take with three characteristics, and we add a fourth one (resonance):

- contrast: e.g. descending is answered by an ascending melodic gesture,
- imitation: e.g. shifting in time and pitch space a given melodic gesture,
- transformation: answering by a geometric contrapuntal transformation such as retrograde on a melodic gesture,
- resonance: simultaneous imitation of a gesture.

So these gestural exchanges are realized as structural correspondences of melodic lines. For the time being, we refrain from giving a precise definition of a gesture—this will be done in due depth in chapter 8. Here, we are not



**Fig. 2.7.** The Bill Evans trio: *Portrait in Jazz*. © [116]

The image shows a musical score excerpt from measures 1.11 to 1.22. The score is written for piano and bass. Red boxes highlight specific musical phrases in both staves. Red arrows indicate correspondences between these phrases across different measures. A legend on the right side of the score lists the types of correspondences:

- contrast 1
- imitation 1
- imitation 2 (b-flat/g)
- resonance 1 (d/e-flat)
- imitation 3
- imitation 4
- contrast 2
- imitation 5 (of ds!)
- imitation 6

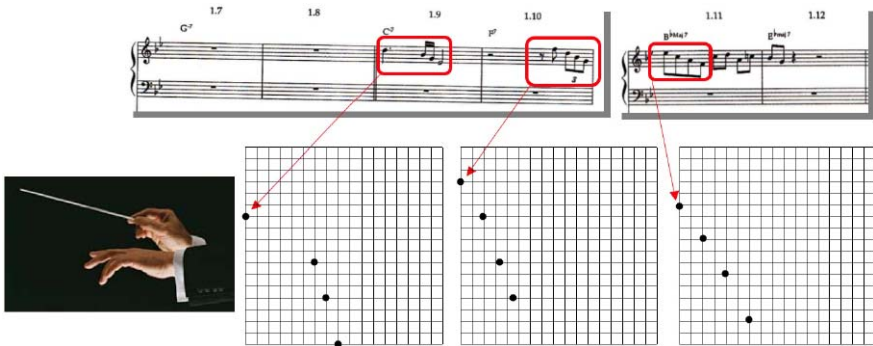
**Fig. 2.8.** An excerpt of the gestural dialog between Evans, LaFaro, and occasionally Motian, showing different types of correspondences. © [117]

understanding gesture in terms of spatial structure (a single note, a melodic line, a chord), but the action taken by a musician which provokes a corresponding re-action, the “response” of the fellow musician. We also insist on the fact that such exchanges are not driven by messaging given semantics, but do in fact create whatever would be called “meaning” by the movement of a symmetric correspondence as described above. This is a classical example of symmetry: It is the correspondence of parts as an expression of a whole. And this whole is not given in advance, but created under this correspondence (see [69, chapter 8] for a more in-depth discussion of the concept of symmetry).

Here, the semantic charge is effectively represented by the very making of these correspondences. Gestures are thrown at fellow musicians who answer with a counter-point that constitutes their musical meaning. The blossoming of these beautiful “meanings” is facilitated and advanced by intimate gestural interaction. In figure 2.8 we show a page from Hodson’s transcription, which abounds of such gestural ping-pong pairings. For example, the piano movement in bar 1.11 is imitated (imitation 1) by the bass in bar 1.12, and simultaneously, the descending line  $d - c - b$ , of the piano in bar 1.11 is con-

trasted (contrast 1) by the ascending (retrograde) and then re-descending line  $b_b - c - d$  of the bass in bar 1.12.

We are also refraining from a mathematical definition of these correspondences. They all pertain to the topological theory of similarity of motives as developed in [69, chapter 22]. So these concepts are nothing less than pure intuition. Here we stick to the intuitive understanding of melodic similarity, i.e., the transformation or deformation of melodic shapes (in pitch and time) into each other. Suffice it to show (2.9) that melodic similarity is a very natural approach to the fuzzy character of gestures, as is visible from three similar melodies that may be intuited in the finger gestures of a conductor.



**Fig. 2.9.** Three melodies as visualized in the pitch-onset space and embodied in a conductor’s finger gestures.

Our example demonstrates that this instance of transgressing the limits of traditional jazz frames to free jazz also evokes a new branch of theoretical musical vocabulary built around the concept of “gesture”. More so, it shows that the result of gestural dialogs is not controlled by the classical contrapuntal theory, since there is no a priori structural scheme to be reified. *The aesthetic value lies entirely in the dynamics of the gestural exchange. These movements transcend codified rules and create their own. They do not follow, but make them.* We come back to this fascinating insight when discussing the French philosophy of diagrammatic thinking in section 7.2.