Jazz, Improvisation, and Architecture

Noise Orders

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In memory of Helena,
Frank, and Robert

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Speculative Leaps

Fugitive Systems

1-2-3-4-5—1-2—1-2-3-4-5 is the rhythmic pattern of descending chords introduced in seven measures of "Giant Steps." In the next eight measures, this progression is countered with four rhythmic clusters of three chords moving in ascent, 1-2-3—1-2-3—1-2-3—1-2-3. Then 1-2 chords descend in the sixteenth measure to initiate a second presentation of the sequence. Speed transforms this harmonic progression and rhythmic sequence into a challenge of daunting complexity when John Coltrane and his fellow musicians play.[1] Multiple distinctions blur, as Coltrane rapidly presses an extraordinarily dense quantity of notes through his saxophone. He barely has time to draw breath and seems intent on forcing either himself or the saxophone to a traumatic end. Out of necessity, dexterity and intellectual agility merge as he and his fellow musicians work frenetically to maintain their pace and a delicate balance between his solo and their tempestuous support. The slightest hesitation or misstep by any participant will result in the collapse of their play. In defiance of this risk, Coltrane's solo seems to always run slightly ahead, beckoning and then springing forward with the arrival of the smallest amount of necessary support.

Despite the strains imposed by their velocity, no one falters. They

all navigate safely to the end. Future recordings by Coltrane do reveal that there was in fact a casualty: the composition had been pressed and accelerated to its end. With "Giant Steps," Coltrane exhausted the need for a chord structure as the basis of improvisational play. In such works as "My Favorite Things," he obliterates the song as a sound object—something represented in a fixed ideal state through writing or recording and reproducible in performance—in order to use fragments of the song as raw materials and resources. With the song recognizable only through occasional statements of its refrain, two scales selected from within the theme structure enable an equally energetic and open-ended play that eventually becomes so expansive that Coltrane is criticized for practicing onstage.[2]

Practice is pertinent; preparation for recognizing potential dimensions, depths, and directions is preferred. Instead of a final form, there is a perpetual state of development and change in playing that facilitates a leap into the unknown. Steve Lacy describes the potential yield of that leap as the only means to some forms of knowledge: "If through that leap you find something then it has a value which I don't think can be found in any other way. . . . What I write is to take you to the edge safely so that you can go out there and find this other stuff. But really it is this other stuff that interests me and I think it forms the basic stuff of jazz."[3] Within this dynamic system, the sound object is not the only form subverted—rendered pliant, unstable, and unfixed. Also necessary for this music, focused on a risk-laden moment, is the engagement of the indelibly inscribed, yet mutable, bodies, instruments, and vocabularies of the musicians. Playing in an atmosphere where they contribute to evolving music orders rather than conform to existing ones, musicians paradoxically lose their identities even as they find them.[4]

Noise

Architecture has been characterized as frozen music. However, musicologist Bruno Nettl suggests that the dominance of vision in Western culture and thought has already frozen its sense of music: "Musicologists have been concerned in the first instance with musicology, and less with the process than with the completed work. Affected by the research traditions of visual art and literature, they have con-

centrated on the finished work, analyzed the interrelationships of its components, and looked at its history, but rarely have they been concerned with the varying orders of creativity that may have led to the final product."[5] As it has continued to develop through the twentieth century, Western classical music has focused on fixed, rather than active, relations that emphasize the composer over the performer, and "correct" technique adopted to perform the intentions of the written composition. This focus facilitates the identification of synesthetic equivalencies or harmonic series of mathematical and structural relationships that might be extracted and applied to reinforce the proportional relations, idealized geometries, and other visual obsessions that dominate architecture and urban design. However, as Nettl notes, all music cannot be fully accounted for within the vision-based relations of written music: "The concept of improvisation is actually broader and encompasses more types of creative activity than the concept of composition, defined as an individual writing a score. Nevertheless, musicologists have tended to dismiss it as a single process which is not easily described."[6] Unable to precisely account for or define all of the processes that can be found in jazz, written modes of thought that privilege the eye have dismissed the potential of improvisation as a modern mode of thinking and practice, viewing it as oppositional and inferior. But improvisation is facilitated by a broad range of creative activities, including written composition, that enable a set of explorations that are distinct from, rather than opposed to, those of a fixed composition. In reminding Western culture that playing music and creating music need not be separate activities, jazz insists that order might not reside where we expect it—in the places described by Western musical notation, its techniques, and its harmonic preferences. Order might in fact reside in what that system perceives as noise.

Noise, as the art historian George Kubler proposed in *The Shape of Time* while explaining the concept of "drift" in linguistics, is irregular and unexpected change.[7] "Drift," or gradual and periodic change in language, occurs because of noise, interferences that prevent the complete repetition of an earlier set of conditions. Historically, "human perception is best suited to slow modifications of routine behavior," so we seek to regulate rather than embrace the sources of noise.[8] Noise is inevitable. However, by limiting it or reducing it to a

regular hum, we can control the rate of change to ensure communication. In *Noise: The Political Economy of Music,* Jacques Attali indicates that a price is paid for that limitation and reduction, because noise may bear meaning: "A noise is a resonance that interferes with the audition of a message in the process of emission. A resonance is a set of simultaneous, pure sounds of determined frequency and differing intensity. Noise, then, does not exist in itself, but only in relation to the system within which it is inscribed: emitter, transmitter, receiver. Information theory uses the concept of noise (or rather, metonymy) in a more general way: noise is the term for a signal that interferes with the reception of a message by the receiver, even if the interfering signal itself has a meaning for that receiver."[9] Situational and system-dependent, noise, or that which is excluded or taken as interference, may indicate a different ordering potential and meaning outside the range of an existing system. These aspects of noise are evident in improvisation's use of particular contexts, performers, and other circumstantial variables as resources for making music. Because written composition in classical music seeks to regulate and limit these same factors to ensure the precise reproduction of music, improvised music is inexplicable to classical musical thought.

Architecture and Improvisation

However, neither Kubler's nor Attali's discussion of noise is limited to sonorous considerations. In contemporary architectural practices, we find several efforts that reflect upon questions introduced by improvised music's assertions of verbs over nouns, the sonorous over the visual. We also find variability and fugitivity as indicators for different issues in architecture. Readings of the spontaneity and exuberance in architectural drawings and forms have on occasion identified or proposed a visual equivalence to qualities that characterize forms of jazz, such as syncopated rhythms, hesitations, repetitions, inversions, and call and response.[10] Walter Hood deploys a geometric organization and often subjects it to a series of readings, based on subjects—observed and documented from everyday life—who might occupy the space, and who provide different articulations and elaborations of the geometry that he overlays onto a site.[11] The completed

design is a synthesis that somehow reflects all of these informants. Araya Asgedom and Mark West have sought to incorporate improvisational aspects within their work through frameworks and formworks in which the final determination of a built element's form is elicited from the play of material forces and properties during construction.[12] Through such work, improvisation offers a challenge to approaches that make the material conform to modes of construction. With computers, this play of material forces can become more implicated in the act of design. Animation software is the material in which active properties and variables are defined, assigned, and set in motion to enable shifting forms to unfold. Design becomes a process of assignment, adjustment, and selection that has been likened to "avant-garde jazz" (that is, the work of avant-garde jazz musicians).[13]

The reasons for these explorations in relation to improvisation, at the level of design, construction, and/or use, are quite varied. Some of these references to improvisation and jazz focus on visual equivalents—substituting one kind of music as a representation of visual relationships—and maintain an emphasis on representational relations that can account for the sonorous quality of music and the visual character of geometric forms, as well as the processes that generated them.[14] Other efforts, such as Bennett Neiman's, strive to develop generative forms or processes that exceed the intentions and expectations of the designer and subsequently give the design greater formal spatial complexity.[15] Asgedom seeks an affective as well as effective architecture—an architecture of excess, which, having fulfilled its functionality, goes further. An architecture of improvisation in this formulation is based in repetition and change, improvisation, nonobjectivity, and contamination.[16] Through his improvisational design acts, Hood strives to produce a new spatial field—one that acknowledges and is characterized by flux and change, rather than permanence and certainty, and that enables its subjects to engage in acts of improvisation in their occupation of the space.

Further potential for such dynamic spatial fields and ways that architecture might provide or work within them is the focus of this book. Jazz and improvised music are studied to identify properties, qualities, and effects that architecture might instill and encourage

to increase the potential for improvisational moments and actions to occur. The chapters that follow focus on manifestations in improvised music of active and variable conceptions of composition, relations between subject and object, time and space that challenge architecture's own separations between subject and object, its isolations and exclusions to delineate discrete wholes, and its assertions of fixed structures wrought by a privileged eye, which tend to emphasize stasis. By examining these four areas, the potential for designs that emphasize material forms and their resultant shapes, emergent and variable subject/object positions, moments laden with diverse temporal articulations, and latent properties of materials and systems are introduced and outlined.

The incorporation of these considerations, which seek to facilitate improvisation in a dynamic spatial field, does not necessitate improvisational design, but it does transform, shift, and expand architecture practice from an emphasis on the design of objects to an emphasis on the coordination and manipulation of resources, including the production of objects, to facilitate access to processes. Operating within this change in emphasis, the architect may take on the role of improviser as well as other roles involved in the making of improvised music, including those of composer, soloist, provider of rhythmic support, and listener. The architect might engage in different sets of actions—some improvisational and some compositional. The particular position that an architect might occupy across this spectrum would be determined by the needs of the project.

In such shifting roles, the architect might address Keller Easterling's suggestion that architects seek the wild cards—which she describes as improvisational frameworks that permit adjustment—in many of the organizational formats and infrastructures that work upon the manifestation of our built environment.[17] The architect might find himself or herself working like a jazz drummer, or a shepherd, to guide what Sanford Kwinter describes as a "soft urbanism"—a dynamic, flexible, ad hoc urbanism "where forces are allowed to interact and in so doing to declare their natures: to tell us of what they are made and to what ends they tend."[18] Both of these potential directions for architectural practice are notable because they reference biology, information theory, and cybernetics, yet they recognize that there are qualities and properties of improvisation—which is

not a component of such areas of study—that merit consideration. These qualities and properties include its ability to accept and accommodate the unforeseen and the unplanned, the provisional and the circumstantial, and that which is subject to change and adjustment. Such recognition of improvisation is rare, perhaps because of the lack of precise lines or indications, similar to those offered by scientific explanation, on which design might concentrate.

Insofar as improvisation has been examined, the emphasis tends to be on seeking understanding through definition. The definitions provided in architecture, such as those by Asgedom and Hood, describe improvisation as a negotiation between anticipated and unanticipated phenomena and a play of the familiar within processes of tradition/repetition and change. These definitions are richer and more accurate than the common understanding of improvisation as the act of "making it up as one goes along." Even so, the moment and act of improvisation eludes prediction or precise identification. The task of defining improvisation is likely impossible in view of its "having no existence outside of its practice."[19]

Improvisation is perhaps, borrowing from the language of the biological and the computational, best understood as an emergence—one of human thought and action—that is facilitated by a range of variables, properties, and structures. As this book demonstrates, some of those variables, properties, and structures, as well as ways in which they might be informative for architecture, can be identified and understood by examining jazz. The intent of this study is to understand what design can organize to facilitate or increase the likelihood of improvisation—to structure ways to, in paraphrase of Lacy, "take someone out there."

In its cultural, philosophical, and social basis, jazz also offers an indication of the value of processes that facilitate improvisation as informants and aspects of dynamic spatial fields.[20] Through the blues and work songs, jazz descends from six organizing principles of African song and dance, which Robert Farris Thompson has described. Five of these principles affirm and elaborate the formal characteristics that are traditionally used to describe jazz. The sixth principle—characterized as "*songs and dances of social allusion* (music which, however danceable and 'swinging,' remorselessly contrasts social imperfections against implied criteria for perfect living)"—identifies

the ability of the tools of entertainment to operate as conceptual critiques that push both musical and social limits.[21] The study of improvised music contributes insight regarding the human creative potential that can be enabled in the interplay of dynamic systems—filled with risk, diverse durations, fleeting boundaries, and varying qualities of media. The manner in which active properties are deployed in improvised music emphasizes inclusion by maximizing individual creativity within a collaborative and collective environment.

Cecil Taylor and Santiago Calatrava

Commenting on his own music and Santiago Calatrava's architecture, Cecil Taylor, an improviser known for his free-form playing, suggests some of the fundamental questions that improvisation poses for the design, development, and engagement of architecture—questions that this book examines: "I get more gratification in looking at an architectural drawing by the structural engineer Calatrava than I do looking at most musical scores. There's always been this inaccurate way of describing people who play by ear. I mean what other way is there to play? Composition is a kind of architecture by using sonorities to create three dimensions. What is this mythology about composition? What is the body supposed to be doing when one is performing?"[22] Elsewhere, Taylor has revealed that his fascination with Calatrava's work proceeds from interests in dance, poetry, and architecture/engineering, including the ways in which these forms are structured.[23] Although he acknowledges a difference in material, Taylor, who also writes poetry, believes there are unintended similarities in his poetic and musical structures that are informed by his cross-disciplinary interests. Similarly, his interest in the transition from suspension bridges to the sculptural qualities of fan-shaped and harp-shaped cable-stay bridges, and the development of Calatrava's distinctive structural conception—all, according to Taylor, analyses of construction techniques manifesting an "idea of space, duration, and time"—have unspoken yet clear connections to Taylor's musical structures.[24] Taylor's particular interest in Calatrava's bridges seems to lie in the ability of Calatrava's forms to identify the forces and counterforces acting upon them (Figure 1).

Alexander Tzonis and Liane Lefaivre, in *Movement, Structure, and*

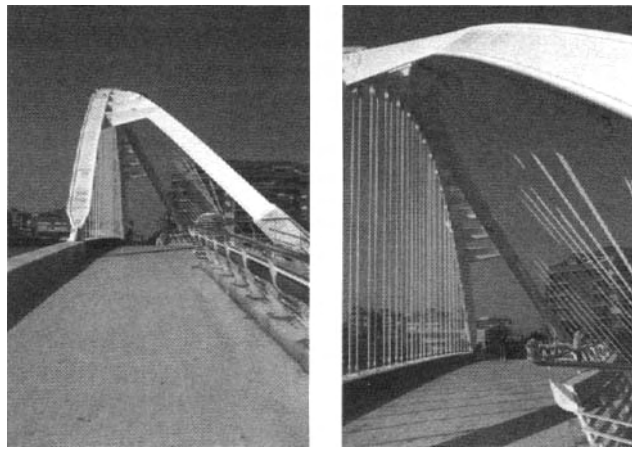

Figure 1. Santiago Calatrava, Bac de Roda Bridge.

the Work of Santiago Calatrava, assert that Calatrava's work "manifests movement rather than masks it."[25] They note that Calatrava surpasses the representation of stability and the appearance of optimization, and approaches structure as an open field of possibilities by selecting a transitional state—where the structure articulates its generative movements as well as its potential destruction—as the point of equilibrium. In its poise between "generation and catastrophe," Calatrava's dynamic equilibrium relates to two structural aspects of Taylor's music: the rhythmic quality created through cycles of a gradual rise then precipitous fall of pitch and intensity, and the composed elements that initiate the music (Figure 2).[26]

Using poetic prose, Taylor describes these composed elements and their role in the generation of his music in the liner notes for his recording *Unit Structures:* "The first level or statement of three an opening field of question, how large it ought or ought not to be. From *Anacrusis* to *Plain* patterns and possibility converge, mountain sides to dry rock beds, a fountain spread before prairie, form is possibility; content, quality and change growth in addition to direction found. 3rd part is area where intuition and given material mix group interaction. Simultaneous invention heard which these words describe. The paths of harmonic and melodic light, give architecture sound structures acts creating flight."[27] The "unit structures"—short, self-contained rhythmic and/or melodic themes and elements—that are

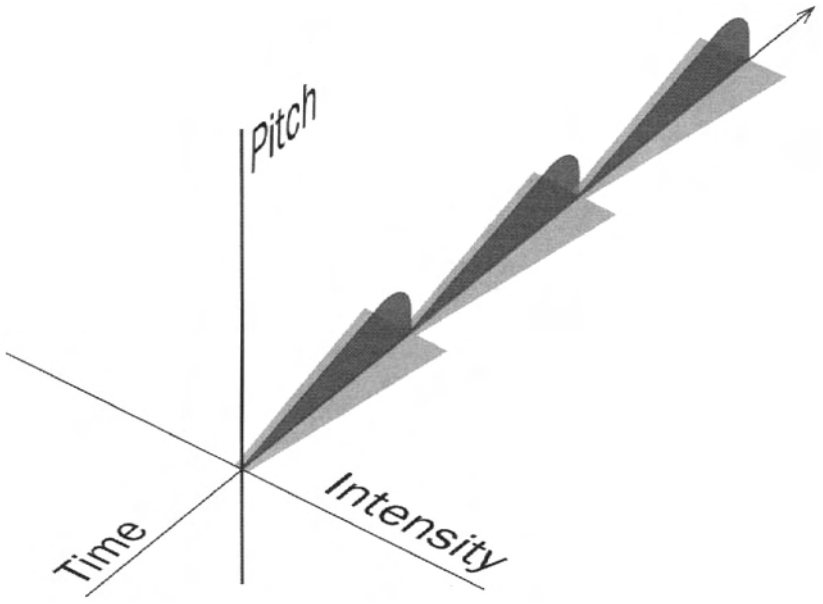

Figure 2. Diagram of pitch and intensity cycles in Cecil Taylor's music. Based on a drawing by Ekkehard Jost in *Free Jazz*.

present in the sections "Anacrusis" and "Plain" have similarities to Calatrava's drawings. In "Anacrusis," which is the beginning of the piece, a unit structure in the form of a rhythmic figure juxtaposed with piano chords establishes rhythmic tension as the general sense of the mood and tone of the music to come. In "Plain," unit structures provide predetermined thematic materials: as many as fifteen different melodic and rhythmic phrases, none lasting more than ten seconds, are stated to provide the material that will later be repeated and developed.[28]

In the spring of 2001 Taylor taught his organizational principles to a class at the Turtle Bay Music School, providing a rare description of how Taylor notates this material: "He divides the scores into small modules, which he calls quadrants. Each has specific rules, with cues and gestures as to how they can be played, and each fits with the others in some manner. He uses neither bar lines nor staves, but presents the notes as hieroglyphs of letters, ascending from A to G and descending from G to A, with register and pitch indicated by the distance in whole steps from middle C. They look like the

branches of a tree, abstract landscapes of plateaus, mountains, and valleys, or perhaps a graphic representation of a dance."[29] In developing this material, Taylor applies lessons from opening melodic lines by Thelonious Monk and Charlie Parker "that have all the energy and all the rhythmic qualities of a symphony in twelve measures."[30] He strives to provide similar properties in his short statements.

Calatrava's drawings reflect "conceptional principles that regard structure as a three-dimensional well-woven network containing different conduits dedicated to different scales and qualities of movement."[31] As such, they can diagrammatically describe the general rhythmic oscillations and the forces at work in the composed elements of Taylor's music. But the drawings are resonant, not resolute, as formal correspondences. They lack the capacity to explain the varying tempo, the irregular rhythmic lengths, or the other phenomena that Taylor encourages in "Area," the long passages of his music constructed through collective improvisation, the conscious manipulation of the known materials. However, Taylor's composed elements presented in "Anacrusis" and "Plain" also lack this capacity, because "notation can be used as a point of reference, but the notation does not indicate music. It indicates a direction."[32]

Describing the potential within a chord sequence to the Turtle Bay group, Taylor explains, "I played you just a single line. Unless you play this extension chord, you have all sorts of possibilities within that sound."[33] Later he emphasizes the rhythmic aspect of a four-note sequence and demonstrates that its different rhythmic registers hold potential improvisational variations. Musician Dan Marmorstein, echoing Taylor's description from *Unit Structures,* considers the scores to be fields. "Part of the fun," Marmorstein observes, "is to discover the possibilities of combining these notes in different ways." Yet as the music develops, all of the possibilities may not be appropriate: "the player has to keep alert and on his toes and decide whether to deal with the vertical stacks and the horizontal lines as consecutive tones or as simultaneously voiced chords."[34]

Taylor's description of his preparations for a work with the dancer Min Tanaka further explains why the composed elements cannot fully account for the music he produces. "For this Min Tanaka thing there are three areas I'm dealing with. I'm dealing with how to get to the piano, what kind of movement is going to be required. How the

voice is going to be used. . . . Then there's the music. Specific sound organization of music."[35] Architecture, in Taylor's formulation of using sonorities to create three dimensions, is not limited to notated directions, definitions, organizations, and relations of sound values, because the "intricate network of formal relations" that he produces by playing includes such seemingly nonmusical variables as getting to his instrument.[36] His architecture emerges from the development of sound in an interplay between the directions described in his composed structures and the variable qualities of the body, time, and space. In the manipulation of these forces and materials, his music articulates a total environment or area that is a measure of these properties and in which no one property is the sole determinant.

Complex Subject/Object Relations

To optimize the directional operations of his composed elements, Taylor conveys his music through playing rather than through writing: he prefers that his composed structures remain in the realm of sound for more complete absorption. Heard rather than seen, his forms are always active, "playing around in [the musicians'] heads and operating" to suggest new shapes that emerge when playing.[37] Writer Mark Miller emphasizes the collaborative implications of this approach in a description of Taylor's process. Miller observes that Taylor first had the musicians write the parts that he described to them. Later, "he would ask for Xeroxes of each part as the musician had written it—this, together with a personal statement of what the musician felt to be his or her own 'most outstanding personality trait.'"[38] Because of this emphasis on the contributions made by the musicians and their distinct personalities, Taylor's music is subject to change depending on the individuals who are playing it.

For musical personality to emerge, Taylor feels it is important that "you look at the instrument and you spend your energy creating sound with the instrument."[39] Having studied in a classical conservatory for three years, Taylor has a firm grounding in the standard techniques for playing the piano. However, as seen in excerpts from the video *Burning Poles,* he has developed a range of unique techniques for releasing an array of sounds from his instrument. While playing "Poles," he bypasses the keyboard to concentrate on the produc-

tion of sounds through the direct manipulation of the piano strings (Figure 3). With a mallet in his right hand, he successively plucks and rubs the piano strings with his left hand, then strikes them with the mallet as he moves around the piano. Shown seated at the keyboard playing "The Silence of Trees" in the same video, Taylor reveals a similar variety of techniques, few of which correspond to the conventions of his classical training (Figure 4). He conducts runs in which his fingers, clustered together, dart at the keys. At other moments, he sits with his hands poised above the piano keys, then rolls one hand over to strike a cluster of keys with its backside or slaps the keyboard with his palm and forearm. While most of these practices and techniques were initiated by modernist composers, Taylor's use of them has distinctive effects.[40] Buell Neidlinger has commented that "most pianos are not worthy of Cecil's abilities nor were they able to sustain the massive force of his attack which comes from the shoulder. Most pianists play from the elbow; he played from the shoulder."[41] Valerie Wilmer has called Taylor's technique percussive, as if the piano were eighty-eight tuned drums.[42]

Figure 3. *Rub.* Still sequence of Cecil Taylor playing "Poles." From *Burning Poles: Cecil Taylor in Performance,* 1991. Courtesy of Mystic Fire Video.

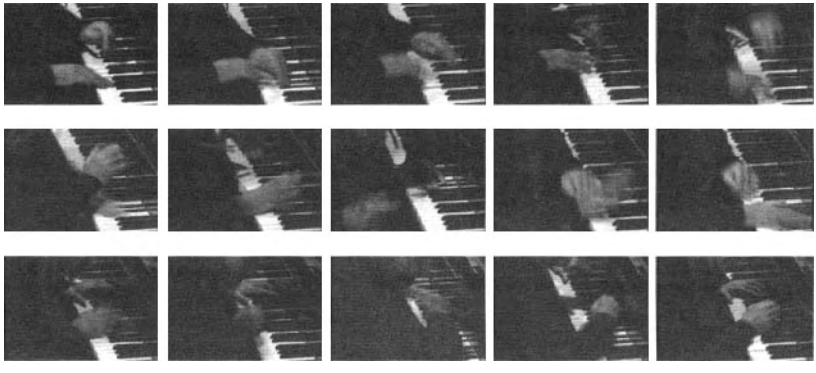

Figure 4. *Dart, Slap, Forearm.* Still sequence of Cecil Taylor playing "The Silence of Trees." From *Burning Poles: Cecil Taylor in Performance,* 1991. Courtesy of Mystic Fire Video.

Taylor's playing emphasizes the extensive sound potential that lies outside the range of sounds that standard notation communicates and the realm established by classical techniques developed to allow written composition to work effectively. Every instrument both enables and conditions us through its implied physical relations—fingerings, volume control, and body control. In jazz, thorough explorations of how the body may relate to an instrument provide the basis for developing technique. "Each man," Taylor declares, "is his own academy," deriving techniques from an individual exploration of gestures in relation to a particular instrument as well as from the latent intelligence of that instrument's material and form.[43]

Variable Temporal Flow

Jazz, which reintroduced rather than introduced Western culture to the principle of kinetic improvisation in music, is not unique in its practice.[44] All music uses improvisation in some manner. "What makes jazz unique," Taylor proposes, "is the compression of that energy in a short period of time, and that, in turn, is a reflection of what the machine has done to our lives in metropolitan areas in America."[45] While solos in twelve, sixteen, or thirty-two measures and the duration that a piece is played contribute to this temporal compression, rapid rhythmic manipulations have the most significant impact. Accents on the offbeats, the placement of notes slightly ahead of or behind the beat, and the overlay of multiple rhythms provide jazz with its kinetic drive and enable the expression of variable and complex temporal manifestations within a small interval. Charles Mingus, describing the opening line of *The Black Saint and the Sinner Lady,* indicates the compressive degree of these manipulations: "Dannie Richmond opens with a written repeated rhythmatic bass drum to snare drum to sock cymbal figure that suggests two tempos along with its own."[46] Three of the six movements that follow deploy temporal measures extracted from this dense overlay produced in the one-second interval that it takes Richmond to play the figure. In effect, the basic measure of uniform mechanical time here contains four measures of time.

Taylor encourages temporal compression—"complete sketches, improvisation, content, and shape becoming one"—by dispensing with

steady beats and other repetitive measuring elements and concentrating on the development of a dense field of varying patterns and phrases.[47] Energy, the rise and fall in pitch and intensity of his rhythmic phrases, operates as the source of kinetic drive in this approach. Additionally, the different lengths of Taylor's overlapping melodic lines often accentuate one another over extended and undefined periods of time, which not only results in a startling density of tempos but also suggests that time consists of an interplay of various durations that develop and dissipate at different rates. The music, lacking any external imposition of temporal measure, is developed in real time, with each element operating temporally as a direct registration of the activities that produce it.

Textured Space

Music that undergoes development in real time is influenced by all the elements that make up its spatial environment, including the socially defined spaces between musicians, and between the musicians and the audience, as well as the physical space that surrounds them. Taylor conveys the importance of these spatial considerations when he comments on recording studios: "I've never been really comfortable in a recording studio. For the most part it's such an artificial situation, and the engineer, of course, makes it even more artificial by the insistence on arranging everybody to fit his idea of sound, which has nothing to do with music . . . what the engineer should do is simply reproduce the sound after the musicians have set themselves up in the most happy arrangement possible."[48] In improvisation, unlike compositions written away from the performance site, the space of playing is not assumed to be uniform or without significant properties that might affect the music. Instead, that space, textured and varied, is understood to contain elements that not only affect the acoustic properties of the music but also give it a degree of site specificity, informing some of the musical decisions and relations of the musicians.

Noise Orders

Composition is an open-ended structure. We should not limit ourselves to a prescribed range of given objects but alert ourselves to the

broader range of potential positions that we can develop by working with them. At each moment, we are immersed in multiple durations; space consists of varied rather than uniform properties. As Taylor works with these dynamic and variable considerations, "the emphasis in each piece is on building a whole, totally integrated structure."[49] However, he is hesitant to fully identify the nature of the form or the order that develops, and offers the following viewpoint: "There is no music without order. . . . But that order is not necessarily related to any single criterion of what order should be as imposed from the outside. Whether that criterion is the song form or what some critic thinks jazz should be. This is not a question, then, of 'freedom' as opposed to 'non-freedom' but it is rather a question of recognizing different ideas and expressions of order."[50] Taylor is frequently surprised by the ways in which patterns, relations, and order manifest themselves in the total field generated by his music because none of these structuring considerations provides comprehensive control over the elements it gathers and organizes.

Dynamic, open-ended, and ambiguous, these considerations facilitate improvisation and the embrace of opportunities created by the circumstantial and the unforeseen, yielding outcomes that exceed their seeming potential. I call these underlying structuring considerations within the apparent disorder, which music played by ear—improvised music, such as jazz—has come to represent, *noise orders.* With the phrase *noise orders,* I seek to convey the tenuous balance between object and action by which such orders maintain their tentative relations with the forces they organize, and how they are inherently subject to change, capable of resisting closure and objectification by acknowledging and engaging noise.

The chapters that follow further investigate the design implications of these structures and conceptions that facilitate improvisation by examining each one individually within one of four preexisting comparative moments when modern and avant-garde artists and architects established an overlap or a distinction between their work and jazz. Each comparison introduces a line of inquiry, through ideas in architecture, visual art, or music, that provides parameters for examining developments and ideas in jazz. Black culture is significant in considering these moments of overlap because of its conceptual, perceptual, and aesthetic impact on jazz practices, and because of

the ways in which misperceptions resulting from its reception have affected perceptions of jazz. The process questions the prevailing historical understanding of jazz as an emblematic or metaphoric "expression of the dynamism of the modern city and modern life through its complex dissonant sounds and dynamic energy," to reveal jazz as a reflection on improvisation as a mode of production in modern culture.[51] The lines of thought are altered, deflected onto different trajectories that reveal jazz to be a set of structures, conceptions, and practices that constitute a distinct effort to negotiate the processes of modernization. The chapters thus operate dually. First, they demonstrate how improvised music, since its rise in the early twentieth century, has consistently offered seldom considered alternative and inclusive modes of practice. Second, they reveal how the active properties and practices of improvised music continue to bear the potential for the creation of an inclusive environment. In working through the comparisons, the intent is not to read improvisational aspects in past architectures, but to expose potential directions for architecture. Each chapter concludes with the identification of a design consideration that can be incorporated into contemporary design practices.

Mondrian's reflection on neo-plasticism, rhythm, and open form in relation to jazz is the focus of chapter 1. The obvious point of overlap is boogie-woogie, the music to which Mondrian referred in his two final paintings. However, as early as 1921, Mondrian also proposed that jazz was a precursor to neo-plastic music—a point he made in "Jazz and the Neo-Plastic," an essay that Mondrian describes as "an article on Neo-Plastic chromoplastic in architecture. . . . I only take jazz as the starting point; it does not deal with music."[52] The chapter discusses boogie-woogie as the culmination of these speculations on neo-plastic music and considers the impact of boogie-woogie on Mondrian's work. It then explores Mondrian's thoughts on the spatial and architectural implications of neo-plastic painting and jazz. Both employ open-form compositions focusing on extended relations rather than closure, and both (in Mondrian's estimation) indicate an open potential in architecture that leads to a transcendent utopian future unconstrained by form. The chapter concludes by discussing an implication of open form in jazz that is outside Mondrian's focus on rhythm and percussive sound—the way in which compositions

organize participants. Forms that take you "out there" provide links and/or find coherences within incoherences in the work and words of Count Basie, Charlie Parker, Thelonious Monk, Charles Mingus, Wadada Leo Smith, Michel Ratté, and Anthony Braxton. These forms suggest not only a different manner in which architecture might be an open form, through the design of material forms that manifest resultant shapes, but also a different consideration of the present and the future, as well as immanence and transcendence.

Although Mondrian's ideas were transformed upon his hearing boogie-woogie, his early writings advocate the use of electronic sound and nonsound, emphasize the composer rather than the performer as "the actual artist," and support a precise repetition in performance. In these respects, Mondrian's ideas run counter to many developments within jazz. Given the emphasis on electronics, they have more similarity with the ideas of John Cage. However, Mondrian's emphasis on the repetition that electronics permit runs counter to Cage's viewpoint.

For Cage, the advent and proliferation of electronic systems introduced sounds and qualities that exposed the inadequacies of Western music's concentration on harmonically organizing the sounds of the scale. An indeterminate music, one that eluded the control of the composer or the performer and permitted sounds to be themselves, was his response. Chapter 2 compares the processes of improvised music and Cage's ideas regarding indeterminacy by focusing on Cage and Rahsaan Roland Kirk, who are paired in the video *Sound??* The chapter also addresses Cage's effort to distance himself from jazz in an interview, "Lethal Measurement." Cage sought this distance because he believed that jazz manifested the desires for control that he sought to forgo. Additionally, he believed that improvisation consisted of playing what you know, and that it did not introduce any means, such as those found in his compositions, to generate a situation or action with an unknown outcome.

The chapter addresses how Cage's belief results from a different consideration of the relations between the subject and the object than that found in jazz. While Cage successfully challenged many aspects of classical music and expanded the perceptual range of the composer, the performer, and the listener, his indeterminate works retain the separate and discrete understandings of these subjects as well as the

objects they use. Jazz, given its premise that playing music and making music need not be separate activities, has different restraints and considerations: the subject and object are not discrete, but engage in a range of different relations between the body and the instrument and among the participants that emphasize their variability. This emphasis is revealed in nineteenth-century efforts to notate African American work songs and spirituals, which consisted of sounds that deformed and slid across the notes of the traditional scales. Roscoe Mitchell's development of recordings and notation of finger positions, the movements of the body, provides an extended example of the expanded potential of variable relations between the subject and the object. Kirk demonstrates this emphasis in a unique and explicit manner, by playing multiple instruments at the same time, as well as through other actions that show he is looking to participate in a field of activity rather than take control. From their conceptions of the subject and the object, we can propose different models of diffusion, receptive and resonant, underlying the respective work of Cage and Kirk. After further consideration of the resonant model of diffusion that Kirk suggests, the chapter concludes by proposing that nurturing object behaviors is a way that design might acknowledge variable subject/object positions, and develop manifestations of the resonant model of diffusion.

The comparisons yield unforeseen interrelations, in a demonstration of Nathaniel Mackey's proposal that "creative kinship and the lines of affinity it effects are much more complex, jagged, and indissociable than the totalizing pretensions of canon formation tend to acknowledge."[53] The examination of Kirk and Cage provides an introduction to Le Corbusier and Ludwig Mies van der Rohe, the architects considered in chapters 3 and 4. Kirk's *Rip, Rig and Panic* inadvertently comments on a work by Le Corbusier through its play upon Edgard Varèse's *Poème Électronique,* the composition made for the Philips Pavilion, and *Ionisation.* Cage suggests that Mies's Crown Hall is an ideal space for an indeterminate music.

Chapter 3 examines temporal conceptions initiated by Le Corbusier's descriptions, in *When the Cathedrals Were White,* of seeing Louis Armstrong play. The chapter begins by examining how jazz musicians, through their writing and performance practices, often sought to subvert efforts to place their music and themselves within fixed

and limiting identities. Armstrong, both a skilled musical innovator and an adept entertainer, was perhaps the cleverest negotiator of an identity not fully of his own making through the development of performance practices that reinforced prevailing cultural associations of the music without sacrificing its conceptual foundations. This nuance in Armstrong's music is lost upon Le Corbusier in his description of Armstrong, which relies on a reductive characterization of black music production. Le Corbusier focuses exclusively on the primary rhythm in the music, as he reinforces his own proposals for a new urbanism by presenting Armstrong's music as a rhythmic articulation of machine-age precision and universal time. However, Armstrong's music actually expresses and manipulates various durations. His sense of time, articulated in the rhythmic play of his solos upon the primary rhythm, is revealed in his early recordings, and noted in accounts by authors Ralph Ellison and Marie Cardinal of listening to Armstrong's music. This manipulation in Armstrong's work suggests the design of moments laden with diverse and simultaneous temporal articulations. A manifestation of this design potential is revealed through an analysis of the Carpenter Center as a temporal experience that provides moments of release from the surrounding temporal order.

Mies's promotion of flexibility over function and his warning to be careful of improvising establish the parameters for chapter 4, which seeks an understanding of the optimizations and precisions provided by "function," "flexibility," and "improvisation." Louis Sullivan's focus on function attempted to develop new codes and signs, and Mies's work with flexibility indicated the loss of meaning in signs as well as the inability to produce new ones. The improvisational efforts of the Association for the Advancement of Creative Musicians (AACM) offered processes for developing ephemeral and evaporative codes. The AACM is an improvisational urban collective that sought to provide alternative settings for the development of a free improvised music. In seeking these settings, this collective extended the interactions of improvised music play to the social and urban situations of Chicago's South Side. The implications of this effort are considered in relation to Ralph Ellison's *Invisible Man* and Toni Morrison's *Jazz*, two fictional works that offer improvisation as a means of navigating and participating in the city. However, Jacques

Attali's *Noise* provides the primary basis for understanding how the AACM's various efforts, as a challenge to the existing political economy of music, resulted in new modes of production and exchange. In reviewing those new modes of production and exchange in relation to several critiques of work by Mies, we can raise questions about the political economy of property and the potential for new urban morphologies, responding to the reflective and transparent qualities of Mies's work, and Walter Benjamin's identification of new perceptual and conceptual challenges produced by mass cultural forms. The chapter thus offers ideas about urbanism as well as a proposal that design work can explore the potential in latent properties of materials and systems to encourage the development of the new modes of production and exchange that can be identified in the AACM's efforts.

Toward the end of each of these chapters, aspects of two projects (a proposal for the Martin Luther King Jr. National Memorial in Washington, D.C., and an installation at Project Row Houses in Houston) and work from studio teaching (Community Land Trust Plans of Action Studio) are introduced to provide some initial and tentative indication of the ideas presented.[54] Produced while writing this book, that design work drew upon or informed the development of those ideas. The design work is not presented exhaustively. However, readers can gain a clearer understanding of a project by looking at its set of images across all of the chapters.

Sonorous Vision in the Contemporary City

By examining the past, my larger intention is to foreground the potential of deploying structures that facilitate improvisation in a contemporary architectural context. The conclusion reassesses the four design propositions introduced in the preceding chapters in relation to contemporary considerations of the diagram in architecture. The intention is to better understand the qualities that conceptions and processes that facilitate improvisation contribute to contemporary efforts to move from static to variable, and to dynamic understandings of how we experience, read, and design the contemporary city. The work and words of Anthony Braxton and Lawrence "Butch" Morris frame this chapter. Reflecting on Braxton's diagrams, their

relation to writing practices, and the provision of human agency, a concern for the mobility and flows within diasporas can be identified as one direction for further study.

Morris's work is examined for the further insights that it provides about playing practices in improvised music. In discussing conducting as an improvisational music-making activity, Morris proposes that a focus on the medium rather than on the aesthetic, constant preparation, determination and then release of the boundaries, and risk rather than chance drive the restless mobility of improvised music. After discussing those properties, I suggest that they provide the outlined design propositions with a distinct potential to contribute to an architecture of inclusion that encourages original and creative actions, when coupled with greater understanding of the various organizers that work upon the metropolitan field, and to operate in an environment that unfolds by default rather than by design. By incorporating conceptions and processes that facilitate improvisation, design can contribute to areas in this field in which improvisation and the agency that it provides have greater potential to occur.

Chapter 1

Compositional Imperatives
Mondrian and Boogie-woogie

Boogie-woogie Revival

In the 1920s Al Ammons, Meade "Lux" Lewis, and other Chicago pianists developed a twelve-bar blues form that became known as boogie-woogie. It demonstrated their facility for articulating left-hand, syncopated, eight-bar-to-the-measure rhythms overlaid with right-hand melodic lines. Its basic character is evident in "Lux's Boogie," a piece by Lewis that could be, given its structure, continuous in form. Its recorded length was determined more by the limits of available technology than by an implicit progression in the music that would build to a concluding resolution. Resolutions instead recur at micro-levels. The piece is ordered by a repeated walking bass line, developed in left-hand articulations of I-IV-V chords in arpeggio, that creates a slight, cyclical vertical movement within the four beats of each bar. These cycles take place within a larger cycle—a twelve-bar structure—indicated by right-hand accents that frequently signal a shift in melodic ideas. Often consisting of one note intermittently repeated as a counterpoint to the primary rhythm, these melodic ideas, primarily three-note riffs, are vertically restrained and rhythmic in their conception. A rhythmic emphasis is reinforced by the frequent lack of progressive development. Melodic ideas frequently recur, but

in no particular sequence in relation to one another. Instead, they are rhythmically juxtaposed to one another.

While "Lux's Boogie" reveals many of the basic elements of boogie-woogie, it does not fully demonstrate the effects that could emerge while this music is being played. The faster tempo of Lewis's "Honky Tonk Train Blues" makes it harder to aurally identify these basic elements. One hears a rapid cascade of implied textures and figurations through the interplay of the triplet figures of the right hand with the left-hand rhythms. These textures and figurations arise from different paces of accented moments in which notes of the ostinato and riffs, each having its own rate, coincide within or across measures of the music (Figure 5).

Mondrian and Boogie-woogie

Arriving in New York in 1940, in the midst of boogie-woogie's revival, Piet Mondrian had frequent opportunities to hear these musi-

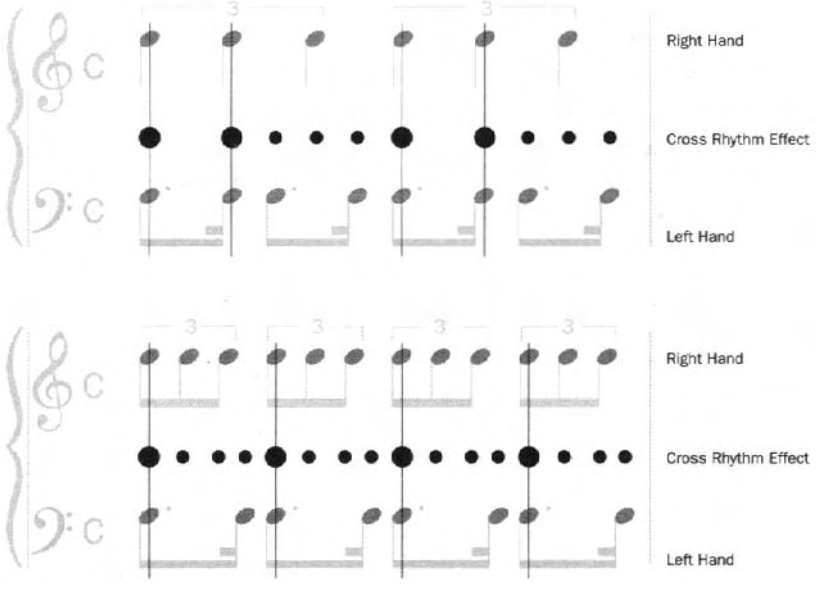

Figure 5. Cross-rhythm effects between bass lines and riffs in Meade "Lux" Lewis's "Honky Tonk Train Blues." Based on notation found in Frank Tirro, *Jazz: A History,* 2d ed. (New York: W. W. Norton, 1993).

cians play and exuberantly proclaimed "certain examples of boogie-woogie to be 'Pure,' or 'The True Jazz'; as for the rest, it was worthy provided an inferior status be granted."[1] The impact of this music on his work and thinking was first registered in his response to a comment regarding changes in *New York City I*: "now it has more Boogie Woogie." More commonly noted is his acknowledgment of this music in the titles of his last works—*Boogie Woogie, Broadway Boogie-Woogie,* and *Victory Boogie-Woogie*—which has led to speculation regarding the relation of this music to the New York paintings. Rapid, syncopated rhythms and irregular rhythmic flickers of color, improvisation, and new process-oriented techniques (including the use of lines of color tape, revealed brush strokes, and intuitive decisions) have all been cited in analyses of these paintings relating them to boogie-woogie.[2] But Mondrian's own statements reveal that he was striving to articulate a relation focused on a similarity in intention:

> I came to the destruction of volume by the use of the plane. This I accomplished by means of lines cutting the planes. But still the plane remained too intact. So I came to making lines and brought the color within the lines. Now the problem was to destroy these lines also through mutual opposition.
>
> Perhaps I do not express myself clearly in this, but it may give you some idea why I left the Cubist influence. True Boogie Woogie I conceive as homogenous in intention with mine in painting.
>
> I think the destructive element is too much neglected in art.[3]

While analogies with jazz were evident and were acknowledged by Mondrian, what fascinated him was their mutual destructive ability. Boogie-woogie and his paintings were parallel articulations of dynamic equilibrium.

In boogie-woogie, Mondrian heard the full emergence of a potential in jazz that he had first speculated about in "Natural Reality and Abstract Reality" (1920). Potential relations between jazz and the neo-plastic are established in this script when Z., an abstract real painter, comments: "Old music and old violins don't mean very much to me; I far prefer the jazz band where the old harmony is broken up. That, at least, is a beginning. The new concert music is concerned with the same thing, but goes about it differently."[4] Jazz

had provided Mondrian with definitive evidence that the neo-plastic was present in other arts besides painting, and it served as a prod and precedent for his own efforts to distill painting. Before his encounter with boogie-woogie, his thoughts on jazz culminated in the essay "Jazz and the Neo-Plastic" (1927), where he declared: "Jazz and neo-Plasticism are already creating an environment in which art and philosophy resolve into rhythm that has no form and is therefore 'open.'"[5]

Rhythm, form, and openness, as defined in this essay, provide a basis for evaluating the transformations in Mondrian's late works as well as for examining the potential for architecture that is suggested in form as understood in boogie-woogie and other compositional modes, ideas, and practices in improvised music. It is important to recognize that Mondrian's focus in this essay was neither on music nor on painting. As Mondrian explained to J. J. P. Oud, it is "an article on neo-plastic chromoplastic in architecture. . . . I only take jazz as the starting point; it does not deal with music."[6]

Open Form

Mondrian's concern for establishing an "open" environment, created through a move from form to rhythm, can be seen as a manifestation of a collective concern. In *The De Stijl Environment* historian Nancy Troy describes this concern as "a goal that virtually every advanced artist active in the period after the First World War held dear: to work through the arts to achieve an ideal future when all the walls that separate men would be broken down and when society would be truly integrated and capable of constructing a utopian urban environment of abstract forms."[7] While Troy's observation emphasizes this concern in the postwar work of artists, initial identification of an open potential as well as its architectural range can be made in prewar manifestoes.

Paul Scheerbart writes in "Glass Architecture" (1914) of visually eliminating architecture's enclosing character through the extensive use of glass:

> We live for the most part within enclosed spaces. These form the environment from which our culture grows. Our culture is in a

> sense a product of our architecture. If we wish to raise our culture to a higher level, we are forced for better or for worse to transform our architecture. And this will be possible only if we remove the enclosed quality from the spaces within which we live. This can be done only through the introduction of glass architecture that lets the sunlight and the light of the moon and stars into our rooms not merely through a few windows, but simultaneously through the greatest possible number of walls that are made entirely of glass—coloured glass.[8]

From new technologies in building construction, Scheerbart proposes two outcomes. One is that walls of glass, rather than small window openings, could admit light and provide views in and out to minimize the sense of enclosure. This is an obvious extension of new technologies applied to every building in the built environment. The other outcome, which is both his guiding concern and pure speculation, is the positive impact that this environment would have on culture. An open architecture—one that for Scheerbart visually minimized enclosure—would provide spatial connection and would raise culture to a higher level than had previously been attained.

In the same year Antonio Sant'Elia's "Futurist Architecture" appeared. Like Scheerbart, Sant'Elia stresses the need to embrace new material and construction techniques to accommodate modern life. For him, the problem posed in modern architecture

> is not a problem of linear rearrangement. . . . It is a question of tending the healthy growth of the Futurist house, of constructing it with all the resources of technology and science, of satisfying magisterially all the demands of our habits and our spirit, trampling down all that is grotesque and antithetical (tradition, style, aesthetics, proportion), determining new forms, new lines, a new harmony of profiles and volumes, an architecture whose reason for existence can be found solely in the unique conditions of modern life, and in its correspondence with the aesthetic values of our sensibilities. This architecture cannot be subjected to any law of historical continuity. It must be new, just as our state of mind is new.[9]

Sant'Elia advocates a shift from monumental to light and practical architecture—based on the spatio-temporal field that modern developments had implicated, rather than on the visual quality of modern

materials that informed Scheerbart's thought: "The art of construction has been able to evolve with time, and to pass from one style to another while maintaining unaltered the general characteristics of architecture, because in the course of history changes of fashion are frequent and are determined by the alternations of religious conviction and political disposition. But profound changes in the state of the environment are extremely rare, changes that unhinge and renew, such as the discovery of natural laws, the perfecting of mechanical means, the rational and scientific use of material."[10] While Sant'Elia does not explicitly identify an open quality in architecture in his manifesto, its suggestion can be located in earlier manifestoes by a fellow futurist, the painter and sculptor Umberto Boccioni.

Writing about painting in 1910, Boccioni inquires, "Who can still believe in the spacity of bodies, since our sharpened and multiplied sensitiveness has already penetrated the obscure manifestations of the medium? Why should we forget in our creations the doubled power of our sight, capable of giving results analogous to those of the X-rays?"[11] Later, in "Plastic Dynamism," a lecture presented and published in 1913, he proclaims, "It should never be forgotten that we are passing through a stage in a long progress towards interpenetration, simultaneity, and fusion, on which humanity has been engaged for thousands of years." He then states, "As a result, sculpture as well, by means of an interpenetration of planes, is bringing figures alive within their environment." He concludes that "we must, therefore, raise the concept of the object to that of plastic whole: *object + environment*. In this way we shall have the object extended into the rays of light which shine on to it, by uniting atmospherical blocks with elements of a more concrete reality."[12]

Hints of the transparencies identified later by Colin Rowe and Robert Slutzky in their essay "Transparency: Literal and Phenomenal" are already present in Scheerbart's emphasis on glass and in Boccioni's focus on "simultaneity" and "interpenetration," which are among several terms that Rowe and Slutzky claim are used synonymously in architecture: "superimposition," "ambivalence," "space-time," and "transparency."[13] "Open" can be understood as another of these synonymous terms. However, Mondrian's mention of openness in relation to rhythm and form shifts emphasis away from the spatial effects that Rowe and Slutzky examine to relations of matter,

form, and space. *Literal* and *phenomenal* still apply. Scheerbart's glass architecture permits one to see how a form is literally penetrated by light, while Boccioni talks phenomenally of an object extending into rays of light. This extension of an object occurs through Boccioni's dual conception of form in response to two understandings of movement. At the outset of "Plastic Dynamism," he proposes that dynamism "is the lyrical conception of forms, interpreted in the infinite manifestations of the relativity between absolute motion and relative motion, between the environment and the object which come together to form the appearance of a whole: *environment + object.*"[14]

Mondrian acknowledges the efforts of futurism at the outset of "Jazz and the Neo-Plastic": "Many movements have actually set out to abolish form and create a freer rhythm. In art, Futurism gave the major impulse."[15] This seems to point directly to "plastic dynamism." As Boccioni describes his two notions of motion and their implication on the "environment + object" as well as the "object + environment," he provides several ideas that seem to inform Mondrian's essay—or at least clarify it. Boccioni notes, "Only through this dual conception of form can we give a hint of plastic life in our work, without having extracted and removed it from its living environment, which would mean arresting its motion." This constitutes a shift in emphasis from form to rhythm: "In sculpture, therefore, we are not necessarily looking for *pure form* but for *pure plastic rhythm,* not the construction of an object." This is similar to the emphasis on rhythm that Mondrian would later propose. Further, Boccioni's distinction between absolute motion—"the motion characteristic of an object," the internal forces working upon and exerted by an object (while at rest or in motion)—and relative motion (the "transformation which the object undergoes in relation to its mobile and immobile environment") seems to inform Mondrian's understanding of the distinction between what painting (absolute motion) and music (relative motion) could impart to architecture.[16]

Neo-Plasticism and Neo-Plastic Music

In "Jazz and the Neo-Plastic," Mondrian goes on to assert painting's significance as the medium in which the abolition of form could be

intensively studied: "Cubism led painting to *break form* and to *organize it anew.* Less bound by form than the other arts, painting was able to carry this through consistently to Neo-Plasticism: a *new* organization through a *new* plastic means."[17] Mondrian, Theo van Doesburg, and other de Stijl artists viewed their work as a continuation of an evolutionary shift in the focus of painting, from natural forms (man, tree), to elements of form (sphere, cylinder, cone), to plastic elements (plane, line, color). Over the course of modern painting's short history, from impressionism through cubism, an underlying concern for composition, or "the aesthetic element in art"—the positions held by the elements within the space of the canvas—had steadily asserted itself over the previously dominant concerns of representation. According to van Doesburg, cubism completed the negation of representation and raised "to the first rank these elements which, in illusionistic painting, had held a secondary plane (such as plane, colour, proportion)." Cubism, he further proposed, "is the stage at which all formal, tangible qualities (secondary) are transposed into essential qualities of relation." Neo-plasticism continued this development by further emphasizing the pictorial space of the canvas and "the mechanics of painting (brushwork, color-squares or points—impressionism, divisionism, pointillism)" as the bearer of the content. The intent of composition for de Stijl artists became the organization of line, plane, and color into an equilibrium made up of "a dynamic rhythm of determinate mutual relations which excludes the setting up of any particular form."[18]

"Jazz and the Neo-Plastic" continues with an assessment of the obstacles, the conventions, that impeded the ability of literature and music to achieve similar reductions as rapidly. For Mondrian, neoplasticism was not confined to painting, but was an extension of neo-plastic painting principles to all aspects of the constructed environment. He believed an expressive unity of the arts would occur through the reduction of each art to its particular means for articulating or manifesting pure, determinate, and equilibrated relationships of its primary oppositions.

In support of this position, Mondrian proposed in 1922 that while the plastic means of painting was "determined color," or the duality of color and noncolor, explored through line and plane, the plastic means of music "should be determined sound, the duality of sound

and nonsound (noise)."[19] He elaborated on the difference between sound and noise through analogies to color and noncolor in painting: "'Sound' is here used to signify in the auditory what is expressed by color in neo-plastic painting more or less in the sense of 'tone' in music. And the word 'nonsound' is chosen to signify what in neo-plastic painting is expressed as non-color, that is, white, black, and gray. Thus 'noise' denotes percussive sound *[coup]* rather than an assemblage of diverse sounds incapable of forming a harmony in the old sense."[20] In a series of later essays, Mondrian sought to refine this definition of neo-plastic music by focusing on futurist music and the potential of electronic instruments. However, he would continually return to "the jazz band," which he had first cited in 1920, as the most effective demonstration of sound and nonsound. And with each return, his descriptive vocabulary indicated an increased certainty that jazz possessed traits of neo-plasticism.

In "Neo-Plasticism: The General Principle of Plastic Equivalence" (1920), he writes, "There appears, perhaps somewhat brutally, the *jazz band,* which dares abrupt demolitions of melody and dry, unfamiliar, strange noises that oppose rounded sound."[21] In "Neo-Plasticism: Its Realization in Music and in Future Theater" (1922), he comments that "in the jazz band we sometimes hear sounds which by their very timbre and attack are more or less opposed to traditional 'harmonious' sounds, and which clearly demonstrate that it is possible to construct 'nonsound.'"[22]

By 1927, Mondrian seemed convinced that jazz had almost achieved reductions to the equilibrated relationships. He declared that both "Jazz and Neo-Plasticism are revolutionary phenomena in the extreme: they are destructive-constructive." However, perhaps due to the remaining presence of melody or the continued reliance on traditional instruments, he maintained that jazz was not quite a manifestation of neo-plasticism: "Jazz—being free of musical conventions—now realizes an almost *pure rhythm,* thanks to its greater intensity of sound and to its oppositions. Its rhythm already gives the illusion of being 'open,' unhampered by form. But on the other hand Neo-Plasticism actually shows rhythm free of form: as *universal rhythm.*"[23]

Scanning the remaining essays that Mondrian wrote, we find that "Jazz and the Neo-Plastic" seems pivotal. He subsequently wrote

almost exclusively on neo-plasticism and painting with references to the arts in general. Jazz receives only one other brief mention until many years later when, after a transatlantic relocation, Mondrian was confronted with boogie-woogie's rhythmic assault.

Boogie-woogie as Neo-Plastic Music

Max Harrison, a jazz critic writing in the 1940s, provides a description of boogie-woogie. Though lamentable for its pejorative characterization of boogie-woogie musicians, his description clarifies boogie-woogie's dramatic departure from traditional Western piano playing through an emphasis on percussion and rhythm, two essential elements of a neo-plastic music:

> There are a number of ways of producing volume on a piano, but an untutored player would almost always choose the most obvious—that of hitting the keys hard with tensed muscles and rather stiff wrists. This kind of touch results in the hard percussive quality of sound that is characteristic of almost all genuine boogie. It is a tiring way of playing, but the primitive pianists knew of no other method and were doubtless inured to hard work. . . . it is diametrically opposed to the conception of pianism imposed on us by nineteenth-century music. . . . the general trend in piano writing was towards an increasing reliance on variation in touch, scope of harmonic vocabulary and use of the pedals, particularly the sustaining pedal. Everything possible was done to mitigate the instrument's percussive qualities. . . . In sharpest contrast to all this, the boogie players used the piano virtually as a percussion instrument. This was not an abuse of its qualities, for it has enormous resources and fully admits of both approaches.[24]

Through this shift in focus to the percussive qualities of the piano, boogie-woogie musicians could provide the "abrupt demolition of melody," which Mondrian had written about in 1920, by using an old instrument. Harrison analyzes the rhythmic impact of this percussive approach:

> In practice the unconsciously imposed limitation of the percussive touch proved to be a beneficial discipline. Cut off from the resources of touch by his ignorance and the poor quality of his instrument, the boogie player was forced to develop variety of effect by other

> means. His harmonic knowledge was small and his themes were a limited number of blues. As he was called upon to produce brash and forceful music at all times, the refinements of elaborate melodic development were out of the question. (This is not to suggest that boogie does not have its share of melodic interest, but melody could never be its foremost quality.) Consequently the boogie player explored the only avenue open to him and cultivated great rhythmic virtuosity. Against the unfaltering beat of the left hand were thrown an endless variety of rhythmic punctuations and irregular accents. Thus did the rhythmic element predominate as in no other form of jazz, and it became the richest part of the boogie idiom.[25]

The developments made by boogie-woogie musicians that Harrison identifies as "untutored," "primitive," "unconscious," "ignorant," and "limited" in fact reflect an aesthetic choice on the part of the musicians, informed by the rhythmic and percussive emphasis in African American music culture. The classically trained Cecil Taylor, for example, developed a manner of playing that many observers believe uses the piano as if it were eighty-eight tuned drums. A percussive approach to the piano, Taylor insists, is consistent in black music.[26]

This predominance of rhythmic articulations in boogie-woogie did not confirm Mondrian's earlier speculations of a correspondence between noise and percussion in early jazz. Instead, the kaleidoscopic rhythmic flurries that Ammons, Lewis, and others encouraged from the piano produced a resonant frequency that demolished the oppositional dualisms at the core of Mondrian's neo-plasticism. Even after writing "Jazz and the Neo-Plastic," Mondrian maintained a belief that both painting and music contained distinct oppositional boundaries, the clarity of which can be seen in the sharp delineation between color and noncolor within his work. However, stimulated by boogie-woogie, Mondrian would paint his tautest surfaces—*Broadway Boogie-Woogie* and *Victory Boogie-Woogie*—works in which line, plane, and color merge into one another (Figure 6). Each of these elements comprises and defines aspects of the others in such a manner that the image threatens its own collapse. Elements seemingly recede into the background or proceed into the foreground, and move centrifugally past the edges and centripetally toward the center of the canvas. However, none of these motions dominates; we are

instead made aware of the fragility of the surface. Even the most imperceptible additional weight upon distributed points seems capable of collapsing both paintings into a disequilibrium, where the elements composing this surface read as individual and distinct forms.

Harry Cooper in "Mondrian, Hegel, Boogie" specifies the nature of this rhythmically posed compositional challenge: "Boogie-Woogie is the very model of a collapsed dualism, or rather a collapsing one, since the two hands remain distinct despite their similarities: the left hand is (more) repetitive, the right hand (more) discursive."[27] The opposition of sound and nonsound has collapsed into what is in some senses a reversal, as there is more melodic movement in the left-hand

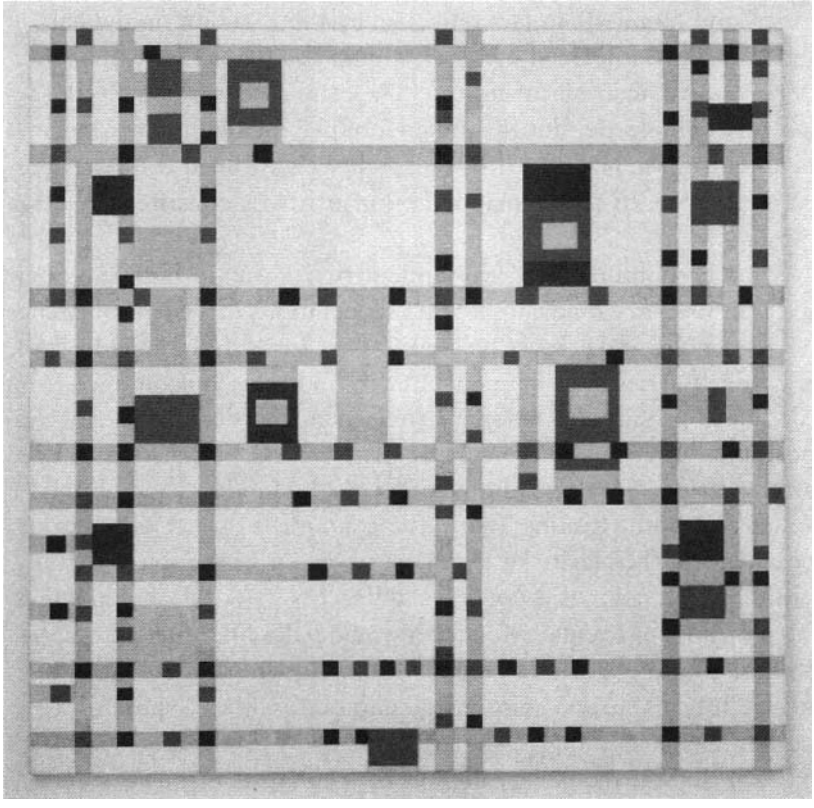

Figure 6. Piet Mondrian, *Broadway Boogie Woogie,* 1942–43. Oil on canvas, 50 x 50 inches, Museum of Modern Art, New York. Copyright the Museum of Modern Art; licensed by SCALA / Art Resource, N.Y.

bass line (nonsound) and more rhythmic variety in the juxtaposition of twelve-bar melodic lines in the right (sound). Cooper locates the influence of boogie-woogie on Mondrian's late works in shifts that are not only discernible at the surface level (the techniques previously noted) but at a "higher level of abstraction" in the transformation of Mondrian's vocabulary from "duality and opposition" to "plurality and similarity."

Mondrian's Studios

Describing neo-plastic painting, Mondrian noted: "Through equivalent oppositions of form and space, it manifests reality as pure vitality. Space-determination is here understood as dividing empty space into unequal but equivalent parts by means of forms [planes] or lines. It is not understood as space-limitation. This limitation determines empty space to particular forms."[28] In this suggestion of space-determination, space is viewed not as an empty void that permits form to stand out as figure, but as something made up of differing and changing qualities and properties. Form is not considered to be distinct from and an organizer of space, but is seen to consist of different states, scales, and consistencies of those qualities and properties found in space and articulated through relations of line and plane. The precariousness of these relations is described by Mondrian: "The more neutral the plastic means are, the more the unchangeable expression of reality can be established. . . . We consider all forms relatively neutral that do not show any relationship with the natural aspect of things or with any 'idea.' Abstract forms or dislocated parts of forms can be relatively neutral."[29] Any indications of or deference to function and utility could upset the dynamic equilibrium.

Because it was subject to structural and practical needs, architecture was one of the primary forms that established boundaries that created space-limitation. However, Mondrian, like many of his contemporaries, sought an architecture that did not separate and limit a portion of space from the continuity of space. The uniqueness of Mondrian's explorations was the extreme degree to which he attempted to develop an architecture of space-determination, rather than space-limitation, as an extension of painting. He did this by focusing

on architecture as a multiplicity of planes rather than as a volume, or as "three dimensional 'plastic.'" He sought to literally apply neo-plastic painting principles of planarity and color to architecture as he proposed that "a room has to be more than an empty space bounded by six empty planes facing one another: it must be an articulated and therefore a partially filled space bounded by six articulated planes that oppose one another by their position, dimension, and color."[30]

Mondrian himself did not treat the edge of his canvas as a boundary that contained the painting. By letting some lines extend to the edge while having others stop short, he could imply that a viewer was seeing just one portion of a larger field. The dynamic rhythm and equilibrium in his paintings does not cease at the edge of the canvas, but suggests an extended vibrational field that is open to and integral with its surrounding environment. As one looks upon the surface, the intent is not to perspectivally experience pictorial depth. Instead, while standing before the neo-plastic plane and viewing the forces in equilibrium upon its surface and within its edges, a viewer's vision collapses into an inner seeing that enables the viewer to intuit or perceive the fundamental universal relations of the world—the unity of objects and the environment as different states, densities, and intensities of matter.

In his studio, Mondrian pursued the architectural implications of this planarity and its extensive vibrational field by applying variably sized, painted cardboard panels onto the room surfaces (Figure 7). To stand among those neo-plastic surfaces was to stand within a three-dimensional matrix composed of the varying densities and intensities structured and suggested by the planes. With the space already determined, furnishings became perturbations within the matrix rather than limitations of the space. His focus on planes, neo-plastic surfaces, provided a set of aesthetic conditions affecting a given space that were distinct from its otherwise dominant functional, structural, or utilitarian use; the description of its limits; or other subjective influence that introduced readings that made architecture an objective and closed form. Space was defined instead by the interrelation of things that were "ultimately nothing in themselves, but creating one another simultaneously."[31] "Seen as an equilibrated opposition of *expansion and limitation in planar composition,* architectural expression (despite its third dimension) ceases to exist *in corporality and as object.* Its abstract expression appears even more directly than in Painting."[32]

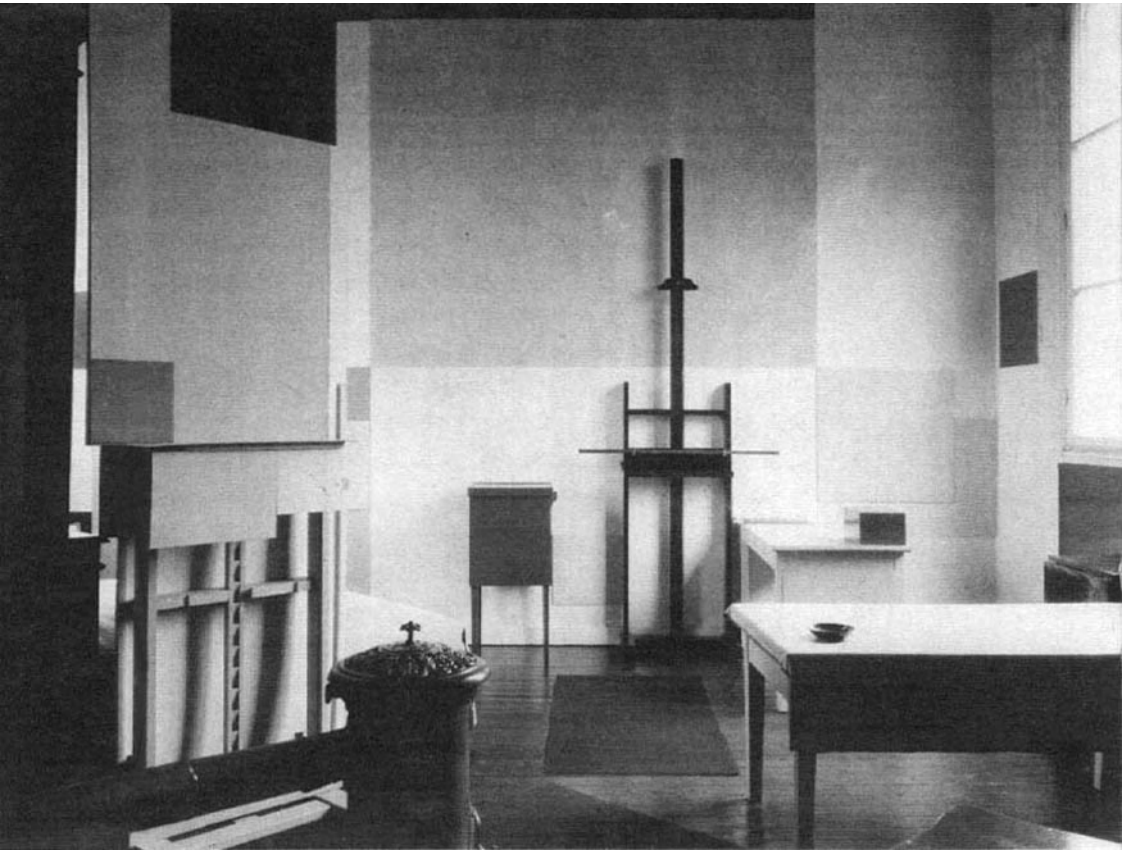

Figure 7. Piet Mondrian, studio of the artist, Paris, 1926. Collection of the Gemeentemuseum Den Haag. Copyright 2003 Mondrian/Holtzman Trust / Artists Rights Society (ARS), New York.

Painting, Architecture, and Open Form

While commenting on the design of a salon for Ida Bienert, a room where Mondrian proposed articulating all six planes (Figure 8), El Lissitzky remarked that "it is really a still-life of a room, for viewing through a keyhole."[33] Lissitzky's "Proun Space" stood in contrast to the static nature that he saw in Mondrian's spatial composition: it was a composition of six planes that accentuated the unfolding of space through the viewer's movement. The differences between this temporal consideration and Mondrian's preexistent space-determination are evident in the two artists' renderings of a six-sided interior through

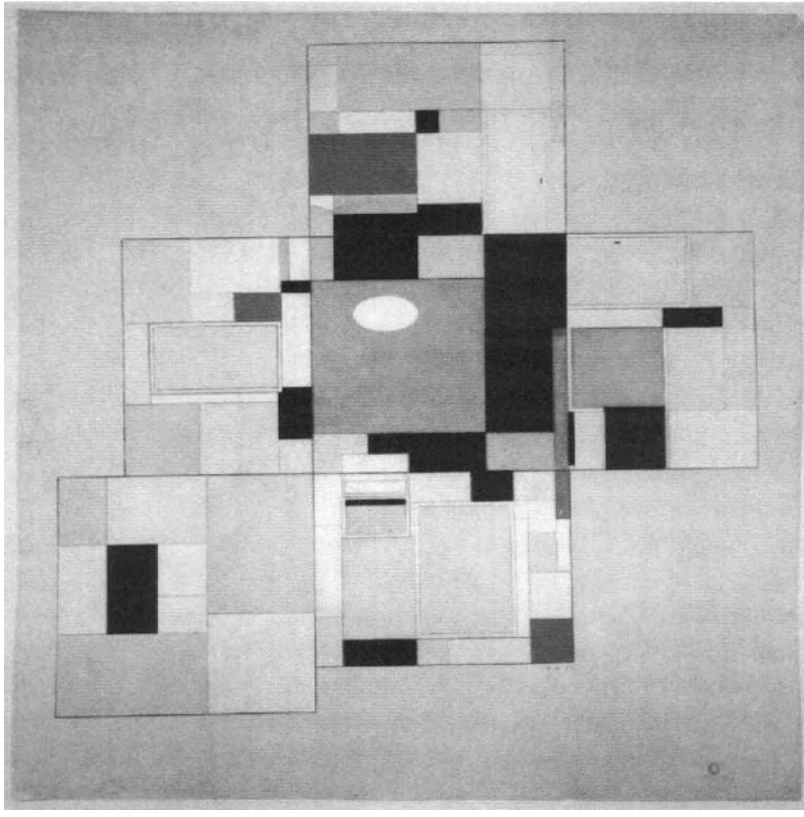

Figure 8. Piet Mondrian, *Exploded Box Plan*. Kupferstich-Kabinett, Staatliche Kunstsammlungen Dresden. Copyright 2003 Mondrian/ Holtzman Trust / Artist Rights Society (ARS), New York.

axonometric projection (Figures 9 and 10). Mondrian, as Lissitzky notes, sought to center the viewer within the space by using a projection of two walls and the ceiling to the left of and above a projection of the two remaining walls and the floor. Lissitzky, on the other hand, inscribed time into his axonometric projection by starting it at the doorway (at the midpoint of a wall) and unfolding the remaining planes in the order in which they are to be perceived before returning to the doorway via the remaining wall half. For Mondrian, this perceptual unfolding of space emphasized by Lissitzky was a temporal approach to be avoided. The dynamic character of space, independent of occupation, was his point of emphasis. In addition to

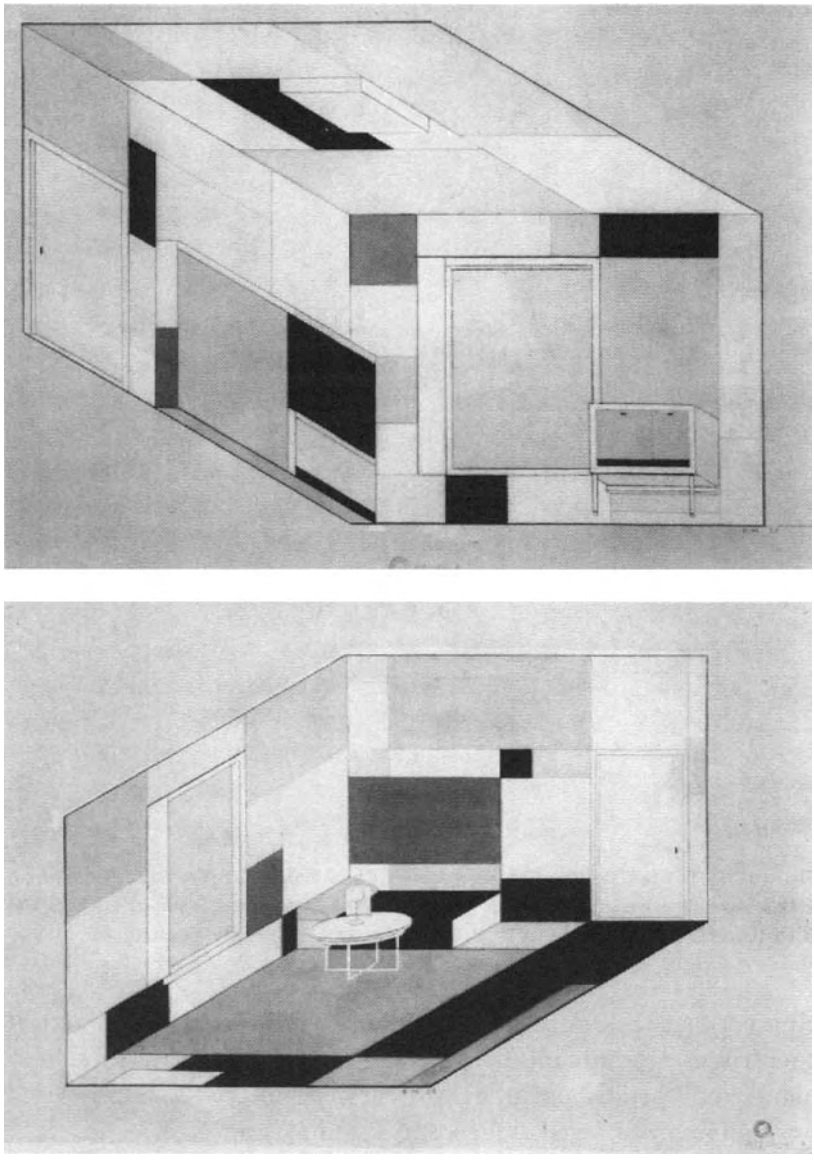

Figure 9. Piet Mondrian, *Geometric Perspective, Salon de Madame B.* Kupferstich-Kabinett, Staatliche Kunstsammlungen Dresden. Copyright 2003 Mondrian/Holtzman Trust / Artists Rights Society (ARS), New York.

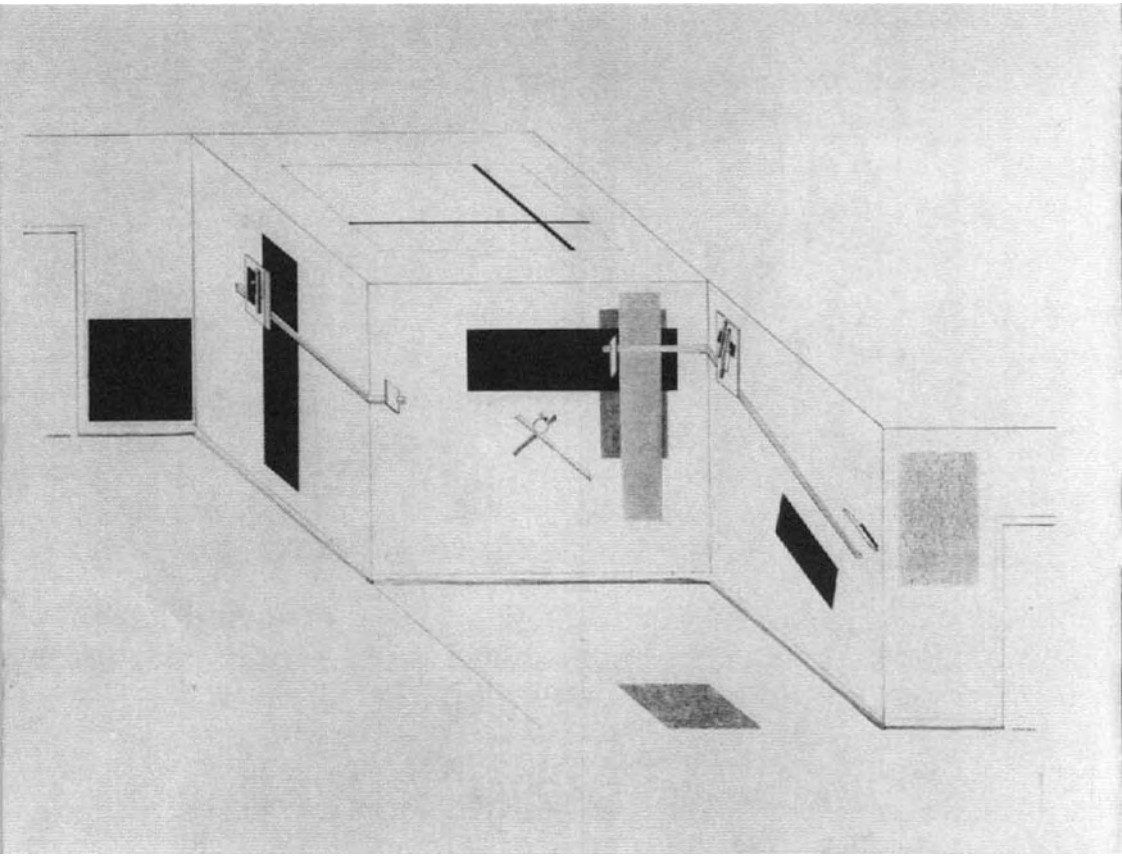

Figure 10. El Lissitzsky, *Proun Space (No. 5 from 1st Kestner Portfolio)*, 1923. Axonometric, Stedelijk Museum Amsterdam. Copyright 2003 VG Bild-Kunst, Bonn / Artists Rights Society (ARS), New York.

eliminating the dominance of structural, utilitarian, and practical concerns as determinants of spatial experience, Mondrian's focus on planes abolished the potential inherent in perspective for a privileged position or a privileged sequence to accumulate in time.

In his efforts to dissolve architecture by applying color to wall surfaces, van Doesburg similarly abandoned the notion of a progression in time found in Lissitzky's temporal approach. He also found Mondrian's architecture to be two-dimensional in conception and lacking a consideration of time: "I am now certain that painting

in the interior, i.e., in 3 dimensions, brings with it entirely different demands than painting on a plane. The interior again brings the time element to attention. . . . Since in his last article Mondriaan completely denies the time moment and wants to banish it from painting, for him 3 dimensional painting (i.e., space-time painting) must be impossible. He remains limited to the 2-dimensional canvas and the attempt to solve a 5-plane space as 1 whole is impossible in terms of 2-dimensional painting. Thus what Mondriaan has made in his atelier with colored cardboard is restricted to one plane (window plane) and is therefore also a painting in 2 dimensions."[34] While van Doesburg's investigations in 1921 used musical harmonies and progressions to inform the proportions, balances, and temporal progressions of the color compositions that he deployed on wall surfaces, his collaborative design with Cornelis van Eesteren for the "Private House" in 1923 produced a conceptual breakthrough. In this project, van Doesburg ceased to think of color relationships "in temporal connection with music," as a "sequential, linear progression across architectural surfaces, but rather in terms of the identification of color with those surfaces, perceived simultaneously in space and time."[35] His notion of "coloristic movement" no longer required the progression of a moving subject around a building, movement through space, or movement through time. Instead van Doesburg conceived of movement in space-time, visually obtained (as seen in his axonometrics) by suspending colored planes in a three-dimensional matrix. Never quite meeting, they described an architecture in which the walls and floors were made up of planes situated in the matter of space, through and around which space continuously flowed. By suggesting that areas were actively being formed or in a state of dissolution by those flows, as well as the flow of the planes within the ether of space, it was possible to describe interior spaces, as well as their continuous extension into and connection with the surroundings, and directly implicate them in the volatile atmosphere of space-time. In contrast to Mondrian's and Lissitzky's efforts, van Doesburg's space, as his axonometrics revealed, was discernible from outside as well as from any point surrounded by the described planes and did not depend on a single vantage point or sequence.

Music, Architecture, and Open Form

Mondrian seems never to have answered these critiques of the absence of time in his spatial environments. He declined to pursue similar explorations of three-dimensional form and seemed content to focus on his canvases and the manipulation of the apartments he occupied. Time was not absent from Mondrian's conception, but he did not seem to consider it a concern that could be solely addressed through painting. Space-time was manifested not through one art, but through the expressive unity among arts. True to his belief in the expressive unity of the arts, as each art was reduced to its primary elements, Mondrian did not perceive painting as the single source of determinations that could be operative as organizers of an environment outside the provision and accommodation of function and use. Other arts, such as jazz, could provide similar determinations that were more temporal than spatial—composed of changes and relationships in time.

Mondrian suggests this temporal determination when, in 1931, he describes a room in "An International Museum of Contemporary Art" at the end of a series of galleries that document the evolution of the arts from naturalism to neo-plasticism. In the room "painting and sculpture will be realized by the interior itself: *dissolved as separate objects and projected directly into life.* Thus, neo-plastic architecture and chromoplastic are shown as a unity determining everything in the room, and demonstrating that what is lost for art is gained for life."[36] Distinct from the other galleries, this room could be designed for use as a lecture room or a restaurant; then, following an ellipis pause, he provides the program that he had described in "Jazz and the Neo-Plastic," which could complete the determination of the space "as a bar with an American jazz band."[37]

In "Jazz and the Neo-Plastic" Mondrian reiterates his belief in expressive unity: "Only when the multiplicity of forms has become uniformly deepened, so as to establish *equilibriated relationships,* can forms annihilate one another in multiplicity." He identifies an affinity between jazz and neo-plastic painting through the similar effects that they have on form: "They do not destroy the actual content of form: they only deepen form and annihilate it in favor of a new order. Breaking the limitations of 'form as particularity,' they

make universal unity possible." The potential for equilibrated relationships, given this similarity, is furthered through the effects that jazz has on the architecture of the bar that is the focus of "Jazz and the Neo-Plastic." Identifying the bar as a manifestation of the "more sublimated culture," which the neo-plastic would engender, he writes that "equilibrium is there, for everything is subsumed by rhythm." The source of this equilibrium is not visual but musical. "Jazz above all creates the bar's open rhythm." Jazz furnishes a measure and pace that provides a basis for identifying relationships between disparate elements. "The structure, the lighting, the advertisements—even in their disequilibrium—serve to complete the jazz rhythm. All ugliness is transcended by jazz and by light." "Everything in the bar moves," as it is interpenetrated by the rhythms of the music, "and at the same time is at rest. Continuous action holds passion in check. The bottles and glasses on the shelves stand still, yet they move in color and sound and light." Mondrian concludes that jazz rhythm "annihilates. Everything that opens has *an annihilating action.* This frees rhythm from form and so much that is form without ever being recognized as such. Thus a haven is created for those who would be free of form." But nowhere—neither in his initial emphasis on a duality and opposition of sound and nonsound, of tone and percussion, nor in the collapsing "plurality and similarity" of the two that Cooper identifies in boogie-woogie and the late transition in Mondrian's paintings—is there an indication that "rhythm fills everything without creating new oppression—it does not become form."[38]

The Open Potential of Rhythm in Music

With some elements stopping before and others continuing to the edge of the canvas, Mondrian's paintings suggested the extension of some lines and planes beyond the canvas. They also hinted at variation in the patterning of that extended field to maintain the sense of dynamic rhythm and equilibrium rather than a static and regular pattern, which is capable of its own oppression, if not form. Dynamic rhythm in music has a similar need for variation.

James Snead, in "Repetition as a Figure of Black Culture," states that variation and repetition are accounted for in black music through

the overlap of rhythmic elements: "The typical polymetry of black music means that there are at least two, and usually more, rhythms going on alongside the listener's own beat." This overlap and juxtaposition of multiple rhythms provides a third sensibility from duality and opposition, and plurality and similarity—"dynamic rhythm, organizing melody within juxtaposed lines of beats grouped into differing meters." In dynamic rhythm, "one rhythm always defines another," and "beat is an entity of relation."[39] These characteristics enable boogie-woogie's flow of varying short melodic phrases within its rhythms to create a field of shifting rhythmic patterns and intensities that are rhythmically propulsive but not harmonically progressive. Each rhythmic phrase or melodic phrase can be continued indefinitely or provide the basis, through its implied rhythms, for a shift to another repetitive phrase.

Snead reveals how some other properties in black music contribute further to rhythm's dynamism. He notes, "That the beat is there to pick up does not mean that it must have been metronomic, but merely that it must have been at one point begun and that it must be at any point 'social'—amenable to restarting, interruption or entry by a second or third player or to response by an additional musician."[40] The beat is not rigid in its time, but malleable. This malleability is obtained through call and response as well as what Snead terms the "cut," a kind of variation that allows for a "succession of accidents and surprises" rather than an illusion of progress: "Black culture, in the 'cut,' builds 'accidents' into its *coverage,* almost as if to control their unpredictability. Itself a kind of cultural *coverage,* this magic of the 'cut' attempts to confront accident and rupture not by covering them but by making room for them inside the system itself."[41] Snead's comments suggest that the social, interactive, and responsive properties are just as significant as extension and variation to rhythm operating as an organizer without becoming form.

All these qualities are evident in the music of the Count Basie Orchestra, which deploys dense clusters of riffs (short, repeated phrases) as support for a soloist. Within its "big band" structure the trumpet, saxophone, and trombone sections play different riffs that call and respond to one another, accruing into a driving rhythm that belies the simplicity of the singular phrases, which often seem static when heard in isolation. "One O'Clock Jump" (1937) is built on this idea

of gradually crescendoing riffs. Like "Lux's Boogie," it has a twelve-bar phrase and a rhythmic base that is infinitely extendible. This rhythmic interplay is not just between the various wind ensembles. Lewis Porter and Michael Ullman, in *Jazz: From Its Origins to the Present,* note that one of the more dramatic moments in a Basie performance would occur when the rest of the band would drop out and leave the rhythm section to sweep up behind it. In the absence of any riffs or phrases, the layering of guitarist Freddie Green's steady 4–4 rhythm, Jo Jones's high-hat cymbal rides, the walking bass lines of Walter Page, and Basie's sparse and intermittent piano accents produced its own subtle, yet steady, locomotive drive. Although a big band does not possess the dramatic clarity of one instrument deployed to maximum percussive effect, Basie's accumulated rhythms are closer to the collective interplay found in African drum sessions, so more demonstrative of the compositional properties of rhythm and Snead's "sociability" of the beat.

The presence of these rhythmic qualities in Basie's music is significant because it demonstrates that boogie-woogie, in the moment that it influenced Mondrian, was not the sole permutation of music based on rhythm aesthetics. Nor was it the most recently emergent. Charlie Parker noted the first formulation of bebop, the form of jazz that became dominant after the war, while practicing on the roof of a place where he was working one night in 1939: "I'd been getting bored with the stereotyped changes that were being used at the time, and I kept thinking there's bound to be something else. I could hear it sometimes but I couldn't play it. Well, that night I was working over 'Cherokee' and as I did I found that by using higher intervals of a chord as a melody line and backing them with appropriately related changes, I could play the things I'd been hearing. I came alive."[42] This separation of the melody from its chord structure means that any chord structure holds within it the potential to support multiple melodic phrases. By developing new melodic lines for the chord changes of "I've Got Rhythm," "How High the Moon," and a host of other popular tunes, bebop musicians produced numerous head arrangements or compositions. In performances, the stating of the melodic line and chord progression initiates a play in which the rhythm section repeatedly plays the chord changes to permit each soloist to improvise for one or two measures, concluding with a final

restatement of the theme. Snead notes that the departure and variation from the theme introduced by the solos also constitutes a cut, or a departure from expectations.

These rhythmic emergences, which bracket boogie-woogie's revival, show that boogie-woogie, in its reductive and clear articulation of repetition and variation, provided a rhythmic expression that propelled a further transformation of Mondrian's work. They also reveal that its consistency with his positivist and transcendent ideas regarding neo-plasticism is not a historical convergence, but a coincidental tangent or intersection. And the subsequent explorations of form and other manifestations of rhythmic expression in improvised music found along this diverging trajectory would yield different implications for an open—rather than idealized, objective, and closed—form.

Open Form Enablers

The compositional implications of Parker's breakthrough are evident in the work of Thelonious Monk, who showed the percussive qualities of the boogie-woogie pianists as well as the melodic qualities of the Harlem striders in his dissonant yet logical vocabulary of chords. In *Straight No Chaser,* a documentary on Monk, producer Teo Macero views Monk's twelve-bar phrases/compositions, scrawled on scraps of paper, as sketches. Monk's compositions are not complete scripts, but outlines—a kind of open form. Although complete statements on paper, these pieces did not indicate the full course of music that occurred in performance, making them open, or weak. Monk's focus on the process that these forms would eventually initiate, rather than their objective existence, is evident in the same documentary. Having just completed an extended jam with his fellow musicians, Monk asks Macero to play it back. Macero, who had not recorded it, responds that he thought they were just practicing, a distinction that Monk did not make. Monk wanted to hear the playback of what he felt was extraordinary music regardless of the pretext under which it was played. Monk further denied the objective nature of his pieces and emphasized the texture of performance by insisting on an aural rather than visual transmit-

tal of his music. In clubs, neither the audience nor the musicians knew what piece was forthcoming until Monk played its first eight to twelve bars.

The composer and bassist Charles Mingus developed a similar compositional process based on his understanding that neither a classical musician nor a jazz musician was capable of playing his compositions as he heard them in his inner ear. The former would not play with the proper emotion, while the latter would inevitably introduce his or her individual expression. Mingus's solution was to transmit his compositions aurally, like Monk, so that the ensemble elements might have as much spontaneity as the solos and so as to encourage collective improvisation. Although similar in method to Monk, Mingus's work has a different character that is dependent on broad movements, rather than chord progressions, and rhythms and tempos in those movements that are shifting rather than stable. Mingus and his drummer, Dannie Richmond, provided rhythmic drive in addition to rhythmic support. This drive in part emerged from Mingus's obstinate insistence on encouraging implied rather than actual rhythm by always playing ahead of or behind the beat. Additionally, he and Richmond often articulated broken rhythms and made shifts in tempo that challenged the other musicians to keep up. Accounting for the presence of rhythmic flow in the apparent absence of a set beat within some of their work, Richmond explained: "Mingus and I feel each other out as we go but always, when the time comes to back into the original beat, we're both always there. The best way I can explain is that we find a beat that's in the air, and just take it out of the air when we want it."[43]

Mingus demanded that his fellow musicians mutually arrive at select points, but the path for getting to those points was determined by each individual. He thus created collective improvisations that were highly compositional in their ability to develop long and comprehensive forms. The most dramatic of these endeavors is "Folk Forms No. 1," where he organized a collective improvisation that was cohesive yet fully unpredictable in its shifts and development. Mingus noted that he essentially provided a rhythmic pattern, then asked that the rest of the band keep up as he shifted from one rhythmic figure to another.

Form and Resultant Shapes

The absence of any apparent set structure or rhythmic figure would become a focus of the improvised music avant-garde of the 1950s and 1960s. But in these permutations of improvised music, from the 1930s boogie-woogie revival to this avant-garde, the startling fact is that there has, in a sense, been no development at all. Amiri Baraka termed this underlying stability of principles "Changing Same," diverse manifestations of *"consistent attitudes within changed contexts."*[44] The flexibility and resiliency, rather than stagnancy, of this attitude, in music ranging from field hollers to blues and jazz, is facilitated by its emphasis on the transient play of forces enabled by forms rather than on an intrinsic value of forms in isolation or stasis. While writing about free improvised music, Wadada Leo Smith identifies three potential forms: "the original intention of all great music [is] to create and express original ideas without being inhibited by certain prescribed forms. In free-music we have many forms: structured forms that supply a beginning leading into improvisations; link form, whereby several different predetermined elements are linked together to form improvisations; and, at its highest level, improvisation created entirely within the improvisor at the moment of improvisation without any prior structuring."[45] Transitional and connective rather than fixed, these forms identified by Smith are not artifacts or ends, but variables that organize and enable activity. They provide access to processes of flux and interaction that produce unforeseen ways for things to collide, momentarily cohere, and describe other shapes.

Michel Ratté describes the shapes that emerge from these processes as finding coherences within incoherences: the continual challenge is to resolve a form that has a shifting presence, given its formation during a free temporalization—"the activity of grouping or synthesising time-events."[46] In each instant, musicians strive to create coherence from what was previously played. However, incoherence reemerges because of their distinct temporalizations and different perceptual grasps of the multiple subjectivities at work. The offering of the collective in each instant blurs each musician's decisions, interventions, and perspectives regarding coherence. "Spontaneous temporalization" and its attendant "perceptual scramble of actual listening" destabilize "the identities, similarities and differences of

the materials"—the composition as well as the participants—and release them into free play.

The conception of dynamic form that is at work here is not one of revealing the dynamic forces at work in forms. The conception is that the form provides access to the means for actively engaging the decisions, risks, and exclusions from which forms proceed. Anthony Braxton provides a summary of this form sensibility that is applicable to architecture as well as music: "The significance of form is that information can be carried forward; a given form can make given variables come into play."[47] Such form provides material and some measure of organization for the emergence of a series of shapes or states.

Extended to design, this suggests interplay between form and shape. Form can operate as a generator of shapes, and might make it possible to identify, select, or develop other forms from the subsequent shapes (Figure 11). Shape might provide the basis for particular readings of a form (Figure 12). Form can become the guide/organizer of change to make shapes (Figure 13).

Provisional Utopias

In noting that "Jazz and Neo-Plasticism are already creating an environment in which art and philosophy resolve into rhythm that has no form and is therefore 'open,'" Mondrian sought to make their directions the same.[48] By shifting from representation toward abstraction, the arts were eliminating oppressive and closed forms, and enabling manifestations of higher forms or states—open forms in which people cease to focus on the things themselves and instead contemplate the relations among them. Form in Mondrian's vision was a complex relation of material things coupled with historically determined conventions and institutions that produced closed orders of society indicative of past stages of human culture. Modernization and technology had introduced and encouraged processes that fragmented and separated people and things into discrete and isolated categorical elements, while producing ruptures in closed forms that permitted new opportunities and states to emerge. The arts, in Mondrian's estimation, could reveal the opportunities that modernization engendered

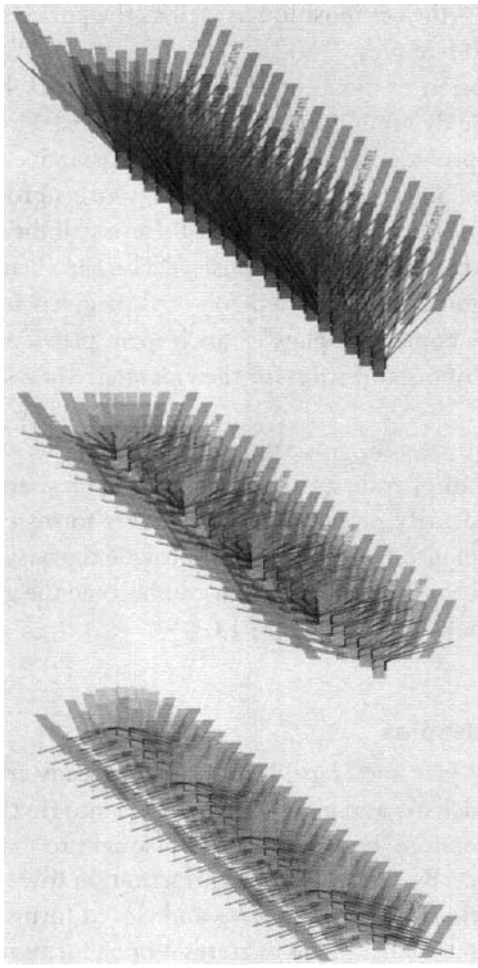

Figure 11. Form and resultant shapes. *Solstices and Equinoxes Shadow Studies, Glass Canopy—Shadowed Field—Projection Surface,* a proposal for the Washington, D.C., Martin Luther King Jr. National Memorial Competition, 2000. Twenty glass planes, etched with quotations from Martin Luther King Jr., are suspended overhead and aligned along the axis between the Lincoln and Jefferson Memorials in Washington, D.C. The glass panels and their structure are proposed as a mechanism for creating a field of projected words that shifts with the sun's movement. Smooth stone markers in a plaza below the glass panels would operate as a mechanism for selecting particular quotations from this transient shape. The alignment of quotations with markers would permit the commemoration of different moments in civil rights history over the course of a year.

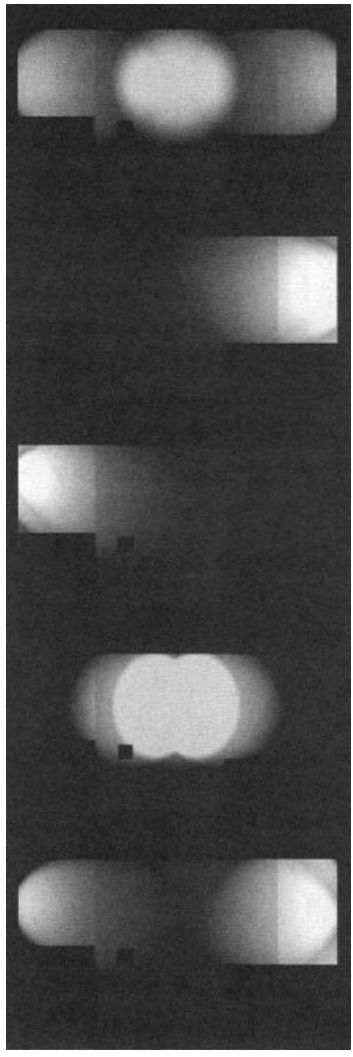

Figure 12. Arrangements through overlays of shape and form. "Lighting Arrangements Indicating Different Playing and Viewing Configurations." *. . . and other latent uses,* an installation in Project Row Houses' Music and Spoken Word House, Houston, Texas, 2001. Within the shell of a shotgun house three zones were defined by raised platforms, as well as planes of different-color fishing line described along the ceiling and portions of the walls. The positioning of three lights on a low-voltage line running the length of the space could be used for organizing different relations between the two primary activities in the space—making music and listening.

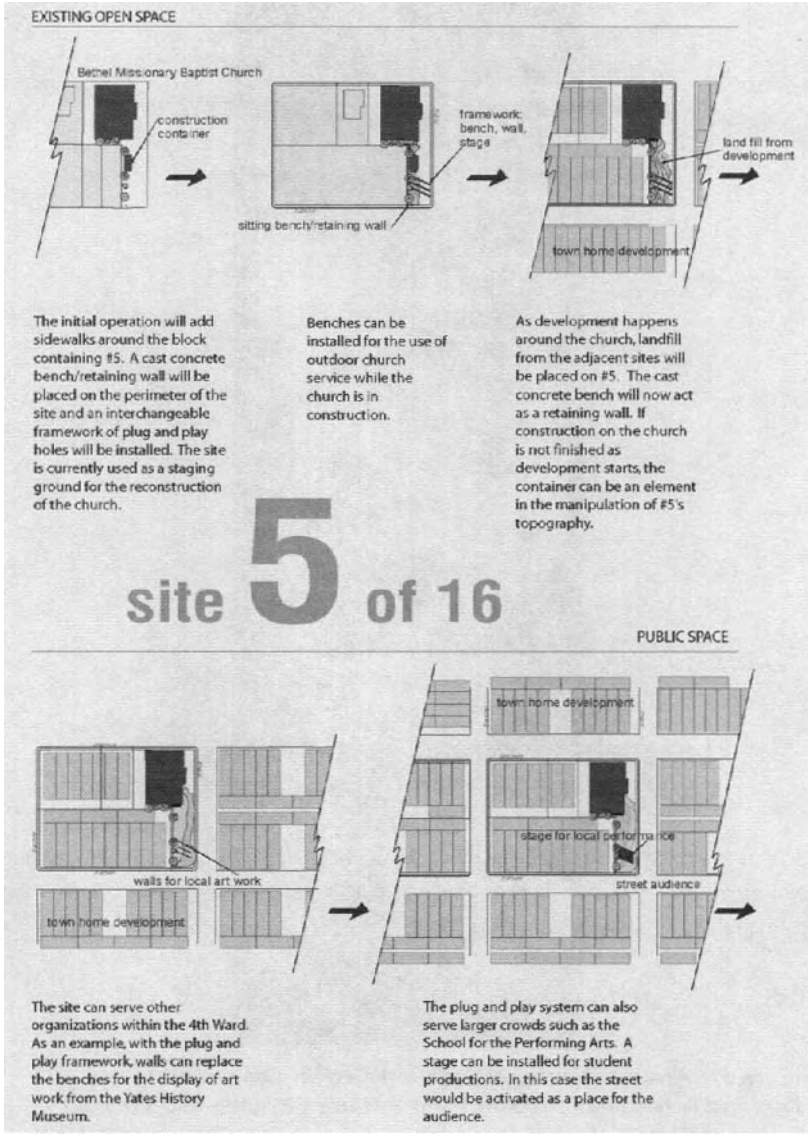

Figure 13. From form to shape to form. Anne Buttyan, *Site 5 Interventions*. Community Land Trust Plans of Action Studio, Rice University, spring 2003. A set of walls structures the means for a site to develop responsively from one form and use to another by operating in support of and in relation to construction activity on surrounding sites. Reproduced by permission.

through the creation of an abstract environment in which everything was situated within rhythms manifesting dynamic equilibrium.

However, the equilibrium that Mondrian thought could be established by jazz and neo-plastic painting was not without limits. In the practices available to him, immersion within a state in which all elements are mutually dependent could only occur within the limits of an interior: "What was achieved in art must for the present be limited to art. Our external environment cannot yet be realized as the pure plastic expression of harmony."[49] Only in the future would there be a true realization of a neo-plastic architecture, an architecture other than a closed form separated from the continuity of space surrounding it. With this realization of architecture as environment, both art and architecture would dissolve into life. In Mondrian's theosophically informed beliefs, this evolution would lead from mundane concerns for matter to a higher spiritual state of unity, where "man will be able to live by intuition: all 'thinking-and-feeling-in-form' will dissolve into the unity of deepened emotion and intellect."[50]

Mondrian undoubtedly glimpsed this inevitable transcendent end while dancing "to the rhythm of some 'boogie-woogie' until the melody reminded him of the immense developmental distance that remained, and he would stop and return to his seat."[51] However, the open form that is suggested by improvised music, and extendible to architecture, does not progress toward any envisioned utopian and transcendent end. As Ratté notes, "Not only is improvised music a process seeking to go beyond its incoherences, and finding in this an expression of coherence: it is also a music whose incoherences critically confront any attempt to go beyond incoherence in a schematic way."[52] Or as Jacques Attali states, "To compose [improvise] is to stay repetition and the death inherent in it, in other words, to locate liberation not in a faraway future, either sacred or material, but in the present, in production and in one's own enjoyment."[53] In both statements one can detect extensions and elaborations of the impulse informing the blues—"to keep," as Ralph Ellison describes, "the painful details and episodes of a brutal experience alive in one's aching consciousness, to finger its jagged grain, and to transcend it, not by the consolation of philosophy but by squeezing from it a near-tragic, near-comic lyricism."[54]

Within the blues-inflected practices of contemporary improvised music, transcendence is not projected as the end but, like the musical shapes that develop and dissipate in time, is tenuously and momentarily grasped in the transformative play of forces that forms make available.

Chapter 2

What Is the Body Supposed to Be Doing? John Cage and Rahsaan Roland Kirk

Sound??

Bearing multiple instruments, his blind steps measured with a cane, multi-reedist Rahsaan Roland Kirk crests a hillside to descend into London's zoo. In the background a sustained pitch emerges and continues as the image cuts from Kirk's seemingly chaotic and fragmented form moving across the fixed space of the camera's frame to John Cage, the centering point of focus in a moving frame. In the midst of the visual swirl of the city behind him, Cage calmly, stoically, recites a series of questions from the book that he carries: "Is it high? Is it low? Is it in the middle? Is it soft? Is it loud?" The images continue to alternate intermittently between these contrasting figures and their surroundings (Figure 14). The pitch is joined by an accompaniment as Cage poses more questions: "Does it communicate anything? Must it? If it's high, does it? If it's low, does it? Is it a sound? If so, is it music? Is 'music' the word I mean; is that a sound? If it is, is 'music' music? . . . Is it softer than before? Is it supersonic? When will it stop? What's coming? Will it never stop? Why won't it? Is sound enough; what more do I need?"

Finally, the alternating imagery breaks (Figure 15). We see Kirk in a nightclub performing the music that has taken shape in the background. Cage continues: "Silence is not a question. A little sound or

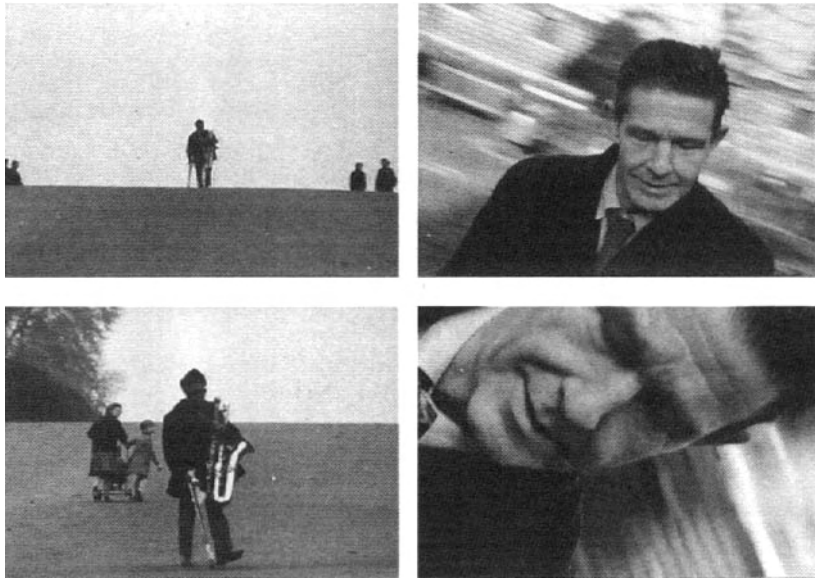

Figure 14. Alternating sequence of contrasting subjects presented in the opening of *Sound??* Rahsaan Roland Kirk (left) and John Cage. Stills from *Sound??* a film by Dick Fontaine for Grapevine Pictures. Courtesy of Rhapsody Films, Inc.

more sound, there's no such thing as no sound. It's simply a question of what sounds we intend and what sounds we don't intend." His reflections are followed by Kirk's sole comment, an explanatory statement: "I've been put down by many critics for exploring what I call 'sound.'" "Sound," he proclaims, in the concluding moment of the first sequence of *Sound??* (1967), a video juxtaposition exposing the proximity and the distance between Cage and Kirk, "is something like eyesight for me."

Cage always acknowledged jazz as a percussive music, notable for rhythmic and timbral concerns similar to his own. In "The Future of Music," he writes:

> Percussion music is a contemporary transition from keyboard-influenced music to the all-sound music of the future. Any sound is acceptable to the composer of percussion music; he explores the academically forbidden "non-musical" field of sound insofar as is manually possible.
>
> Methods of writing percussion music have as their goal the

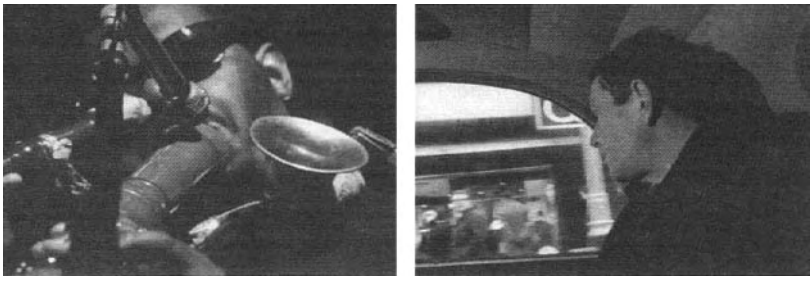

Figure 15. Transition sequence. Stills from *Sound??* Courtesy of Rhapsody Films, Inc.

> rhythmic structure of a composition. As soon as these methods are crystallized into one or several widely accepted methods, the means will exist for group improvisations of unwritten but culturally important music. This has already taken place in Oriental culture and in hot jazz.[1]

A rhythmic orientation was necessary, given his view of what sound consists of: pitch, timbre, loudness, and duration. He explains: "The opposite and necessary coexistent of sound is silence. Of the four characteristics of sound, only duration involves both sound and silence. Therefore, a structure based on durations (rhythmic phrase, time lengths) is correct (corresponds with the nature of the material), whereas harmonic structure is incorrect (derived from pitch, which has no being in silence)."[2] Having identified these parameters, Cage proposed a high-culture music that would explore these characteristics, and he positioned jazz outside the need for further consideration, maintaining that it was inconsequential to formal, high music culture.

Cage believed that while jazz, like folk music, was structurally based on rhythm, the correct orientation of music, rhythm "never developed in them, for they are not cultivated species, growing best when left wild."[3] And he would continue to delineate boundaries, hierarchies, and lines of descent in other writings: "Jazz per se derives from serious music. And when serious music derives from it, the situation becomes rather silly."[4] These characterizations of jazz were necessary for establishing the originality of his development of a transgressive music within high music culture that focused on rhythm and was tenuously related to notation. "Work indeterminate

of its performance," Tom Johnson notes, is the name that Cage chose for his music, "because to have called his work 'improvisations' would have implied that the performers were not guided by goals and rules."[5] In *Sound??* this distinction is evident when Cage asks, "Wouldn't it be better to just drop music? Then what would we have? Jazz?" Then, smiling wryly, he asks, "What's left?" to rhetorically imply, but remain silent about, his own indeterminate work as the answer.

In his construction of a high cultural distinction between indeterminacy and improvisation, Cage failed to see the true difference, found in his own assertion of a set of distinct and separated subject positions rather than a set of shifting and variable ones: "Composing's one thing, performing's another, listening's a third. What can they have to do with one another?"[6] Indeterminacy through written composition led to an experimental music that Cage defined as an action "the outcome of which is not foreseen" and is "necessarily unique." It challenged the ability of notation, the work of a composer, to predefine music by pursuing a music removed from intention.[7] Playing—making music through variable and simultaneous interactions of composing, performing, and listening—led to an experimental music that challenged writing as the only location of musical thought by developing, over its history, new systems of communication and interaction that facilitated improvisation. Indeterminacy and improvisation are thus sources of musical spontaneity that differ in their respective structurings through writing and playing, as well as in their conceptions of the subject and its relation to the surrounding environment. In bringing Kirk and Cage into proximity with each another, *Sound??* offers an opportunity to understand the implications of a variable, rather than fixed, subject, as well as the potential of those subjects in relation to the behaviors that may be embedded in objects.

Changed Composer as Subject

The inability of "scales, modes, theories of counterpoint and harmony, and the study of the timbres, singly and in combination of a limited number of sound-producing mechanisms," to fully account for the diverse and widening array of sounds that were unintentionally introduced by mechanical and electronic means was pivotal to Cage's

formulation of his work. In response to this condition, Cage sought to demonstrate, through a series of activities, that "sounds are events in a field of possibilities, not only at the discrete points conventions have favored."[8] By meticulously recompiling shreds of magnetic tape, Cage mined "the possibilities of magnetic tape, which is revealing to us that musical action or existence can occur at any point or along any line or curve or what have you in total sound-space; that we are, in fact, technically equipped to transform our contemporary awareness of nature's manner of operation in art."[9] Likewise, turning the knob on a radio could produce an unforeseen range of sounds, attesting to this emergent field of sound within which notational tools could identify only a minute and limited spectrum (Figure 16). Or by merely sitting silently, yet poised to perform, the musician could call attention to the hum of air conditioners, the creak of seats, and other unintended sounds generated by both the environment and the audience.

Given the unforeseeable sounds produced through such acts, how could one operate as a composer without imposing composition's rational, controlling, and limiting efforts? How could one make compositions that unleashed this broadened spectrum and permitted sounds to be themselves? In response to these challenges to relinquish compositional control over sounds in performance, Cage proposed that "those who have accepted the sounds they do not intend—now realize that

Figure 16. John Cage studying a sound-emitting electronic assembly. Still from *Sound??* Courtesy of Rhapsody Films, Inc.

the score, the requiring that many parts be played in a particular togetherness, is not an accurate representation of how things are. These now compose parts but not scores, and the parts may be combined in any unthought ways. This means that each performance of such a piece of music is unique, as interesting to its composer as to others listening."[10] The disjunctions resulting from these fixed scripts specifying parts and structures with no set succession were furthered by the absence of a specific vocabulary of notes in the notation systems he developed. The written compositions might indicate vertical and horizontal relations of points in time, but in the absence of a measure, the performer has to decide what those relations mean. Through both strategies, Cage was able to "fix some parameters while leaving others to chance" and so to develop music that incorporated both sound (prescribed and intended sounds) and silence (unintended sounds). "At minimum," declares Peter Yates, "Cage 'emancipated music from its notes.'"[11]

"Lethal Measurement" and Cage's Other Difficulties with Jazz

Yet for Cage a "composition which is indeterminate with respect to its outcome" had larger implications for modern culture, given the tendency of those compositions to produce simultaneous yet unrelated occurrences. "Sounds," he noted, "have frequency, amplitude, duration, timbre, and in a composition, an order of succession." However, the same technologies that introduced unintended sounds had ruptured the notion that a singular linear narrative could organize and define a time period or a zone of space. "Communications, radio, television, not to mention magnetic tape, not to mention travel by air, departures and arrivals from no matter what point at no matter what time, to no matter what point at no matter what time, not to mention telephony": all these things revealed an immense field of simultaneous events of differing scopes and scales that lacked sequential dependencies with one another. Multiple orders were proliferating in the world and making it impossible to believe that any one order possessed primacy over the others. Considering the impact of these developments on sound, Cage observes: "Patterns, repetitions,

and variations will arise and disappear. However, rhythm is durations of any length coexisting in any states of succession and synchronicity. The latter is liveliest, most unpredictably changing, when the parts are not fixed by a score but left independent of one another, no two performances yielding the same resultant durations. The former, succession, liveliest when . . . it is not fixed but present in situation-form, entrances being at any point within a given period of time." Instead of using succession and beat to impose unifying conceptions, composers should create "the situation of sounds arising from actions which arise from their own centers" and should appreciate any synchronicities that emerge.[12]

The presence of succession would be one of Cage's primary complaints about jazz in "Lethal Measurement," an interview by John Zwerin published in 1966 in the *Village Voice*. Its form, Cage notes in this interview, which focuses on jazz, "suggests too frequently that people are talking—that is, in succession—like in a panel discussion."[13] Identifying further elements in jazz that he believed "you really have no use for in life," he criticizes the persistent presence and emphasis on the beat: "if this notion of measurement—that someone is ahead or behind the beat—is essential to our lives, it means we mustn't do anything, without this lethal measurement going along with it. I myself revolt against this notion of measurement."[14] Cage asserts that jazz contains the structures that he sought to subvert and that it is incapable of creating unpredictable liveliness. While he had once cited it as a musical practice that was primitive, wild, and outside the realm of art, he now repositions it as an insufficient practice because it remains too close to Western conceptions of music: "It seems—jazz does—to cling to the fact of art more than to the fact of life."[15]

Jazz was not the only music for which he had revised his outlook. Cage had distanced himself from the work of Schoenberg with a critique of serial music that clarifies his difficulty with beat and succession: its links to repetition (and variation) in commercial culture.[16] As evidenced in the stockpiling of music, particularly jazz, through recordings, repetition had become the dominant mode (logic) of commodity culture. While sheet music as a means of representation permitted the development and dissemination of a particular kind

and form of music (based in harmony), recordings permitted the actual moment of performing, playing, or making of music, a temporal event, to be stockpiled and transformed into a commodity.[17]

In atonal serialism, a relation to commercial culture occurred through the continuity of capitalist development manifested in the continuation of harmony, albeit through questioning and seeking to dissolve it. As an explicit critique of harmony, it operated as a development of harmonic evolution, one that was consistent with developments in Western commercial culture. In jazz, this relation to commercial culture was mirrored in the musical content through beat and succession, a false play of difference and innovation, in his eyes, that was amplified by the use of improvisation. "Improvisation," he stated, "is generally playing what you know."[18] The improviser, Cage believed, was burdened by individual emotion, taste, and memory, and Cage could not detect a means for obtaining new experiences within an improvisation.[19] Therefore, improvisation, like rational planning, could only provide a "means of controlling the continuity from note to note." It could not make opportunities to release control over sound material and to create a situation in which "sounds are to come into their own, rather than being exploited to express sentiments or ideas of order."[20]

Cage's critique posed two principal questions. First, can a music immersed in beat and succession provide a resource for liveliness and unexpected sounds? The second question is implied in his lament: "What I would like to find is an improvisation that is not descriptive of the performer, but is descriptive of what happens, and which is characterized by an absence of intention."[21] Is improvised music inevitably under the control of the individual?

Nonnotational Noises—a Divergent Aesthetic

The impossibility of "achieving creative agency and experiential spontaneity through improvisative musicality" points to the limitation of only considering intellect and emotion as the creative sources in making music.[22] Neither, as Cage noted, can account for all the complexity of nature. Nor can they account for all human complexity. Missing from Cage's formulation is a consideration of the relation

between the player's body and the instrument, which became transparent in the Western music tradition. Music critic John Corbett notes this diminished presence:

> The training of the hands, their adjustment and alignment to meet the requirements of correct technique, and thus the development of musculature *incapable* of producing "bad" technique, all ensure the reproduction of music outside, off the surface of, away from the performer. Standard technical facility is therefore a strategy by which the instrument and performer are both denied a certain kind of presence in the performance, a strategy by which they are disavowed as the writing of culture and thus a strategy that protects written (preinscribed) music and the discipline of the body against exposure and detection.[23]

The problem is not that improvisation is impossible, as Cage and others rooted in Western music tradition have asserted, but that the regulated bodies of classically trained musicians cannot improvise.[24]

By 1963, when the "Lethal Measurement" interview was conducted, the elements in jazz that Cage criticized had already undergone critical examination by numerous jazz musicians. Cecil Taylor, Ornette Coleman, John Coltrane, and others were working in settings in which all musicians improvised simultaneously, in a kind of return to early New Orleans/Chicago music. They were creating a free-form music having variable, polyrhythmic densities and tonalities that lacked any connection to Western tempered scales. But these emergent sounds—free shrieks and honks—were less a response to ideas set forth by Cage or other "modern" music composers, than they were a look backward.[25]

Corbett observes that "modern" music's problematics are not shared by the "ongoing legacy of black music in improvisation."[26] Christopher Small provides some insight as to why this might be so: "the limit of distortion to which performers are expected to subject the written notation are variable, being all but infinite in the Afro-American tradition but very narrow in the classical."[27] Improvised music stems from practices in which notation did not indicate narrow constraints.

Efforts to transcribe ballads, spirituals, and work songs, nineteenth-century precursors of jazz, had revealed the disjunction between

Western notation and sound that Cage would later recognize in electronics. In 1873 M. F. Armstrong and Helen W. Ludlow, reflecting on their efforts to document and compile the Hampton spirituals, observed how the mobility of continuous tones across the precise points of an octave presented notational conundrums: "Tones are frequently employed which we have no musical characters to represent. . . . Their tones are variable in pitch, ranging through an entire octave on different occasions, according to the inspiration of the singer."[28] Earlier, in 1862, William Allen, one of the editors of *Slave Songs in the United States,* offered similar comments on the difficulty of making notations, given the emphasis on tonal areas rather than precise notes, as well as the temporal variability: "What makes it all the harder to unravel a thread of melody out of this strange network is that, like birds, they seem not infrequently to strike sounds that cannot be precisely represented by the gamut, and abound in 'slides from one note to another and turns and cadences not in articulated notes.' . . . There are also irregularities in the time, which it is no less difficult to express accurately."[29] Lucy McKim Garrison, another editor of the same volume, specifically linked these variable qualities to the processes of the body and the collective interactions that created the music: "It is difficult to express the entire character of these negro ballads by mere musical notes and signs. The odd turns made in the throat and the curious rhythmic effect produced by single voices chiming in at different irregular intervals, seem almost as impossible to place on the score as the singing of birds or the tones of an Aeolian Harp."[30] Developed through the activity of playing, direct immersion in the thing being made, none of the music that these individuals sought to chronicle conformed to the notation that the documenters sought to impose.

Given his grounding orientation in Western classical music, Cage could not reconcile the presence of melody, harmony, and timekeeping with experimentation in music. He could not see that a music developed through playing rather than notation was outside the limits and crises of Western composition, the primary critical focus of Cage's own work. However, a music based in playing can find its opportunities within the exploratory potential of the constitution of the body without necessarily abandoning melody, harmony, and timekeeping, elements that Corbett characterizes as "tools of expression for roman-

ticism; the lineage to perforate for high modernism. In either case, repressive strategies only insofar as they produce the possibility 'music' that denies the presence of the body of the performer. Melody, harmony, timekeeping: these take on new significance in being improvised."[31] In playing, these elements represent potential rather than prescribed developments. Because it developed through playing, jazz never created ruptures between the mind and body or separations between composing and performing. Emerging through playing, aurality, and the body, it never experienced the need to adhere to the restrictions of notation, or conversely the need to disregard them. The difficulty of transcribing music produced by playing points to an understanding of notation as a guide and stimulus for making music rather than the description of an object for performance.

Roscoe Mitchell and a Language of the Body

The sense that "notes on scorepaper amount to nothing more than a set of variables" is evident in such works as "SII Examples," a solo recording by Roscoe Mitchell, who is a meticulous documenter of the sounds that can be produced through interaction with instruments.[32] As the name implies, "SII Examples" is a selection of examples from his *SII Book,* which describes soprano saxophone fingerings that he has developed to "allow an individual to play quarter tones, semi-quarter tones, between notes, the same note with different timbres, and that kind of thing."[33] With an accompanying tape that demonstrates the sounds, "the book explains how the fingerings are done, and how to tie these sounds together into a line with no breaks in it other than hearing a scale pattern of notes falling together."[34] Mitchell's work constitutes an alternative form of written notation that describes positions of the body in relation to the instrument rather than musical note values found on a scale.[35] And the *SII Book* is potentially but one of many books, given the number of saxophones and other wind instruments with which Mitchell works (Figure 17).

This emphasis on processes and actions rather than on quantities, note values, is driven in part by the character of the sounds Mitchell produces. Listening to "SII Examples," one detects sounds, which lack discrete clarity or authority, emerging as distant resonant pitches

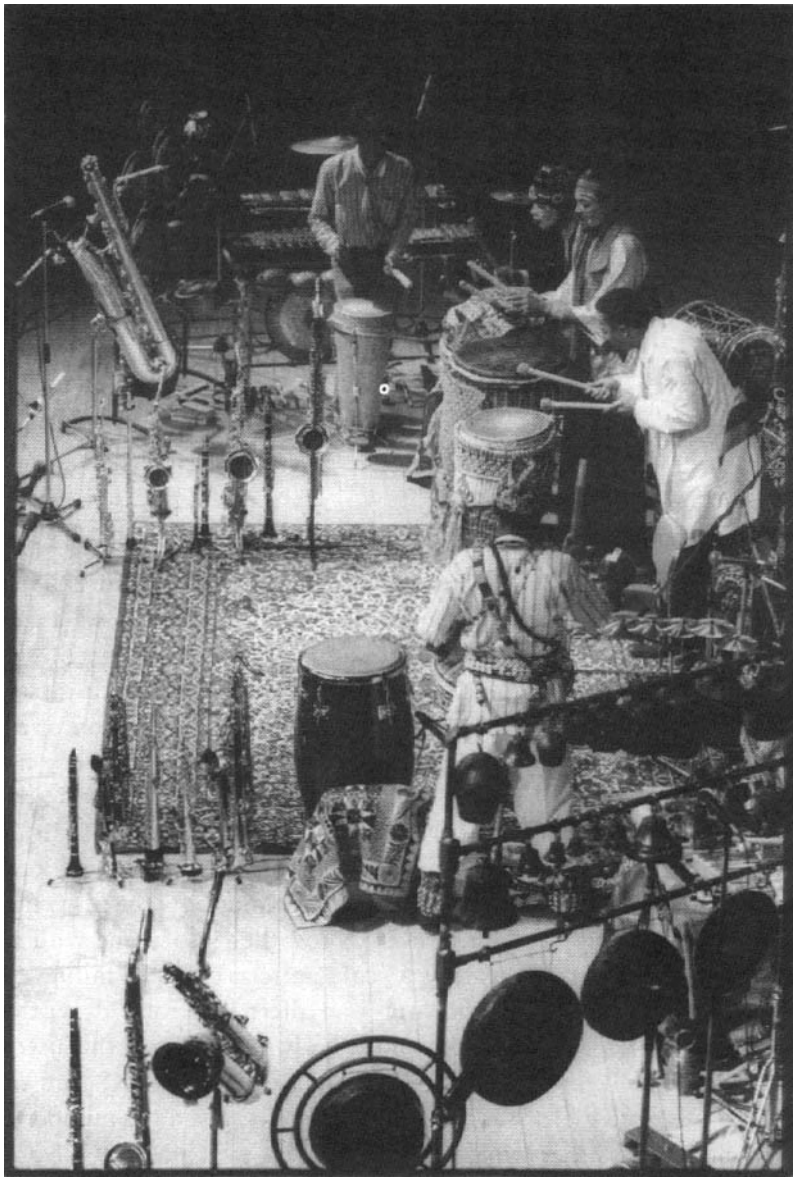

Figure 17. The Art Ensemble of Chicago, live at Kanihoken Hall, Gotanda, Tokyo, 1984. For this concert, Roscoe Mitchell, top was equipped with an ensemble of eight woodwinds (upper left corner). Copyright Mitsuhiro Sugawara. Reproduced with permission.

that are inextricable from the passage of air and the manipulation of the saxophone's keys. Consequently, one becomes acutely aware of the physical effort and constraints of the musician, as well as the stresses and strains within the instrument needed to produce such sounds. Mitchell eventually "discovered that one example that could be done on [his] curved soprano saxophone couldn't be played on . . . straight sopranos."[36] Sound in this sense is not an a priori note value, but a function of Mitchell's body positions, as well as the form and properties of his selected instrument.

Technique and Its Absence

The potential enabled by such relations between the body and the instrument is further revealed in Taylor's recollection of a discussion regarding Thelonious Monk's playing technique: "[Gunther] Schuller had made a remark that it would never occur to Monk to practice and thereby change his technique to improve his music. I asked then, 'Would it ever occur to Horowitz to practice to change *his* technique?' I said, 'Monk can do things that Horowitz can't, and that's where the validity of Monk's music is, in his technique.'"[37] Monk's lack of proper technique, relative to definitions imposed by classical training, did not limit his music, but was inextricable from the potentials of his activity and from the sound he created. A change in technique would not have improved his music; it would have led to the development of a different kind of music.

Taylor's anecdote implies that, like the relation to notation, the concept of technique is not the same in improvised music and Western classical music. Wadada Leo Smith identifies this difference: "Technique for the improvisor is not an arbitrary consumption of an abstract standardized method, but rather a direct attunement with the mental, spiritual and mechanical energy necessary to express a full creative impulse." He emphasizes the generative potential in individual technique: "In other words, to improvise, a display of flawless standardized technique is not enough: an improvisor must be creative."[38] An individual's technique, in improvisation, emerges from the work with the instrument in order to find and develop his or her sound.

John Corbett provides a detailed account of the influences of the

form and properties of an instrument on the development of technique in both the Western classical tradition and improvised music: "Implicit in the instrument are techniques for playing it; the knowledge one can have on an instrument is mapped out progressively in terms of a training that allows the musician a certain way and thereby forces the instrument to sound only a certain way. Contained in the very body of the instrument is the power/knowledge juncture capable of producing correct gesture."[39] The Western tradition emphasizes conformance by focusing on the technique that facilitates the repeated production of particular sounds regardless of individual musicians and instruments. The "correct gesture" in this focus creates a seamless interface between the body and the instrument in which the weaknesses and undesired characteristics of either one are minimized and become undetectable. Compared to this disciplined, and thus hidden, body of a Western-trained musician, Corbett explains that "a reappropriated technique" requiring "a radical redisciplining of the body" is evident in improvised music: "The improviser's task, then, is to subvert this disciplinary action at a number of levels: gesture, the object-body articulation, the orchestrated body, or a combination of these. This does not mean an abandonment of discipline altogether. It requires re-discipline. New techniques, new gestures, new responses. To reposition music in relation to the body of the performer, the player must be willing to stretch, must not be fearful of exposure and detection. Abandoning virtuosity or embracing it: both become possibilities."[40] As the body, through all of these actions, ventures beyond the standard interface and becomes detectable, so does the instrument. Standing with the reed away from his mouth, Evan Parker percussively fingering his saxophone's keys, Fred Hopkins producing a drone by bowing his bass in a circular motion that shreds the hairs of the bow, Peggy Lee repetitively striking her bow and the strings against the bridge of her cello, Susie Ibarra dropping and dragging a string of shells on her snare drum: all these acts are examples of musicians going beyond the limits of the standard or designed interface in the Western tradition to locate and work with hidden and unintended sound potentials of the behaviors that are embedded in their instrument's design (Figures 18 and 19).[41] All these behaviors, which are informed by an instrument's material properties as well as its form, are exposed as creative resources,

Figure 18. Bowed cymbal. *. . . and other latent uses*, an installation in Project Row Houses' Music and Spoken Word House, Houston, Texas, 2001.

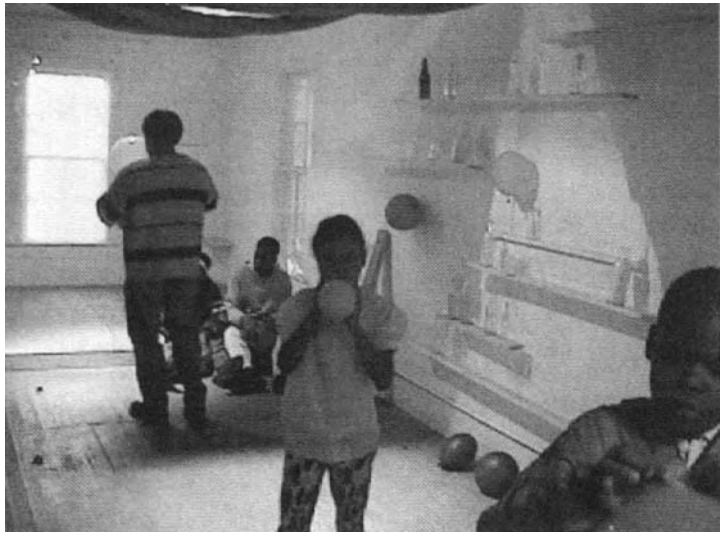

Figure 19. Three forms of playing balloons. *. . . and other latent uses*, an installation in Project Row Houses' Music and Spoken Word House, Houston, Texas, 2001.

rather than weaknesses, for the improviser to interact with and to develop a broad range of sound-making activities.

Shifting Subject/Object Relations in Playing

No one has displayed improvisation's facets of technique and focus on instrument behaviors more openly than Kirk. With a variety of whistles and noisemakers, in addition to the three saxophones, flute, clarinet, and siren, strewn around his neck, Kirk kept available a sound-making potential that was perhaps infinite given his willingness to modify each instrument (Figure 20). The "Saxophonium" is the name given to a saxophone without the reed that Kirk would play. The practice was perhaps initiated by an instance in which he had lost a reed, or the worn and fragile state of many of his instruments. In the course of playing, he might also remove the saxophone's mouthpiece and neck, or substitute a similar part from another instrument, such as the trombone.[42] In the liner notes for *Here Comes the Whistleman,* critic Alan Grant proposes, "If Roland Kirk had the time, he would try to master every musical instrument in the world, not so much to master the instrument as to produce his own inimitable improvisational sound."[43] As with the musicians described above, the concern is for sound potential available while playing rather than adherence to correct technique.

Figure 20. Rahsaan Roland Kirk demonstrating his multihorned approach. Still from *Sound??* Courtesy of Rhapsody Films, Inc.

Kirk further increased the sound potential of his playing by placing multiple mouthpieces in his mouth at one time. With up to three instruments in his mouth, Kirk placed his body in a position that demanded new techniques because he could no longer hold the instruments or manipulate the keys in a conventional manner. Kirk lamented being limited to ten fingers; however, many observers, amazed by his ability to deploy a fingering that enabled him to play all of these instruments simultaneously, could not detect a limit or weakness.[44] Through his multi-instrumental practices, Kirk developed the facility to contemplate and play two separate thoughts as different melodies simultaneously issued from each horn, thus making apparent the understanding in improvised music that the subject was fragmented and unfixed, and was susceptible to change in relation to the object.

While citing Amiri Baraka's declaration that the imperative of New Black Music, or free improvised music, was to "find the self, then kill it," Nathaniel Mackey identifies comparable manifestations of a multiple rather than unified subject in the activities and claims of musicians such as Charles Mingus and Muhal Richard Abrams.[45] Self-expression becomes stimulus for self-transformation through risk, the "cruel contradiction" of improvising first identified by Ralph Ellison and detailed by improviser Evan Parker.[46] Operating within and against the group, the risks encountered in improvised music include stagnation (nonexistence), insanity (dysfunction), and completion (systemization, standardization, habit).[47] In *Sound??* Kirk makes these aspects of improvisation transparent (Figure 21). He does not limit his explorations to the nightclub, the venue that contributes so much to the predominant visions of jazz. He is equally comfortable playing in the zoo, where he spars with animals and organizes a procession of whistle-blowing children. He thus challenges conceptions of proper times or places for music. Any context becomes an opportunity for exploring and interacting with sound. Later the video documents Kirk in the club, distributing whistles and absurdly requesting "'Blues in W' in the key of W." Kirk and his band work within and against the resulting cacophony of sound produced by the audience to make it clear that Kirk is not striving for authority, but rather seeks to interact with forces outside his control.

Figure 21. Rahsaan Roland Kirk serenading a wolf in London's zoo; Kirk leading a parade of children through the zoo; and a club audience playing kazoos provided by Kirk. Stills from *Sound??* Courtesy of Rhapsody Films, Inc.

Music that emphasizes development, of itself and its makers, through playing is not concerned with "rules," but located in discipline, which trombonist George Lewis defines as "technical knowledge of music theory and of one's instrument as well as thorough attention to the background, history, and culture of one's music."[48] Lewis, an improviser and composer, accepts that a music based in orality and the body acknowledges personality as part of its sonorous equation: "Sensibility, personality and intelligence cannot be separated from an improviser's phenomenal (as distinct from formal) definition of music."[49] However, the presence of personality within the music does not limit musicians to their own experience or to only playing what they know—suggesting further distinctions between the understandings of discipline and technique in this phenomenal definition of music and Western classical music.

An elaboration on improvisation by Corbett provides a release from the bipolar consideration of rational and emotional states to reveal its complexity: "a different, more complex image of improvisation as a diverse range of strategies regarding gestural rediscipline and body-object articulation, without a single rallying cry. . . . An opposition to the notion of music away from the site of the body of the performer—but one that is not unified at the level of the three bodies (knowledge, performer, instrument) nor at the juncture of these three bodies, but in the space between improvisers."[50] This is a different conception of sound as integral and intertwined with the forms and processes that produce it. The performers and their personalities are inseparable from their music but are not the sole source of its production. Knowledge, in this conception, does not reside in and emerge from the object or the body, rather than the mind. Individually, all three are inadequate and are limited by the assumption that they are discrete and stable. Knowledge instead develops in the interaction among the three, and is produced in exchanges across musicians and the audience.

Prepared Instrument and Disciplined Bodies

As *Sound??* implies, the zone separating the music explorations between Kirk and Cage is blurred rather than distinct. In his use of a

radio tuned to any station as a sound source for his music, Kirk overlapped Cage.[51] Similarly, Kirk's multiple horns and instrument modifications have parallels with Cage's prepared piano, which he developed in the 1930s. The production of unexpected and undetermined sounds could occur through the performer's application of standard technique on such a modified instrument:

> In the late 1930s Cage also devised the "prepared piano," the innovation that first won him notice. Here he doctored the piano's network of strings with screws, bolts, nuts, and strips of rubber, endowing the familiar instrument with a range of unfamiliar percussive potentialities. . . .
>
> In addition to generating unusual noises, the prepared piano gives the performer less control over the sounds that are finally produced—bolts and nuts, alas, are not as precise as tuned strings.[52]

While a musician might strike the keys in the standard manner, no one knew what sounds would emerge from the altered instrument.

Describing Cage's indeterminate structures, critic Richard Kostelanetz notes that "in the choice of materials and guidelines lies his taste. He was known to become visibly upset if the skeleton of his piece, as distinct from the detail, lost its predetermined shape. 'The rules of the game,' quipped [music critic] Peter Yates, 'determine the nature of the play and the shape of the end product.'"[53] Cage's notations invariably offered shapes or points that placed the musician outside the bounds of standard notation. To read and translate those notations, the musician would have to initiate experimental actions—actions that neither Cage nor the musician had preconceived—to produce a sound. Since neither the sound nor the action was explicitly determined by the notation, the same notation read by a different musician would yield a different action and sound. Cage's only insurance, therefore, that each action was "experimental" was if it emanated from the underlying dictates and rules, however ambiguous, indicated by the notations.

Cage had not created the means for a composer to structure a sound-making activity made up of indeterminate sounds in order to permit the performing subject to influence or to take control of those sounds. He dictated through notation the manner and means by which a musician could initiate an experimental action. At no mo-

ment was the musician free to initiate such an action that emanated from a different source or stimuli than those structured by the notation. Only the composer could provide the means for the musician to initiate an experimental action. Each action could be independent of the previous one, and each sound could be independent of the previous one, only because the relations between the composer and the musician as subjects remained fundamentally intact.

The true parallel to Kirk's work lies in Cage's activity while writing his compositions. Jazz players have more in common with classical composers than with classical performers, the makers of the music in their respective idioms. Released from the concern for controlling the aural result, Cage's exploration of methods of composition, including chance and new notation systems, enabled him to emerge as a writer who could pursue the implications of writing as an activity rather than a means:

> In contrast to the neo-Schoenbergians, who wanted a precise rationale for the placement of every note, Cage in the late 1940s continued to develop methods for minimizing his control over the aural result. Sometimes he would enumerate several possible choices posed by a compositional situation and then let the throw of dice dictate the selection. Other times he would choose his notes by first marking the miscellaneous imperfections (holes, specks, discolorations, etc.) on a piece of paper and then placing a transparent sheet over the marked paper; after duplicating these marks on the transparent sheet, he would finally trace the random dots onto musical staves.[54]

In all of these methods, the act of making a mark is emphasized over the meaning that those marks might signify. Cage's modes of writing music were similar to Kirk's modes of playing, given their immersion in the material at hand and the demands they placed on the writer as subject.

Convergence and Differentiation

The painter Lee Krasner suggested the potential influence of jazz improvisation upon the work of her husband, Jackson Pollock: "He would get into grooves of listening to his jazz records—not just for

days—day and night, day and night for three days running, until you thought you would climb the roof! Jazz? He thought it was the only other really creative thing happening in this country."[55] Chad Mandeles reinforces the connection: "To the extent that improvisatory method was a means both for invoking the unconscious and for developing the act of painting, Pollock's work of the early 1940s more closely parallels the be-bop idiom which emerged during the same years: be-bop players distanced themselves from the limited chord progressions and rhythms of swing, placing greater emphasis upon solo improvisation and accelerated rhythm. . . . This improvisatory style was nurtured by Pollock's reliance on the creative act, or rather, his insistence on the preeminence of gesture over object."[56] By spilling and dripping paint onto his canvases, Pollock incorporated accident and chance as structural challenges to pictorial composition in ways that would evoke comparisons to the articulated playing surfaces of improvisation, and the abrasive paper surfaces and written instruments of indeterminacy.[57] In 1959, with the release of his debut album, *Something Else!* Ornette Coleman introduced a form of free jazz. A 1954 Pollock work, *White Light,* appeared on the cover of Coleman's second album, *Free Jazz,* released in 1960. In an interview years later, Coleman commented that Pollock was someone "in the same state I was in—doing what I was doing."[58] Kostelanetz describes the relation between Cage and Pollock in a way that contrasts with Coleman's response to Pollock, focusing on the qualities of the visual fields that each produced rather than on parallels between the intersubjective process and the knowledge it provides: "visual work, descending from unintentional purposes and yet eminently Cagean in artistic style, is the untitled drawing made by Cage while cleaning his pen during the composition of *34'46.446"* in 1954. The scattered inklines create noncentered, nonhierarchical space, incidentally resembling, more than anything else, not painterly constructivism but expressionist paintings by Jackson Pollock, who, we remember, was likewise concerned with the possibilities of noncentered, nonhierarchical visual space." He continues, "By such initially visual device, Cage ensured that the aural experience of the entire piece will likewise be noncentered and nonclimactic."[59] These discussions emphasize two principal images of Pollock's work—Pollock lunging forward to pour paint upon a canvas that rests horizontally on

the floor, and the result of that process hung vertically upon a wall. Comparisons with improvisation concentrate on the former, while comparisons with indeterminacy focus on the latter and expose similar yet differing models of diffusive fields.

Receptive and Resonant Models of Diffusion

Cage, through his efforts to order activities in such a way as to remove individual influence from those activities, seems to advocate a *receptive diffusion.* Kirk, through an insistence on playing no matter the context, seems to propose a *resonant diffusion.* The difference in these two models lies in their understanding of the subject occupying the diffuse landscape and the subject's potential to act within it.

In his criticism of jazz in "Lethal Measurement," Cage offers Charles Ives's music as a more accurate reflection of the times, given its suggestion that "not one thing is happening at a time, but rather that everything is happening at the same time. They simply are. We are living in a period when our nervous systems are being exteriorized by electronics, so that the whole glow is happening at once. There is no need to minimize the complexity of the situation, but rather a great need to make this complexity something we can all enjoy. If our arts introduce us to it, then I think they are performing a useful function."[60] The production of sounds operating simultaneously and independently not only emphasizes the complexity and saturation of electronic and digital systems within contemporary culture, and their activation of processes at scales and rates that exceed human capabilities, but also provides a means for enjoyment of that complexity. This production, evident in Cage's characterization of Crown Hall as an ideal performance setting, is most effective when the performers are dispersed within a space:

> Certainly the performers in the case of an ensemble in space will be disposed about the room. The conventional architecture is often not suitable. What is required perhaps is an architecture like that of Mies van der Rohe's School of Architecture at the Illinois Institute of Technology. Some such architecture will be useful for the performance of composition which is indeterminate of its performance. Nor will the performers be huddled together in a group in the center of the audience. They must at least be disposed separately around

> the audience, if not, by approaching their disposition in the most radically realistic sense, actually disposed within the audience itself. In this latter case, the further separation of performer and audience will facilitate the independent action of each person, which will include mobility on the part of all.[61]

One can imagine Crown Hall as the site for one of Cage's collaborations with Merce Cunningham, which consisted of little more than the agreement to perform simultaneously—an ensemble of musicians and dancers performing and moving independently from one another with the audience moving among them. Mobility in this diffuse environment stimulates the development of active listeners, the role of the composer that Cage transformed through his work:

> What makes Cage's esthetic position so revolutionary is that, in theory at least, it completely discounts the traditional purposes of composing and even the importance of the composer. As Cage would have it, music is everywhere, and everywhere is music—nature's natural noise—if only the listener is prepared to hear it. Therefore, if the composer has any function at all, it should be, Cage said, teaching people to keep attuned to all the implicit music that their environment offers. Following the logic of this position, he admitted that solipsism characterizes the experience of both everyday life and indeterminate music; and, because each person hears something individual, everyone is his or her own composer, putting sound together, in the act of attentive listening. The music most appropriate to our time is that which allows each listener to compose an individual experience, his argument continued.[62]

With our "nervous systems exteriorized by electronics," and with the choice to compose, perform, or listen, Cage identified and advocated *active listening* as the appropriate position for the contemporary subject. In this position listeners obtained aspects of the composer through their ability to individually select what sounds are of musical value rather than have them imposed by another individual. The visitors who passed through these spaces and events made their own decisions regarding the relations among the performance elements.

The active capability of the performer and the listener are maximized in Cage's environments; however, his complexity—his absence of intention—can only be maintained by keeping the subject in a singular and restrictive role. His listeners, no matter how active, are

always outside the sound-making systems: while listeners are free to choose and select, they are unable to affirm or add to these sounds by articulating any sounds of their own (Figure 22). Even the slightest uninstructed utterance, Cage feared, could reestablish a desire for control.[63] Thus the listener remains a consumer with no access to the processes of production, left to the mercy of the increasingly decentralized modes of commodity production and culture.[64]

While he envisioned Crown Hall as an ideal setting for an indeterminate music, the Philips Pavilion, a form Cage would have abhorred and described as tyrannical, was the site of an architectural event, *Poème Électronique,* collaboratively developed by Le Corbusier and Edgard Varèse.[65] Working separately on their respective portions of the design of a 480-second interval, Le Corbusier constructed a visual presentation, while Varèse conceived and created a sound composition directly on magnetic tape. Using various sound sources and processes, Varèse developed sounds that "should not have so direct an associational basis; through the use of loops, filters and other devices, the sound is recreated, reshaped, acquires new frequencies and thereby new associations. In a word it is Organized Sound."[66] To the distress of the Pavilion engineers, only a minimal calibration of the acoustics of the space and the projection systems was allowed because both Varèse and Le Corbusier completed their parts at the last minute; the combined result was unknown until the first visitors experienced the space. "No synchronization between sight and sound was attempted . . . part of the effect achieved was the result

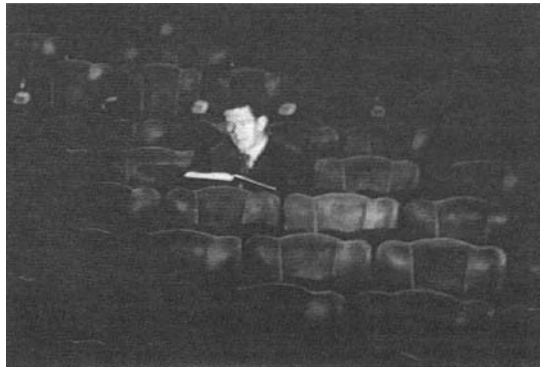

Figure 22. The audience as composer. Still from *Sound??* Courtesy of Rhapsody Films, Inc.

of a discordance between aural and visual impressions and part the result of their not infrequent accidental concordance."[67]

Although there was no conscious effort to do so, Cage's *HPSCHD,* conducted eleven years later in the Assembly Hall at University of Illinois, Urbana-Champaign, would effectively operate as an amplification of these effects through its increased scale and Cage's deployment of a greater abundance of simultaneous, yet independent, activities.[68] Kirk, however, interjects a different potential into the Pavilion's diffuse environment that describes a fourth position and relation of individuals to the events surrounding them, playing: not composer or performer or listener, but a shifting play of relations among all three. In *Sound??* Kirk is shown recording sounds to incorporate into pieces such as "Rip, Rig and Panic," which plays upon two of Varèse's electronic works—*Poème Électronique* and *Ionisation*—as well as on the chord progressions of jazz.[69] Kirk's music opens the Philips Pavilion's closed loop to formulate a resonant distributed network in which distinctions between electronic recorded sounds and played sounds become obscured.

The projection of "Rip, Rig and Panic" onto the Philips Pavilion suggests some variation to its event. Some of the images might have been projected along the level of the audience or from higher levels over the audience and down onto the floor. Similarly, speakers could have been located in positions that were accessible to the visitors. With both changes the visitors to the space would move about to see and hear, and in so doing introduce variations in the projections that would affect, yet not take control of, the environment. Both changes would have implicated the audience into the fields of sound and visual projection, and would have transformed the duration that the Pavilion calibrated and coordinated in one of active manipulations and negotiations. A more complex change, one that was likely not possible with the technology available at the time, would have been to introduce ways in which the activity of the visitors would somehow change the overall sequence of images and sounds—perhaps through various sensors and triggers located in the space.

Of the two options, the latter is probably the one that Kirk would be least likely to advocate. Although willing to engage electronic sources, Kirk always maintained a healthy skepticism about the increasing reliance on such systems because they often provided diminishing quali-

tative returns (Figure 23). With their emphasis on interfaces that were efficient only along the lines of their prescribed use, these systems with their seemingly vast range of options often eliminated characteristics and qualities that otherwise enabled unforeseen and unintended forms of knowledge to emerge through an interaction with more conventional instruments. In relation to this limiting aspect of electronics, persisting if not magnified in our digitally driven diffusion, Kirk's work suggests a potential for spaces and forms that acknowledge shifting, variable, and multiple subject positions, and thus permit interactions that yield unforeseeable ranges of knowledge.

The nurturing of behaviors within objects to facilitate resonance, rapport, and relationship between people and things might provide such spaces and forms. The absence of behaviors—a tool's or medium's limitations and points of distortion—is the source of Brian Eno's discontent with how computer software, which equates more options with greater freedom, is replacing the recording studio. While this absence in the design of computer software is prevalent, it need not be. The development of behaviors—the ability to provide plausible responses as well as make choices—is a driving consideration in George Lewis's *Voyager,* a computer program that improvises complex responses to the sound information offered by other improvisers. By measuring thirty or more different musical parameters and filtering them through behavior options in its process of accepting input and generating output, the program has its own personality

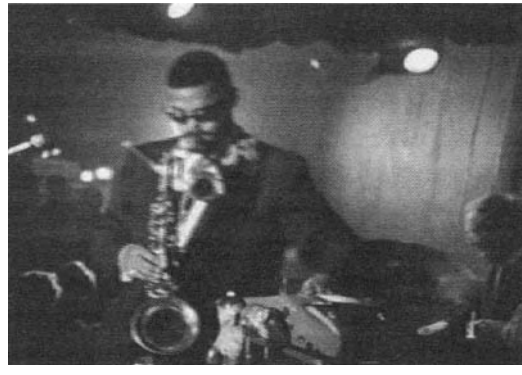

Figure 23. Rahsaan Roland Kirk playing tape recordings and saxophone. Still from *Sound??* Courtesy of Rhapsody Films, Inc.

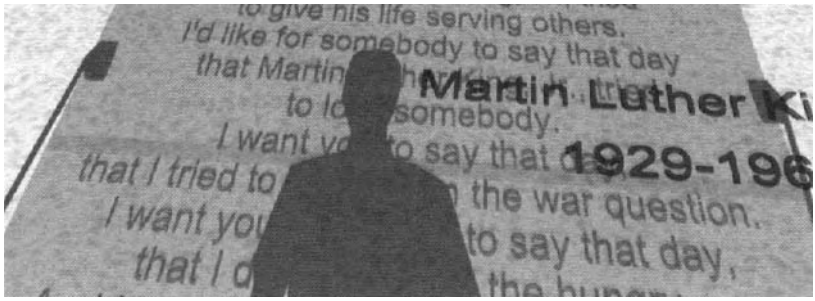

Figure 24. Interference. "Shadow Text on the King Marker, Noon, January 15." *Glass Canopy—Shadowed Field—Projection Surface,* 2000. Every time someone moves onto the proposed plaza to read King's words that would be projected on it, an active negotiation occurs. Anyone seeking to read a projected quotation obscures portions of King's words, and King's ideas are presented as a continuing challenge to us to fight for basic human rights and freedoms.

and responds differently to the musicians who work with it.[70] In an effort to provide a broad means for considering interactive form-making processes, Lewis has proposed: "It should be axiomatic that, both in our musical and in our human, everyday-life improvisations, we interact with our environment, navigating through time, place, and situation, both creating and discovering form."[71] This same axiom serves as a starting consideration for encouraging behaviors in the objects that might be designed and made. Possessing their own behaviors, intelligences, and personalities, objects might alert us to unanticipated and unknown aspects of ourselves in the process of their operating responsively, independently, or indifferently toward us as we engage, or interfere with, them (Figure 24).

Chapter 3

Now's the Time
Temporalities of Louis Armstrong and Le Corbusier

Discursive Tactics

In the 1940s jazz underwent a revolution in sound and practice. The development of a new music, bebop, was accompanied by a change in jazz musicians' view of themselves. They ceased to consider themselves entertainers and more consciously asserted themselves as artists. Some of this changed sensibility is reflected in the tactical uses of naming by bebop-era jazz musicians, particularly Thelonious Monk and Charlie Parker. "Relaxin' at Camarillo" asserts a casual ease that transforms Charlie Parker's six-month sentence to a California state hospital. Parker's "Klact-oveeseds-tene" and Thelonious Monk's "Jackie-ing" deploy onomatopoeia and "verbal nouns" respectively to deflect the ability of the title to fix, place, and name, in order to emphasize the active processes of producing sound.[1] With the proclamation "Let's Call This," Monk provides a title that operates multiply, signaling the end of the session or the imperative to name.[2]

Similarly, Parker's "Now's the Time" has multiple connotations, given its ambiguous position between naming and directing. As a name, "Now's the Time" indicates a chord progression and melodic phrase that structures the music to come. As a directive, the phrase indicates the tempo, the musical time of a piece. However, *now,* as

a specific reference to the present, is vague in this context, because it fails to indicate either a meter (beats per measure) or a tempo (number of notes per beat). Lacking these measurements, *now* cannot indicate a precise rhythmic articulation and measure of time. Instead, it emphasizes either the full duration of the music with its processes unfolding as an actualized moment, or the urgencies of the mid-twentieth century, within which the music is constructed.

All these discursive tactics have their precedent in *Swing That Music,* the first of many autobiographical documents that Louis Armstrong made over the course of his life. In "Negotiating the Color Line: Louis Armstrong's Autobiographies," William Kenney reflects on the interactions of jazz, writing, and ethnicity within this first autobiography, which Armstrong completed in 1936, a year after he established a decidedly commercial direction for his music with the assistance of his new manager, Joe Glaser. Emphasizing this commercial focus, Kenney questions Armstrong's "degree of control over the text," given its "eclectic narrative form." An introduction and closing essay by other writers frame the main text, legitimizing Armstrong for the general public interested in musical entertainment by providing transcriptions and analyses of his music for musicians trained in traditional European notation. In the main text, two distinctive voices are at work: a vernacular Armstrong voice provides autobiographical remembrances, which a didactic Armstrong voice links to a story about the transformation of jazz from its crude New Orleans origins to its refined swing-era art form. This interplay between two distinctive voices leads to Kenney's conclusion that, "like big band music itself, *Swing That Music* was arranged to communicate comprehensible signals to the general public."[3]

Kenney proposes that Armstrong's swing-era prose and playing, executed within arrangements developed and edited by others, addressed two audiences: "a 'fictive reader,' a generalist, curious enough about popular music to pick up a book like this one, and an 'implied reader' who is more sensitive and more informed than the fictive reader about both jazz and the racial dimensions of American life." In the autobiographical process, Armstrong demonstrated his awareness of this duality by "exercising his memory strategically, monitoring his speech to perform a version of his ethnic identity that seems to correspond to his collaborators' assumptions." Similar tactical de-

ployments of his playing abilities could be seen in his approach to musical performance:

> Armstrong the popular entertainer drew big crowds with his minstrel clowning, willingness to perform popular material readily familiar to the general public as well as feature slapstick vocalists like Velma Middleton, and his own high-note theatrics; Armstrong the jazz musician included just enough improvisational creativity to remind "implied" jazz fans that he was the man who had made the Hot Five and Hot Seven records. The fictive, musically naive general public would not (and need not) catch the subtleties that the "implied" jazz listener savoured.
>
> The sense of two levels of communication—two messages and two kinds of listeners—was a vital foundation of the jazz concept of "hip." It was hip to identify the fine points of the artistry with which Louis Armstrong performed his shows, to catch the fleeting moments of beauty that he sprinkled through his act. But it was also hip to grasp the racial dimensions of the act and the audience reactions to them. Consciousness of a conflict between surface appearances and underlying reality was hip in both music and autobiography.

Kenney's analysis suggests that Armstrong, concerned about his economic needs and aware of audience expectations still heavily conditioned by minstrelsy, accepted an image not fully of his own making, which he sought to skillfully interject with indications that it was an act. As a result, his performance style reinforced the emerging cultural associations of the music, without sacrificing its conceptual foundations.[4]

The divergent potential of these dual levels of reading, fictive and implied, is revealed in the analysis of Armstrong made by Le Corbusier, who saw him play in 1935, the year of Armstrong and Glaser's calculated efforts to develop a wider commercial appeal. Le Corbusier characterized Armstrong in a way that supported the universal, uniform, and progressive sense of time underpinning his own modernist proposals.[5] Obscured by this characterization are the divergent senses of the present—of "now" as an actualized moment rather than a register of twentieth-century urgencies—revealed through a close examination of Armstrong's musical activity before and during the period in which Le Corbusier observed him. As early

as 1926, Armstrong was exploring a variable and relational sense of time that suggests an underdeveloped potential for design to structure moments composed of diverse temporal articulations. This potential received a rare exploration in Le Corbusier's design of the Carpenter Center (Figure 25).

Le Corbusier's Time and Armstrong

In *When the Cathedrals Were White,* Le Corbusier initiates a reflection on the city, jazz, and race when he asserts that "Negro music has touched America because it is the melody of the soul joined with the rhythm of the machine."[6] The chapter, "The Spirit of the Machine,

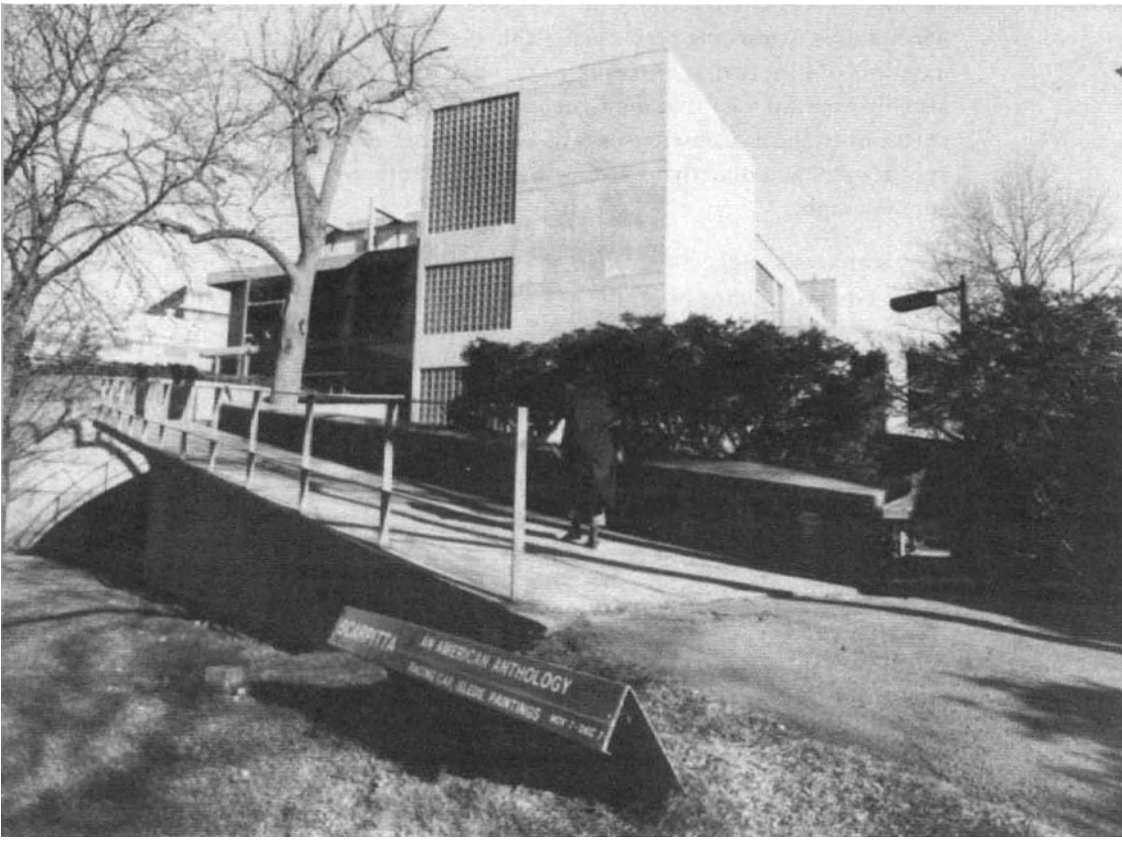

Figure 25. Initiating an architectural promenade. Le Corbusier, Carpenter Center, Harvard University.

and Negroes in the USA," continues with identifications of machine-like rhythms in the work of black performers that establish a basis for considering the development of jazz in relation to and as a reflection of the city. It is while making the first of these observations that Le Corbusier introduces Armstrong into the scope of architecture. He proposes:

> Let's listen to Louis Armstrong on Broadway, the black Titan of the cry, of the apostrophe, of the burst of laughter, of thunder. He sings, he guffaws, he makes his silver trumpet spurt. He is mathematics, equilibrium on a tightrope. He is Shakespearean! Why not? He only appears at two o'clock, to close the jam session. An assistant has led the orchestra up to now. The orchestra has not been silent for a second. Its precision is staggering. . . . That implacable exactitude expresses American taste; I see in it an effect of the machine. . . . with Armstrong, that exactitude leads to an unearthly suavity, broken by a blow like a flash of lightning. The men are tireless, like a smoothly running turbine.

Later, a visit to the Savoy confirms his impression. He observes that "in Harlem as on Broadway, the Negro orchestra is impeccable, flawless, regular, playing ceaselessly in an ascending rhythm: the trumpet is piercing, strident, screaming over the stamping of feet. It is the equivalent of a beautiful turbine running in the midst of human conversations. Hot jazz." Human energy and activity, viewed as machine-like registers of precision, align and calibrate the labor of Armstrong and other black performers with the rhythm of the machine-age metropolis. In this characterization, black performers are in essence entertainment-producing machines that reveal an unanticipated musical potential in the rhythmic language of machines.[7]

Through this alignment of jazz and the machine, Le Corbusier is able to support his argument that contemporary New York is a spectacular but ineffective use of new machine technologies. While the music made by the tireless efforts of black musicians and dancers demonstrates that regular, flawless, precise, and exact rhythms, such as those produced by machines, can be musical, such musical potential remains latent in the sounds made by machines at work in the city. Interspersed among his reflections on hearing and seeing black music and dance are characterizations and descriptions of sounds emanating from the city, such as "the clamor of the

skyscrapers and the roaring of subways," which are discordant and fail to be musical.[8]

Conceding that the United States was a "modern society experimenting on a grand scale with the machinery which will someday enable it to create the 'radiant city' when everything will be calculated, justly valued and exactly measured out," Le Corbusier characterized American efforts as a willingness "to do," which he felt was the crudest stage of machine-age development. Innovative and full of promise, yet lacking spirit, Americans produced skyscrapers, "architectural accidents" and "expressions of pride," that exacerbated the lack of light and the congested circulation of modern cities because they were built upon an infrastructure inappropriate to the new movement and density permitted by technological advances. In addition, American architecture, urban design, and planning had produced an environment in which the sounds of machines could not operate musically. The unchained madness of the subways, the grinding of streetcars, the pounding of machines in factories, and piercing sirens confirmed the "atmosphere of frenzy"that American efforts had created.[9]

The ability of black performers to make music "from this new uproar around our lives" is an encouragement for Le Corbusier. He speculates, "If architecture were at the point reached by jazz, it would be an incredible spectacle." He then asserts that jazz can provide direction for the further development of the city: "I repeat: Manhattan is hot jazz in stone and steel. The contemporary renewal has to attach itself to some point. The Negroes have fixed that point through music." Through sound, jazz, which elevates the heart and sets bodies in motion, provides qualities that architecture might strive to attain. An architecture appropriate to new technologies and the times would activate the musical quality that was latent in the sounds and rhythms of machines.[10]

Although it allows him to identify and propose this potential for architecture and planning, jazz is not an ideal for Le Corbusier. Along with the machine precision that he identifies in black performance, he sees elements of primitivism. On Broadway he witnesses "tap dancers . . . silent Negroes, as mechanical as a sewing machine," demonstrating that "the rhythmic instinct of the virgin African forest has learned the lesson of the machine and that in America the

rigor of exactitude is a pleasure. Idea of a masterpiece: exactitude." Although this statement emphasizes machine precision and American exactitude, it also references primitive impulses—savagery, as well as "simple" and "virgin" qualities—that Le Corbusier believed were sources of the music. "The Negroes have virgin ears," he notes, "a fresh curiosity. The sounds of life echo in them." And in this echo—a passive response, rather than an active transformation—the "ugly or horrible" new sounds of the city become musical.[11]

A complex relationship between the primitive and the modern is, consequently, at work; the modern sensibility of the city is still in an early (primitive, chaotic, and savage) stage, while jazz has attained modern properties because of the primitive qualities that Le Corbusier attributes to its makers. "Jazz," Le Corbusier noted, "like the skyscrapers, is an *event* and not a deliberately conceived creation. They represent the forces of today." Jazz was a "music of an era of construction"—one that exceeded the construction that stimulated its development and, in that excess, pointed toward the next level of construction.[12]

Having indicated this direction, the value of, and need for, jazz would be eclipsed with the construction of a modern society that was a "deliberately conceived creation." In Le Corbusier's conception, the developments of jazz and the modern metropolis are subordinate to a universal and progressive measure of time, which was described by Le Corbusier while visiting the Rockefeller Center: "The clock is dictator. . . . I pointed out to my companion, Fernand Léger, a straight red needle turning around a dial marked 1 to 60. They are seconds. The needle is obsessing; I said to Léger, "Notice the needle that goes around so fast: it marks the seconds and nothing else. The clock beside it marks the hours. Small matter! The hours will return tomorrow. But the dial with the second hand is something cosmic, it is time itself, which never returns. That red needle is a material evidence of the movement of worlds."[13] For Le Corbusier, the shift in music from a melodic to a rhythmic emphasis that he read within jazz confirmed a present in which all things progressed and developed uniformly in response to the possibilities that machines had established for the age. The resolution of this tension between primitive and modern characteristics in jazz and architecture would occur in time. While the implementations of skyscrapers had resulted in an overtaxed block

system in 1935, sometime tomorrow, if Le Corbusier could implement his plans, Manhattan's grid would be replaced by a larger one with a Y-shaped tower extending horizontally from the center of each new block (Figures 26–29). A conscious effort would transform the forces of today—forces of upheaval and development during the early stages of industrialization, and forces of jazz.

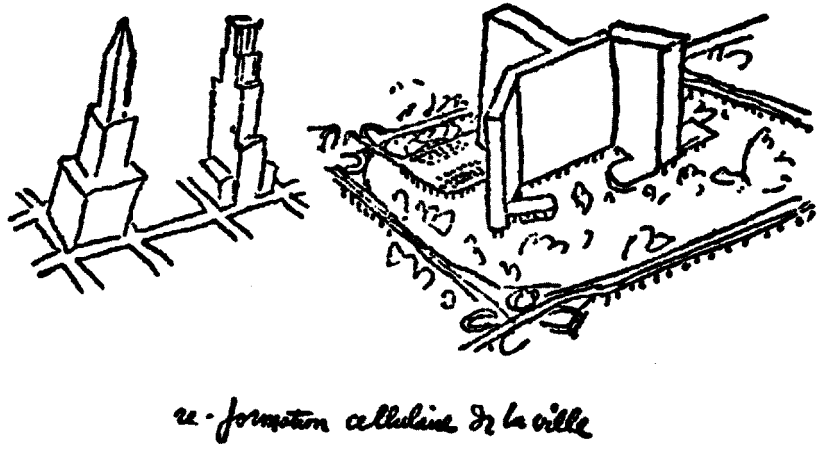

Figure 26. Le Corbusier, sketch from *When the Cathedrals Were White* (1937), 188. Copyright 2003 Artist Rights Society (ARS), New York / ADAGP, Paris / FLC.

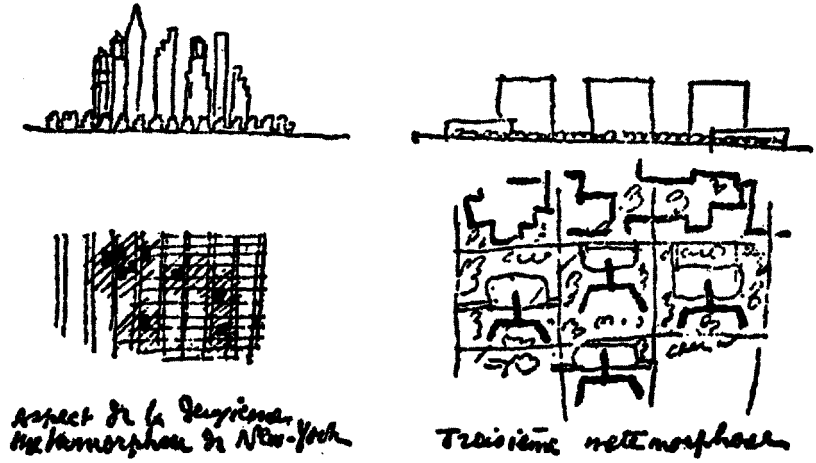

Figure 27. Le Corbusier, drawing from *When the Cathedrals Were White*, 191. Copyright 2003 Artist Rights Society (ARS), New York / ADAGP, Paris / FLC.

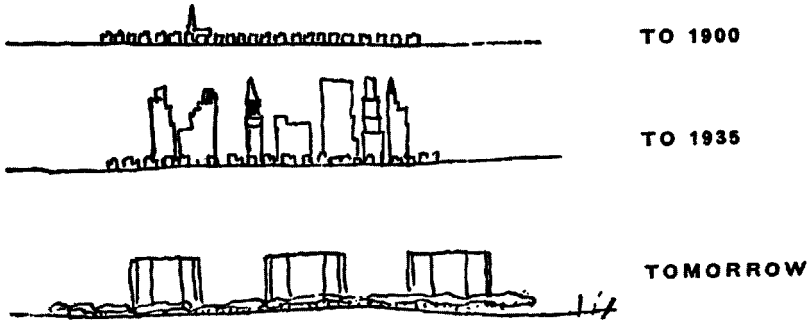

Figure 28. Le Corbusier, sketch from *When the Cathedrals Were White,* 185. Copyright 2003 Artist Rights Society (ARS), New York / ADAGP, Paris / FLC.

"Architecture," Le Corbusier argued, "rejoins its destiny, which is the setting in order of the present time." The implementation of his city form would constitute an infrastructure and architecture capable of maintaining urban densities while providing the "essential joys" of light, space, and greenery. As in his proposal for Paris, Le Corbusier suggested that large skyscrapers and city blocks be used as a tool of city planning in New York to provide higher densities while freeing the ground of the smaller, four- to five-story structures. One can begin to imagine how Manhattan's musical potential might have been activated in this implementation of the *ville radieuse.* Le Corbusier might have considered the towers of this city plan to be "cathedrals of sound." Back in France, he reflected further on his encounters with jazz in New York while attentively listening to the sounds within the environment around him, seeking to hear within it the potential for constructing a world of "mechanically precise rhythmic armature[s]" in which one heard the music of machines.[14]

Richard Sennett summarizes the link between the substantive cost in existing physical structure necessary for Le Corbusier's city plans, and his emphasis on a progressive sense of time:

> Le Corbusier hoped to erect a new awareness of time, the sense of now. You have to fight off the deadweight of the past, as a young person must overthrow the presence of an overbearing parent. This destructiveness can be redeemed by the quality, indeed, the perfection of form one can create once one is free. The literary critic and theorist Harold Bloom describes this sense of time as a result of

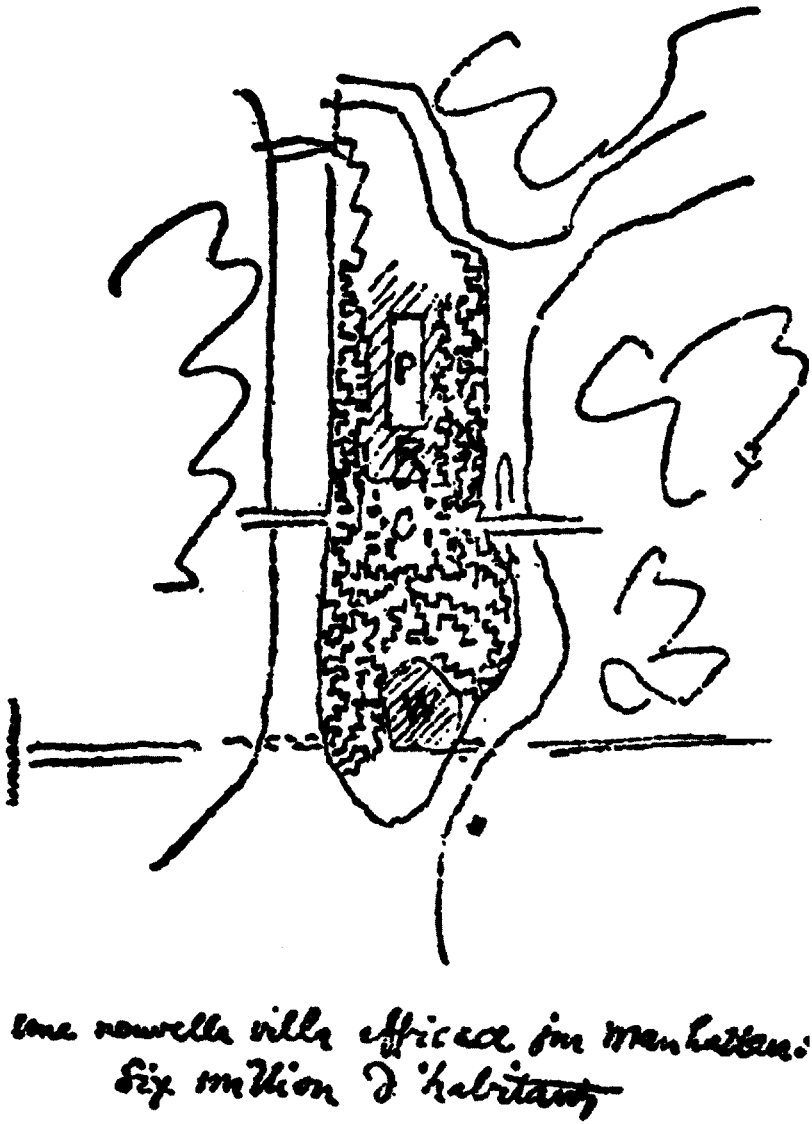

Figure 29. Le Corbusier, sketch from *When the Cathedrals Were White,* 197. Copyright 2003 Artist Rights Society (ARS), New York / ADAGP, Paris / FLC.

"anxiety of influence." In urbanism, the result of this anxiety about past and present, as represented by Le Corbusier's early work, is to destroy the differences which have accumulated in space for the sake of affirming this difference in time.[15]

For Le Corbusier, the full inventive potential of the machine-age present—of "now"—could only emerge through the dramatic erasure of the material past and the remaking of all things in accordance with new technologies and means of the time. The inadvertent, yet inevitable, result of such an effort is to deny the reality of duration—the temporal signals borne in form and matter.[16] The temporal signals from the past are not the only ones lost in this erasure. The affirmation of the difference in time through new spatial forms that supersede prior urban forms also collapses, through elimination or calibration, the various temporal impulses of the twentieth century into a single trajectory. For Armstrong and the other black performers and workers who populate *When the Cathedrals Were White,* this collapse of time is a loss of agency and an assignment to the subordinate class implied but seldom acknowledged by Le Corbusier in his urban plans.[17] Contrary to his proclamation "Architecture or revolution," the liberty to make spatial form did not guarantee social liberty, because for many it maintained the inscription of predefined and often limiting roles and relations.

Armstrong's Time

Although Armstrong is the only black musician named by Le Corbusier, we gain very little information regarding the character and nuances of Armstrong's music as distinct from that of other musicians or dancers from Le Corbusier's description. In describing Armstrong, he emphasizes Armstrong's qualities as an entertainer, rather than the quality of his trumpet playing. "His voice is as deep as an abyss, it is a black cave. He bursts out laughing, he roars and puts the trumpet to his mouth. With it he is in turn demoniac, playful, and massive, from one second to another, in accordance with an astounding fantasy. The man is extravagantly skillful; he is a king."[18] Le Corbusier was less concerned with Armstrong's music than with crowning Armstrong as the emblem or icon of Le Corbusier's characterization of jazz—as the music of a nascent machine age. "The modern world vibrates with new sounds. . . . The companion of so many of us: the cadence, the slight or titanic rhythm of machines at work. . . . Armstrong has recognized these ever-present voices and his genius has put them into music."[19]

Significantly, Armstrong's activity during a solo does not conform to Le Corbusier's characterization of black music or his conception of "now." Absent from Le Corbusier's consideration, the solo shifts focus from regular rhythmic articulation to invention and innovation. Marie Cardinal, in *The Words to Say It,* provides a compelling account of the development of the solo in her description of Armstrong's music:

> My first anxiety attack occurred during a Louis Armstrong concert. I was nineteen or twenty. Armstrong was going to improvise with his trumpet, to build a whole composition in which each note would be important and would contain within itself the essence of the whole. I was not disappointed: the atmosphere warmed up very fast. The scaffolding and flying buttresses of the jazz instruments supported Armstrong's trumpet, creating spaces which were adequate enough for it to climb higher, establish itself, and take off again. The sounds of the trumpet sometimes piled together, fusing a new musical base, a sort of matrix which gave birth to one precise, unique note, tracing a sound whose path was almost painful, so absolutely necessary had its equilibrium and duration become; it tore at the nerves of those who followed it.
>
> My heart began to accelerate, becoming more important than the music, shaking the bars of my rib cage, compressing my lungs so the air could no longer enter them. Gripped by panic at the idea of dying there in the middle of spasms, stomping feet, and the crowd howling, I ran into the street like someone possessed.[20]

Through architectural, structural, and spatial references, Cardinal identifies a support role for the rhythmic, as well as harmonic, efforts of the band that are the area of concentration in Le Corbusier's description. Working with the support that they provide, Armstrong creates an improvised melodic line that has compositional integrity. No note is wasted in this improvised line, which works with the space and support to build, find support, and then build again until it reaches a crescendo.

Cardinal's description, while similar to Le Corbusier's in its emphasis on precision and mathematics, identifies harmonic and melodic properties that are absent from Le Corbusier's rhythmic descriptions. However, within her description, which only acknowledges rhythm in a cursory fashion with the mention of stomping feet, she cannot

explain all of the music's relationships and effects. Cardinal expects and emphasizes compositional musical relationships in the solo, but as the music reaches its crescendo, it provides qualities that those anticipated compositional relationships cannot account for. Cardinal panics and flees as the music posseses an immediacy, which she experiences bodily, when in building toward a crescendo, sounds "piled together" and yielded "a sound whose path was almost painful, so absolutely necessary had its equilibrium and duration become."

The effect is a rhythmic one, resulting from the solo, that neither Le Corbusier nor Cardinal identify in their descriptions. Armstrong, as a fellow cornetist who was his contemporary noted, had developed the "ability to compose a close-knit, individual 32 measures with all phrases compatible with each other—all the while based on the fundamental tune and chord structure being played."[21] Additionally, as a biographer has described, by using an improvisational technique that permitted articulation of an extended playing range, variable rhythmic quality, and long irregularly shaped phrases, Armstrong was capable of profound rhythmic manipulation through his "technically precise expression of beautiful melody," and he "became the subtlest manipulator of time that jazz has ever had."[22]

Cardinal establishes a support role between the rest of the band and Armstrong, and she assumes that Armstrong is working solely to build melodically on that support. However, Armstrong's solo actually operates rhythmically, as well as melodically, and in its rhythmic operations it both builds upon and counters its support. Both Le Corbusier and Cardinal emphasize only a part of what is taking place in the music. The invention that Cardinal identifies occurs in part through Armstrong's introduction of rhythmic variations in the rhythms that Le Corbusier emphasized.

Passages by Ralph Ellison emphasize this work by the soloist, and provide some insight into Armstrong's understanding of time. In *Invisible Man* the main character reflects: "Invisibility, let me explain, gives one a slightly different sense of time, you're never quite on the beat. Sometimes you're ahead and sometimes behind. Instead of the swift and imperceptible flowing of time, you are aware of its nodes, those points where time stands still or from which it leaps ahead. And you slip into the breaks and look around. That's what you hear vaguely in Louis' music."[23] In *Shadow and Act* Ellison introduces

the "cruel contradiction" implicit in the art form—"an individual assertion within and against the group" in which the performer "loses his identity even as he finds it."[24] Together these descriptions reveal the complexity of Armstrong's rhythmic work. At the same time they challenge the configuration of blackness in which an encounter with black people ignites a critical moment of discovery or change. As Toni Morrison has noted, such a concept of blackness operates within Cardinal's description, and as Mabel Wilson points out, it also informs Le Corbusier's description of Armstrong and other black musicians and its relation to the *ville radieuse*.[25] Through rhythmic manipulations and alterations of the sense of time's flow, Armstrong revealed that making music could provide a moment—particularly within the solo—that was filled with empowering and actualizing potential even for members of society who were presumed to be known and transparent through their placement in limiting social constructions.[26]

Variable Temporal Flows

Henri Focillon and George Kubler have proposed that the moment of actuality, the present instant, is immanent and vital, yet forever fleeting and elusive—having always just occurred.[27] It is the present instant in which various signals from disparate sources arrive. Not fixed, but becoming, this instant, described as the void between events, passes imperceptibly, yet it is the only manifestation of time that we can know directly. However, if actuality is impossible to perceive, the experience of its having passed can be intensified by necessitating, within a dense cluster of present instances, our response to a turbulent flow of diverse temporal signals.

Jazz, in essence, presents such intensification by compressing several articulations and manifestations of time into the duration of playing so as to effectively create an expanded moment in which we are acutely and persistently aware that we have just missed actuality's passing. Through this rapid accumulation of moments, we experience a duration in which the moment of actualization is almost a palpable presence.

In the music of Armstrong, there is the rhythmic measure that Le Corbusier noted—4/4 time with accents on the downbeats to cre-

ate the forward motion that is characteristic of swing. Armstrong began to manipulate this pulse, as well as the twelve- or sixteen-bar measures indicative of the song structure of early jazz and popular music, by playing melodic solos that introduced alternative and counter-rhythms, or carefully placed notes just ahead of or behind the beat. Through both techniques Armstrong's melodic lines operated rhythmically to accelerate, slow, or reverse the flow of time, understood through the sense of the beat.

In the Hot Five and Hot Seven recordings made in the mid-1920s, Armstrong, a prototypical jazz improviser, ceased to improvise embellishments of the melody and instead introduced new melodies by improvising on the chord changes. For Armstrong, melody was a variable and flexible counter-rhythm capable of accelerating or decelerating the feel of the grounding beat. The regularity and exactitude of the rhythm section articulated a temporal datum against which Armstrong sonorously developed alternate potentials. In "Potato Head Blues," Armstrong consciously turned the beat around. By placing his notes against the natural strong-weak, strong-weak progression of beats, he created counter-meters that momentarily caused the existing meter to leap out of place. In such solos as the one documented in the 1926 recording "Big Butter and Egg Man," he continually manipulated the sense of the pulse by shifting the beat through accent, weight, duration, and the precise placement of notes fractionally ahead of or behind the beat.

This rhythmic manipulation—consisting of pulses of varying rates and measures—is the most overt of many measures, temporal modalities, and durations operating within and informing the duration of playing. The time of inspiration, the time of structuring and realizing the music, the time of playing it, and the time of communicating with the audience are all temporal modalities that are typically subordinate to clock time in written music practices, as they primarily occupy separate and distinct positions.[28] However, in improvised music these modalities operate simultaneously as interrelated flows.

Accompanying these simultaneous modalities are durations ranging from the introduction, development, and passage of ideas by musicians to the various histories that inform the reception of those ideas: the history of the idiom, the memory of the musicians and the

audience, the relations that the musicians have developed in working with one another, and the instruments and the musicians' knowledge of them as sound-making devices. All of these durations have an impact on the music's development.

As decisions are made across these rates, measures, modalities, and durations, the duration of making the music, which is coincident with the musical artifact, operates as an expanded moment. Within this moment there is an acute awareness of the instant of actuality as an almost palpable presence that is felt through a persistent exposure to a series of risks—the cruel contradiction identified by Ellison. These risks, as detailed by the improviser Evan Parker, include stagnation (nonexistence), insanity (dysfunction), and completion (systemization, standardization, habit).[29]

It is through the assumption of these risks, the acceptance of an unpredictable outcome, and the assertion of the moment as a questioning of circumstance that improvised music overtly engages actuality and provides opportunity to question arbitrary and constraining external conditions, such as imposed social positions and hierarchies. A reflection by G. W. F. Hegel, quoted in *The Society of the Spectacle,* reinforces the link between shifting and unforeseen manifestations of identities and the moment of actuality, as well as the way in which working in and upon time can operate as a social critique:

> time is *necessary* alienation, being the medium in which the subject realizes himself while losing himself, becomes other in order to become truly himself. . . . The opposite obtains in the case of the alienation that holds sway—the alienation suffered by the producers of an *estranged present.* This is a *spatial alienation,* whereby a society radically severs the subject from the activity that it steals from him in the first place from his own time. Social alienation, though in principle surmountable, is nevertheless the alienation that has forbidden and petrified the possibilities and risks of *living* alienation within time.[30]

From his experiences and observations at clubs in Paris, Piet Mondrian commented, "Jazz does not know the oppression of work. The orchestra works as if it were at play."[31] In the United States this proposal was not entirely true, as jazz musicians struggled against external circumstances—social alienation and exclusions based on

race—in their efforts to obtain opportunities to make music. If "play" is understood as the opportunity to subject arbitrary and constraining external conditions, such as invisibility as well as the social hierarchies that created it, to questioning through the dynamic construction of an expanded, adaptive, and flexible field of action, then Armstrong's solo activity demonstrates that, within the duration of playing, play was available. The duration of playing was a moment in which social and spatial alienation could be cast aside to enable "the possibilities and risks of living alienation within time." Armstrong's music, through the articulation of "now" as a moment in which one navigated diverse temporalities, transforms social alienation, invisibility, and exclusion into a temporal alienation that emphasizes becoming.

Contrary to Le Corbusier's assertion, Armstrong's music did not contribute to the compression of all contemporary temporal expressions into a fixed, unified, and encompassing expression of the present. While Le Corbusier anticipated that such compression would be liberative, it would in fact allow social and spatial alienation to hold sway. Instead, Armstrong articulated, in the moment defined by the duration of making music, an actualizing intensity of "now" by amplifying, rather than denying, diverse manifestations of time. He affirmed the need for the present to be made up of diverse, continuing, and proliferating, as well as expiring, rates, measures, modalities, and durations of time. The challenge issued by Armstrong's music was whether or not architecture could also develop this actualizing potential of time. Could a spatial form modulate time and participate in the becoming that emerges in the moment of actuality, rather than provide a fixed and idealized indication of a past or present age?

Le Corbusier in Armstrong's Time

To step onto the ramp of the Carpenter Center at Harvard University is to initiate an architectural promenade. The building, completed in 1963, stands as a late summary of Le Corbusier's ideas, given the strong affinity between the center's program and the social ideas he had advocated throughout his life. "The Visual Arts Center is placed at the disposal of all students of the University, independently of their

courses of study, with the sole objective [of bringing] to the present generation the taste and the desire to combine the work of the hands with that of the mind, which is Le Corbusier's most important social vow."[32] While a reexamination of his architectural vocabulary is evident throughout and explains much regarding the resulting form, the Carpenter Center is more than a late demonstration of principles. It introduces significant shifts and changes in the promenade to facilitate "a program of complete creation based on new data: to establish a place where the students of the University could, while crossing this main path, look-in from the outside, eventually enter and register to work."[33]

The extent to which Le Corbusier attempted to manifest the potential for this moment in which a student might wander in and register seems to be linked to his 1959 visit to Harvard to study the site for the Carpenter Center. He observed, as he had in 1935, similarities between the American campuses and his Radiant City, as well as manifestations of exactitude at the site similar to those he had noted in the second hand's sweep and the rhythms of Armstrong's band. While discussing the center's program with members of the faculty, his "attention was riveted to the sight of the Yard below him, one minute empty and still, the next crossed by lines of people approaching one another under the trees along the paths. The others present realized they had lost his attention and fell silent. When he turned back to them he remarked on the beauty of what he had just seen."[34] The resonance of the program with his own ideas, his admiration of the fixed rectangular buildings defining open spaces that are crossed by paths of circulation, and his fixation on an alternating rhythm of dynamism and stillness would establish the variables within the design.

Architectural Acoustics or *Architecture Acoustique*

Le Corbusier's early design condensed these concerns into a route, potentially spiraling, for touring the building, which was coupled with a literal, intermittent emission of sound. The initial conception of the building was thus as a sound object, not unlike the Philips Pavilion, where a fixed route was precisely coordinated and modulated through sound. Given this self-contained modulation, the building might have

existed as a precisely controlled and scripted object in isolation from the campus. However, as the scheme developed, the spiral was converted to a winding ramp, and sound emissions were replaced by the routine noises of the campus. Thus, literal acoustic concerns dissipated and were replaced by concerns regarding *architecture acoustique:* "the action of a work on its surroundings."[35] The particular action that resulted from appropriating and developing alternative manifestations of the temporal and spatial ordering systems of the campus as resource material was not only more responsive to the moment between classes, but also more aligned with the temporal ideas articulated by Armstrong. The Carpenter Center challenges the surrounding order by restructuring the periodic duration of activity between classes to reveal emancipatory moments resonant with Armstrong's rhythmic dissent.

Through its insistence on participating in both the rectangular buildings defining open spaces and the paths of circulation, the center forms a distinct counterpoint to the directed routes of the campus (Figure 30). The design, operating equally as an object defining a field and a circulation element within that defined field, creates a series of ambiguous, fluctuating, and tensioned qualities that question the building's status as an object and may be read by moving along the ramp and through the building. Observed from the exterior, the building presents an almost opaque façade: a combination of taut glass surfaces, the stair tower, and the *brise-soleil.* These elements emphasize the mass of the structure as a collection of clearly expressed programmatic and constituent parts—studios, museum, stair, and ramp. Solidity and weight yield to a reflectively transparent and lightweight interior space as you follow the ramp's measured and continuous movement: the apparent opacity of the collaged forms viewed from the exterior melts into an ambiguous and continuous interior surrounding the ramp (Figures 31 and 32). At the crest of the ramp, you visually enter the building, which is also experienced as an amplification of the paths. Walls of glass make this entry conditional by establishing a tenuous threshold that allows your eye to proceed into the interior spaces, even as it frames views of the surrounding buildings, yet impedes your movement toward them. Absent here is the assumed anonymity of the open paths. The undistinguished path

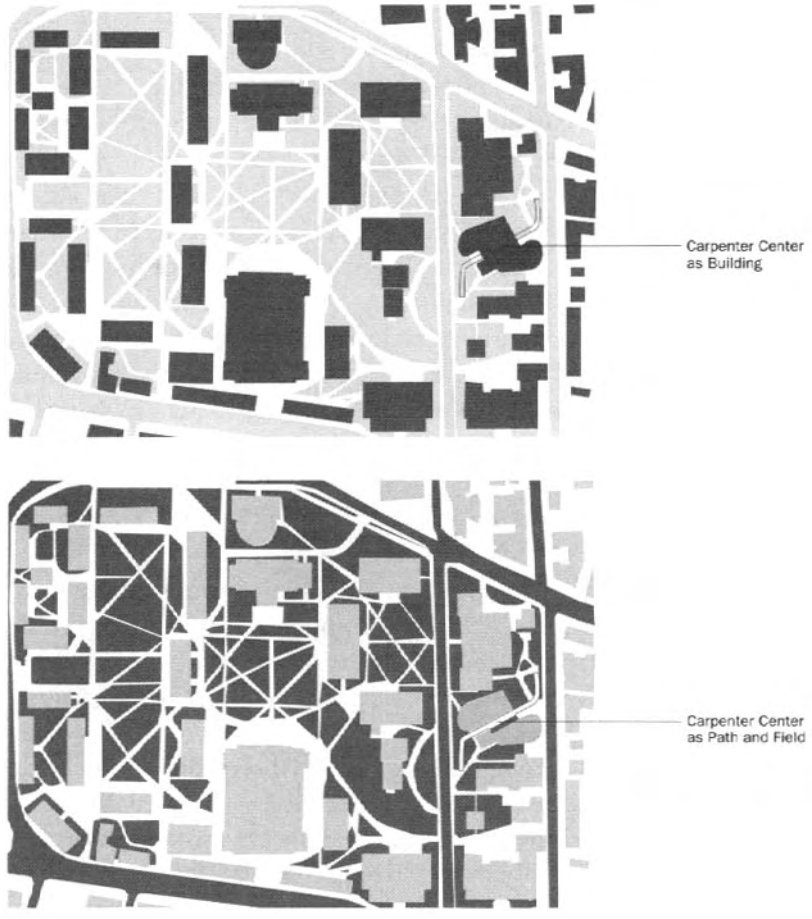

Figure 30. Fluctuating readings of the Carpenter Center in relation to the surrounding campus.

has been transformed into an interstitial center. The wrapping of interior activities around it obscures figure and ground distinctions, and increases your awareness of others along this or crossing paths.

Risk on the Architectural Promenade

The rise and curve of the ramp accentuate the presence of the body through the gravity and tactility of the body's movement along it.

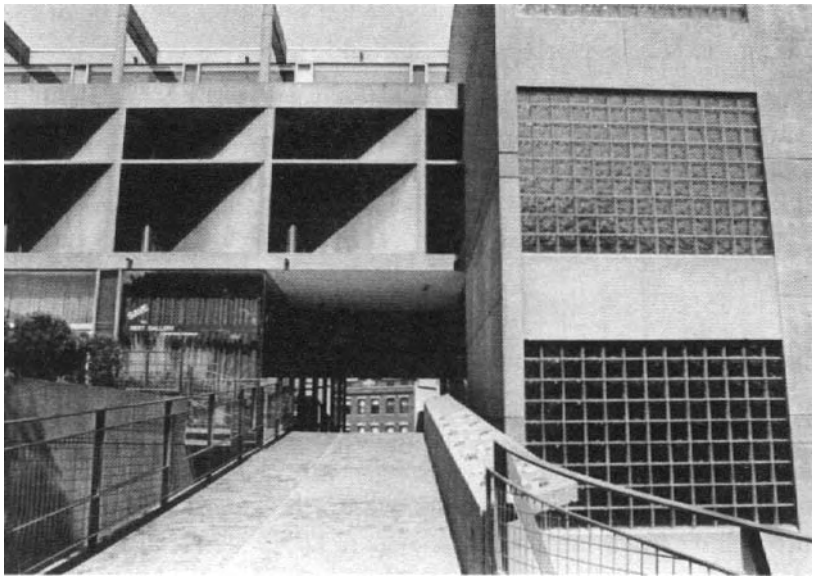

Figure 31. Approaching the Carpenter Center on the ramp. Photograph by Peter Stone; reproduced with permission.

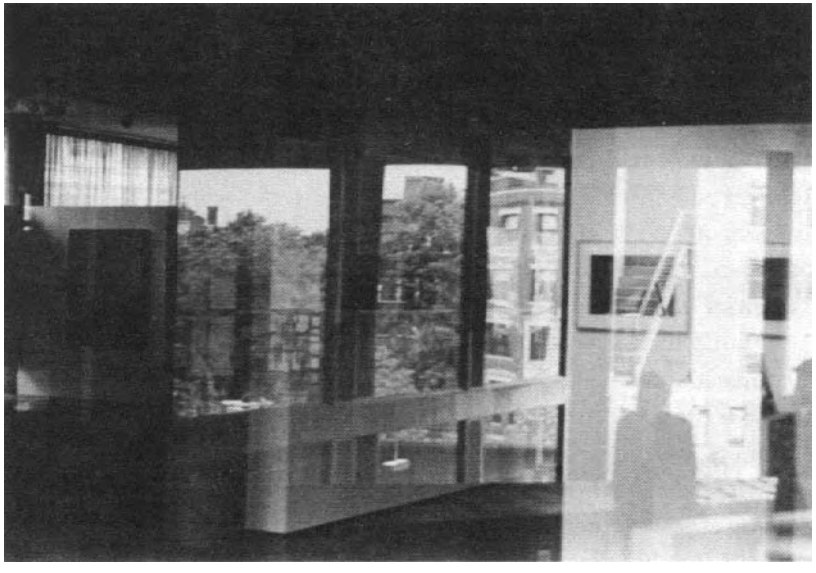

Figure 32. On the crest of the Carpenter Center ramp. Photograph by Peter Stone; reproduced with permission.

The resulting juxtaposition with the flat and straight paths of the campus recalls Le Corbusier's assertion:

> Man walks in a straight line because he has a goal and knows where he is going; he has made up his mind to reach some particular place and he goes straight to it.
>
> The pack-donkey meanders along, meditates a little in his scatter-brained and distracted fashion, he zigzags in order to avoid the larger stones, or to ease the climb, or to gain a little shade; he takes the line of least resistance.[36]

In the context of the campus, Le Corbusier implicitly advocates the meander, which he determinedly argued against throughout his career, by setting in place a form and a motion that he had criticized as a mark of the pre-machine-age city. More important, he formed a moment of distraction, a delay, within the rapid flow of students proceeding from one class to the next. The building causes you to slow your pace, observe the surroundings, and perhaps become less serious and have an "active, ardent thought, which contains the joys of a profusely flowered field," something that Le Corbusier found to be absent among Americans.[37] The "ardent thought" that emerges through the spatial order and temporal experience along this ramp is not a daydream, but a concentration upon the surroundings that yields alternative potentials within the defined duration. In the absence of expected perceptual relationships or of established narrative reinforcement, we must rely on improvisational techniques to guide us. During these moments of intense concentration on the present, as we exercise unconventional action, we critically contemplate the potential of the future by questioning present circumstance.

Dramatically, in this assemblage of his architectural devices, Le Corbusier's promenade does not conclude in an outlook to the future, so common in past promenades, but confronts the present as a fragmentary experience with undeveloped potential. The Carpenter Center is part of the sequence, but it also challenges the sequence by placing the event within the middle of the promenade rather than at the end. At the crest of the ramp, slightly displaced from the center of the building, is a point of transition, rather than an architectural promise, where one either enters the building or proceeds along a slow

descent to the ground. The ramp is not focused on points of departure and destination, but, like Armstrong's music, is engaged in the potential of the duration itself. Le Corbusier's conception of "now" is set aside here to provide the pedestrian, caught off guard and defenseless, with a heightened awareness of moving between episodes. The movement along the ramp is one of felt intensity and relates to what Le Corbusier considered to be an eternal joy—a life lived intensely through each day. While visiting the Harvard campus, he had proclaimed to the students and faculty, "One must have courage!"[38] Courage is what is needed because the design is a spatial and temporal eddy, at play within and against the surrounding order, in which the traveler might become lost. As a tensioned experience of the present created by challenging both spatial and temporal perceptions, it presents destinations that are ambiguous and open. Designed as an in-between state, a flux of building and path, it simultaneously begins, interrupts, and ends. Le Corbusier unraveled the structure of moving between classes and released the potential for events within that moment. In the presence of an ambiguous formulation of the relationships so clearly expressed elsewhere on the campus, the passers-by may examine and reevaluate, rather than passively accept, the surrounding order as well as their position within it.

Designing Moments Laden with Diverse Temporalities

The destruction resulting from World War II, the frustration of not receiving a larger U.S. commission, a self-evaluation of his successes and failures, or further reflection on Armstrong's music: perhaps all of these factors contributed to Le Corbusier's identification of actuality, rather than the age, as a potential focus for architecture. As the Carpenter Center demonstrates, architecture can contribute to an expansive manifestation of the present moment, exposing us to the dynamics of actuality.

The moment in the Carpenter Center is accomplished through the overlap of at least three embedded temporalities—the duration of the interval between classes, the changing pace (rate of movement) of a pedestrian from a flat surface onto a curving ramp, and the rhythms of the programmatic activities in the spaces surrounding the ramp.

It is perhaps augmented by the time bound in the form, its moving sections, as well.[39] These temporalities are but a few of a diverse field of temporalities—fast and slow durations—in which architecture is immersed. Through its manipulation and organization of forms, materials, and processes, as well as programs and events, architecture implicates and is implicated in a litany of rates, intervals, rhythms, periods, and cycles. The different terms are significant. They offer distinctions that include physical or manual articulation, material decay, and movement through space to reveal different manners in which time may be embedded and manifested.

In his reflections on art history, Kubler, in particular, has provided further indication of the diverse shapes of time, the various kinds and qualities of duration, which are hidden in the multiples and divisions of the solar or calendar year that constitutes our primary vocabulary of time. Kubler emphasizes *absolute age* to note differences in the rates, periods, and spans of biological organisms, materials, and objects, as well as similar differences within any one of these three categories—for instance, a fruit fly's lifespan compared to that of man. He also identifies *systematic ages*, the historical or evolutionary development that is implicated in an idea or an object as well as in each of its component parts.[40] Having distinguished between the two and outlined some of their internal variation, he notes, "Because duration can be measured by the two standards of absolute age and systematic age, historic time seems to be composed of many envelopes, in addition to being mere flow from future to past through the present. These envelopes, which all have different contours in the sense that they are durations defined by their contents, can be grouped easily by large and small families of shapes."[41] The application of Kubler's propositions to the reading of drawings has revealed temporalities that range from instantaneous times of pure presence, in which all things are fully discrete, quantifiable, and manifest, to entropic, transitive, and contingent durations that are nonlinear, nonmonolithic, and nonpositivist manifestations of time.[42]

These classifications are informative, but they are not exhaustive: "the number of ways for things to occupy time is probably no more unlimited than the number of ways in which matter occupies space."[43] The classifications offered provide a beginning for identifying durations that are relevant to architecture. However, many

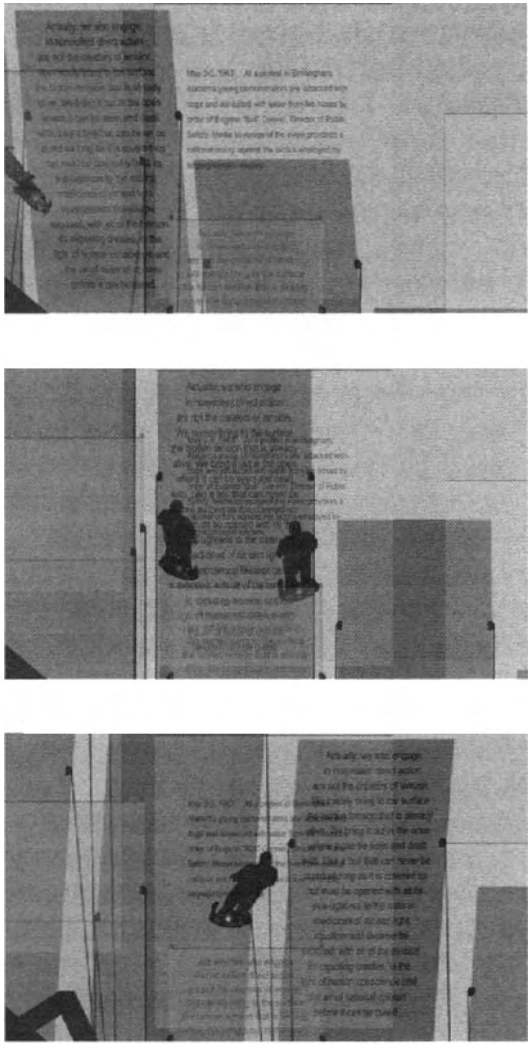

Figure 33. Shifting definition. "Overhead Sequence, 12–2 P.M., May." ***Glass Canopy—Shadowed Field—Projection Surface,*** **a proposal for the Washington, D.C., Martin Luther King Jr. National Memorial Competition, 2000. Rendering Martin Luther King Jr.'s words as an animated field of shadow, projected by the movement of the sun, washing across surfaces below, enables the proposed memorial to convey the universal nature of his ideas. The momentary alignment of quotations with the markers in the plaza surface at varying times and lengths of days, as well as different times of year, shifts focus to a particular quotation within the field, revealing the context within which King developed and practiced his ideas.**

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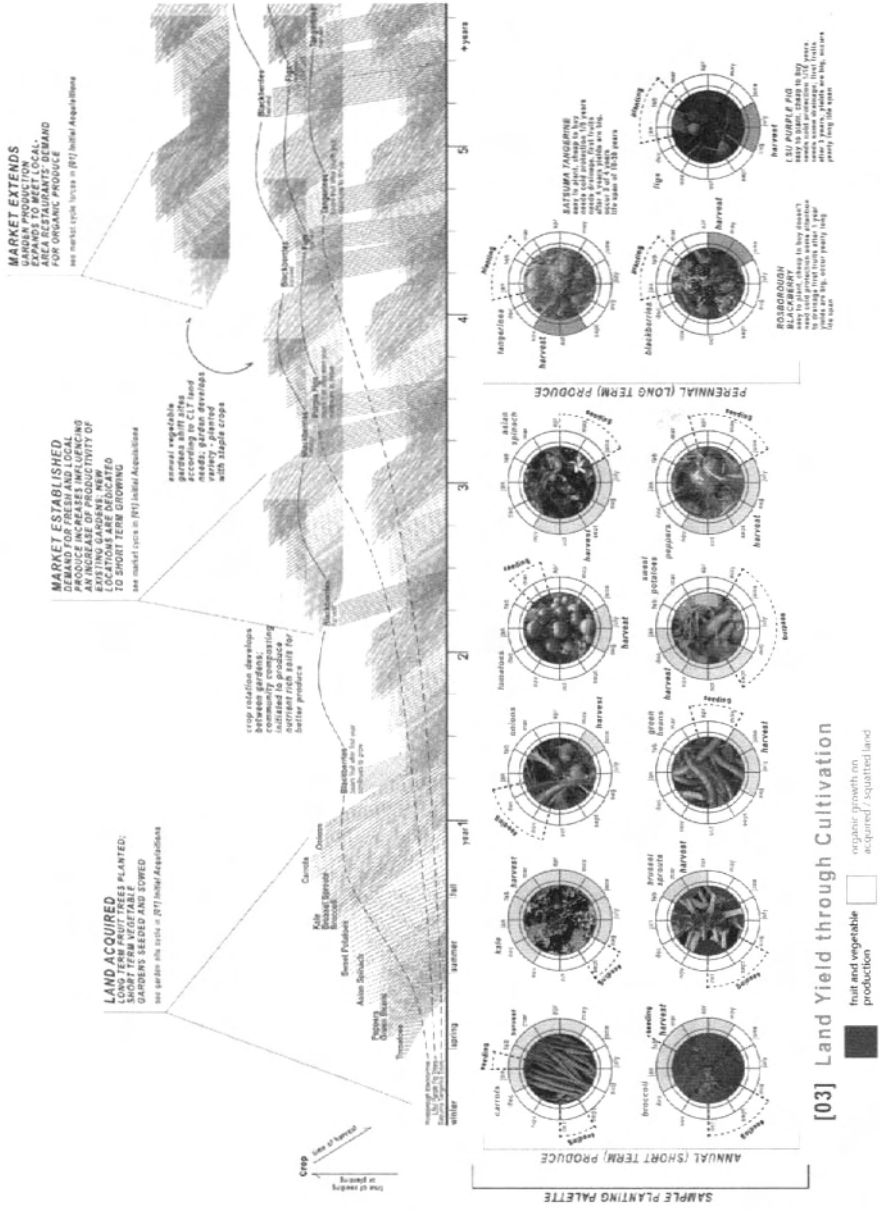

Figure 34. Organizing temporal processes that mature at varying rates. Quyen Luong, Delia Wendel, and Kathy Williams, *Land Yield through Cultivation.* Community Land Trust Plans of Action Studio, Rice University, spring 2003. Decisions about future uses of sites could be tied to planting cycles and durations. Annual growth cycles of vegetables could organize the evaluation of sites, or areas of sites, with vegetable gardens relative to other changes in the surrounding area. If there was a perceived need, those sites could take on new programmatic uses in a year or less.

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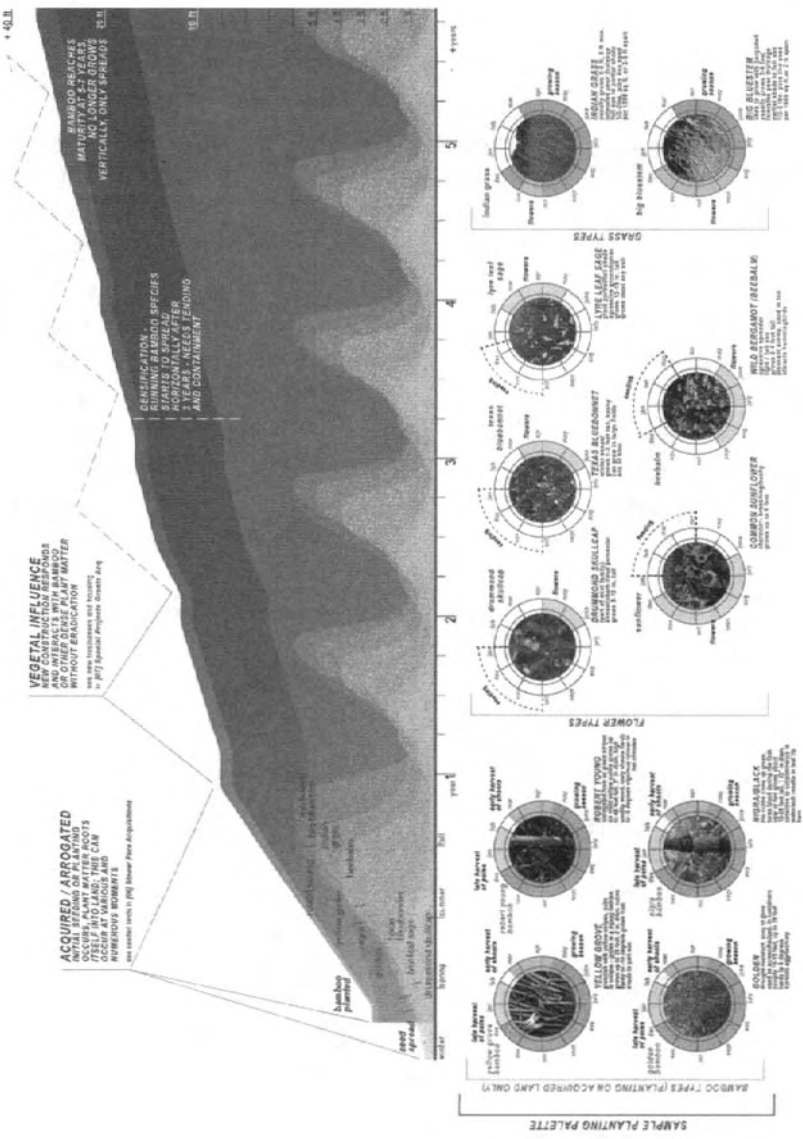


Figure 35. Quyen Luong, Delia Wendel, and Kathy Williams, *Yield through Land Arrogation.* Community Land Trust Plans of Action Studio, Rice University, spring 2003. The planting of perennial plants and trees, such as fruit trees, would establish a longer duration for a site or an area of a site. Evaluation of such areas would occur only after the trees were mature enough to bear fruit. The presence of the trees would have an influence on any future course of action.

temporalities that might not be of interest to historians may have value for architecture.[44] Additionally, while there are overlaps within these classifications, and the simultaneous manifestation of the temporalities that they describe, the emphasis tends to be on a singular or primary temporality at work within a given process or moment, rather than multiple and simultaneous durations. There is seldom exploration, or even acknowledgment, of more than one temporal process or manifestation being operative. Improvised music has been the primary area to explore the opportunities presented within moments consisting of overlays of various and diverse temporalities.

However, architecture, given its diverse activities, as well as the material processes that it organizes, has the opportunity to create fields manifesting simultaneous and diverse temporalities, to provide means for environments and the individuals within them to be responsive to shifting modalities and the moments of engagement that they manifest. Architecture might organize the embedded durations of its materials, programs, and events to introduce opportunities for play across them. Such efforts could make use of transitional zones from a space organized by one duration to another space that is organized by a different duration, shifting definitions of a space as it is implicated in changing temporal measures, and/or setting forward of temporal processes that reach maturity—growth or decay—or that complete their cycle at varying points in the future (Figures 33–35). In foregrounding various temporalities of elements and systems that surround us in these and other manners, the potential is similar to that found in improvised music. By providing awareness of and play across the diverse temporalities that organize our lives, architecture might provide greater opportunities for moments of questioning, innovation, and change.

Chapter 4

Function, Flexibility, and Improvisation
The AACM and Mies van der Rohe

Verb or Noun

Swing was transformed from an action to a form in 1935, when Benny Goodman's band gained an enthusiastic reception in Los Angeles, the last stop on a failing coast-to-coast tour. In 1934 only the West Coast had been awake to hear Goodman's radio performances broadcast live from New York at 1:00 a.m. And only Los Angeles had developed an audience excited by Goodman's "hot" music, which was less favorably received in the rest of the country. Without the show in Los Angeles, Goodman would have returned to New York as a failure rather than as the king of swing, the form of jazz that captured the imagination of America in the mid-1930s and early 1940s. With its transition from the weighty two-beat rhythms that had dominated jazz in the 1920s to the lighter, more buoyant rhythms that would characterize swing, jazz was aligned and calibrated to perform as a rhythmic expression of American optimism regarding progressive and populist reforms as the nation anticipated the end of the Great Depression.

Goodman's story also reveals a negative side to that upbeat realignment. As readily acknowledged by Goodman, his musical style was built on the arrangements of Fletcher Henderson, who had developed the sound with his Harlem-based band in the 1920s. Although

Henderson's charts were vital to Goodman and the swing era, Henderson's band would not enjoy the same commercial success, and Henderson officially became Goodman's staff arranger in 1939. The success of swing thus meant high profits and status for white bands, but a lesser degree of success for comparable black bands, the source of many of the innovations that were later codified as swing.

Focusing on this appropriation, Leroi Jones (Amiri Baraka) in *Blues People* identifies a conceptual transition signaled by the change in the use of the term *swing,* from verb to noun: "Swing, the verb, meant a simple reaction to the music (and as it developed in verb usage, a way of reacting to anything in life). As it was formalized and the term and the music taken further out of context, swing became a noun that meant a commercial popular music in cheap imitation of a kind of Afro-American music."[1] Jones equates this transition with the transformation of a critical musical practice into a commodified popular urban entertainment form, bringing a disturbance of the delicate balance between oral and literary considerations in the music. While the collective improvisations of small New Orleans ensembles depended on composed material and sheet music as resources, the written composition was not a static form meant for precise execution through performance. It was a system and approach that optimized the ability of the composition to initiate and encourage collective play.

The demands of coordinating a large swing band and re-presenting live renditions of tunes popularized by radio and recordings would require an increased reliance on the written. The "arrangement," as a mediator of the composition, facilitated the ability of a large band to simulate improvised play. Goodman noted the essential qualities of a successful swing arrangement in his description of Henderson's arrangements:

> The whole idea is that the ensemble passages . . . have to be written in more or less the same style that a soloist would use if he were improvising. That is, what Fletcher really could do so wonderfully was to take a tune like "Sometimes I'm Happy" and really improvise on it himself, with the exception of certain parts of the various choruses which would be marked solo trumpet or solo tenor or solo clarinet. Even here the background for the rest of the band would be in the same consistent vein, so that the whole thing really hung together and sounded unified. Then, too, the arranger's choice of

> different key changes is very important, and the order in which the solos are placed, so that the arrangement works up to a climax.[2]

With this increased dependence on the written, swing shifted the balance away from improvised music, by imposing confinement on that which was open and free. The arrangement dictated the constraints and the overall shape of the performance by replacing previously variable elements—the tempo, the instrumentation, the collective palette of sounds, and the relations of the pitches and ranges of different instruments to one another—with set modes and structures. Arranged in this fashion, the music was often based more in performance than play, and bands were frequently made up of members who could only sight-read, supplemented with solo specialists who improvised in order to add vitality and freshness.

While the development of radio and recordings, and the use of standardized material, encouraged the commodification of music, improvised music, through its variability, had tended to resist commodification. Through the maintenance of the solo, swing maintained a limited form of that resistance. Additionally, arrangements were often orally developed and communicated in order to permit some slippage between the arranged music and what was played. Although swing was a less improvised, more standardized form, it was still music that depended on playing for its development, music that maintained moments difficult to transcribe and was capable of sounds that exceeded the seeming simplicity of its notation.

In 1965 Muhal Richard Abrams, Phil Cohran, and Steve McCall created the Association for the Advancement of Creative Musicians (AACM), which was dedicated to another kind of optimization between written arrangements and musical play. The core membership of this nonprofit arts organization was an experimental band started by Abrams in 1961 that sought to explore new musical ideas through collective improvisations deploying a vocabulary of written arrangements. When internalized, this vocabulary—which provided directive and connective themes while necessitating renewal, extension, and variation—enabled musicians to build "long multi-sectional compositions defined by elaborate instrumental variety; rapid and abrupt rhythmic, dynamic and textural successions; [and an] emphasis on multiple, disparate, instrumental voices that obscured any clear sense

of tonality."[3] Sounds within silence, space as a medium of suspension, and autonomous improvisation were some of the musical explorations conducted through unscored performances that developed from writing created to optimize collective improvisation.

Similarly, there are different levels and degrees of optimization in architecture. Ludwig Mies van der Rohe suggested these different optimizations, and the spatial as well as economic, technological, and cultural demands that inform them, in a speech at the Illinois Institute of Technology (IIT) that dealt with the importance of flexibility over the expression of function: "When Sullivan spoke of 'form must follow function,' he was reacting to his times. Today, function changes so rapidly that only great flexibility has any value in a building. Flexibility is what is important and characteristic in my buildings, not the expression of function."[4] *Function,* a term that had once given rise to rich debate and had had a panoply of meanings, by the 1930s was reduced to an economically motivated and culturally determined definition. Through an emphasis on flexibility, Mies sought to accommodate economic, technological, and cultural needs, while leaving his architecture free to provide an expression of the age. Clear span volumes would support a variety of planned and unforeseen uses without obstruction and provide a basis for Mies to develop an architecture that was a "repudiation of *a priori* formal meaning as the primary locus of meaning."[5] This focus on flexibility has parallels with the insistence by the proponents of improvised music—outlined in advance but determined through playing—that order is not implicit in its written instruments but emerges through playing. However, while Mies proposed that flexibility was desirable, he was wary of the flexibility offered by improvisation. In reaction to George Danforth's declared admiration of the musicianship and improvisation found in swing, Mies warned, "You must be careful of improvising."[6]

Benny Goodman was the subject of that particular exchange. However, we can explore the implications of Mies's comment by examining his work in relation to the AACM and its efforts to offer a more supportive and equitable alternative to the music industry, in a shared landscape, Chicago's South Side. Through organizational, as well as musical, innovations the AACM would challenge the prevailing perceptions concerning jazz musicians, their role in society, the

realms in which they operated, and the implications of their music for the city.

Navigational Tactics

The implications of the AACM's project complement those found in novels by Ralph Ellison and Toni Morrison. Recognizing the city's potential to foster renewal and invention even as forces within it strive to impose new forms of categorization, Ralph Ellison in *Invisible Man* was the first to propose the adoption of a jazz-informed improvisational relation to the city to continually negotiate this fluid and tensioned dynamic. Historian and critic Gerald Early characterizes Ellison's novel as a contemplation of "the fluidity of human life bumping up against human systems of categorization; ideologies as masks that humans adopt to manipulate or to delude; the individual finding freedom, not through politics, but through a kind of aesthetic and psychological 're-wiring.'"[7] Although it is not directly political, this "re-wiring" has political implications. For Ellison, it makes audible political and social undertones, or noises, present in the risk-laden dynamics of improvised music. An element of risk—identified by Ellison as finding and losing the self through the solo's assertion of the individual within and against the group—accompanies, indeed facilitates, improvisation and the emergence of developments that are unforeseeable by any single participant. Because the music created is responsive to both the individual and the group, yet controlled by neither, this improvisational risk is not limited to the soloist but is encountered by every participant. Ellison's novel concludes with an appeal: "Who knows but that, on the lower frequencies, I speak for you?"[8] Pitched to resonate physically as well as transmit sonorously, this question by Ellison's Invisible Man strives to "re-wire" the reader's aesthetic understanding from fixed to vibrational conceptions, to make possible a risk-laden navigational engagement with the city and society.

In *Jazz,* Toni Morrison examines the role of jazz in relation to its makers in order to develop an alternative take on modernity, mobility, and the construction of the urban subject. Her book suggests that Ellison's navigational technique was operative as early as the

"jazz age," while introducing a corollary proposition. Morrison's narrator, omniscient yet flawed, embodies this tensioned dynamic as a voice unable to accurately account for all the activities in the novel and a voice that is often contradicted by the narrative solos of the novel's main characters. The structure of the book reiterates Morrison's principal point—that no singular narrative is capable of fully rendering a subject's complexity and that in the engagement of that complexity, the participant-observer is also changed.

Morrison's and Ellison's works provide broad guides for an improvisation-based understanding of the city by respectively emphasizing the limits of the city's systems to fully account for the operations and activities within it and the potential relations that an individual can establish to those systems. However, while both describe the basis for finding and negotiating gaps in the city, they do not indicate how improvisatory practices might structure processes of the city's design. In examining the AACM's work in relation to that of Mies, the attempt is to move from such models of improvisational processes, describing how we move through and interact with the city, to a concept of how improvisatory practices might structure processes of urban transformation and change.

Jazz and the City

Chicago's South Side, where such clubs and dance halls as the Lincoln Gardens, the Dreamland, and the Pekin and Sunset Cafés were once found, is vital to the general development and history of jazz. During the 1920s musicians from New Orleans, such as Joe "King" Oliver and Louis Armstrong, migrated north to play in these clubs and further develop the collectively improvised music that is today known as the New Orleans and Chicago style. In a typical "arrangement" of this music, each band member would improvise a line in harmonic relation to the melody of a blues, rag, march, or stomp. However, after an extended visit to New York, Armstrong returned to Chicago in 1926 and redefined improvised music by creating significant distinctions between solo and ensemble play. His inventive rhythmic and melodic solo flights, as heard in the Hot Five and Hot Seven recordings, signaled the demise of both the collective improvisation of the New Orleans/Chicago style and Chicago's reign as the dominant

site for new developments in jazz. The principal development of the styles of jazz that would later dominate—swing and bebop—would occur in New York, though Chicago continued through the 1950s to be the home of many jazz clubs.

In *Jazz City* Leroy Ostransky proposes that some of the underlying urban structures of New Orleans, Chicago, Kansas City, and New York provided support for the development of jazz. Each of these transport cities had a density of resident and transient populations, with money to spend and a demand for entertainment, capable of sustaining musical activity that allowed for the exchange of diverse ideas and enabled jazz to flourish. However, on Chicago's South Side, this configuration had changed by the 1960s, when the AACM sought to develop a new music and provide alternative venues to challenge the dominant and limiting structures of the music industry, in the midst of declining opportunities for jazz musicians to play in Chicago clubs.

With an explicit goal of demonstrating "how the disadvantaged and the disenfranchised can come together and determine their own strategies for political and economic freedom, thereby determining their own destinies," the AACM established an organizational structure that treated each member as an individual who was free to participate in multiple collective groupings.[9] AACM members could play in any band; however, a band led by an AACM member had to maintain 60 percent AACM representation as a show of mutual support. The common musical language that the musicians developed and shared through their writing facilitated this demand by enabling members to participate in a multitude of formulations, both to play before an audience and to develop musical ideas. The AACM's signature group, the Art Ensemble of Chicago, best demonstrates this capability, having survived as a group for more than thirty years, perhaps because of such fluid practices (Figure 36). Its members remained committed to the group, yet pursued outside projects to develop other musical ideas that, in turn, contributed to the ensemble's musical vitality. This structuring also allowed groups to form and disperse in response to the parameters of their environment and the need to accommodate a greater variety of environments and opportunities for playing. The structure of this self-reliant community of musicians transformed the political undertones in Ellison's and

Figure 36. The Art Ensemble of Chicago, live at Kanihoken Hall, Gotanda, Tokyo, 1984. Copyright Mitsuhiro Sugawara; reproduced with permission.

Morrison's propositions into direct political action. The members of the AACM actually extended the dynamics found in playing to the processes that supported their music making and their interaction with the surrounding environment.

The AACM responded not only to the collapse of performance venues, but also to the greater cultural, economic, and social challenges confronting the South Side, a historically black neighborhood, in the 1960s, as well as to continuing civil rights efforts.[10] The AACM developed and promoted South Side community centers, churches, art galleries, coffeehouses, and private homes, as well as museums and university campuses, as a new network of spaces for playing improvised music. In these spaces, free from the definitions that limited improvised music to an entertainment spectacle, the AACM positioned improvised music's fluid, transient, and creative play as integral to

daily life and available to anyone, anywhere, through a multitude of means. The AACM actively encouraged others to adopt its creative practices, by repairing instruments and giving them to inner-city youths, and by operating a tuition-free music school to educate others in the music that the AACM developed. Through such outreach, the AACM challenged the notion that jazz musicians were an unreliable and disorganized fringe group, and revealed how the musicians could contribute to the everyday character of the urban environment.

In pursuing its goals, the AACM was also influenced by black nationalist efforts to develop expressions of black heritage and culture, including its African roots, and to provide positive affirmations of blackness. Presented by the Art Ensemble of Chicago as "Great Black Music," AACM stage shows made use of stage actions and spoken words that often contained explicit black nationalist sentiment and other political content. However, these actions were also a part of the music and were used to trigger transitions in the direction of the musical activity.[11]

AACM stage shows involved a collage of performative elements drawn from the many traditions of black music culture, including theatrical stage actions, spoken word, and music. All of these elements, presented as an interwoven series of spontaneous events, placed an emphasis on the inherent theatricality of making music. At the same time they enacted a critique of the entertainment content that had historically permitted jazz to be considered a marginal cultural practice. By dressing in different costumes, using face paint, and surrounding themselves with multiple instruments, the members visually reinforced this collage of activity. Nor were their instruments limited to those expected of jazz. A reed player, for example, might have an array of saxophones and other wind instruments, as well as an assortment of little instruments, such as bells, whistles, gongs, toys, and other unconventional or homemade instruments that could be used as percussive augmentation (Figures 37 and 38). The musicians pursued a thorough knowledge of, and facility with, every one of the diverse instruments that they played.[12]

The AACM's mix of experimental sound, politics, and the provisional with potentials of its South Side surroundings are summarized in a story by an AACM member, Henry Threadgill, regarding the making of a "hubcapphone":

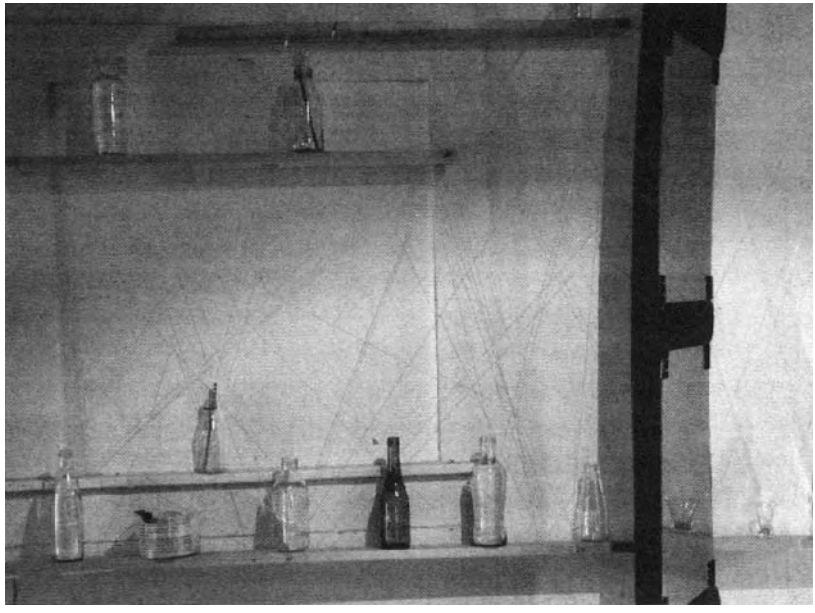
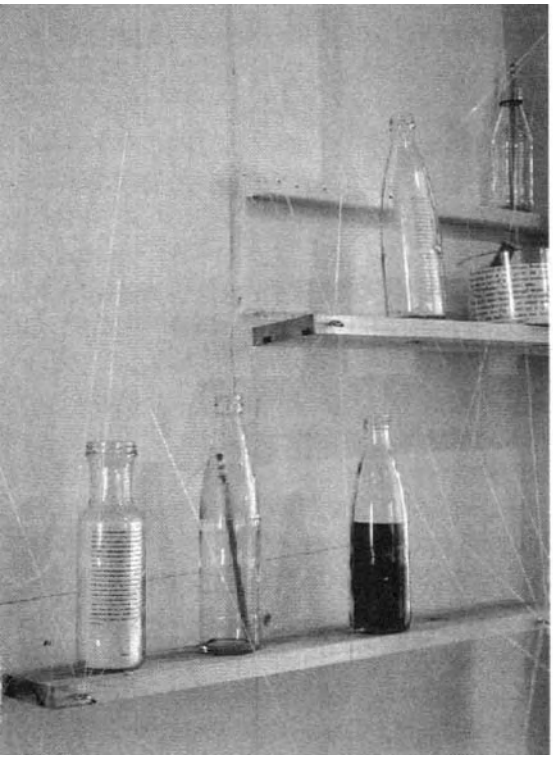


Figure 37. "Little Instrument" storage and acoustic reflector or baffle. . . . *and other latent uses,* an installation in Project Row Houses' Music and Spoken Word House, Houston, Texas, 2001. AACM member Wadada Leo Smith has described how children in Mississippi stretched wire between nails in the walls of their homes to create makeshift guitars. In its description of three zones for playing and listening to music, the installation developed the architectural potential suggested in their and the AACM's play of materials and forms.

> There was a guy on Maxwell Street, that you could see from the expressway, that had all of these hubcaps in his junkyard: the sun was hitting them, and they were *shining*, it was just lighting up the whole expressway—it was blinding. So I came off the expressway to see what it was. And when I started looking at them, they were so incredible—looking at the coat of arms on these hubcaps, you know—when I was going through them, I would drop some trying to get to others, and I got involved in the sound when I was dropping them. I took some of them home and cleaned them up and began to beat on them and test them for sound; I designed a frame and everything and put it together.[13]

In defiance of stereotypes and by developing the unforeseen potentials of the city, the members of the AACM established an environ-



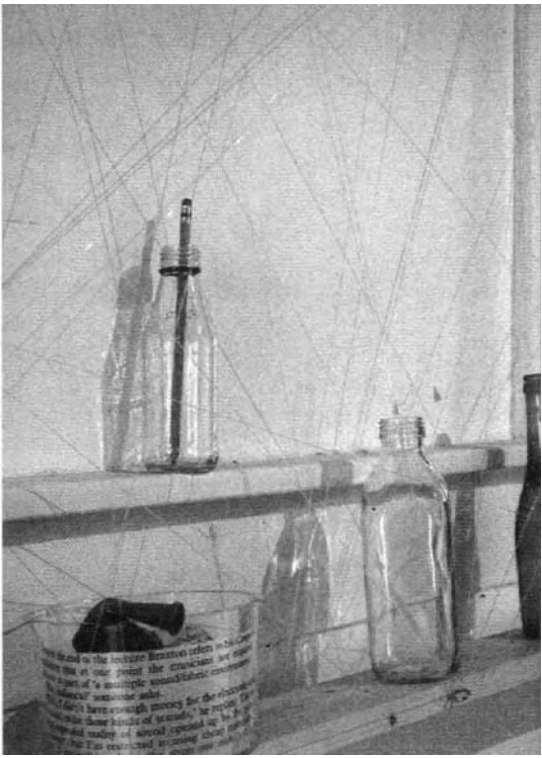


Figure 38. "Little Instruments." *. . . and other latent uses*, an installation in Project Row Houses' Music and Spoken Word House, Houston, Texas, 2001. Bottles containing poems, music diagrams, and liner notes, and balloons inscribed with diagrams by AACM member Anthony Braxton, stored in the wall, referenced the project's generative sources and provided a range of ideas about making music for those who choose to play within this environment.

ment that sustained an ongoing effort "to use music to build a new culture. . . . through the production of a new music outside of the industry with implications beyond the musical."[14]

Optimizations and Precisions

Because it thoroughly implicates the musician, improvisation is always susceptible to the influence of personal aspirations.[15] This manifestation of the personal was sufficient cause for Mies's wariness of improvisation, and the AACM departed from Mies's ideal even

further by using direct acts, beyond the development of music, to provide an alternative to the music industry. Its blurring of the properties that distinguish music from the economic, social, and political influences upon it contrasts with Mies's concentration on architecture, distinct from the diverse factors that affected it.[16]

Given these factors, the AACM's processes of improvisation seem to repeat the efforts of functionalism to assert the needs of the individual in the midst of a mass-oriented and alienating metropolis. Function, as Mies acknowledged, had provided a rich source of speculation and debate for Louis Sullivan and his contemporaries on the rise of the metropolis, industrialization, and economies based on mechanical reproduction, rather than the economies of representation that had dominated the first half of the nineteenth century. Recognizing a loss of meaning in the formal approaches and styles of the Beaux Arts, Sullivan, along with other architects in Europe, sought to develop languages, approaches, and organizations derived from straightforward and apparent uses of mechanical technology mediated by artisanal knowledge. Through this mediation, function might provide the basis for exploring new forms that could be invested with contemporary values and meanings.

Mies's skepticism of the personal and his hesitancy regarding other social factors grew out of his reaction to the continued dominance of function as the determinant of form in the 1920s. While a focus on function was appropriate within a culture in transition from representation to repetition, it became apparent by the end of World War I that there was no turning back from the alienating effects of the metropolis. The search for new signs and meaning proved hollow and ineffective before the overpowering demands of capital. Function, having failed to produce significant meaning, found itself narrowed in definition to the employment of rational means of construction to establish a close fit between architecture and the uses that occurred within it. This reductive elision, cold in its economic and performative optimization, left it unclear whether architecture conformed to use, or use to architecture, and blurred the distinction between the language of construction and the language of meaning. For Mies, this close and individuated fit between a built environment articulating social ideals and meaning, and economically and rationally optimized industrial and repetitive work, registered as cultural determinism rather than architecture. Consequently, while Sullivan's proclamation that

form follows function would historically summarize modernist work executed through the 1920s, Mies resisted this characterization in his attentiveness to flexibility and materiality in order to redirect the potential of rational construction from the particulars of any project to universal conditions of the age.

Flexibility—the distillation and compact organization of program to maximize the provision of clear span spaces—coupled with precisely calibrated deployments of materials, enabled Mies's architecture to serve as background, shimmering glass and steel presences that offered little expression beyond the facts of their construction. Such works as the Illinois Institute of Technology campus in Chicago offer exquisitely proportioned and detailed buildings, which provided an ambivalent if not contradictory hierarchy of structural spans and tectonic detail in relation to the programs found inside (Figure 39). Both conceptual and perceptual readings of Mies's work have resulted.

Figure 39. Ludwig Mies van der Rohe, Illinois Institute of Technology, Chicago, 1939–41, master plan for the campus. Photomontage of aerial view: model superimposed on photograph of neighborhood. Museum of Modern Art, New York. Courtesy of The Mies van der Rohe Archive (MI3900.000). Digital image copyright The Museum of Modern Art / Licensed by SCALA / Art Resource, N.Y.

As described by Michael Hays, Mies's work creates a silence in which meaning is a function of emerging impersonal productive systems rather than of the formal operations of architecture and urban planning: "Mies's achievement was to open up a clearing of implacable silence in the chaos of the nervous metropolis. . . . It is the extreme depth of silence in this clearing—silence as an architectural form all its own—that is the architectural meaning of this project."[17] Neither determined by cultural ideals and constraints nor developed free of circumstance through purely formal means, Mies's architecture, including his "subtle grafting of an alternative reality onto the chaos of Chicago's South Side," provides a "place in which the motivated, the planned, and the rational are brought together with the contingent, the unpredictable, and the inexplicable."[18] By constructing silence, Mies's buildings could support the dynamics of modern culture, yet, as Hays proposes, also stand as a "critical architecture." Focused exclusively on maximizing a minimal language of construction, Mies provided codeless and empty (if not active) voiding signs that made no effort to establish meaning or dialogue with the metropolis.[19] Instead, his buildings accept the inability of architecture to offer any meaning; they criticize the surrounding chaos by silently reflecting the metropolis back onto itself. Rather than search for a new code, a new set of signs, Mies introduced silence as the pronouncement of an end.

While the reflective capacity of Mies's work made possible this critique, its transparent effects permitted a different reading. One could look at it or past it if one wanted. Thus, glass structures by Mies and others indicated, for John Cage, a means for encouraging forgetfulness and unfocused attention. As in Hays's reading, Mies's work did not provide a way in which meaning could take hold. However, Cage was not willing to rely on the ability to obtain the autonomy necessary for the conceptual critique proposed in Hays's reading. Instead, by placing an emphasis on this new mode of perception in which things are immersed in and interpenetrated with their surroundings, Cage identified within Mies's work a potential rather than an end. Forgetfulness and unfocused attention always permitted seeing things for what they are, rather than in successive, accumulative, or associational relations, in order to undermine the repetition and variation that was indicative of mass and commercial

culture.[20] Interpenetration rather than autonomy, perception rather than cognition, could provide the means for gradually eroding the overly rationalized constraints and conformities of capitalist culture and allow an anarchic culture and society to emerge.

Walter Benjamin had identified the materialization of new modes of perception in "The Work of Art in the Age of Mechanical Reproduction." Like Mies, Benjamin was unsentimental and unwavering in his recognition of the passing of contemplative culture. He noted two phenomena—the substitution of plurality for unique experience and the copy's ability to place an object in new situations disconnected from previous dictates of time and space. Together, these had overwhelmed contemplative culture's conceptual underpinnings—creativity, genius, and eternal value and mystery—as well as the art object's authenticity. However, Benjamin suggested that the potential for a new cultural sensibility was emerging in the distractive tendencies of temporality and the habitual knowledge of tactility, which were thriving rather than diminishing within the transformations of mechanical reproduction. "The adjustment of reality to the masses and the masses to reality is a process of unlimited scope, as much for thinking as for perception," he commented, while identifying in film the introduction of new participatory modes based on spatial expansions and contractions as well as temporal compression and extension.[21]

While Benjamin concentrated on film, its effects on the actor and the audience, music was also significant within mechanical reproduction, and it emphasizes some other effects, implications, and complexities of the mass or popular form and the multiple influences upon it—particularly its development through several modes of production. While musicians created the music, in mass and commercial culture, producers, marketers, agents, and critics possessed unprecedented powers to affect its reception and manner of development. The production of the commodity (what would be recorded) and, more important, the production of demand exerted significant influence on the production of music (what musicians would play).

Therefore, questioning of the production of the commodity and of demand was necessary if the AACM and the other black music organizations of the 1960s were truly to have the freedom to explore free improvisation as a new mode of music production. Jacques Attali

argues that through their efforts to move away from the pressures of the market and provide their own support for development of their music, such organizations as the AACM produced a significant yet unanticipated outcome that extended beyond the development of new practices for making music. While functionalism attempted to develop new universal codes and signs, and flexibility silently acknowledged the loss of meaning in signs as well as the inability to produce new ones, the AACM's improvisational efforts resulted in processes for developing ephemeral and evaporative codes that imply new modes of production and exchange.

Succeeding by Failing

This potential for new modes for production and exchange did not emerge through sounds alone, but through their coupling with the AACM's other activities and practices. As Benjamin notes, "By the absolute emphasis on its exhibition value the work of art becomes a creation with entirely new functions, among which the one we are conscious of, the artistic function, later may be recognized as incidental."[22] Just as nineteenth-century advocates and opponents of photography, by debating whether photography was an art, rather than whether photography had transformed the nature of art, missed the central question of its historical role, a similar oversight perhaps occurred in the development of free improvisation.[23] Criticism often concentrated on whether or not the music was a new style of jazz and on the political claims embedded in proclamations such as "Great Black Music," rather than recognizing the political implications and transformations offered by the processes at work within the music as well as those surrounding and supporting the music's development.

As an effort to supersede the music industry, the AACM could be considered a failure. Attali indicates that given the nature of capitalism, the mass market, mass advertising, and mass culture, this failure was inevitable: "Since repetition today is based essentially on control over distribution, over the production of demand and not the production of the commodity, free jazz ran into difficulty promoting itself from within its own structures, in a world in which repetition monopolizes the major part of the market."[24] Image had replaced content and created an unexpected turnaround. However, Attali ar-

gues that free jazz, having failed as a takeover within repetition, generated the conditions to articulate a new system of exchange, one that is still emerging: "It also shows how the refusal to go along with the crisis of proliferation created *locally* the conditions for a different model of musical production, a new music. But since this noise was not inscribed on the same level as the messages circulating in the network of repetition, it could not make itself heard. It was the herald of another kind of music, a mode of production outside repetition—after having failed as a *takeover of power in repetitive society.*"[25] Free improvisation was less a new form of music than a new music practice, and the potential transformations brought about by this new practice are tenuously evident today.

As conceived by the AACM, creative music provides rules, or a vocabulary of open potential, that are tools for exploration and stimulation of creative thinking. Emphasis is on the development of the individual voice and its ability to contribute to the collective improvisation. Rather than focusing on the proper technique and the correct gesture necessary for ensuring the accurate production of particular notes within a written composition, individuals developed techniques and gestures that allowed them to facilitate and meet the creative needs of the moment. This emphasis underlies all improvised music, but the AACM's developments are not merely a stylistic shift, or a simple return to the collectively improvised forms of the New Orleans/Chicago style. In its rejection of the traditional rhythm section as support for limited solo flights, the AACM developed ensemble relationships in which each musician simultaneously improvises to a collectively developing piece.

Access to multiple instruments was necessary, given the AACM's desire for the musician to have "the absolute ability to instantaneously organize sound, silence, and rhythm with the whole of his or her creative intelligence."[26] Joseph Jarman describes the free-form implications and challenges of these musical relationships: "This was about goal and purpose and mental attitude. It's about, what do I want to paint, what colors do I want to use, it's about, will I have the nerve to step out there on a limb? It's about, will I be creative?"[27] The AACM brought the structures that facilitate improvisation into sharp focus through its reduction of music to a collective exploration of sound that creates a code. This code is not permanent, nor does it

have an intrinsic meaning. It exists because at least two people have chosen to invest meaning in its production. The effect of this reductive approach to playing was the transformation of creative processes into a new form of musical practice. As an alternative mode of production accessible to anyone, this practice is resonant with Benjamin's prediction in "The Author as Producer" that as specialties dissolve, we might all become producers.

This practice is a form of abstraction intimately tied to its makers, and because it is developed collectively, it eludes singular control. Attali elaborates on the impact of this music produced through collective labor, calling it a mode of production that "heralds the negation of the tool-oriented usage of things," and "a reconciliation between work and play": "Thus in a reversal of the current process, which starts with the conception and ends with the object, the outcome of labor no longer 'pre-exists ideally in the imagination of the worker.' To modify the meaning of form in the course of its production, to empty exchange/use-value of its alienating content, is to attempt to designate the unsayable and the unpredictable." He also notes the impact of this mode of production on the object: "Each production-consumption (composition) entity can call its program into question at any moment; production is not foreseeable before its conclusion. It becomes a starting point, rather than being an end product; and time is lived time, not only in exchange and usage, but also in production itself." The AACM's simultaneous acts of inhabitation and musical development describe a potential environment, "a truly different system of organization" waiting to be actualized.[28] As an alternative mode of production and exchange emerging from their efforts, it was neither fully anticipated by the AACM and other improvised music collectives, nor within the scope of the IIT campus's criticality—its silent and contemplative end. The AACM demonstrates that effective transformations of and alternatives to mass cultural conditions might be found by working through different optimizations of surrounding forces rather than avoiding them.

The Mass Market and Architecture

At the end of the twentieth century, comparable engagements with the political economies surrounding architecture have occurred with reassessments of the preoccupation with criticality in architecture. The

competition for a campus orientation center at IIT, held in 1997–98, is one instance of such engagement. The competition offered an opportunity for reflecting on contemporary conditions, paradigms, and modes for architectural practice in relation to Mies's work. Some of the designs submitted revealed the potential for alternative directions by applying his focus, intensity, and resolve to questions and areas that constitute exclusions and blindnesses of Mies, given the limitations that he placed on his work, or of prior readings of him.[29] With the change in age from mechanical to informational, as well as the transformations and expansion of mass consumer culture, the need for questioning has continued, but the area of questioning can no longer be the same. Such questioning has included the repositioning of traditional relationships in architecture, such as figure-ground to figure-figure or field-field, and inquiries regarding the body in building activity that Mies's reliance on technical means excluded. It has also enabled architecture to appropriate ideas from, and enter into new overlapping relations with, its affiliated design disciplines, as well as areas, such as mass media and mass culture, that have generally been considered to be outside the boundaries of the design of the built environment.

These expansions, in particular, respond to observations of the continued growth and increasing influence of mass consumer culture. That growth has revealed that the opposition between critical and commercial practices, like the opposition between form and function, can be ambiguous: the commercial can co-opt the critical, and can itself operate critically.[30] This understanding has made possible an embrace of the ways that architecture participates in—is informed by and informs—commercial and consumer culture. Commercial and consumer culture is itself a resource for principles that can provide a basis for alternative positions.

In the IIT competition, the winning scheme was submitted by Rem Koolhaas's firm, the Office for Metropolitan Architecture (OMA). Koolhaas has engaged in the most extensive study and pursuit of new principles that can be extracted from mass culture, and OMA's proposal is indicative of the opportunities provided by redirecting some of the sensibilities of mass culture. The project foregrounds and intensifies the commercialism that is latent in the program—as an orientation center and a focal point that provides the campus with an array of needed services. It provides five diagonal paths through

the site that are aligned with destinations on campus and routes from campus to the surrounding residence halls and apartment towers. Within the envelope of the orientation center, which is the zone where the five paths intersect, clusters of activity are located in the spaces between them. Although mall-like, the intent is urban:

> The issue of the IIT Campus is how to inhabit a given territory with half the population that animated it in the 70s. To us the conundrum implies a building that is able to (re)urbanize the largest possible area with the least amount of (built) substance. . . . By not stacking activities, but by positioning each programmatic particle as part of a dense mosaic, our building contains the urban condition itself. . . . Without fragmenting the building itself, each of the constituent parts can be articulated according to its specific needs, positioned to respond precisely to contextual influence, placed for maximum exposure and impact, creating neighborhoods—24 hour, commercial, entertainment, academic, utilitarian—parks and other urban elements in miniature.[31]

Additionally, the center is intended to provide a quiet environment for studies by buffering the campus from the noise of the elevated train. Both programmatic concerns make the campus more appealing, which makes IIT more competitive with other campuses as they vie for students.[32] The self-dependency and isolation operate to offset the lack of services provided by the surroundings. The irony of Koolhaas's approach was probably not lost upon him. The project provides a miniature urbanism through a kind of negation—by inserting an anti-urban body into an existing, internally focused anti-urban body (or one that is urban within the confines of the campus).

Urban Morphology and the Political Economy of Property

During a symposium in 1992, "The Presence of Mies," Dan Hoffman presented his altered aerial photograph of Detroit next to Mies's collage proposal at IIT. Hoffman's altered photograph reflected an effort by the city to identify and assemble land parcels for future development, but as Hoffman lamented, "Unfortunately, no development has taken place and the parcels are growing larger and larger." For Hoffman, the juxtaposition of the two images raised the question of "how to mobilize a culture towards the great investment of effort

and displacement of material that is required to build." The juxtaposition also foregrounds and questions the available processes of urban transformation and change.[33]

Dana Cuff notes, in *The Provisional City,* that urban transformation and change is currently engendered by large-scale urban projects in which "radical changes are quickly effected, large sites are transformed, and new kinds of community are proposed." Mies's collage graphically describes these aspects by simultaneously indicating the campus plan as well as the process of acquiring the land and clearing it that would be needed to implement his campus vision. The process entails "convulsion" within "a part of the urban body which then becomes a discrete zone, operating with greater independence from its surroundings."[34]

Cuff further notes that the aggregation and description of large-scale discrete sites to provide utopic areas of stability—presumably inserting a measure of clarity and order within the field—has not increased the city's legibility. Rather, it contributes to urban instability, increases and accentuates the fragmented nature of the city, by introducing large-scale areas with harsh relations to their surroundings. The provisional character of the city emerges in the cumulative effect of this process as it is repeated.

With the repetition of such large-scale operations and projects in various areas of the city, continuous, planned, and referential qualities yield to disruptive, spontaneous, and circumstantial ones. Long-term stabilities recede to reveal the short-term instabilities of architecture and urbanism. In contrast to historians and designers who strive to read coherence, as well as an orderly, continuous, and progressive development of the city as a whole, composed of interrelated parts, Cuff maintains that the city has often if not always been provisional, convulsive, fragmented, and sporadic in its changes. Transformations of areas occur in indeterminate and unpredictable cycles of divestiture and reinvestment. Currently, three primary factors shape contemporary urbanism and inform the particular character of contemporary urban transformations: the implementation of large-scale architecture and urban design projects, the upheaval that such projects entail, and the varied property rights and claims of different groups and organizations that manifest themselves when an effort is made to implement such projects.

In Cuff's account, two primary scales of the city can be discerned: the small scale of individual lots, and the large scale of pieces of the city that are assembled for major projects. However, the provisional city that she describes is only predicated upon large-scale operations, with the scale itself contributing to the overall effect.[35] There is no comparable consideration at the small scale. While small-scale sites can undergo dramatic transformation and change, their effects are only local, and are easily absorbed by the city. Small-scale perturbations on individual lots do not introduce transformative shocks or changes to the city. In relation to the development of large-scale projects, the small is also a point of resistance: "The small can mobilize to stage attention-getting events, to unite with other entities into something large, and generally to show strength where none is assumed. But the small always finds itself defending against the large, in a posture of resistance, which, in the long run, is exhausting and given to failure."[36] While the large scale prompts transformation and change of the city, context and continuity have been the primary modes for understanding the small scale and its changes.

These scales are what the political economy of property most easily accommodates, but they are not enough, as there are site conditions that neither scale can support. The effects of repeated large-scale projects are evident around IIT. Three other large-scale projects, Comiskey Park, Dearborn Homes, and Stateway Gardens, surround the campus. All four operate with the independence that Cuff identifies as characteristic of such works. In the remaining spaces between them there is not enough of the small scale to operate viably. One wonders whether the increased self-dependency and isolation that the IIT orientation center is meant to provide would be necessary if each of these projects sought to opportunistically address its adjacencies. The accumulation of large, independent projects has contributed to an overall vacancy, desertion, and danger in the surroundings, as well as in each of the four sites. A walk within the rational clarity and calmness of the campus order can be perilous.[37] The limits of the small scale, the maintainer of context and continuity, and the large scale, the generator of transformation and change, are further exposed in the areas, such as those that Hoffman identified in Detroit, where context and continuity have ceased to be an effective mea-

sure or informant, and transformations through the construction of large-scale projects seem increasingly less likely.

These sites register the need for new urban morphologies, not only in form, but in scales and rates of growth. However, the creation of new morphologies is not enough. The existing modes of transformation and change can be traced back to the shift in the political economy of property: "With use value liberated from exchange value, a new political economy of land was possible, and with it, new urban morphologies."[38] In addressing site conditions that fall outside the available means, the need—similar to the case of the AACM and its efforts to develop a new music—is to identify alternative modes or morphologies, and to seek out economic mechanisms that can enable and engender them. Conversely, one might examine existing alternative mechanisms to identify their latent potential for new urban morphologies.

Power Stronger Than Itself

One such alternative is a community land trust (CLT), a nonprofit organization that holds land in common for the benefit of a community. While maintaining ownership of the land, the trust provides low-cost, long-term leases and sells the built improvements upon the land to its members. The principal purpose of such a trust, which can ensure long-term affordability of housing in an area, is economic. However, the long-term management structure, and the restructured relations between buildings and lots that this economic model entails, provide the potential for urban transformation among disparate small-scale sites.

This potential emerges through a slight change in the CLT's practices. In place of long-term leases of the whole property, a trust might provide a partial land lease or a guarantee of easements to allow other portions of a lot to work without relation to the buildings upon it. Portions of a lot might work in conjunction with other sites to provide relations and connections among lots and blocks that elaborate on the economic links that a trust establishes (Figures 40–42).

Design actions executed at the level of individual sites can suddenly have urban implications, as each property that the trust acquires

Figure 40. Jason Scott LaRocca, *Trust Steps 1 and 2.* Community Land Trust Plans of Action Studio, Rice University, spring 2003. Working with the assumption that a Community Land Trust might provide a guarantee of easements, or a partial land lease, a studio investigated planning directions engendered by different definitions of what a CLT could be. An initial general presence across the approximately seventy-five-block area of study in Houston could be established through membership of the existing resident owners. The priority of properties for initial acquisition and properties that might be acquired later was subsequently developed given the identification of critical sites for initiating the planning direction suggested by a particular definition, and given an assumed budget equal to a grant amount that two area community development corporations had each received. Through the assumption that corner sites, below a certain property value, were optimal for work and retail, sites that could provide the basis for two commercial and service areas were identified within this area of Houston.

has the potential to be articulated as part of a larger urban body. Actions on one site can be amplified through repetition across other sites or conducted in conjunction with different, yet complementary, actions on other sites. Each site that the CLT acquires provides a basis for adjusting roles, actions, and relations on its other sites.

Although these connections can be developed between immediately adjacent properties, they are probably most effective over non-adjacent and disparate sites of varying sizes. Through relations and connections across dispersed sites, a CLT can provide comprehensive

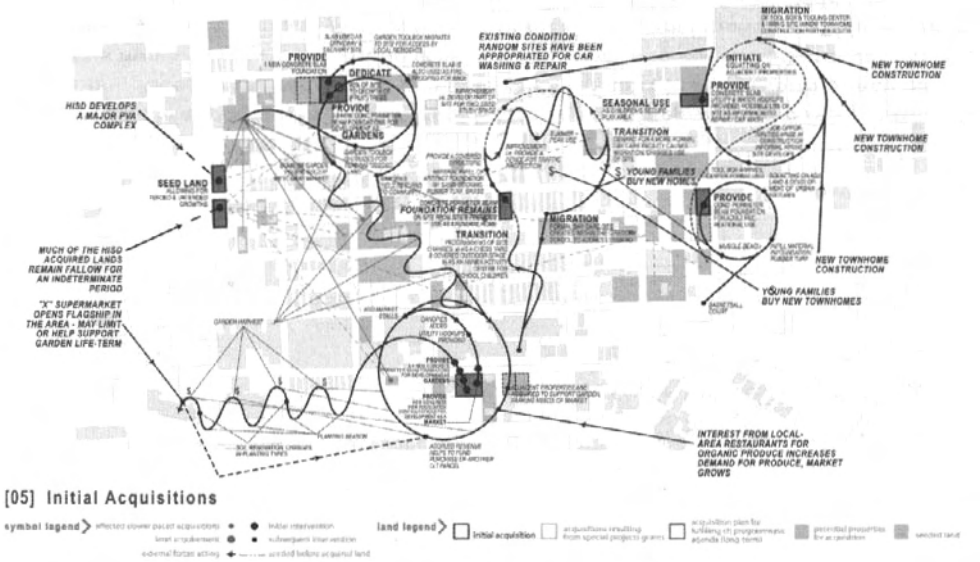


Figure 41. Quyen Luong, Delia Wendel, and Kathy Williams, *Initial Acquisitions.* Community Land Trust Plans of Action Studio, Rice University, spring 2003. Defining the CLT as a general provider of community resources and infrastructure that focuses on preparing and tending land maximizes this potential of a trust as an organizer of comprehensive planning. Given such a definition, a CLT's sites, and the cycles they might experience, can be informed by onsite and surrounding conditions; no one site is fully determined at the outset. All CLT sites are initially fluid, and multiple sites are suitable to any one program. The multiple programs that the project proposes can be seeded and supported on its foundational infrastructures, and with the addition of more sites, or development by others, as well as the relative success or failure of programs on a site, the form of a particular site and program becomes more determined and more formalized.

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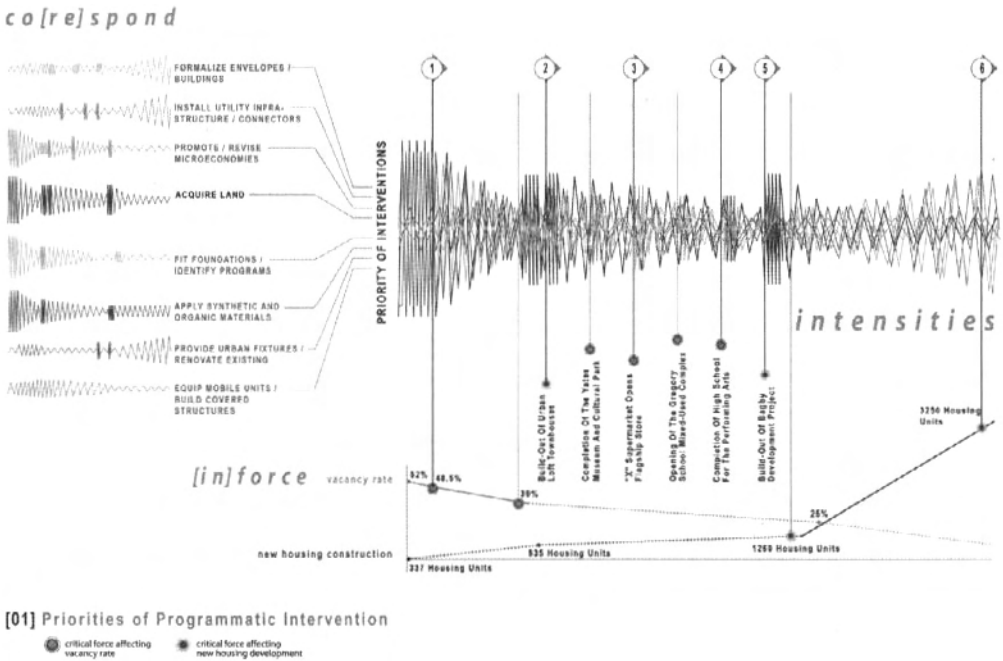

Figure 42. Quyen Luong, Delia Wendel, and Kathy Williams, *Priorities of Programmatic Intervention*. Community Land Trust Plans of Action Studio, Rice University, spring 2003. More significant than the form of any one site or program are processes for activating as much land in the ward as possible, and guides to continually assess the area's transformation and set the CLT's priority of activities. By offering means for growth internally and priority shifts in response to external changes, the design outlines a structure for negotiating the area's development in time.

planning across an area that exceeds its actual property. Its area of influence can equal the area of a large-scale project. However, because it does not own all the property within that area, it remains a participant in, rather than the sole determinant of, the area's form, and imparts a different kind of transformation and change.

In contrast to the acquisition process that large-scale urban projects require, in which sites may fall into disuse or disrepair until all the necessary property is obtained, a CLT, through increment, variability, and dispersal, can dynamically negotiate the area's development in time. Planning can be initiated on one or two lots, with influence and impact over an area building through the CLT's ability to articulate and develop relations and connections among its sites and the property of others. The network of relations and connections that a trust can structure does not exclude or obstruct other development but provides a framework that other development can work within. Other development can in turn contribute to that network, or it can trigger responses and adjustments by the trust upon its sites. Within the area where the CLT operates, the impact of individual sites upon the urban surroundings is not limited to properties that the trust owns. Neither independent nor fully determined, the relations and connections that the trust can form are able to change over time. Change can result from actions initiated by the trust itself or by others, as well as through changing responsibilities, claims, and needs.[39] These may include the provision of housing, service, and commercial structures, as well as open and public space, and/or community infrastructures.[40]

The effort by the city of Houston, Texas, since 1995 to initiate a Land Assemblage Redevelopment Authority in its third and fifth wards reveals another alternative. In a segment of the third ward, this program would reclaim approximately one hundred lots scattered throughout the area (Figure 43). In contrast to the sites in Detroit, those sites are in demand. The city's plans would continue to treat them as separate lots. Understood individually, the lots will return to the tax rolls and to the existing modes of transformation and change. However, understanding all or some of them collectively, and finding ways that they might be organizationally developed and maintained by local, city, or regional organizations, offers different opportunities to address a range of needs in the third ward and its relations to the surrounding

metropolitan area. As with a trust, those needs could be met by outlining the variables, parameters, and guides that would inform decisions and allow the shape of development upon those sites to occur in time and across an area that exceeds its actual area. The specific organizational structure that might be envisioned would provide a basis for identifying and fully developing those guides. However, the land assemblage program and the location in the third ward provide two starting points for evaluating the magnitude of change that collective work on those sites might provide. The challenge is to demonstrate that the collective use of the lots is to the greater benefit of the existing community and provides greater value for the city than reassembling the properties as individual lots returned to the tax rolls.

A CLT structures an economic difference within lots and, through a modification of its practices, provides a means for opportunistically building on those differences urbanistically and in relation to other factors and considerations. The land assemblage locates an existing economic difference defining a field of lots and intercedes to build upon the potential of understanding those lots as a field. Both examples demonstrate that by expanding their own scope of thinking to the opportunities that various economic structures and mechanisms engender in property, architects can work comprehen-

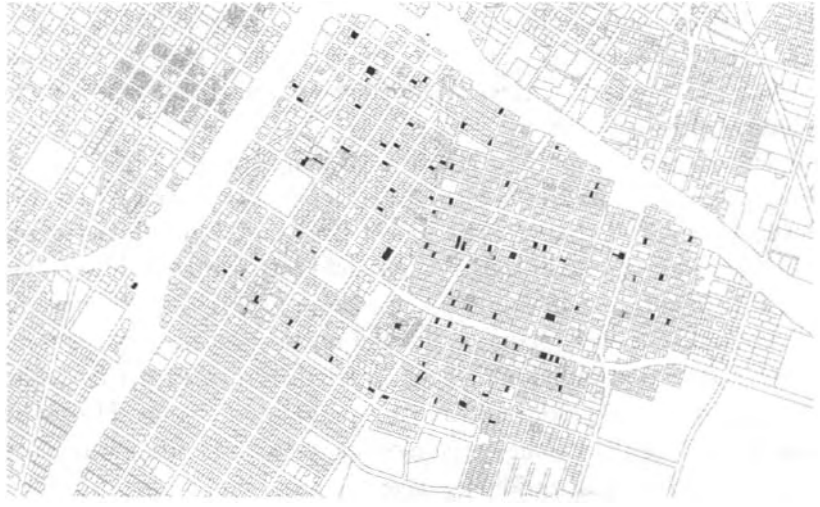

Figure 43. Sites in Houston's third ward that have delinquent property taxes exceeding their current property value.

sively with organizations to envision and enable alternative modes of urban transformation and change.

Latent Potential of Materials and Systems

Such work, as it relates to the AACM, is less ambitious than that outlined by Attali in his reading of the AACM and other improvised music collaboratives started in the 1960s. As Attali acknowledges, it is difficult to fully conceptualize a political economy based on the system of organization—improvisation, which he terms composition—that he sees implicated in their work. Its development is dependent on an array of forces. While the practice for architecture that is being described here might contribute to it in some manner, the intention has been to understand implications and opportunities at the urban scale of considering a system that architecture affects and is immersed in—the political economy of property.

The relations in time and among the disparate sites that emerge from shifts in that system are but one way that the AACM's work is informative for architecture. In all the materials and systems that affect or define their practices (instruments, writing, group relations, playing venues, and economic structure), members of the AACM sought to understand and expose the latent potential that was present and to describe the alternatives made available by working with that potential. A similar understanding can be pursued in architecture, and as with the AACM, that understanding should be extended to the full range of the materials and systems that architecture is immersed in, including those areas that have been considered outside its scope.

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Conclusion

Diagrams, Conduction, and the Contemporary City

Form and Agency

In Graham Locke's *Forces in Motion,* percussionist Gerry Hemingway provides an informative description of his various ways of reading and playing in relation to a graphic notation by composer and saxophonist Anthony Braxton, which Hemingway approximates in a sketch (Figure 44):

> Then there's *110A* where Mark [Dresser] and I play a pulse track, *108B,* that is nothing but numbers and lines that go up and down, with circular, wavy motions to them that suggest glissandos, dynamics, but could be anything—Anthony didn't specify, he allowed us to make our own interpretation of what the shapes are. They're interesting in that they do hold you together, though Mark and I as well as John Lindberg and I developed various ways of interpreting that score.
>
> OK. So, for approximately five given beats we might do a glissando up, which is what happens on the record, the *Six Compositions (Quartet) 1984* LP. John Lindberg and I tended to lean towards glissando, we would follow the shapes fairly literally and we'd try to adhere to the time lapses that were happening: we'd be deliberate, but not too much, so we'd stretch them out and open them up in certain ways. More recently Mark and I do a number of other things within this diagram system—sometimes I use it as a velocity

> diagram, so as the line goes up I increase the velocity of whatever I'm doing; sometimes it gets faster, sometimes faster and louder, speed and dynamic; or I'll do inverse things, so when the line goes up I slow down. I try to keep changing the relationship.[1]

Hemingway reveals the agency that he and two different bassists possess in Braxton's music. Not only can he read the diagram differently, but working collaboratively with a different bassist he develops different tendencies. Describing his playing in relation to a different pulse track, 105A, he reveals that with Lindberg, he tended to extend the track into a slower, elongated form, while with Dresser, he often varies the tempo or speeds it up beyond what the track implies.

Hemingway explains that Braxton provides an indication of the directions and the various approaches that Hemingway and either bassist might take in working with the diagram, while encouraging them not to limit themselves to the obvious ones. Variation can take place because Braxton has "given no special instructions, he just tells us he likes what he hears, so because we're improvisers we open up the possibilities. But we're true to it, too: I mean, it's holding you into a pattern that you have to play and you've got to stay together." The exchanges and interplay that Hemingway describes occur between the bassist and himself, but he emphasizes that the two of them are also listening and working in relation to what else is going on, such as shifts in pitches, tempo, and dynamics that Braxton and pianist Marilyn Crispell introduce. The music is "the way it should be," he concludes, after noting that it is "different every time we play."[2]

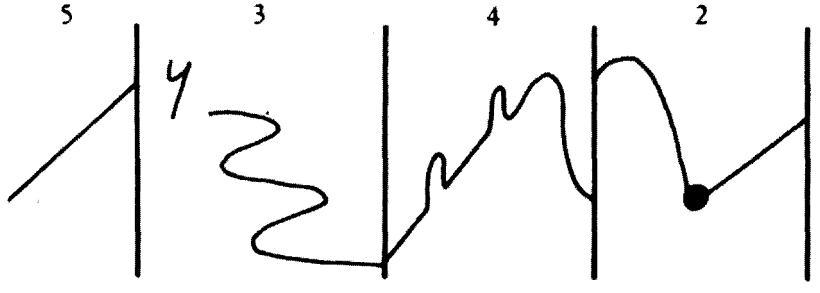

Figure 44. Sketch by Gerry Hemingway of Anthony Braxton's Pulse Track *108B* diagram. Reprinted with permission from Graham Locke, *Forces in Motion: Anthony Braxton and the Meta-reality of Creative Music* (London: Quartet Books, 1988), 261.

Braxton accounts for this variation in his music, when he describes his study of and emphasis on structure. He seeks to understand "the reality of structure and what it poses to the dynamics of music—the understanding being that given structures will make certain things happen."[3] To this end, he has worked to develop a diagram system that graphically titles and organizes his music while leaving it susceptible to a wide range of interpretations.

Braxton has categorized over 230 sound structures—such as long sound, accented long sound, trills, multiphones, short and angular attacks, and staccato line, intervallic, legato, and diatonic formings—and codified them into a system of "language types" with accompanying visual symbols.[4] Individually or in combination, these language types can operate as a generating form in four ways: "(a) as a language generating form (in the solo context); (b) as a material generating form (as notated material inserted into the co-ordinate music); (c) as a principle generating form (as a given variable used to determine the nature of music); (d) as a multiple generating form (inserted into a larger context)."[5] The form-making properties of the language types shift in state—language generator, material generator, principle generator, or multiple generator—depending on the playing context, yet in all phases they operate as generators because the shapes do not specify a particular sound. Instead, they provide limits and directions by asking that the musician provide either a sound quality or a sound-yielding action that can be categorized within the classification that a visual symbol indicates. In this way Braxton's notations and diagrams explicitly prompt playing rather than performance and display his respect for the science of music but not the many value systems that have become associated with the science, such as dominant concepts surrounding notation. "That's what structure *is*," Braxton reiterates, "it doesn't have anything to do with me telling somebody what to feel, but with creating a structural situation or a language situation that has particular variables which will allow certain things to happen, and each individual will be able to establish their own relationship with it."[6]

Qualities of Braxton's diagram system are reflected in the recent emphasis on the diagram in architecture, based on the ability of the diagram to work similarly as an organizer and coordinator of forces and flows. It has become clear that the diagram can operate provisionally,

performatively, and generatively to yield forms that emerge in time. The diagram does not prescribe a static, predetermined final form, but allows multiple formations, iterations, and outcomes. Nor is it limited to the description of relations among architecture's traditional concerns—site, material, context—but rather it can incorporate forces and flows introduced by economic, political, and cultural factors at local and global scales.[7] Given such capacity, in which emphasis shifts from space and structure to surface and event, the diagram is not just an expanded tool of practice. It expands the discipline by indicating new territories for practice. Advocates of diagrammatic practices have proposed that architecture operating diagrammatically—organizing and coordinating information—can emphasize society as a plastic entity and can become an engine of social and political (as well as disciplinary) change.[8]

Braxton's efforts are guided by a comparable concern: "the development of a system of thinking that allows for individual to group consciousness (not separate from social and political dynamics)."[9] The concern, involving writing practices and playing environments, is not exclusive to Braxton. Robert Farris Thompson characterizes a principle of African dance music as "*songs and dances of social allusion* (music which, however danceable and 'swinging,' remorselessly contrasts social imperfections against implied criteria for perfect living)."[10] The same concern can be found in other examples of writing practices in jazz, as well as literature informed by jazz, and improvised music playing environments. Those examples offer questions and directions relevant to efforts in architecture to provide similar dynamics within the metropolis, as well as indications of the agency that such dynamics can provide.

Notation as Guide

When Scott Joplin wrote *Maple Leaf Rag,* a ragtime composition, in 1899, he acknowledged that the primacy of writing as the organizer of music had come to an end. Ragtime, a popular and syncopated piano music that precedes and influences the development of jazz, merged black folk material with the compositional techniques of the Western notation system. With contrasting themes, changing keys, and a considerable use of counterpoint between hands, *Maple Leaf*

Rag is a significant writing achievement—the quintessential ragtime composition by the idiom's most noted composer. However, while it affirms the importance of writing, the desire that guided its writing acknowledges that writing is not the exclusive domain for the production of musical knowledge. The complexity of *Maple Leaf Rag* results from Joplin's intention and effort to write a composition that is too complex for improvisation. In this effort to prevent improvisation, it defined one end of the potential relations between writing and playing (Braxton's diagrams would later define the other).

However, Ferdinand "Jelly Roll" Morton's improvised version of the composition a few years later revealed the hopelessness of Joplin's efforts. The history of jazz demonstrates that any form can be approached dynamically, rather than statically. The emphasis in swing and bebop on playing standards and the development of new melodic lines on top of existing chord changes reveal the continued impulse within jazz to understand and read notation as a guide, rather than a definitive set of instructions. Amiri Baraka summarized this impulse when he reviewed John Coltrane's recording of Billy Eckstine's "I Want to Talk about You." "Each one of the notes," Baraka wrote in response to Coltrane's extensive use of tremolo and vibrato, "is given the possibility of 'infinite' qualification. . . . proving that the ballad as it was written was only the beginning of the story."[11] When played, each notation, through its susceptibility to "'infinite' qualification," provided the opportunity for the description of worlds of alternatives.

Developing relations between music and language in black literary and cultural practices, Nathaniel Mackey has identified how such qualification constitutes an artistic practice that implicitly critiques social practices. He references Zora Neale Hurston's description of "verbal nouns" in black folk culture and Amiri Baraka's essay "Swing: From Verb to Noun" to reveal an accent and emphasis on verb, rather than noun, as the basis for this critiquing action. By privileging verbs in music and language practices, blacks have countered presumed norms and supposedly static and intrinsic attributes and characteristics, which socially confine them, with assertions of innovation, mobility, action, variation, and change. By privileging verbs, blacks assert their agency even as fixed and limiting formations and constructions in society seek to deny it. Continuing with the analysis

of some works of literature that are informed and influenced by improvised music, Mackey proposes that "troubled eloquence"—the breaks, dissonances, and deformations—in music, language, and literature registers "a need for a new world and a new language to go along with it, discontent with the world and the ways of speaking we already have. A revolution of the word can only be a new beginning, 'beating,' as [Edward Kamau] Brathwaite puts it, 'its genesis genesis genesis genesis / out of the stammering world.'"[12] Like Braxton's notation, the literature that Mackey analyzes expresses its own contingent character, and through it Mackey describes a cross-cultural terrain of experimental writing—composed of white and black writers in the United States as well as Caribbean writers, with black music providing a link—that advocates "diversity, hybridity, and mix."[13]

Diasporic Flows

The heterogeneity that Mackey identifies and develops emerges from diasporic flows, many of which have been active long before the transnationalist flows of globalization that are a contemporary focus and concern. There are similarities: both present the need to reevaluate, rethink, and redefine the concepts of nation and nationalism. However, they are not the same. Transnationalism introduces an unmitigated leap from local to global that can supersede national concerns, while diasporas—the historical migrations, immigrations, and exiles of people—introduce conditions that extend and reshape the boundaries of nations as citizens living in communities outside a nation's borders introduce hybrid and transformed conceptions of citizenship and configurations of culture.[14] The two are categorically different, as well. Diaspora can operate as a subset of transnationalist flows, defined as flows "of people, ideas, goods, and capital across national territories in a way that undermines nationality and nationalism as discrete categories of identification, economic organization, and political constitution."[15] However, diaspora is a distinct epistemological and historical condition with particular qualities.

Therefore, even diasporas that have resulted from the processes of globalization contain relations and aspects that globalizing forces cannot account for. Similarly, older diasporas have been transformed by globalization, but maintain qualities and characteristics that do

not register in the understandings of transnationalism that globalization foregrounds. The shapes and flows that these still active and emerging diasporas provide between places are not always coincident with the shapes and movements characteristic of economic globalization.[16] Considered concurrently with globalization, diasporas provide a clearer indication of the flows that make up contemporary life. While processes of globalization and transnationalism foreground commonalities and sameness among world metropolises, diasporic processes are a basis for considering the continued emergences of difference, as well as the potential for negotiations and play that can be structured around such differences.

Conduction

Through the term *conduction* Lawrence "Butch" Morris simultaneously distinguishes conducted improvisation, as a process for making music, from conducting, as a process of interpreting music, and emphasizes properties of his interaction with the music, musicians, and environment within that process. For Morris, conducted improvisation is an immediate transmission of information and result that encompasses both physical properties (communication and heat) and physiological properties (electric charge and response from one body to another) defined as conduction. Morris provides this definition in "Theory & Contradiction: Notes on Conduction," a set of short reflections on his development of conduction as a means of producing, within free improvisation, structures and forms that are indicative of writing without recourse to writing.[17] These reflections provide a basis for gauging the effectiveness of a dynamic system as an enabler of human agency, as well as for understanding the demands and potential encountered within such systems.

A vocabulary of hand gestures permits Morris to approach a group with which he has never played, describe the actions that the gestures convey, and enter into a collective production of music that has a "viable connection to the process of composition, and the process itself." Replacing notation, gesture incites an immediate response from the musicians, and the resulting sounds become the material for the development of a sustained improvisation of unspecified length. Sustain, repeat, mimic, remember, develop, and expand: these are among the

actions that Morris elicits through gestures in order to select material from the field of sound that the musicians are generating, shape it, and shift the course of the music. However, while Morris directs aspects of the music through these gestures, the musicians determine what sounds they are being asked to select and shape. Through the gap in transmission, each participant informs the music, yet no one has full control. The music itself has a freedom; it operates on the musicians and audience as much as they operate on it. To make spontaneous music, Morris adds, "is to convey information that is in all ways interpenetrable."[18]

Music in this process is nothing more than the transfer of energy across its participants—the audience, the musicians, and the conductor. Beyond the temporal experience and the transfer of information, this music bears no explicit content or meaning. It is the production of "a sonic code found only in team play, trust and challenge—focus and construction. The decoding of tongues, to magnify all combustible elements—in that moment of ignition."[19] As with Louis Armstrong's temporal manipulations, this moment is extended. It encompasses the duration of the music's making. For Morris, this production is "a place or a music with 'no tense.'"[20] With the production of each sound, the moment is continuously articulated and reevaluated.

Determine Boundaries Then Let Them Go

With the first sound, potential directions are indicated. By executing a gesture to initiate other sounds, Morris begins to parse through those potential directions and to describe parameters for form and structure to subsequently develop. However, Morris at times might leave the ensemble alone to let sounds develop and emerge before gesturing to initiate the selection and manipulation of sounds. Seeking to provide forms, structures, and directions that propel the music but can neither take control nor subordinate the group or the music, Morris works to "determine boundaries then let them go."[21]

Such action enables a play between directed and emergent orders by providing a basis for the production of differences. Letting go emphasizes any boundaries that are determined as volatile sites rather than distinct and inviolable edges. Once introduced and released into

the music, the boundaries are either developed or permitted to dissipate. In either fashion, they propel the music by introducing material that can provide, encourage, or leave space for the development of subsequent and/or other shapes and directions. "Extreme flexibility" as well as the encouragement of "environmental orchestration" and collective action are qualities that Morris seeks to enable through this process of "music as constant invention."

Constant Preparation

Shifting emphasis from the process to the demand that conduction places on the participants, Morris states that each participant must be prepared to "take responsibility for the direction of the music—and to surrender to the music."[22] Each participant contributes material that is capable of offering directions in which the music may go and sustaining or following the direction in the music that emerges. The music requires an intensity in which one is simultaneously listening and reacting, as well as a readiness to recognize contingencies and noise as part of the process, as potential.

In his introduction to his conduction vocabulary, Morris recommends that "when you are not playing, you should be thinking of what you would be playing. You must make music all the time, whatever you think music is. Respond to what (you think) you hear or see or understand. Execution must be deliberate and decisive." "Constant preparation" is Morris's succinct yet expansive and seemingly impossible reply to how one begins to operate within this production of music. "Part of the idea," Morris explains, "is to develop the mind in such a way that it becomes critical to the construction of something we have yet to hear or see."[23]

Such preparation entails learning the total range of the instrument, including registers and uses outside the range for which it was designed, prescribed, or intended. Similarly, one must increase the understanding of the qualities of the materials at hand, not solely in the realm of their rational and intended expressions but in their latent qualities and properties. Constant preparation also means that in any given situation, one must not only recognize the material intelligences at work, but must be open to what constitutes the

material. In Morris's understanding of conduction, human beings as well as instruments are the material through which information is communicated.

Additionally, one must be prepared to accept material that seems to be outside of the understood limits of a discipline's boundaries. In the period following 1963, John Coltrane was frequently accused of practicing on stage. The accusation was true, but not in the pejorative manner that was intended.[24] Coltrane had ceased to make a distinction between practicing and performing. In order to fully pursue the demands of musical exploration, he maintained the same playing intensity in each environment.

Saxophonist Daniel Carter extends this understanding further. He does not believe that the development of his musical play is limited to practice or performance. It permeates his daily inhabitation and engagement of his urban environment. Like the characters who populate the novels of Ralph Ellison and Toni Morrison, Carter moves through the city, reformulating it through an associational word play inspired by street vernacular as well as James Joyce's *Finnegans Wake*.[25] He believes that the ability to reevaluate conventional meanings encountered in life by remaking "the world with the words that it has" informs and develops his playing. The development of various resources, the multitude of places that one might locate thought at any given moment, is another implication of constant preparation. Paul Berliner, in *Thinking in Jazz,* has noted that there are multiple representations, including sounds, physical gestures, visual displays, and verbalizations, that musicians keep at their disposal—each having distinctive thought processes and distinctive qualities of mediation with the body, in preparation for the moment and needs unknown.[26]

Risk, Not Chance

Because the music is determined in the moment, "everyone receives the information at the same time. Therefore the mind can make decisions on what can or will be sounded. Then the mind can change its self or allow its self to be influenced by another."[27] Morris writes these words before presenting another, and perhaps his most important, proposition: "Risk, not chance." With this proposition, Morris repositions a vital informant of twentieth-century forms and expres-

sions, chance, from a structuring device, or operation, to an unanticipated variable, or stimulus. In chance operations, an act of chance is a specific method for developing a structure, or setting parameters, quantities, dimensions, and/or extents. Such operations challenge the structures of modernization by revealing ways that modernization's rationalized processes of optimization and efficiency can be diverted to yield unanticipated results. However, in these challenges, the body (the subject) is primarily a productive instrument—conducting a scripted action—that is engaged in a riskless endeavor. Like modernization processes, chance operations reveal a wariness of the subject as a variable and avoid manners in which the subject could potentially take control. As a result, such operations do not fully engage the subject. They fail to place the subject at risk, in a position in which it is capable of affecting the processes and outcome as well as susceptible to change within the processes that unfold.

As a stimulus rather than an explicit operation, chance elements—the unforeseen and unplanned elements that the environment, the musicians, the audience, the space, and the vocabulary provide—are variables that affect the outcome and ensure that no one individual will take control. Each time one makes music, there is not only the risk that the music will succeed or fail, that the resources will prove to be inadequate, but also the risk of identity in relation to the instrument, and the risk of alienation and transformation in time.

Reflecting on Morris's music, Allan Graubard remarks, "Conduction presents a challenge. . . . a challenge not to forgo the complexities and exaltations of embodiment. It is also a challenge not to limit embodiment to the human form alone."[28] Not only is this challenge applicable to architecture as it works upon or within dynamic systems, but the three propositions that Morris offers provide a guide for how to operate upon and within them.

Within a Field Organized by Default Rather Than by Design

Morris's reflections applied to the metropolitan field suggest a focus on the various agents that create the field more than on the physical elements that compose it, or the daily activities that course through it. The majority of those elements (housing, retail chains, highways, interstates, city and regional service systems and infrastructures, and

so forth) are generated by government, commercial, and nonprofit organizational entities, operating at local, regional, and national scales.[29] Each entity, operating as an agent for a specific element, possesses operational and organizational logics that guide its decisions about the element of the metropolis that is its area of focus, including the properties that the elements seek to enable and, of equal importance, what they do not take into account. Much of the metropolis's fragmented and discontinuous character results from the absence, within many of the logics organizing and constructing it, of provisions for addressing connections, overlaps, and adjacencies with dissimilar, as well as similar, concerns. The same infrastructural element, for example, may have multiple and potentially competing logics informing it as it passes from one agent to another (most notable in shifting grids, as once separate municipalities expand into a continuous, yet varied, street system). For all of the intelligence in the individual logics governing parts of it, the metropolis develops by default rather than by design.

The provision of structures operating within those logic gaps allows increased opportunities for architects to work more effectively upon the metropolitan field. By incorporating knowledge of the agents and their guiding logics, as well as the various forces, and the available resources that they provide, design work across a range of scales could offer different calibrations of those systems in order to structure overlaps, connections, and adjacencies that can enable negotiations among various organizations.

The governing logics of organizing agents, and the variables that they present, become available to design through constant preparation, or sustained research and study that is independent of any one project. That research entails learning the vocabulary that an agent uses to describe the actions of an element and subjects that use it; its sites, how they are defined or determined and how they are acquired; material and programmatic obsolescences and abandonments that affect it; and its primary role and related short- and long-term activities, as well as the scale of those activities. These factors perhaps focus on the built artifact and clarify how that element is understood from the agent's point of view. However, there are other factors guiding the agent's decisions that are less tied to the artifact, yet are equally significant.

Research of an agent and its logic should include knowledge of how the organization was established, its mission, and its jurisdiction; the ability for it to initiate and implement a project; and the time it needs to move from conception to development and implementation. Funding sources (city budget, bonds, grants, taxes) and their accompanying temporal factors (fiscal, election, and granting cycles) should also be described. Additionally, all of these organizations do not work directly through construction. They might instead work through lobbying, advocacy, regulations, and/or policy. Through an understanding of such variables, alternatives and opportunities that are unrecognized by an agent, or those that are potentially available through a slight shift in definition of the organization or its mission, can become apparent.

Design in this context would consider the variables that each entity provides, and identify those that could operate as parameters for the project that is to be done on a site. In relation to those parameters, the design might provide *responsive* (using the variables as a measure), *mimetic* (enacting or imitating some of the logics and actions operating around it), and/or *transformative* (directing the variables and parameters to different ends) operations. In organizing the relations of parameters from several agents as well as those suggested internally by the program, a design might address multiple concerns. In all of these and other potential directions, the design could provide ways for the work on the site to be inflected and informed by the surrounding parameters, as well as ways for the parameters introduced by the site and project to inflect and inform the surroundings. Through such operations, the design exceeds its physical site and operates as a structure that determines the boundaries, then lets them go.

The design considerations introduced in the preceding chapters, emphasizing forms and resultant shapes, complex subject/object relations, articulations of diverse measures of time, and latent properties of materials and systems, might serve as informants to the properties that are enabled in structuring relations among the variables provided by these various agents. Additionally, further research in relation to improvised music might yield additional considerations and guides.[30] Such research could consider subjects like the situationists and play, automatic writing, the work of Wassily Kandinsky, and squatter settlements in many metropolises. The intent of incorporating

such considerations is to structure situations that, in the words of Braxton, "will allow certain things to happen, and each individual will be able to establish their own relationship with it," or, in the words of Morris, provide for "risk, not chance."[31] Through efforts to structure such situations in the metropolis, inhabitants might gain increased perceptions of the organizing forces that surround them, as well as opportunities and means to work with those forces and release some of the cultural, social, and physical routines of contemporary metropolitan life into transient and fluid improvisational play.

Notes

Speculative Leaps

1. Tommy Flanagan, the pianist, notes: "[John Coltrane] came by my apartment with this piece, 'Giant Steps.' I guess he thought there was something different about it, because he sat down and played the changes. . . . There *was* no problem just looking at the changes. But I didn't realize he was going to play it at that *tempo*! There was no time to shed on it, there was no melody; it was just a set of chords, like we usually get." Quoted in Peter Watrous, "John Coltrane: A Life Supreme," *Musician*, July 1987, 106.

2. For a more technical analysis see Ekkehard Jost, *Free Jazz* (New York: Da Capo Press, 1994), 25–26.

3. Steve Lacy, quoted in Derek Bailey, *Improvisation: Its Nature and Practice in Music* (New York: Da Capo Press, 1992), 58.

4. Ralph Ellison, *Shadow and Act* (New York: Random House, 1964), 234.

5. Bruno Nettl, *In the Course of Performance: Studies in the World of Musical Improvisation* (Chicago: University of Chicago Press, 1998), 1.

6. Ibid., 5.

7. George Kubler, *The Shape of Time* (New Haven: Yale University Press, 1962), 60–61.

8. Ibid., 124.

9. Jacques Attali, *Noise: The Political Economy of Music* (Minneapolis: University of Minnesota Press, 1985), 26–27.

10. See George Rand, "Morphosis: Three Houses," *Design Quarterly* 152 (1991): 17–19. Dave Hickey offered Gehry's design for the Guggenheim Museum, Bilbao, as the architectural realization of improvisation in a fall 1997 lecture at Rice University.

11. See Walter Hood, *Urban Diaries* (Washington, D.C.: Spacemaker Press, 1997).

12. See Mark West, "Construction-Research-Design-Invention: Elastic Behavior in a Moist Environment," *Journal of Architectural Education* 54, no. 4 (May 2001): 251–54; and Araya Asgedom, "The Unsounded Space," in *White Papers, Black Marks: Architecture, Race, Culture,* edited by Leslie Naa Norle Lokko (Minneapolis: University of Minnesota Press, 2000), 237–77. I explicitly cite aspects of improvisation that their work engages in David Brown, "Extemporaneous Lessons: Improvisation in *Built Surface,*" in *Built Surface* (exh. cat.) (Tallahassee: Florida A&M University, 1998).

13. Thom Mayne made this analogy in response to a question at the conclusion of his lecture "Rice (and Beans)," Rice University, fall 2002.

14. Mona Hadler, "Jazz and the Visual Arts," *Arts Magazine,* June 1983, 91. Hadler writes, "For example, many jazz compositions utilize riffs in which motifs are repeated and varied; call and response patterns where solo instruments often are involved in a dialogue with another instrument or the ensemble; insistent rhythm with syncopation. These stylistic traits are generally consistent with Cubist works and also with other forms of twentieth-century abstraction. In addition, the new expressive sounds of jazz instruments, including growls and varying shades of vibratos, find correlates in the inventive color and texture of certain modern paintings. Finally, the central role of improvisation in jazz is paralleled in the equally important role of the process of much twentieth-century art."

15. I cite Neiman, as he has most extensively referenced jazz in his exploration and production of such work.

16. Asgedom, "Unsounded Space."

17. See Keller Easterling, *Organization Space: Landscapes, Highways, and Houses in America* (Cambridge, Mass.: MIT Press, 1999).

18. Sanford Kwinter, "Politics and Pastoralism," *Assemblage* 27 (August 1995): 31. Kwinter likens the role of the architect in this condition to shepherdry—the architect is like the shepherd, driving his herd, and the shepherd is like the drummer in a jazz quartet. "This new urbanism—it does not plan, it does not precisely or inflexibly impose, and it does not fetishize the integrity and pristine unfolding of the fixed abstract scheme. This new urbanism is a moving urbanism, a pastoral urbanism of inflection."

19. Derek Bailey, *Improvisation: Its Nature and Practice in Music* (New York: Da Capo Press, 1992), x–xi. While he uses the word *improvisation,*

Lawrence "Butch" Morris prefers "to think of an improviser as an intuitor, and the act of improvising as intuiting." See *Testament: A Conduction Collection,* booklet, in Lawrence "Butch" Morris, *Testament: A Conduction Collection,* New World Records 80478-2 (1995), 3.

20. I will shift between using *jazz* and *improvised music* to refer to the music. The shifts will be in part to acknowledge the refusal by many musicians to categorize their music as jazz, while seeking to maintain a relation to yet question the historical understandings and conceptions that have built up around the term *jazz.*

21. Robert Farris Thompson, *Flashes of the Spirit* (New York: Vintage Books, 1984), xiii: "the *dominance of a percussive performance style* (attack and vital aliveness in sound and motion); a propensity for multiple meter (competing meters sounding all at once); *overlapping call and response* in singing (solo/chorus, voice/instrument "interlock systems" of performance); *inner pulse control* (a "metronome sense," keeping a beat indelibly in mind as a rhythmic common denominator in a welter of different meters); *suspended accentuation patterning* (offbeat phrasing of melodic and choreographic accents)."

22. Cecil Taylor, interview by Howard Mandel, *Weekend Edition Saturday,* National Public Radio, 24 April 1994. See also Howard Mandel, "Emperor of the Senses," *The Wire* 124 (June 1994): 22–25.

23. Chris Funkhouser, "Being Matter Ignited: An Interview with Cecil Taylor," *Hambone* 12 (spring 1992). An online copy of the interview may be found at http://wings.buffalo.edu/epc/authors/funkhouser/ceciltaylor.html.

24. Cecil Taylor interviewed in Miya Masaoka, "Innovation, Improvisation," *San Francisco Bay Guardian,* 25 October 2000. An online copy of the interview may be found at http://www.sfbg.com/AandE/35/04/innovation.html.

25. Alexander Tzonis and Liane Lefaivre, *Movement, Structure, and the Work of Santiago Calatrava* (Boston: Birkhäuser, 1995), 156.

26. Ibid., 136. Buell Neidlinger describes the process as one of compression and release that "produces a very forward leaning groove, whereas with a lot of jazz, the rhythm is very straight up and down as it goes along. In CT's music the lines lean more and more forward as they go through the form of 66 or 88 bars or whatever the length some of the tunes are. They lean further and further forward until they release, at which point they stand straight up again at a new plateau, but reproducing the same feeling." *A Conversation with Buell Neidlinger,* booklet, *The Complete Candid Recordings of Cecil Taylor and Buell Neidlinger,* Mosaic Records MR6-127 (1989), 4.

27. Cecil Taylor, "Sound Structure of Subculture Becoming Major Breath/

Naked Fire Gesture," liner notes of Cecil Taylor, *Unit Structures,* Blue Note CDP 7 84237 2 (1987; recorded 19 May 1966).

28. For an extended discussion of how Taylor's music unfolds, see Jost, *Free Jazz,* 66–83.

29. Ted Panken, "Abstraction without Compromise," *Jazziz* 18, no. 6 (2001): 42.

30. A. B. Spellman, *Black Music* (New York: Schocken Books, 1970), 37.

31. Tzonis and Lefaivre, *Movement, Structure, and the Work of Santiago Calatrava,* 81.

32. Cecil Taylor quoted in Nat Hentoff, *Jazz Is* (New York: Limelight Editions, 1992), 231.

33. Panken, "Abstraction without Compromise," 42.

34. Ibid., 43–44.

35. Funkhouser, "Being Matter Ignited."

36. Jost, *Free Jazz,* 83.

37. Valerie Wilmer, *As Serious as Your Life* (London: Serpent's Tail, 2000), 48.

38. Mark Miller, "Cecil Taylor Musician Poet Dancer," *Coda,* June–July 1988, 5.

39. Taylor quoted in Hentoff, *Jazz Is,* 232.

40. Buell Neidlinger, a longtime bassist with Taylor, reflects on the differences in Spellman, *Black Music,* 36–37.

41. *A Conversation with Buell Neidlinger,* booklet, *The Complete Candid Recordings of Cecil Taylor and Buell Neidlinger,* 4. Neidlinger continues by noting the influence of Duke Ellington on Taylor: "Watching Ellington play, you can see where Cecil's balletic style, i.e., rhythm with the whole body, probably came from."

42. Wilmer, *As Serious as Your Life,* 51.

43. Ibid.

44. Bailey, *Improvisation,* ix. Improvisation enjoys the curious distinction of being both the most widely practiced of all musical activities and the least acknowledged and understood. While it is today present in almost every area of music, there is an almost total absence of information about it. Perhaps this is inevitable, even appropriate. Improvisation is always changing and adjusting, never fixed, too elusive for analysis and precise description; essentially nonacademic. More than that, any attempt to describe improvisation must be, in some respects, a misrepresentation, for there is something central to the spirit of voluntary improvisation which is opposed to the aims and contradicts the idea of documentation.

45. Spellman, *Black Music,* 38.

46. Charles Mingus, liner notes of *The Black Saint and the Sinner Lady,* MCA Impulse MCAD-5649 (1986; recorded 20 January 1963).

47. Spellman, *Black Music,* 38.

48. Cecil Taylor quoted in ibid., 66.

49. Spellman, *Black Music,* 38.

50. Cecil Taylor, quoted in Erik Wiedeman, liner notes for Cecil Taylor, *Trance,* Black Lion BLCD760220 (1963); reissued by DA Music (1996).

51. Hadler, "Jazz and the Visual Arts," 92.

52. Harry Holtzman and Martin S. James, eds., *The New Art—the New Life: The Collected Writings of Piet Mondrian* (Boston: G. K. Hall, 1986), 217.

53. Nathaniel Mackey, *Discrepant Engagement: Dissonance, Cross-Culturality, Experimental Writing* (New York: Cambridge University Press, 1993), 3.

54. Christopher Starkey assisted me with the proposal for the King memorial. Darshan Amrit, Sara Stevens, and David Stockwell provided assistance for the Project Row Houses installation.

1. Compositional Imperatives

1. Stuart Davis in Diane Kelder, ed., *Stuart Davis* (New York: Praeger, 1971), 185.

2. See Nancy J. Troy, *Mondrian and Neo-Plasticism in America* (New Haven: Yale University Art Gallery, 1979), 9–10; Holland Cotter, "Abstraction and the True Believer," *Art in America,* November 1995, 73. Cotter notes: "At first the black grids stay in place, though now touched with little tags of color that flutter free at the sides, like jazz clarinet appoggiaturas creating a tension with the underlying bass structure."

3. Harry Holtzman and Martin S. James, eds., *The New Art—the New Life: The Collected Writings of Piet Mondrian* (Boston: G. K. Hall, 1986), 357.

4. Ibid., 116–17. Other essays by Mondrian that consider jazz in relation to neo-plastic music include "Neo-Plasticism: The General Principle of Plastic Equivalence," "The Manifestation of Neo-Plasticism in Music and the Italian Futurists' Bruiteurs," "Neo-Plasticism: Its Realization in Music and in Future Theater," and "Jazz and the Neo-Plastic."

5. Holtzman and James, *New Art—New Life,* 221.

6. Ibid., 217.

7. Troy, *Mondrian and Neo-Plasticism in America,* 5–6.

8. Ulrich Conrads, *Programs and Manifestoes of 20th Century Architecture* (Cambridge, Mass.: MIT Press, 1970), 32.

9. Umbro Apollonio, ed., *Futurist Manifestos* (Boston: MFA Publications, 2001), 169.

10. Ibid.

11. Ibid., 28.

12. Ibid., 94–95.

13. Colin Rowe, *The Mathematics of the Ideal Villa and Other Essays* (Cambridge, Mass: MIT Press, 1995), 160.

14. Apollonio, *Futurist Manifestos,* 92.

15. Holtzman and James, *New Art—New Life,* 217.

16. Apollonio, *Futurist Manifestos,* 92–93. Also see 150–54 for the essay "Absolute Motion + Relative Motion + Dynamism," where Boccioni provides a more in-depth discussion of the two kinds of movement.

17. Holtzman and James, *New Art—New Life,* 217.

18. H. L. C. Jaffé, *De Stijl: 1917–1931: The Dutch Contribution to Modern Art* (Cambridge, Mass.: Belknap Press, 1986), 94–97.

19. Holtzman and James, *New Art—New Life,* 161.

20. Ibid. The bracketed term is inserted by Holtzman and James.

21. Ibid., 144.

22. Ibid., 163.

23. Ibid., 218–19.

24. Max Harrison, "Boogie-Woogie," in *Jazz,* edited by Nat Hentoff and Albert J. McCarthy (New York: Da Capo Press, 1974), 110.

25. Ibid., 110–11.

26. See Valerie Wilmer, *As Serious as Your Life* (London: Serpent's Tail, 2000), 50.

27. Harry Cooper, "Mondrian, Hegel, Boogie," *October* 84 (spring 1998): 136.

28. Jaffé, *De Stijl,* 109.

29. Quoted in Jaffé, *De Stijl,* 108, from Piet Mondrian, *Plastic Art and Pure Plastic Art and Other Essays* (New York: Wittenborn-Schulz, 1945), 20.

30. Holtzman and James, *New Art—New Life,* 110.

31. Ibid., 172.

32. Quoted in Troy, *Mondrian and Neo-Plasticism in America,* 63–64.

33. Ibid., 151.

34. Ibid., 70.

35. Ibid., 112.

36. Ibid., 243.

37. Ibid.

38. Holtzman and James, *New Art—New Life,* 219–22.

39. James Snead, "Repetition as a Figure of Black Culture," in *Out There: Marginalization in Contemporary Culture,* edited by Russell Ferguson, Martha Gever, Trinh T. Minh-ha, and Cornel West (New York: New Museum of Contemporary Art; Cambridge, Mass.: MIT Press, 1990), 221.

40. Ibid.

41. Ibid., 220.

42. Quoted in Daniel Belgrad, *The Culture of Spontaneity: Improvisation and the Arts in Postwar America* (Chicago: University of Chicago Press, 1998), 184.

43. Quoted in Nat Hentoff, liner notes of *Charles Mingus Presents Charles Mingus,* Candid 9005 (1961).

44. Leroi Jones [Amiri Baraka], *Blues People* (New York: Morrow, 1963), 153.

45. Leo Smith, "Beyond Categories," in *Keeping Time: Readings in Jazz History,* edited by Robert Walser (New York: Oxford University Press, 1999), 322.

46. Michel Ratté, "Improvisation as Form," *Resonance* 6, no. 1 (1997): 30.

47. Graham Locke, *Forces in Motion: Anthony Braxton and the Metareality of Creative Music* (London: Quartet Books, 1988), 233.

48. Holtzman and James, *New Art—New Life,* 221.

49. Quoted in Yve-Alain Bois, "Mondrian and the Theory of Architecture," *Assemblage* 4 (October 1987): 106.

50. Holtzman and James, *New Art—New Life,* 221.

51. Bois, "Mondrian and the Theory of Architecture," 117.

52. Ratté, "Improvisation as Form," 30.

53. Jacques Attali, *Noise: The Political Economy of Music* (Minneapolis: University of Minnesota Press, 1985), 143.

54. Ralph Ellison, *Shadow and Act* (New York: Random House, 1964), 78.

2. What Is the Body Supposed to Be Doing?

1. John Cage, *Silence* (Middletown, Conn.: Wesleyan University Press, 1973), 5.

2. Ibid., 63n.2.

3. Ibid., 63 (from note 3 in the essay "Forerunners of Modern Music," originally published in March 1949), also 5; and Richard Kostelanetz, ed., *John Cage* (New York: Praeger, 1970), 162, where Cage also points out the consideration of timbre—that groups have distinctive sounds rather than seek to sound, like most orchestras, the same.

4. Cage, *Silence,* 72. Also see George Lewis, "Improvised Music after 1950: Afrological and Eurological Perspectives," *Black Music Research Journal* 16, no. 1 (spring 1996): 98–99, regarding Cage's denunciation of jazz.

5. Tom Johnson quoted in Lewis, "Improvised Music after 1950," 115.

6. Cage, *Silence,* 15.

7. Lewis, "Improvised Music after 1950," 97; also see Cage, *Silence,* 39.

8. Cage, *Silence,* 28.

9. Ibid., 9.

10. Ibid., 11.

11. Quoted in Richard Kostelanetz, *John Cage (ex)plain(ed)* (New York: Schirmer Books, 1996), 12.

12. Cage, *Silence,* 35, 28, 40, 15.

13. Kostelanetz, *John Cage,* 163.

14. Ibid. Also see Lewis, "Improvised Music after 1950," 103–4.

15. Kostelanetz, *John Cage,* 162.

16. See Branden Joseph, "John Cage and the Architecture of Silence," *October* 81 (summer 1997): 95–97, for an extended discussion of repetition.

17. See Jacques Attali, *Noise: The Political Economy of Music* (Minneapolis: University of Minnesota Press, 1985), 87–132, for an extended discussion of the development of recording technologies and the transformative shifts that they entail. Attali specifically discusses jazz in relation to these shifts (103–4).

18. Lewis, "Improvised Music after 1950," 107. Lewis continues by questioning why Cage is given the authority to speak definitively about jazz.

19. Cage, *Silence,* 59: "musical composition the continuity of which is free of individual taste and memory (psychology) and also of the literature and 'traditions' of the art."

20. Ibid., 62, 69.

21. Quoted in Lewis, "Improvised Music after 1950," 118.

22. Ibid., 107.

23. John Corbett, "Ephemera Underscored: Writing around Free Improvisation," in *Jazz among the Discourses,* edited by Krin Gabbard (Durham, N.C.: Duke University Press, 1995), 227.

24. See Christopher Small, *Music of the Common Tongue* (New York: Riverrun Press, 1994), 281–86.

25. Taylor, who is classically trained, is of particular note in this respect. Bassist Buell Neidlinger has noted that there is a difference between the way Taylor plays the interior of the piano and the way that Cage, Cristian Wolff, Karlheinz Stockhausen, or Mauricio Kagel would play the interior of the piano. See A. B. Spellman, *Black Music* (New York: Schocken Books, 1970), 36–37.

26. Corbett, "Ephemera Underscored," 229.

27. Small, *Music of the Common Tongue,* 232.

28. Nathaniel Mackey, *Discrepant Engagement: Dissonance, Cross-Culturality, and Experimental Writing* (New York: Cambridge University Press, 1993), 269.

29. Ibid., also see Small, *Music of the Common Tongue,* 91–92, for an extended quote of the same passage.

30. Mackey, *Discrepant Engagement,* 275–76.

31. Corbett, "Ephemera Underscored," 229.

32. Francis Davis, liner notes of Roscoe Mitchell and the Sound Ensemble, *Live at the Knitting Factory,* Black Saint 120120-2 (1990).

33. See liner notes of Roscoe Mitchell, *L-R-G, The Maze, SII Examples,* Nessa Records NCD-14 (1978).

34. Ibid.

35. In reference to another Mitchell composition, "Cards," Stuart Broomer, in his liner notes, "The Roscoe Mitchell Quartet," for Roscoe Mitchell, *Quartet,* Sackville SKCD2-2009 (2002), comments that Cage has influenced aspects of Mitchell's compositional interests. However, there is a difference in intent. In the liner notes of *Song for My Sister,* Pi Recordings PI03 (2002), Mitchell explains that "The Card Catalog" is "a series of cards I developed to address the common problems of the inexperienced improviser." The cards give "the players the information to be played and the ability to arrange this information in several different ways." See Ronald Radano, *New Musical Figurations: Anthony Braxton's Cultural Critique* (Chicago: University of Chicago Press, 1993), 109–31, for an extended discussion of the influences of modernist concert music on free jazz and improvised music developments.

36. Liner notes of Roscoe Mitchell, *L-R-G, The Maze, SII Examples,* Nessa Records NCD-14 (1978).

37. Spellman, *Black Music,* 31. Also see Ben Sidran, *Talking Jazz: An Oral History* (New York: Da Capo Press, 1995), 4–6; and Derek Bailey, *Improvisation: Its Nature and Practice in Music* (New York: Da Capo Press, 1992), 98–102, regarding technique.

38. Leo Smith, "Creative Music and the AACM," in *Keeping Time,* edited by Robert Walser (New York: Oxford University Press, 1999), 320.

39. Corbett, "Ephemera Underscored," 229–30.

40. Ibid., 226–28.

41. I have seen the examples I provide here. See Corbett, "Ephemera Underscored," 231, for some other examples.

42. For a series of descriptions regarding Kirk's various instrument reassemblies, see John Kruth, *Bright Moments: The Life and Legacy of Rahsaan Roland Kirk* (New York: Welcome Rain Publishers, 2000), 83.

43. Quoted in ibid., 85.

44. Yusef Lateef, quoted in ibid., 88, states: "He was writing at the keyboard and he was telling me there were notes he wanted to incorporate, certain passages that he didn't have enough fingers to represent. So I suggested

he put a pencil in his mouth and play the extra note with it that way and he did!"

45. Mackey, *Discrepant Engagement,* 275–76.

46. Ralph Ellison, *Shadow and Act* (New York: Random House, 1964), 234.

47. Corbett, "Ephemera Underscored," 223, summarizes Evan Parker's comments on the risk of improvisation.

48. Lewis, "Improvised Music after 1950," 114.

49. Ibid., 117.

50. Corbett, "Ephemera Underscored," 236.

51. Byard Lancaster, quoted in Kruth, *Bright Moments,* 86, reveals that Kirk "would tape a radio to the microphone and turn the radio on. He'd turn it to any station. It wasn't about the station, or the music, it was simply a sound source."

52. Kostelanetz, *John Cage (ex)plain(ed),* 9.

53. Ibid., 14.

54. Ibid., 9.

55. Quoted in Andrew Kagan, "Improvisations: Notes on Jackson Pollock and the Black Contribution to American High Culture," *Arts Magazine,* March 1979, 97. Kagan states: "It is not surprising that his taste in music should have run to a form of immediate emotional expression, an improvisatory form in which authenticity of feeling mattered even more than technique, though virtuoso technique was essential. Jazz voiced the passions of a passionate person. In 'hot' jazz, the emotional extreme was the desiderata, not the state of inhibition, temper, and balance. 'Cool' jazz also allowed for the discharge of intense feeling, but in a more restrained manner. Pollock evidently found release for his torments in this music, and he dreamt of finding a similar catharsis in visual art."

56. Chad Mandeles, "Jackson Pollock and Jazz: Structural Parallels," *Arts Magazine,* October 1981, 139–40.

57. Kagan, "Improvisations," 97; and Mandeles, "Jackson Pollock and Jazz," 140.

58. Quoted in Mandeles, "Jackson Pollock and Jazz," 140. Mandeles states: "Indeed, it is in this spontaneous method of pouring paint, of simultaneously composing and performing, if you will, that Pollock is closest to jazz improvisation. That is to say, while jazz musicians often rely on improvisatory method to embellish preexistent or preconceived compositions, some forms of jazz are essentially improvised. Ornette Coleman's recording session for the 1960 album *Free Jazz,* for example, joined two quartets for 36 minutes and 23 seconds in an unrehearsed improvisation, without a harmonically structured design or even a premeditated form."

59. Kostelanetz, *John Cage (ex)plain(ed),* 35–36.

60. Kostelanetz, *John Cage,* 163–64.

61. Cage, *Silence,* 40.

62. Kostelanetz, *John Cage (ex)plain(ed),* 18.

63. See Kostelanetz, *John Cage (ex)plain(ed),* 143, regarding false moves by performers of Europera.

64. For an extended analysis of the ways in which Cage's work, as a result, reinforces capitalist culture, see Small, *Music of the Common Tongue,* 345–47.

65. Kostelanetz, *John Cage (ex)plain(ed),* 97. Cage comments on Le Corbusier's architecture, "Art this is called. Its shape is tyranny."

66. Liner notes, *Music of Edgard Varèse,* One Way Records A 26791 (1996).

67. Ibid. Also see Marc Treib, *Space Calculated in Seconds: The Philips Pavilion, Le Corbusier, Edgard Varèse* (Princeton: Princeton University Press, 1996), for an extensive documentation and study of all facets of the project.

68. See Kostelanetz, *John Cage (ex)plain(ed),* 99–104.

69. See Don Heckman, liner notes of *Rip, Rig and Panic/Now Please Don't You Cry, Beautiful Edith,* Polygram 832 164-2 (1990; originally released on Limelight). Kirk notes: "When the glass breaks it reminds me of a time when I was about 17 and I used to sit in the hallway at home practicing those double and triple stops. It was the kind of hallway where there are decorations and stuff. Once when I played a certain harmonic a glass vase fell off the shelf. I don't know if the wind caused it or I did but it stuck in my mind and I decided to do this piece. The ending was done with an amplifier; I can shake it in a certain way to get those sounds. It was inspired by the music of Edgard Varèse.

"Rip means Rip Van Winkle [or Rest in Peace?]. It's the way people, even musicians, are. They're asleep. Rig means like rigor mortis. That's where a lot of people's minds are. When they hear me doing things they didn't think I could do they panic in their minds. They all say, 'Well, I didn't know this kind of thing could happen.' Actually, I was doing some things like this when I was in Ohio, but I lost work because people didn't want to hear this kind of music.

"I'm trying to be a musician and represent all phases of music. Even the hippies say 'What is that?' when I do my electronic stuff. They think that since I play two or three horns that I'm not doing anything. Since they don't know what style of music I really represent they can't pin me down."

70. For a more complete description see the liner notes of George E. Lewis, *Voyager,* AVAN 014 (1993). Also see George Lewis, "Person to . . . Person?" *Resonance* 6, no. 1 (November 1997): 32–34.

71. Lewis, "Improvised Music after 1950," *Black Music Research Journal* 1 (1996): 117.

3. Now's the Time

1. Later titles by musicians would continue this play on the strengths and weaknesses of language. Roscoe Mitchell's "TKHKE" and Cecil Taylor's "Taht" play with the utility of two of the primary words used in the English language for specific designation.

2. See Winston Smith, "Let's Call This: Race, Writing, and Difference in Jazz," *Public* 4–5 (1990–91): 71–82, for an extended discussion of the word play in jazz titles by such musicians as Monk and Parker, and their links to literature.

3. William H. Kenney, "Negotiating the Color Line: Louis Armstrong's Autobiographies," in *Jazz in Mind: Essays on the History and Meanings of Jazz,* edited by Reginald T. Buckner and Steven Weiland (Detroit: Wayne State University Press, 1991), 39.

4. Ibid., 43, 45, 56.

5. David Meltzer, ed., *Reading Jazz* (San Francisco: Mercury House, 1993), 26, notes that such assumptions were indicative of the era: "The invented category of 'primitive,' opposed to the 'civilized,' was associated, on the eve of the Modernist revolt and World War I, with new trends in avant-garde European art and poetry that discovered, if not ancestry, a kinship in African art as a precursor. Jazz was embraced with the same cultural mix of enthusiastic assumptions: Africa was in America expressing a fusion of tribal and European martial musics. Jazz enabled white moderns to live in the best of both imaginary worlds: the old and new, the savage and the civilized."

6. Le Corbusier, *When the Cathedrals Were White* (New York: Reynal & Hitchcock, 1947), 158.

7. Ibid., 159, 161. Le Corbusier goes on to state, "Jazz, like the skyscrapers, is an event and not a deliberately conceived creation. They represent the forces of today. The jazz is more advanced than the architecture. If architecture were at the point reached by jazz, it would be an incredible spectacle. I repeat: Manhattan is hot jazz in stone and steel. The contemporary renewal has to attach itself to some point. The Negroes have fixed that point through music. Their simple spirit has caused the reformation to spring up from the depths and has situated it in our own times" (162).

8. Ibid., 159.

9. Ibid., 158–61.

10. Ibid., 161–62.

11. Ibid., 160–61.

12. Ibid., 158, 161.

13. Ibid., 33–34.

14. Ibid., 35, 162, 164.

15. Richard Sennett, *The Conscience of the Eye* (New York: W. W. Norton, 1990), 173.

16. George Kubler, *The Shape of Time: Remarks on the History of Things* (New Haven: Yale University Press, 1962), 124.

17. At the outset of the chapter (159), Le Corbusier comments on the poor living conditions of black laborers in New York and Chicago: "They live, crowded together, in Harlem or Chicago, in slums near the skyscrapers. They serve in Pullmans, in coaches, in all-night bars." However, he does not discuss how his design addresses the condition of laborers. See Mabel O. Wilson, "Black Bodies/White Cities: Le Corbusier in Harlem," *ANY* 16 (1996): 38–39, for an account of their implied position.

18. Le Corbusier, *When the Cathedrals Were White,* 160.

19. Ibid., 164.

20. Marie Cardinal, *The Words to Say It* (Cambridge, Mass.: VanVactor & Goodheart, 1983), 39–40. Cardinal continues, "'I'm going to die, I'm going to die, I'm going to die.' My heart was beating to the rapid tempo of the music." Also see Toni Morrison, *Playing in the Dark: Whiteness and the Literary Imagination* (Cambridge, Mass.: Harvard University Press, 1992), vi–vii.

21. Esten Spurrier quoted in Philip R. Evans and Richard M. Sudhalter, *Bix: Man and Legend,* 51. Excerpted in Lewis Porter and Michael Ullman, with Edward Hazell, *Jazz: From Its Origins to the Present* (Englewood Cliffs, N.J.: Prentice Hall, 1993), 57.

22. James Lincoln Collier, *Louis Armstrong, an American Genius* (New York: Oxford University Press, 1983), 40.

23. Ralph Ellison, *Invisible Man* (New York: Random House, 1964), 8.

24. Ralph Ellison, *Shadow and Act* (New York: Random House, 1964), 234.

25. See Morrison, *Playing in the Dark,* vii; and Wilson, "Black Bodies/White Cities," 35–39.

26. Dwight Andrews, lecture at Emory University, Atlanta, spring 1996.

27. Focillon states, "Le passé ne sert qu'à connaître l'actualité. Mais l'actualité m'échappe. *Qu'est-ce que c'est donc que l'actualité?*" (The past serves only to know actuality. But actuality escapes me. So what is actuality?). Quoted in Kubler, *Shape of Time,* 16–17.

28. Stephen Nachmanovitch, *Free Play: Improvisation in Life and Art* (New York: Jeremy Tarcher/Putnam, 1990), 18.

29. John Corbett summarizes Evan Parker's discussion of the risk of improvisation in "Ephemera Underscored: Writing around Free Improvisation," in *Jazz among the Discourses,* edited by Krin Gabbard (Durham: Duke University Press, 1995), 223.

30. Quoted in Guy Debord, translated by Donald Nicholson-Smith, *The Society of the Spectacle* (New York: Zone Books, 1995), para. 161, 115–16.

31. Harry Holtzman and Martin S. James, eds., *The New Art—the New Life: The Collected Writings of Piet Mondrian* (Boston: G. K. Hall, 1986), 221. Also see Meltzer, *Reading Jazz,* 30: "the music practice also has levels of attention, cooperation, regard and play that is unfound in most workplaces."

32. W. Boesiger, ed., *Le Corbusier, Oeuvres Complètes,* vol. 7, *Le Corbusier, 1957–1965* (Zurich: Les Editions d'Architecture Zurich, 1965), 54: "The structure of concrete and glass is a demonstration of Le Corbusier's theories and contains a wealth of his lifelong basic ideas: the mutual interpenetration of exterior and interior space, the use of rough concrete, a ramp which connects two streets above the third floor, free-standing structural columns on each of the five floors and *brise-soleil.*"

33. Ibid.: "The problem consisted of creating the circulation, places of work, to find surfaces and lighting and, the most difficult of all, it consisted of inserting all of this in so little space."

34. Eduard Sekler and William Curtis, *Le Corbusier at Work* (Cambridge, Mass.: Harvard University Press, 1978), 50.

35. Ibid., 51: "sound as audible equivalent to the kinesthetic sensations by plastic architecture compositions, rhythmical, spatial and formal. He thought of buildings as field forces of energy, emanating their effects into surrounding spaces and objects."

36. Le Corbusier, *The City of Tomorrow* (Cambridge, Mass.: MIT Press, 1971), 11.

37. Le Corbusier, *When the Cathedrals Were White,* 105.

38. Sekler and Curtis, *Le Corbusier at Work,* 52.

39. See Stan Allen, "Le Corbusier and the Modernist Movement," *ANY* 1, no. 5 (March–April 1994): 42–47.

40. See Kubler, *Shape of Time,* 83–122.

41. Ibid., 99.

42. Pamela M. Lee, "Some Kinds of Duration: The Temporality of Drawing as Process Art," in *Afterimage: Drawing through Process,* edited by Cornelia H. Butler (Los Angeles: Museum of Contemporary Art; Cambridge, Mass.: MIT Press, 1999), 25–28. Lee categorizes these last three as "interchronic" durations, and provides further description (*entropic,* decay or dispersal from order; *transitive,* transitions or change of state; *contingent,* alert to change) as she analyzes the actualities of drawing.

43. Kubler, *Shape of Time,* 96.

44. Ibid., 99. Kubler notes that his "main interest is in the shapes and forms of those durations which either are longer than single human lives,

or which require the time of more than one person as collective durations." Along similar lines, Fernand Braudel has proposed that from a historical standpoint, there are at least three kinds of time—geographic, social, and human; see Dana Cuff, *The Provisional City: Los Angeles Stories of Architecture and Urbanism* (Cambridge, Mass.: MIT Press, 2000), 43. To these three Cuff proposes a fourth, urban time.

4. Function, Flexibility, and Improvisation

1. Leroi Jones (Amiri Baraka), *Blues People* (New York: Morrow, 1963), 212–13.

2. Quoted in Lewis Porter and Michael Ullman, *Jazz: From Its Origins to the Present* (Englewood Cliffs, N.J.: Prentice Hall, 1993), 117.

3. Ronald M. Radano, *New Musical Figurations: Anthony Braxton's Cultural Critique* (Chicago: University of Chicago Press, 1993), 79.

4. Michael Blackwood, *Mies,* Michael Blackwood Productions, 1985, videocassette.

5. K. Michael Hays, "Critical Architecture: Between Culture and Form," *Perspecta* 21 (1984): 21.

6. Blackwood, *Mies.*

7. Gerald Early, "Decoding Ralph Ellison," *Dissent,* summer 1997, 114.

8. Ralph Ellison, *Invisible Man* (New York: Vintage Press, 1972), 568.

9. Muhal Richard Abrams and John Shenoy Jackson, "The Association for the Advancement of Creative Musicians," *Black World,* November 1973, 74.

10. See Radano, *New Musical Figurations,* 91–99, for a comprehensive discussion of the political, social, and artistic environment that surrounded the AACM.

11. See Ekkehard Jost, *Free Jazz* (New York: Da Capo, 1994), 171–73, for an extended discussion of the AACM's use of spoken word and stage action in music.

12. George Lewis, "Singing Omar's Song: A (Re)construction of Great Black Music," *Lenox Avenue* 4 (1998): 78–79.

13. Henry Threadgill quoted in John Litweiler, *The Freedom Principle: Jazz after 1958* (New York: Da Capo, 1984), 193–94.

14. Jacques Attali, *Noise: The Political Economy of Music* (Minneapolis: University of Minnesota Press, 1985), 138.

15. "Technical knowledge of music theory and of one's instrument as well as thorough attention to the background, history, and culture of one's music": George E. Lewis, "Improvised Music after 1950: Afrological and Eurological Perspectives," *Black Music Research Journal* 1 (1996): 114.

16. Hays, "Critical Architecture," 22: "Distinguishing architecture from the forces that influence architecture—the conditions established by the market and by taste, the personal aspirations of its author, its technical origins, even its purpose as defined by its own tradition—became the objective of Mies."

17. Ibid.

18. Ibid., 26.

19. Manfredo Tafuri and Francesco Dal Co, translated by Robert Wolf, *Modern Architecture* (New York: Electa/Rizzoli, 1986), 1: 133–35. For elaboration, see 2: 309–14.

20. See Branden Joseph, "John Cage and the Architecture of Silence," *October* 81 (summer 1997): 95–97, for an extended discussion of repetition.

21. Walter Benjamin, *Illuminations* (New York: Schocken Books, 1969), 223.

22. Ibid., 225.

23. Ibid., 227.

24. Attali, *Noise,* 139.

25. Ibid., 140 (emphasis in original).

26. Leo Smith, "Beyond Categories," in *Keeping Time: Readings in Jazz History,* edited by Robert Walser (New York: Oxford University Press, 1999), 317.

27. Litweiler, *Freedom Principle,* 179.

28. Ibid., 142, 144–45, 137.

29. See "Design after Mies," *ANY* 24 (1999).

30. See Robert Somol, "Five Easy Mies," *ANY* 24 (1999): 20–27.

31. Quoted in *ANY* 24 (1999): 46.

32. See Ed Mitchell, "This Is Only a Test," *ANY* 24 (1999): 33.

33. See Dan Hoffman, "The Receding Horizon of Mies—Work of the Cranbrook Architecture Studio," in *The Presence of Mies,* edited by Detlef Mertins (New York: Princeton Architectural Press, 1994), 116.

34. Dana Cuff, *The Provisional City* (Cambridge, Mass.: MIT Press, 2000), 37–39. Also see 13.

35. "The convulsive growth of cities and the fugitive quality that large-scale undertakings lend to them" (67). See Cuff, *Provisional City,* 11–14, for an overview of the effects and qualities of large-scale urban projects.

36. Ibid., 15.

37. This is felt in the danger on campus. See Mitchell, "This Is Only a Test," 30: "the connoisseur's appreciation of an exquisite corner detail pales next to the fear of being rolled and left for dead until morning."

38. Cuff, *Provisional City,* 44.

39. Property rights, Cuff identifies, are quite complex factors—a proliferation of claims regarding various rights and duties asserted by an increasing number of agents and organizations. These proliferating claims result from a shift in the political economy of property.

40. These are all roles identified by students in a design studio at Rice University that I taught in spring 2003. The studio was held in response to a neighborhood association in Houston that is looking to start a community land trust in the same area that Cuff references in *The Provisional City.*

Conclusion

1. Graham Locke, *Forces in Motion: Anthony Braxton and the Metareality of Creative Music* (London: Quartet Books, 1988), 261–62.

2. Ibid., 263–64.

3. Ibid., 232.

4. Braxton describes the process and offers the number of sound classifications in the liner notes of Anthony Braxton, *Five Compositions (Quartet) 1986,* Black Saint BSR 0106 CD (1986). The notes from August 1987 indicate a feverish development between that writing and Graham Locke's travels and study of Braxton in November 1985, when the number of language types was more than a hundred. See Locke, *Forces in Motion,* 321.

5. Locke, *Forces in Motion,* 321.

6. Ibid., 232.

7. See *ANY* 23 ("Diagram Matters"); *Daidalos* 74 ("Diagrammania"); and *OASE* 48 for journal-length presentations of the diagram.

8. See Sanford Kwinter, "The Genealogy of Models: The Hammer and the Song"; and Robert Somol, "The Diagrams of Matter"; both in *ANY* 23.

9. Braxton, *Five Compositions (Quartet) 1986.*

10. Robert Farris Thompson, *Flashes of the Spirit* (New York: Vintage Books, 1984), xiii.

11. Leroi Jones (Amiri Baraka), *Black Music* (New York: Quill, 1967), 143.

12. Nathaniel Mackey, *Discrepant Engagement: Dissonance, Cross-Culturality, and Experimental Writing* (New York: Cambridge University Press, 1993), 274.

13. Ibid., 5.

14. Paul Gilroy's "black Atlantic," a formulation of the black diaspora emphasizing oceanic links rather than nationality, is an example. See Paul

Gilroy, *The Black Atlantic: Modernity and Double Consciousness* (Cambridge, Mass.: Harvard University Press, 1993).

15. Braziel and Mannur, *Theorizing Diaspora* (Malden, Mass.: Blackwell Publishing, 2003), 8.

16. Ibid., 10–11. Braziel and Mannur summarize globalization as follows: "We have entered a period of historical globalization where in multinational corporations, export industry, and manufacturing jobs, economic migrants stay home and migrate, and the international division of labor more sharply divides *those who have* and *those who have not,* even as it simultaneously rigidifies and erodes First World/Third World economic divisions, creating 'first-world zones' in formerly 'developing' countries and 'third-world zones' in supposed 'First World' nations."

17. "Testament: A Conduction Collection," booklet in Lawrence "Butch" Morris, *Testament: A Conduction Collection,* New World Records 80478-2 (1995), 8–12.

18. Ibid., 8, 10, 11–12.

19. Ibid., 9. Also see Attali, *Noise,* 143. The meaning of such play, Attali points out, is not *a priori* but is in the decision of those playing and listening to invest it with meaning.

20. "Testament: A Conduction Collection," booklet in Lawrence "Butch" Morris, *Testament: A Conduction Collection,* 9.

21. Ibid., 8.

22. Ibid.

23. Ibid., 11, 8.

24. See Mackey, *Discrepant Engagement,* 267, 276. Mackey links Coltrane's playing to the sense of infinite variation found in the novel *The Infinite Rehearsal* by Wilson Harris.

25. David Such, *Avant-Garde Jazz Musicians: Performing "Out There"* (Iowa City: University of Iowa Press, 1993), 141–42.

26. Paul Berliner, *Thinking in Jazz: The Infinite Art of Improvisation* (Chicago: University of Chicago Press, 1994), 217.

27. "Testament: A Conduction Collection," booklet in Lawrence "Butch" Morris, *Testament: A Conduction Collection,* 8.

28. Allan Graubard, "Theater through Music," liner notes of Lawrence "Butch" Morris, *Testament: A Conduction Collection,* New World Records 80478-2 (1995), 18.

29. See Keller Easterling, *Organization Space: Landscapes, Highways, and Houses in America* (Cambridge, Mass.: MIT Press, 1999), 3. Easterling also states that many organizational logics can have improvisational sites within them, and she suggests such locations as potential sites for ar-

chitecture as well as sites that are suggestive of an active and inventive practice of architecture. See 4–5. In the proposition here, the intent is to suggest that architecture can in fact structure such sites.

30. All of these have been proposed to me by various individuals while I was researching and writing this book.

31. Braxton quoted in Locke, *Forces in Motion,* 232.

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