

One Line, Many Views:  
Perspectives on Music Theory, Composition, and  
Improvisation through the Work of Muhal Richard Abrams

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## ABSTRACT

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This dissertation examines aspects of the creative practice of Muhal Richard Abrams, composer, improviser, pianist, and cofounder of the Association for the Advancement of Creative Musicians (AACM). Abrams's work intersects with various facets of creative music. I focus on free improvisation, both as a stand-alone performance and in conjunction with through-composed music, his engagement with writings by theorist Joseph Schillinger, and his work as a composer. This study provides an historical overview of Abrams's life and output, supplies analytical accounts of his music and creative practice, contributes to critical issues in music theory and analysis through these examinations, and diversifies the music, musicians, and topics that comprise the discipline of music theory.

My examinations position Abrams as an important figure in twentieth-century music, both improvised and composed, and expand studies in music theory and analysis. I offer new perspectives on and a framework for the analysis of free improvisation and intra-ensemble interaction, challenge traditional binaries between music theory and black experimental music, explore the influence of Schillinger's theoretical treatise, *The Schillinger System of Musical Composition* ([1946] 1978), on Abrams's work as a composer, explicate a set of idiosyncratic theoretical publications to

suggest an underground genealogy of music theory, and posit an analytical vista that sits at the intersection of music performance, disability, and critical race studies.

My overview of Abrams's life and work draws on historical scholarship to tease out details of his development and practice in Chicago and New York, and analyzes contemporaneous articles from magazines, newspapers, and journals in order to provide a snapshot of the reception of Abrams's work and the various scenes that he traversed. In response to Abrams's individual approach to interactive free improvisation, which functions as either a stand-alone performance or alongside composed music, I employ the concept of affordances from ecological psychology. My affordance-based analytical framework facilitates a reappraisal of musicians' interactions during free improvisation and also theorizes the relationship that emerges when free improvisation is preceded and/or followed by composed material. I analyze Abrams's improvised duet with Fred Anderson, "Focus, ThruTime...Time—>" (2011) and his quartet rendition of "Munktmunk" (1987) to illustrate my framework and elucidate the richness of these performances.

I perform a close reading of Schillinger's theoretical treatise to suggest resonances between Abrams's creative practice and the text. I do not aim to elect Schillinger as a kind of fountainhead for Abrams's practice. Rather, I argue that the numerous resonances between Schillinger's text and Abrams's practice connote reasons why the treatise strongly appealed to Abrams, such that he employed it both compositionally and pedagogically for a large portion of his life. I extrapolate from this discussion to outline and theorize an underground genealogy of music theory that represents a more diverse set of music-theoretical practices than is often discussed in the discipline.

Finally, I analyze composed portions of four works by Abrams: “Inner Lights” (1985), “Charlie in the Parker” (1977), “Hearinga” (1989), and “Piano Duet #1” (1987). My analyses of the first three of these pieces intimate the presence of some of Schillinger’s theoretical principles. Abrams does not simply realize Schillinger’s theoretical method in his work, but rather maintains artistic agency by selectively filtering those suggestions through his own pluralistic aesthetic. Finally, I combine recent work on disability in music and critical race theory to analyze “Piano Duet #1,” in which the two pianists’ bodies are restricted in performance. This analysis offers a generative reappraisal of music performance and disability studies in light of race while also elucidating some of the richness of Abrams’s composition.

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This dissertation is dedicated to the memories of Allan Browne and David Tolley.

# 1—Introduction

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*The way to survive is to stop trying to be like other people and just follow the thought of who you are. You receive things you need through the process of thought. These experiences and ideas come from inside and that's why they are humanizing.*

—Muhai Richard Abrams (Abrams, Baker, and Ellison 1973, 105)

## Attuning

On two consecutive Sundays in 2016, December 11 and 18, Muhai Richard Abrams took the rare step of inviting the general public to two rehearsals of his newly formed big band. The group comprised both old and new associates, and the group workshopped material that I knew from recordings, such as “Big T,” and “Ritob,” as well as pieces that I had not heard before, such as “A” and “New Vein.”<sup>1</sup> Rehearsals began at 11 am, and the New York winter weather meant that both musicians and instruments took some time to warm up. At the beginning of the second rehearsal, Abrams suggested that the brass and woodwinds “tune up.”

In place of the usual single tuning note, however, Abrams looked down at some paper on his music stand and started assigning pitches to players. The musicians, who probably expected to tune in a conventional fashion, were suddenly scrambling to make

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<sup>1</sup> Rehearsals took place at Carroll Rehearsal Studios, 625 West 55th Street, New York. The advertisement for these rehearsals lists the following personnel: Tom Hamilton (electronics), Marty Ehrlich (reeds), Ned Rothenberg (reeds), Ingrid Laubrock (reeds), James Stewart (reeds), Scott Robinson (reeds), Herb Robertson (trumpet), Nate Wooley (trumpet), Josh Evans (trumpet), Nabaté Isles (trumpet), Steve Swell (trombone), Alfred Patterson (trombone), Rick Parker (trombone), Jose Davila (trombone and tuba), Richard Sears (piano), Bryan Carrott (vibes), Dean Torrey (bass), Reggie Nicholson (drums), Muhai Richard Abrams (composer/conductor).

sense of Abrams's directions. It gradually emerged that Abrams was constructing four thirteen-note chords, which he described as alternating between having "tension" and "no tension," and that these chords and their progression constituted his "tune up": "let's see what kind of sound we're getting as a unit," he said immediately before the band played through the chords.

Abrams's harmonies sounded to me as though they contained polytonal triads, pitch-class clusters, and symmetrical harmonies. He requested that each section play the chords in isolation: trumpets, trombones, and saxophones. Then he asked for saxophones with trombones, then brass together, then saxophones with trumpets. Finally, he asked everyone to play through these four chords together. He emphasized listening to one another, especially for each section to listen to their section leader, and to focus on their "degree of projection."

"The beginning must grab us, put us in the right mood," suggests philosopher Lydia Goehr (2015, [2]). In contrast to every other big-band "tuning up" that I have witnessed or participated in, where every musician in the band adjusts their tuning in relation to a pitch given by one instrument (similar to the oboe's A4 in an orchestral setting), Abrams's preparatory exercise represents a departure from convention, one that testifies to his emphasis on individualism and personal creativity. Abrams's "attuning/tuning up" forgoes a hierarchical arrangement whereby every instrument adheres to a single, given pitch and instead prepares the musicians by attuning them to one another via multivalent harmonic relationships. If "tuning" represents deference to a single, given reference point, then Abrams's "attuning" foregrounds relationality and intra-ensemble attention.

The rehearsals contained multiple moments that testify to Abrams's emphasis on

individuality, his wisdom and enthusiasm as a leader, and the musicians' veneration of him. When drummer Reggie Nicholson leaned over to the bassist Dean Torrey and told him not to "walk" during a particular section, Abrams intervened so that Torrey could retain creative freedom during the section: "No! Let him do what he wants!" At another moment when a musician asked Abrams what he wanted for a particular improvisation, he simply responded, "I trust you...I wouldn't have called you otherwise...In that space, you can do whatever, you don't have to be in a hurry, all the space that you leave is part of the continuum." Following a moment of confusion in the piece "A" when tuba, bass, drums, and vibraphone played a section at half the tempo of the rest of the band, Abrams suddenly stopped the group not to correct the section, but to get the band to write that arrangement into their charts, thus completely transforming the piece. During the second run-through of "Big T," a slow three-chord slow blues in 12/8 dedicated to Thad Jones, Abrams danced in front the band, yelling encouragement at the various soloists: "Yeah, come on!" Abrams's joy seemed palpable to many of the performers, who smiled back at him and seemed to relax into the music.

Abrams's music and his emphasis on individuality in these rehearsals express some of key themes of this dissertation. One cannot reduce Abrams's music to a single genre or style, restricted set of harmonic or rhythmic elements, or typical formal arrangements. His idiosyncratic approach to harmony, rhythm, melody, and orchestration, in both improvisational and compositional domains, embodies decades of study, practice, and collaboration but to my knowledge has yet to be examined or responded to from a music theoretical perspective.

This dissertation addresses some of the complexities of Abrams's music. Chapters 2 and 3 focus on improvisation and Chapters 4 and 5 focus on composition.

My goals for this dissertation are to provide robust and nuanced accounts of Abrams’s music and creative practice, and intervene in and contribute to critical issues in music theory and analysis through these examinations. I offer new perspectives on and a framework for the analysis of free improvisation (both as a discrete performance and in relation to precursive or subsequent composed material) and intra-ensemble interaction, challenge simplistic binaries between music theory and black experimental music, explicate idiosyncratic theoretical treatises to suggest an underground genealogy of music theory, and posit an analytical vista that sits at the intersection of embodied music performance, disability, and critical race studies. Abrams’s music and creative practice prompts these contributions, which also constitute interventions into the field of music theory and analysis more broadly. A final contribution of this dissertation is to diversify the music, musicians, and topics that comprise the discipline of music theory and analysis. I elaborate on this goal below. Suffice to say that my contributions in this dissertation resonate with issues in the discipline beyond their instantiations in Abrams’s creative practice.

## **Chapter Summaries**

Abrams, like many of his peers in the Association for the Advancement of Creative Musicians (AACM), developed a highly personalized approach to both improvisation and composition. Chapter 2 represents my critical reevaluation of theories of intra-ensemble improvised interaction in light of Abrams’s approach to free improvisation in both stand-alone and composed contexts. I offer an analytical framework that revises conventional analytical approaches to “free” improvisation, which I argue underemphasize crucial dimensions of interaction because they implicitly

preserve principles from conventional jazz. My framework also addresses an under-discussed aspect of jazz and experimental improvised music, whereby free improvisation is preceded and/or followed by composed material. Abrams's compositions represent an important question: what is the relationship between "free" improvisation and composed material in these instances?

Despite compelling work by Paul Berliner (1994), Ingrid Monson (1996), and Robert Hodson (2007), analyses of intra-ensemble "interaction" remain wedded to relatively narrow frames: musicians are said to interact when aspects of their playing can be analyzed in terms of similarity—they utilize similar rhythms, phrase structures, or harmonies, for example. Furthermore, the vast majority of scholarly work on improvised interaction examines performances that utilize shared harmonic or rhythmic foundations, thus eschewing interaction in free improvisation. Benjamin Givan recently noted that most analyses fail to capture the manifold interactions during collective improvisation, resulting "in an overly narrow and homogeneous conception of the [jazz] idiom" (Givan 2016, [27]). Ekkehard Jost and John Litweiler suggest in their early book-length surveys of new musical developments in the middle of the twentieth century that the music by members of the AACM poses significant challenges to interpretive frames that overly rely on conventional jazz (Jost 1981, Litweiler 1984). This limitation is apparent in Hodson's discussion of music by the Ornette Coleman quartet, where he attempts to reconcile the models of interaction that he outlined in relation to song form-based improvisation with Coleman's free-form collective improvisation.

Chapter 2 responds to the challenges issued by Abrams's performance by developing an analytical framework based on the concept of *affordances*. The

conceptual foundation of this framework derives from work in ecological psychology (Gibson 1982, [1979] 1986), embodied cognition (Chemero 2003, 2009), anthropology (Ingold 1992, 2000, 2007, 2012, 2013, 2016), and philosophy (Heft 1989, 2003).

Affordances are opportunities for action that emerge from the interaction between organisms and their environment. A crucial contribution of this literature is the notion of “use”—animals *use* environmental characteristics to guide their behavior. I leverage this notion to formulate my central question motivating Chapter 2: “How can I characterize my aural interpretations of the ways that improvisers use the sounds that they hear during a performance to guide or influence their improvisations?”

My framework eschews interaction as a binary category and instead describes various shades of interaction that emerge via improvisers’ multifarious responses in performance. I describe musicians’ interactions with both one another and any precursive or subsequent written musical material in terms of congruity and incongruity. I do not make historical or general claims regarding avant-garde and experimental jazz, such as those in Roger T. Dean’s *New Structures in Jazz and Improvised Music Since 1960* (Dean 1992) or Joe Morris’s *Perpetual Frontiers: The Properties of Free Music* (Morris 2012). Rather, my framework facilitates analyses based on personal interpretations of the interactive relations between improvisers, as well as between improvisers and composed material.<sup>2</sup> My central argument for this chapter is that the concept of affordances constitutes a robust conceptual foundation for the analysis of interactive musical improvisation in the performances by Abrams that I examine.

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<sup>2</sup> I do not mean to suggest that Dean and Morris do not offer insightful comments on the music they examine, but that the goals of my work differ from theirs.

Chapter 3 presents two analyses of performances by Abrams and his collaborators using the analytical framework that I outline in Chapter 2. The first, “Focus, ThruTime...Time→” from *SoundDance* (2011) features a duo performance with fellow Chicagoan Fred Anderson, and represents an instance where free improvisation constitutes the entire performance. My second analysis focuses on the quartet recording of Abrams’s composition “Munktmunk” that appears on his *Colors in Thirty-Third* (1987). Written material bookends free improvisation in this performance. Free improvisation in this instance both unfolds in the shadow of written material—Abrams’s composed material provides a kind of “set state” for free improvisation—and proceeds toward it—written material provides a kind of “goal state” for the ensemble’s collective free improvisation. Both analyses demonstrate the utility of the analytical framework that I outline in Chapter 2 and attest to the subtly, depth, and multifaceted complexity of Abrams’s music.

Chapters 4 and 5 address additional challenges that Abrams’s creative practice poses to music theory and analysis, this time from a compositional perspective. Chapter 4 examines Abrams’s engagement with Joseph Schillinger’s monumental and singular treatise, *The Schillinger System of Musical Composition* (SSMC) (Schillinger [1946] 1978). I outline the history and context of Abrams’s discovery and study of the volumes, suggest resonances between both Abrams and Schillinger and their work, and examine the text of SSMC to suggest reasons why the text appealed so strongly to Abrams, who employed it by compositionally and pedagogically, according to accounts from his students and fellow AACM members.

A secondary accomplishment of Chapter 4 is my detailed examination of some of the complexities, paradoxes, resonances, and contributions of Schillinger and SSMC.



Both the text and its author constitute rich terrains for research given their participation in the history of twentieth-century American music. Schillinger taught George Gershwin, Benny Goodman, Eubie Blake, and Charles Previn, among others. He also cofounded the New York Musicological Society, a forerunner to the American Musicological Society (Levitz 2018, 18), and assisted Léon Theremin with his work on electric musical instruments. The complexity of Schillinger's work as a theorist, his interdisciplinary interests, and somewhat peculiar and at times disturbing interactions with other musicologists and composers warrant extended critical discussion. My work in Chapter 4 contributes to this area of research.

In the final section of Chapter 4 I use the nexus between Abrams and Schillinger to suggest a larger network of encounters between black improvisers and music theory, which I describe as "fugitive music theory." My theorization of fugitive music theory follows recent work by ethnomusicologist Mark Lomanno (2017), and draws on Britt Rusert's notion of "fugitive science" (Rusert 2017) as well as Stefano Harney and Fred Moten's reconceptualization of "black study" (Harney and Moten 2013). Fugitive music theory describes black improvisers' engagement with, appropriation of, and/or generation of music theoretical texts in order to resist racialized descriptions of black music as chaotic or unordered, and black musicians as anti-theoretical, who generated their music through innate ability or inspiration, rather than diligent study. I suggest that the Abrams/Schillinger nexus outlined in Chapter 4 represents an opportunity to consider what counts as music theory in both research and pedagogical domains.

The discipline of music theory at undergraduate, graduate, and professional levels remains largely tethered to a select group of music and writing by white, male composers and theorists from Western Europe and North America. Undergraduate

music theory textbooks rarely include examples by non-white composers, and theorists such as Heinrich Schenker, Arnold Schoenberg, Milton Babbitt, and David Lewin endure as cornerstones of advanced undergraduate and graduate music theory.<sup>3</sup> The Society for Music Theory, as well as its two primary journals, *Music Theory Spectrum* and *Music Theory Online*, has been slow to transform their overwhelming whiteness in terms of scholarship, pedagogy, and membership.<sup>4</sup> This narrow frame of reference chides against larger calls to decolonize the university. I do not mean to undermine the brilliant pedagogy and scholarship that occurs within the discipline of music theory at its various levels. Nor do I wish to negate some of the progress that has been made in the discipline, as recently chronicled by Ellie Hisama (2018). Rather, I argue that our field would benefit immensely from a more diverse set of theorists, theories, and repertoires, and that Abrams's engagement with Schillinger's writings and fugitive music theory more broadly represents an opportunity for such an intervention.

In Chapter 5, I analyze selected compositions by Abrams. The first part of this chapter examines three of his compositions for improvisers—"Inner Lights," "Charlie in the Parker," and "Hearinga"—in terms of concepts from SSMC. These analyses provide evidence that Abrams drew significantly from SSMC in his work as a composer, but also suggest that Abrams never simply transplanted Schillinger's often emphatic suggestions into this work. Rather, Abrams incorporated concepts from SSMC into his robust and ongoing practice, which included extensive knowledge derived from his work as a jazz, blues, and stage-show pianist in Chicago prior to the foundation of the AACM in 1965 as

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<sup>3</sup> For further discussion see Part III of Rachel Lumsden and Jeffrey Swinkin's *Norton Guide to Teaching Music Theory*, which includes contributions by Brad Osborn, Chris Stover, Ellie Hisama, and Jane Piper Clendinnin (Lumsden and Swinkin 2018).

<sup>4</sup> See <https://societymusictheory.org/administration/demographics> (accessed April 20, 2019).

well as a voracious and inclusive appetite for books, art, and music. Thus I argue that concepts from SSMC are clearly present in selected Abrams's compositions through my analyses, but that their influence is often fragmented, filtered, or dissevered as they pass into Abrams's personal aesthetic.

I devote the second part of Chapter 5 to one of Abrams's most complex fully notated works, Piano Duet #1 for two pianists. My analysis interprets Abrams's score directions regarding which hand(s) the pianists must use to realize the work's complex musical surface to pivot into an analysis based on embodied performance and intersections between disability and race. Drawing on recent work on music and disability (Fulton 2015, Howe 2010, 2015, Iverson 2015, Kielian-Gilbert 2015, Murray 2015, Straus 2011, 2018), I argue that Abrams's piece signifies on disability as a socially and politically contingent, fungible category. Furthermore, I utilize Daphne Brooks's and Saidiya Hartman's rich elucidations regarding slavery, identity, the body, and performance to suggest that Piano Duet #1 redirects examinations of music and disability to recognize the fundamental entwinement of the subjugation of black subjectivity and disability in the United States (Brooks 2006, Hartman 1997). I thus employ Abrams's piece to contribute to the burgeoning collection of analytical work on music and disability by foregrounding the intersection between disability, race, and embodied music performance.

Although my discussions and analyses in this dissertation reference scores, either self-published by Abrams or held at various libraries and/or archives, as well as my own transcriptions, I do not include any of this material in this document at the request of the Abrams family. I therefore support my analytical claims through music-theoretical description and with reference to recordings via time stamps.

My dissertation also contributes to existing historical and critical work on Abrams, and the field of black experimental practice in and around the AACM. Undoubtedly the touchstone for this subfield, which incorporates scholars from the fields of historical musicology, music theory, ethnomusicology, jazz studies, art history, critical race studies, English and comparative literature, and other fields, as well as scholars and musicians who work outside of the university, is George Lewis's *A Power Stronger Than Itself: The AACM and American Experimental Music* (Lewis 2008). Lewis presents a robust account of the AACM's prehistory, beginnings, development, and dissemination, as well as its critical interventions in jazz and experimental music in the United States and Europe. Although Lewis plays close attention to the music and its reception, his text is primarily historical.<sup>5</sup>

Paul Steinbeck's recent book on the Art Ensemble of Chicago (AEC), a flagship ensemble that emerged from the AACM and continues to this day, represents a second touchstone for my work (Steinbeck 2017). His book contains both historical and music-analytical chapters that offer insights into the group's history, organization, rehearsal process, economic model, touring schedule, and other aspects, and provide extended analyses of selected recorded performances in the AEC's discography. Many of Steinbeck's insights stem from his remarkable access to the AEC's private archive and close acquaintance with the musicians: his analyses often utilize the graphic notation used by AEC members in their unpublished scores, hinge on insider knowledge regarding their rehearsal methods, and even incorporate insights from ensemble members as they listen back to their recordings with him. Thus even though Steinbeck's

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<sup>5</sup> Lewis describes the duo performance by Abrams and Anderson that I analyze in Chapter 3 by invoking visual artist Jeff Donaldson's notions of "jam-packed" multidominance (Lewis 2010).

work on the AEC represents a model of AACM scholarship that combines historical and analytical methodologies for my dissertation, the notion that this work emerges from his signally close relationship with the members of the group make it difficult to apply this methodology in my case, where access to private archives or interview opportunities did not materialize.

My dissertation contributes to this body of work on the AACM by addressing aspects of Abrams's life and creative practice. Chapter 4, which explores Abrams's engagement with Schillinger's treatise, arguably represents my most sustained and substantial historical contribution to scholarship on Abrams's life and practice, although I also historically contextualize my discussions in other parts of the dissertation. Many of these snippets are tantalizingly brief and warrant further investigation in a future project. Abrams's account of how he came to contribute big-band arrangements of Duke Ellington's solo piano recordings, "Melancholy" and "Reflections in D" to Mercer Ellington's band, and his arrangement of "Notturmo" for a 1981 compilation of film composer Nino Rota's themes represent two suggestive threads that run parallel to the work in this dissertation but potentially offer valuable insights into Abrams's larger creative practice. Furthermore, because Lewis's book follows proliferating threads after many AACM members move to New York in the 1970s, additional work remains to trace Abrams's navigation of the New York scene from this period until his death in 2017. I will offer a more thorough outline of Abrams's life and development in subsequent research. The following biographical overview of Abrams grounds the work that follows.

## **A Biographical Sketch**

Richard Abrams was born in Chicago in 1930 after his grandparents moved to the city as

part of the “great migration” from the south of the United States to major urban centers (Lewis 2008, 1). His father was a handyman who worked in Chicago’s largely white north side, and his mother worked as a housewife (5). Both parents made strong impressions on Abrams, which he later connected to some of the central philosophies of the AACM: his father represented self-determination and resourcefulness in spite of racist working and political conditions, and his mother insisted on education and a standard of excellence that mirrors Abrams’s fierce autodidacticism (5). Although Abrams did not take an interest in music until he was a teenager, he regularly attended his mother’s piano lessons at the local YMCA (5). Vanessa Blais-Tremblay connects domesticity, maternal care, and music education in her recent insightful work on multiple female pianists and teachers in Canada (Blais-Tremblay 2019). Despite significant differences between these two contexts, her work highlights the importance of Abrams’s mother’s gendered care-work and its representative role in histories of jazz and improvised music.

Abrams learned the value of hard work in his parents’ household, where he hauled coal from the basement in order to provide heat for bathing and cooking (Lewis 2008, 6). He and his brother soon adapted this lesson to outside of their apartment: they would forage around the street for items to sell at a local junkyard. He also learned from alternate community spaces, such as the pool hall, that “street-based” acumen, resourcefulness, and self-determination could translate into a successful career: “We were impressed with education...but we weren’t so much impressed with going to college. We could see it, and the teachers who were educated and highly trained would tell us. But they were in the neighborhood with us. We didn’t see that going further, but we could see Duke Ellington and them going further, and Jackie

Robinson, Louis Armstrong” (quoted in 2008, 7). Abrams notes contrasting meanings of “education”: one based in the school system and the other based in the community. He represents his heroes—Ellington, Robinson, and Armstrong—as self-made figures who largely eschewed institutional education systems in favor of cultural exceptionalism and apparently self-made success. These observations suggest the seeds that would later crystallize with the formation of the AACM.

Abrams attended Forrestville School, an all-black grammar school close to his family’s home on Evans Avenue. Abrams remembers the school as both dedicated to its pedagogical mission and part of an educational status quo: “Forrestville was a standard public school, based on white history. There was no mention of black people in history at all, not even George Washington Carver. You studied about Columbus, Amerigo Vespucci. They had the music of Glück and people like that” (quoted in Lewis 2008, 7).

This overarching suppression of black history likely contributed to Abrams’s transfer to the Moseley School, a mostly black reform school that was known for its strict education and corporal punishment, for fighting and general truancy (8). Abrams nonetheless reflects on the often violent Moseley school as a rare context where the teachers “insisted on your learning about your black self” (8), a major contrast to the curriculum at Forrestville. Abrams eventually found his way out of Moseley and attended DuSable High. He was not particularly interested in music at DuSable, despite the presence of the legendary band director Captain Walter Dyett, choosing instead to focus on sports.

In an apparent flash redirection, Abrams decided in 1946 (at 16) to study music. He dropped out of DuSable, began taking piano lessons with a woman from his church, and eventually enrolled in the Metropolitan School of Music, which eventually became

part of Roosevelt University. Abrams's determination translated into a skill set that soon matriculated into performances in the blues, jazz, church social, and stage-show scenes around Chicago (17). According to the first published, detailed profile of Abrams from 1967, this course of study "ended comically and dramatically when Abrams' [sic] instructor, in an evasive way, tried to learn from him the changes to 'April In Paris'" (Litweiler 1967).

Abrams's determined and autodidactic turn in the late 1940s and 1950s can be viewed as a culmination of some of the important influences on his character up until this point. His parents and grandparents embodied self-determination and excellence at work and home, the various school systems that he attended exposed him firsthand to the institutional erasure of black history, and the community outside of the institutions of church and school suggested a path to success through resourcefulness and "street smarts." By his own account, Abrams was hardly a musical phenom, and oscillated between the practice room and the jazz sessions at the Cotton Club: "You had to go back to the drawing board. But nobody rejected you. It just was obvious that you weren't making it. Nobody had to show you anything. Maybe you'd ask a cat about some changes" (quoted in 2008, 18).<sup>6</sup> Abrams might not have always "made the changes," but his determination allowed him to both develop fluency in the new bebop idiom by practicing and experimenting in private as well as to return to the club to test his evolving skill set. This vacillation functioned as a crucial network in support of his

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<sup>6</sup> In a 1973 profile in *Down Beat* magazine, Abrams also recounts that his attempts at recreating the music of Charlie Parker and other bebop musicians helped him realize the importance of individuality: "when I would attempt to imitate note-for-note licks I heard Bird and all of them play, it would always come out different...Other cats could do it, but I couldn't...I would end up with something other than the original composition. I used to think that there was something wrong with me. But what it was that my personality called for inventiveness, and I didn't realize that till later" (quoted in Townley 1974).



autodidacticism, as it did for many other musicians.

Abrams cites bassist Donald Rafael Garrett as a major influence on his experimental turn towards playing “outside,” as well as painting and drawing (quoted in 2008, 28). Upon a background of Chicago-based experimentalism that included self-directed research into alternate spiritualities and histories of humanity (cf. Szwed 1997), Abrams began researching the so-called “occult arts” in around 1959: “One of the first books I read was *Autobiography of a Yogi* by Paramahansa Yogananda. It awakened something in me that needed awakening. I bought literature and bought literature, and ended up finding out about the Rosicrucians. I got in touch with them and hooked up with the Rosicrucians” (quoted in Lewis 2008, 57). Although Abrams does not elaborate on the role or importance of Rosicrucianism in his development as a person and artist, the society’s focus on self-transformation through personal study of ancient and modern texts to excavate “hidden” meanings and histories (particularly in relation to Egypt and ancient Gnosticism) links to Abrams’s autodidacticism as well as a general interest in black history, spirituality, and consciousness that emerged in Chicago’s music community during the 1950s.<sup>7</sup>

Important musical mentors for Abrams included composer and trumpeter William E. “Will” Jackson and Walter “King” Fleming. Abrams began composing, arranging, and playing for Fleming in 1956.<sup>8</sup> Fleming, a Chicago-based jazz pianist whose style is somewhat reminiscent of his contemporary, Ahmad Jamal, would allow Abrams to sit at his piano and play “until I would make a mistake and they would tell me

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<sup>7</sup> Leonard Jones, a bassist and one of Abrams’s collaborators, who was also involved with the Rosicrucians, politely declined to elaborate on his connection (email to the author, March 7, 2018).

<sup>8</sup> See “The King Fleming Discography,” <http://campber.people.clemson.edu/fleming.html> (accessed April 20, 2019).

to get up. But they would put me back down there until I was ready” (Lewis 2008, 58). “Great Life,” co-composed by Fleming and Abrams, testifies to their close musical relationship. The piece was recorded by Fleming and his trio at Universal Recording in Chicago for Chess Records in early 1957 (but remained unissued until 1996), and also appears on Abrams’s first commercially available recording, *Daddy-O Presents MJT + 3* (1957), as “No Name.” Abrams cites a conceptual rigor in Fleming’s music that resonated with his own, more experimental, practices: “Fleming and Dennis don’t play licks; they play ideas. That’s that older school again. Those guys weren’t interested in a body of licks that were set down by one or two people that they could grab and make clichéd connections with. It’s a different way to think—trying to tell a story instead of showing off flash. That’s one thing that impressed me about them and contributed to my approach. All these impressions encouraged me to go further into doing things my own way” (quoted in Santoro 1995, 178–9).<sup>9</sup> Later, Abrams’s experience as a straight-head jazz musician helped validate the AACM’s experimentalism: Jodie Christian states that “Even me, I didn’t know that much about free-form music or the avant-garde. But because I knew Muhal, and I knew that Muhal could play straight ahead, I knew there must have been something there. He wouldn’t be doing this for nothing. So that made me say, let me find out what it is” (Lewis 2008, 175).

Going his “own way” soon led Abrams to Charles Stepney, who introduced Abrams to Schillinger’s *The Schillinger System of Musical Composition* (SSMC). Abrams worked through its 1,640 pages in the late 1950s, and formed The Experimental Band as a site to try out his new compositional approach. The Experimental Band grew

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<sup>9</sup> Abrams also notes that Art Tatum influenced his rhythmic approach to “the new music” (Litweiler 1967, 26).

out of a more mainstream rehearsal group that rehearsed at the C & C Lounge that included Eddie Harris and Marshall Thompson, among others (Lewis 2008, 60).<sup>10</sup> The group served as both a training ground for younger musicians and a way for more established ones to broaden their skills and try out new compositional ideas.

Generational and aesthetic divides between musicians in this earlier group—the more commercially minded faction led by trumpeter Johnny Hines and the experimentalists led by Abrams—resulted in the dispersal of the group and a reformation with a more explicitly experimental focus (Lewis 2008, 62). The resulting ensemble had Abrams at the helm. The Experimental Band also gave public performances, according to an early article on the AACM in *Down Beat* (1966), although there are no available recordings of the group.<sup>11</sup>

Lewis provides a detailed chronicle of the development of the AACM out of the Experimental Band (Lewis 2008, 55–114). In a publication for *Black World*, Abrams and John Shenoy Jackson state that the AACM “is attempting to precipitate activity geared toward finding a solution to the basic contradictions which face Black people in all facets of human structures, particularly cultural and economic” (Abrams and Jackson 1973, 73). Abrams served as presiding chair for the initial foundation meetings on May 8 and 15, 1965 and was elected as the association’s first president, a position he occupied until September 1968 when Lester Bowie adopted the mantle. The AACM trained

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<sup>10</sup> In a 1977 interview for Columbia’s student-run radio station, WKCR, Abrams suggests that Herbie Hancock also wrote some charts for the group. This recording is available in the WKCR archive at Columbia University.

<sup>11</sup> According to John Litweiler, Abrams also continued to work in commercial and straight-ahead musical domains to support his more experimental ventures, including playing with Morris Ellis’s dance band in a downtown Chicago hotel, touring with Woody Herman’s band, playing intermission music as a local club, and playing bebop with Eddie “Lockjaw” Davis and Wilbur Ware (Litweiler 1967, 41).

younger musicians, and Abrams served as the composition and theory teacher.

“Bringing each other up musically,” in part meant teaching music theory, sight-singing, and ear training (Lewis 2008, 176–7). Abrams’s account of a typical first composition class stresses a general attitude of encouraging students to explore their creativity using relatively small pieces of musical information. I quote this passage at length because of its vivid portrayal of Abrams’s pedagogical method:

We learn how to develop things from the raw materials. First of all, before we write any melody, I deal with the scales and derivatives of scales, which brings us across modes—Ionian, Dorian, Phrygian. We’re listening to stuff that’s around us, and then we can transcend. We’re not captive to the usage of things around us, the empirical part.

I take a tetrachord 2 + 2 + 1, C + D + E + F. We have to have a note to start from. That’s the first four notes of the major scale. If we proceed with the major scale, from the F we get another 2, to G. From the G we get another 2, to A. And then, from A to B another 2, and from B to C, a 1. So you have 2, 2, 1, with a 2 in the middle, then 2, 2, 1. That’s the major scale, and you can start it on any note of the major scale.

They have music paper by now, and they take this scheme and transfer it back to notation, so that they can see it. We’re heading towards composing, personal composing. We’re collecting these components, so we won’t be puzzled by how to manipulate them. First, we organize ourselves rhythmically, so that we have some idea of how to move things around in a variety of ways. We learn all the major and minor scales, and related scales, like the double harmonic scale, stuff that we hear around us.

We haven’t started talking psychologically yet, and we haven’t talked about how the Chinese or the Indians have different tunings. That’s left to personal investigation, which is strongly encouraged.

Next I give rules for generating melodies. First, write an uneven amount of notes; end on the same note you start on; never make two skips in a row, because we're trying to separate out chordal melodies. There are six or seven rules, then we start to construct melodies. Then we bring rhythms over, and we write a rhythm for the melodies. So in about the third session, we're composing melodies. Here's a person who didn't know anything in the first session, and they're creating with full confidence in knowing what they're doing. They know the materials they're using. I encourage people to be forthcoming to teach other people, and assisting them.

(quoted in Lewis 2008, 177–8)

Abrams's pedagogical method stresses theoretical understanding and individual creativity, as well as attentiveness to psychology, non-Western music, and students' local environments. Interestingly, Abrams's description of theory as "raw material," and of the major scale as two sets of "2, 2, 1" with "a 2 in the middle" strongly implies Schillinger's compositional method, which I elucidate in Chapter 4.

Abrams's *Levels and Degrees of Light* (1968) constitutes his first release as a leader. In Marc Little's liner notes for the album, Abrams emphasizes collaboration and spirituality: "I think the musicians involved tried to join their thoughts to mine. We tried to join together in a kind of prayer. This recording constitutes the capturing of a moment in that constant prayer. What is here is what we are and what we hope to be." Abrams's release also embodies the AACM's emphasis on multi-instrumentality—Abrams plays clarinet in addition to piano—and multidisciplinary—the recording features spoken poetry. Furthermore, Abrams continued to explore visual art as an expressive medium and employed his work as cover art for many of his recordings, including *Levels and Degrees of Light*. Lewis also notes that the first wave of albums by members of the AACM, which also includes Roscoe Mitchell's *Sound* (1966) and Joseph Jarman's *Song For* (1966) in addition to Abrams's *Levels*, represents a reconfiguration

of the musicians' relationship to the studio and its engineers (Lewis 2008, 142). Abrams and other AACM members present their expanded sonic palette on these initial recordings, one that testifies to a personal amalgam of influences and expresses new horizons that the artists would develop over the coming decades.

Anthony Braxton, following a sojourn in Paris, moved to New York in January 1970 and provided Abrams with his first New York performance as part of the AACM in the same year.<sup>12</sup> Braxton moved in to Ornette Coleman's fabled Prince Street loft before finding his own apartment in Greenwich Village (Radano 1993, 155). In May, promoter Kunle Mwange organized a concert featuring the "Creative Construction Company," an ensemble that augmented Braxton's trio with Leo Smith and Leroy Jenkins, which had visited Paris, with Abrams, bassist Richard Davis, and Steve McCall (Lewis 2008, 326). The venue was the Washington Square Methodist Church (Peace Church) in the West Village, and the concert was recorded and subsequently released as *CCC* (1975) and *Creative Construction Company II* (1976). The majority of the former recording comprises an extended suite, titled "Muhai (Part I)" and "Muhai (Part II)," and the sets exemplify AACM musicians' deft navigation of multifarious sound worlds, invoking or explicitly employing pastoralism, the blues, multi-instrumentalism, frenetic density, pointillism, and alternating periods of convergence and divergence within in the ensemble. Unfortunately, Abrams's piano (he also plays clarinet and 'cello in these performances) is barely audible throughout these otherwise radiant recordings, suggesting that he was unthinkingly recorded and mixed according to a standard "jazz" sonic profile, whereby the piano sits "behind" the front line. If true, this recording adds

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<sup>12</sup> Abrams had been intermittently visiting New York to perform with saxophonist Eddie Harris since 1959 (Lewis 2008, 335).

further testimony to Lewis's observation that the dynamism of AACM performances largely befuddled recording engineers used for conventional jazz (Lewis 2008, 142).

Abrams's 1974 tour with the Art Ensemble of Chicago following his appearance on their *Fanfare for the Warriors* (1973) probably represents his first European sojourn. This tour included concerts in France, Finland, Italy, the Netherlands, Norway, and Switzerland, and begat Abrams's only other album with the group, *Kabalaba*, recorded live at the Montreux Jazz Festival.<sup>13</sup> By this time Abrams had also established relationships with both Delmark and Italian label Black Saint, and was "doing a recording each year" (quoted in Lewis 2008, 335). This period of Abrams's discography includes *Young at Heart/Wise in Time* (1971), the solo *Afrisong* (1972), *Things to Come from Those Now Gone* (1975), and his duo recording with Malachi Favors, *Sightsong* (1976).

Abrams left Chicago for New York in 1976 and moved his family there in 1977 (Lewis 2008, 333–4), citing a desire to take advantage of the reputation that he had fostered through the AACM as well as to challenge himself artistically (Lewis 2008, 335). As Braxton's initial residence with Coleman suggests, many of the AACM musicians who moved to New York in the 1970s participated in the loft scene. John Fischer ran Environ—" [a] huge square room with only two sets of columns and a lot of empty space" (quoted in Heller 2017, 133)—a loft that hosted numerous AACM concerts after Abrams approached him:

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<sup>13</sup> Abrams would return to the Montreux festival in 1978 to perform solo on piano, percussion, and "tuned sound set." His July 22 performance was recorded and released as *Spiral: Live at Montreux 1978* (1978).

Sometime in the late Summer of '75, Richard Abrams shows up at Environ.

“You John Fischer?”

“Yeah.”

“I’m Muhal Richard Abrams. I’m one of the directors and creators of the AACM. Do you know what that is?”

Then he looks around and says, “I see you have a very good piano. Can I try it?”

“Go right ahead.”...

[After we got to know each other] he decided John Fischer can play and he’s really a nice guy. So he said, “We would like to introduce some musicians here. Is that okay?” I said, “Go right ahead.” So then all of the people who were at that time in the AACM one-by-one called and made a date for a gig.

(quoted in Heller 2017, 55)

Chip Stern also chronicles one of Abrams’s solo performances at the loft, Axis in SoHo, which includes references to ritual, gongs, and “little instruments,” (Stern 1978a).

Aaron Shkuda also references Abrams’s involvement in the loft scene (Shkuda 2016, 129), and Brent Hayes Edwards notes that Abrams stayed with drummer Barry Altschul in his SoHo loft before he moved in to his own apartment.<sup>14</sup>

Heller offers a useful tetra-axial construction of pay/play/place/race to interpret the overlapping, sometimes contradictory discourses in New York’s loft scene. “Place” suggests that AACM members valued the performance spaces afforded by the loft scene, even as they criticized the scene’s “economic model and cultural connotations” (Heller 2017, 59). Loft spaces constituted useful alternatives to jazz clubs, which mitigated the expanded artistic purview of Abrams and other experimental musicians of the period and went against the AACM’s self-empowering economic model. The bare

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<sup>14</sup> Brent Hayes Edwards, personal communication, June 1, 2019.



aesthetic of loft spaces—often relatively barren rooms that were subsequently adorned ad hoc with furniture and equipment suitable for informal rehearsals and performances, socializing, cooking, and living—aligned with musicians’ experimentations with extended musical forms, multidisciplinary, and intertextuality.

In 1977 Abrams collaborated with a student worker at Columbia University’s WKCR radio station, Taylor Storer, for an extraordinary four day concert series at Wollman Auditorium, billed as “Chicago Comes to New York” (Lewis 2008, 344).<sup>15</sup> A *New York Times* article stated that Columbia’s radio station will broadcast “the complete recorded works of the jazz musicians who make up Chicago’s Association for the Advancement of Creative Musicians” beginning at 6pm on Saturday as a preview to the first of four concerts on the following Thursday (Palmer 1977). Jazz writer Whitney Balliett also contributed an extended outline of the AACM in *The New Yorker*, which described the music in both affective and structural terms:

The music was beautiful, infuriating, savage, surrealistic, boring, and often highly original. It is primarily a “free” music. Improvisation is no longer chordal or melodic but is based on motifs, whims, scales, and even timbres. The regular beat has given way to a kind of circular rhythm that is pervasive and insistent. There are no choruses or measures or bridges or verses, although many numbers seem at least to have an inner episodic structure. Counterpoint occurs, but harmony is mostly accidental. There is a great dependence on instrumental variety. Most A.A.C.M. members play several instruments, and it is not unusual during a performance for Anthony Braxton to use three different clarinets, an alto saxophone, a soprano saxophone, a flute, and a contra-bass saxophone.

(Balliet 1977, 92)

Balliett’s observations that much of the AACM’s music combines both free improvisation and intricate composed sections highlight one of the challenges that

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<sup>15</sup> Wollman Auditorium was located in Ferris’s Booth Hall, which was demolished in 1996 and replaced by Alfred Lerner Hall. For more see Hack (1960) and Zimmerman (1979).

Abrams's music poses to music theory and analysis, which I respond to in Chapters 2 and 3.

These Columbia concerts, which were funded by grants from Meet the Composer and the National Endowment for the Arts (NEA) (Palmer 1977), included both AACM members who had moved to New York (such as Abrams) and those who still lived in Chicago. The final concert featured a one-and-a-half hour performance by the Muhal Richard Abrams orchestra that featured every present AACM member (Lewis 2008, 344). An unpublished recording of the final moments of the series features a vocal version of Abrams's "Bermix"—an instrumental version appears on *The Hearinga Suite* (1989)—which is followed by extended, rapturous applause.<sup>16</sup>

WKCR's marathon broadcast also included interviews with AACM members, such as Chico Freeman, Leroy Jenkins, Roscoe Mitchell, Amina Claudine Myers, Kalaparusha (formerly Maurice McIntyre), as well as Abrams. In his interview Abrams outlines the mission of the AACM as "self-realization" through original composition and public presentation, as well as "the business of music."<sup>17</sup> He also emphasizes the association's egalitarian, community, political, and multidisciplinary dimensions, and contrasts the support shown by both audiences and the city for new music in New York versus Chicago, stating "nothing like JazzMobile could ever happen in Chicago." This interview signals Abrams's fondness for the opportunities afforded by the expansive New York scene, but also suggests his embracement of external funding opportunities, an attitude not shared by all AACM members that would come to the surface in the late 1970s and early 80s.

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<sup>16</sup> This recording was shared with me by George Lewis.

<sup>17</sup> This 1977 recording is housed at WKCR at Columbia University.

Many AACM musicians obtained housing in Manhattan Plaza, a federally subsidized pair of apartment buildings on West 35th Street, near Times Square, soon after it opened in 1977. The AACM's collectivity remained even as members proliferated through various parts of the New York scene. This collectivity helped many of them to tender early, successful applications for cheap, quality housing, according to Lester Bowie (Lewis 2008, 335–6), which annoyed some local musicians. These apartment buildings have housed and continue to house many musicians and artists. Abrams would remain in this apartment with his family until his passing in 2017.

By the late 1970s Abrams was an established and recognized figure in multiple dimensions of the New York jazz scene. The large influx of artists from other collectives, such as the Black Artists Group of St. Louis (Looker 2004) and the Underground Musicians Arkestra (Isoardi 2006) helped create a scene in which “the gamut of the music was played, mainstream all up to open” (quoted in Lewis 2008, 336). The personnel on Abrams's recordings begin to reflect this heterogeneity through their inclusion of non-AACM members: *Spihumonesty* (1979), *Mama and Daddy* (1980), *Blues Forever* (1982), *Rejoicing with the Light* (1984), and *View from Within* (1984), for example. These recordings also demonstrate the experimental aesthetic of Abrams's earlier recordings refracted through increasingly formalized compositional forms.

By the late 1970s a New York chapter of the AACM began to form. A series of internal memorandums show significant disagreement regarding the relationship between the Chicago and New York chapters (Lewis 2008, 416–9). Nonetheless a collection of New York- and Chicago-based AACM members chartered the National Council of the Association for the Advancement for Creative Musicians as a nonprofit, tax-exempt organization in the state of New York in November 1982 (Lewis 2008, 418).

Abrams served as chair of the AACM's New York chapter.

Lewis and Heller both indicate that the do-it-yourself aesthetic of “loft jazz” scene conflicted with the AACM's attention to organizational and institutional power, so it is perhaps unsurprising that in 1985 Abrams was a foundational member of the National Jazz Service Organization (NJSO), a non-profit umbrella organization for jazz similar to the American Symphony Orchestra League and Opera America (Pareles 1985). The stated goals of the organization, which received a \$100,000 grant from the NEA, were to “encourage and support the creation, performance, instruction, presentation and preservation of jazz” (quoted in Pareles 1985). Abrams served on the organization's board of directors alongside Quincy Jones, Bruce Lundvall, and Billy Taylor, which according to a profile in the NAACP's *Crisis Magazine* authored and helped pass a “House and Senate resolution declaring jazz ‘an American National Treasure’” (Miller 1990, 9). Abrams's service in the NJSO reflects predilection and capacity as a leader, in that the board aimed to increase opportunities and visibility of jazz musicians through formal organization. His administrative acuity also parallels the AACM's creation of an administrator/fundraiser position through funding from the NEA in 1985 (Lewis 2008, 419).

The rise in status of Abrams and other first-generation AACM members who were now based in New York magnified underlying tensions between the Chicago and New York chapters of the AACM, which emerged from conflicting ideas about the relationship between the two groups. Nonetheless the New York and Chicago Chapters flourished, and Abrams appeared in multiple concerts as part of the newly inaugurated AACM concert series in New York. AACM concerts transpired at Merkin Concert Hall (where the association commemorated its twenty-fifth anniversary), the New York

Society for Ethical Culture, and finally the Community Church of New York, the venue where the concert series remains to this day.

Abrams appears to have formed his own record label, RPR Records, to release *Roots of Blue* (1986), a duo recording with bassist Cecil McBee. Although this album appears to constitute the label's only release, it expresses Abrams's continued efforts to develop an infrastructure independent from those available through familiar channels, even as his status in the jazz mainstream rose. Importantly, RPR Records participates in a longer tradition of musician-run record labels, including Debut Records, founded by Max Roach and Charles Mingus in 1952, Asian Improv Records, founded by Jon Jang and Francis Wong in 1987, and Improvising Artists Records, founded by Paul Bley and Carol Goss in 1974, among others.

Abrams's albums during the late 1980s and 1990s represent arguably the first recordings where recording technology does justice to the pluralism and subtlety of his music. *The Hearinga Suite* (1989) constitutes Abrams's first big band recording, but it is hardly traditional big band music. The album contains multiple compositions that employ synthesizers, particularly on "Conversations with the Three of Me," whose name suggests Bill Evans's *Conversations with Myself* (1963) and *Further Conversations with Myself* (1967), and "Aura of Thought-Things." "Seesall" begins with an extended collage of spoken voices before accelerating into intricate polyphony and a series of "time-no-changes" solos. A similarly pluralistic palette is apparent on other recordings from this period, particularly on *Family Talk* (1993), whose opening "Meditation 1" presents a slowly unfolding pastoral of horns, percussion, and both acoustic and synthesized strings. Abrams's philosophy of looking both forward and back is evidenced by his composition "Dizbirdmonkbudmax," a tribute to the founders of bebop, which

also appears on this recording.

Abrams visited Canada's Banff Centre for Arts and Creativity in 1986, 1987, 1988, and 1989. Bassist Dave Holland was the director of the Banff Centre's jazz program during this period. Canadian trombonist Hugh Fraser states that he also invited Abrams as part of his directorship of the center's annual jazz workshop, which spanned 1991–1998.<sup>18</sup> An archival recording of a composition workshop from his first visit reveals that Abrams's pedagogical emphasis on individual self-actualization continued throughout his life.<sup>19</sup> He also foregrounds pluralism and the need for young and old musicians to avoid the restrictions inherent in genre-based thinking: "I would like to see...musicians...especially young aspiring musicians...address themselves more and more to the amalgamation of sound...the question of total music. Respecting styles...is necessary, but really addressing oneself to the varied nature of the phenomena called music. Music demonstrates to all of us [that] it's constantly changing...I would like to see more and more musicians, older and younger, address themselves to the nature of change with respect to the art form and point of view and allow themselves to take their particular position in the scheme of change. What do you think?" The students in the room gradually warm to Abrams's Socratic method, and by the end of the workshop a lively dialogue unfolds. Other faculty members—saxophonist David Liebman and pianist Richie Beirach—also interject and contribute to the discussion.

A 1997 interview with Bill Shoemaker for *JazzTimes* suggests that at 67 Abrams remained firmly focused on future creative projects: "I love to create situations that I've never encountered before, which is not the easiest thing in the world because we're

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<sup>18</sup> Hugh Fraser, email to the author, March 16, 2019.

<sup>19</sup> This recording is housed the Paul D. Fleck Library and Archives at the Banff Centre.

creatures of habit. There are so many possibilities. I have learned more about possibilities than I could ever use. I'm engaged in that, while at the same time, I am having a healthy respect for the past work of others. It lends itself to a whole music world" (Shoemaker 1997). When Shoemaker characterizes this project as a search Abrams corrects him in order to emphasize the ongoing effort that his work requires: "It's not a search. It's a continuous work or effort to see a personal achievement in regards to what I see as the vastness of possibilities. OK?" (1997).

Both this interview and a contemporaneous one with Ted Panken show that Abrams adopted an explicit attitude of not discussing the past. "[Abrams] lays down some strict parameters for our conversation," states Panken in his introduction, "Okay," he says warily when I call to request a few minutes of his time. 'As long as you don't ask me any questions concerning opinions on other musicians. And nothing about the past'" (Panken 1998). I encountered a similar proviso in my conversation with Abrams: "[It's] not that I don't reflect on things that I have done, but it's like...I'm thinking of the next step."<sup>20</sup>

As I mentioned earlier in this introduction, many of Abrams's activities, collaborations, and movements in the 1990s and at the beginning of the new millennium require further research before a more detailed picture can emerge. John Corbett's 1990 article in *Down Beat*, "The music's still happenin'" positions the AACM as a "landmark institution," precursor to contemporary collectives such as M-Base and the Black Rock Coalition, and formidable influence on various ensembles well outside of jazz genre

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<sup>20</sup> Conversation with the author, January 30, 2017. John Corbett's profile of the AACM on the occasion of its 25<sup>th</sup> anniversary opens with a statement from Joseph Jarman that emphasizes "endurance" as a key component of the association (Corbett 1990b). I interpret Abrams's distaste for nostalgia as part of his endurance as a creative musician.

(Corbett 1990a). S.E.M. Ensemble founder Petr Kotik states that he began working with Abrams in 1990s.<sup>21</sup> The S.E.M. Ensemble presented many compositions by Abrams and other AACM members over the years, including at concerts that I attended at Bohemian National Hall on East 73rd Street. On April 29, 2015, S.E.M. presented Abrams's orchestral work *Mergertone* alongside pieces by Roscoe Mitchell and George Lewis, as well as an improvised set by "The Trio," comprised of the three AACM members. The the ensemble organized a concert on April 25, 2017 featuring Joseph Kubera, Thomas Buckner, Dada Jessen, and Claire Chase in addition to Abrams, Mitchell, and Lewis. Abrams and members of the Momenta Quartet performed his "Trio Things," a piece that combines dense, polyphonic passages with structured free improvisation.

Abrams's final recordings were released on Pi Recordings, a small but prolific label based in New York. Cofounder and partner of the label Yulun Wang invited Abrams to release recordings for them through George Lewis, who had coordinated the recording session that would become *Streaming* (2006), an album of collective improvisation between Lewis, Abrams, and Mitchell.<sup>22</sup> Wang recounts that he and Seth Rosner had developed a working relationship with a number of first- and second-generation AACM members during the label's initial years in the early 2000s, including Lewis, Henry Threadgill, the Art Ensemble of Chicago, Roscoe Mitchell, and Wadada Leo Smith, but that by the mid 2000s realized that Abrams represented a glaring omission in their catalogue of AACM artists. Abrams began sending tapes of solo piano performances to Wang at a remarkable rate after an invitation to do so. Wang began listening and discussing a potential release with Abrams. Their

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<sup>21</sup> Petr Kotik, email to the author, March 25, 2019.

<sup>22</sup> Yulun Wang, conversation with the author, February 22, 2019.



relationship warmed further when Wang offered feedback on the recordings that was obviously predicated on close listening—Yang suggests that his attention to detail in the recordings led Abrams to “open up” to him. *Vision Towards Essence* (2007) is the outcome of Abrams’s solo piano tapes and these exchanges.

The recognition and numerous awards during the final two decades of Abrams’s life testify to the extent to which the jazz mainstream came to accept the experimentalism and pluralism that he embodied since the 1960s. He was awarded the first JazzPar prize in 1990, commended as an honorary member by the Society for American Music in 2006, inducted in *Down Beat* magazine’s Hall of Fame in 2010, chosen as a “jazz master” by the NEA in the same year, received an honorary doctorate in music from Columbia University in 2012, received the Walter Dyett Lifetime Achievement Award from the Jazz Institute of Chicago in 2014, received a Doris Duke Impact award in 2014 and a Doris Duke Artist Award in 2015, and delivered the 2015 keynote at DePaul University School of Music and The Theatre School.<sup>23</sup> Contemporary artists such as Jason Moran, Vijay Iyer, and John Hollenbeck cite Abrams’s crucial influence on their development.<sup>24</sup>

Iyer included Abrams in the iteration of the Ojai Festival that he curated as music director in 2017. Abrams appeared as part of “The Trio,” with Lewis and Mitchell, and also participated in a recorded discussion (along with Mitchell) with journalist and writer Steve Smith. Abrams temporarily relinquished his stipulation of not discussing the past and recounts the foundations of the AACM and The Experimental Band. Following a question from Smith about the AACM’s emphasis on composition and its

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<sup>23</sup> <https://www.muhalrichardabrams.com/honors-awards.html> (accessed April 11, 2019).

<sup>24</sup> See Moran (2012a, 2014) and Iyer (2012b). Joh Hollenbeck, email to the author September 30, 2018.

eschewal of genre destinations such as “jazz,” Abrams plainly describes the racialized modes of reception that they experienced around the formation for the AACM: “We’re black musicians...not coming out of the so-called classical world or classical institutions, so the first thing that people say is that those people are *jazz* musicians...They will accept a black musician who was trained in an institution, ‘he was trained by so-and-so, [therefore] ‘he’s a *classical* musician’...but we have to confront the idea of the study of music, [which] is quite free. We studied the same information that they studied in the institutions...We have to be careful when we allow the word ‘jazz,’ as it is used in a sense to say ‘that’s not important’.”<sup>25</sup> Abrams explicitly connects study and composition as a mode of resisting racialized, genre-limited modes of reception. This connection forms a central pillar to Chapters 4 and 5 of this dissertation.

Bassist John Hébert played in Abrams’s final quintet and remarked to me that Abrams was still composing and rehearsing new music immediately before his rather sudden passing in 2017.<sup>26</sup> The bass part to “Quint17” (2017) features a single page with seventeen staves. Other members’ charts were organized similarly, although they contain different musical content. Abrams would cue the lines in non-linear, circular orders, but also granted the musicians freedom to improvise their own orderings. This piece indicates that Abrams’s focus on new music never wavered. “I’m always thinking of the next step,” he told me, “[which] naturally would include whatever steps that I’ve made.”<sup>27</sup> Abrams and Wang had discussed recording this quintet for Pi, but the session never eventuated. Abrams passed away in his home on October 29, 2017.

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<sup>25</sup> See <https://youtu.be/YRWEgK6J6bo> (accessed June 20, 2019).

<sup>26</sup> John Hébert, conversation with the author, May 23, 2018.

<sup>27</sup> Muhal Richard Abrams, conversation with the author, January 30, 2017.

Abrams's dedication to individualism, originality, study, and creativity resonated and continues to resonate with many musicians and artists, from those who knew him personally to those whose only exposure is through recordings. He was a natural leader and an empathetic collaborator, a deep thinker attuned to spontaneity, and dedicated to creating original music without losing sight of past work. This dissertation engages with Abrams's creative practice to generate critical contributions to music theory and analysis. Chapters 2 and 3 address two structural features in much of Abrams's music that pose significant challenges to existing music analytical approaches to jazz and improvisation: the coexistence of "free" improvisation with composed material, as well as the kinds of intra-ensemble interactions that occur during his performances.

## 2—From Abrams’s Music to an Affordance-based Analytical Framework

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*Don’t just think about what you’re playing when you’re playing a solo—think about what came before and what’s going to come after.*

—Muhai Richard Abrams (quoted in Lewis 2008, 70)

*The richest and most elaborate affordances of the environment are provided by other animals and, for us, other people.*

—J. J. Gibson (Gibson [1979] 1986, 135)

### Introduction

Muhai Richard Abrams’s musical oeuvre is full of variation. His albums often include striking contrasts between individual songs in terms of genre, sonic palette, instrumentation, and formal structure. Despite this variance, improvisation is a primary component of much of Abrams’s music, although it is no means ubiquitous.<sup>1</sup> Furthermore, many of Abrams’s compositions combine “free improvisation” and composed music. Compositions such as “Charlie in the Parker,” “Munktmunk,” “Arhythm Songy,” and “Time Into Space Into Time” bookend free improvisation with the same set of notated material; an adaption of the typical head-solo-head form in straight-ahead jazz. “C.C.’s World” begins with a free piano improvisation that segues

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<sup>1</sup> I discuss some of Abrams’s compositions in Chapter 5.

into complex notated material. Variations for Solo Saxophone and Chamber Orchestra contains three instances where the soloist is directed to freely improvise between intricate composed material, and “Inner Lights” contains distinct sections for solo improvisations by double bass, piano, and flugelhorn, each preceded and/or followed by fully-notated material.

In this chapter I concentrate on Abrams’s juxtaposition of composed music with “free improvisation.” I restrict my focus because this formal arrangement challenges theoretical assumptions and analytical norms; that is, Abrams’s music provides an opportunity to contribute to the sizable body of music-analytical work on jazz and improvisation.<sup>2</sup>

“Free” improvisation, in this context, refers to improvisation without “an underlying formal scheme” such as song form, harmonic progression, or ostinato (Pressing 1984, 349).<sup>3</sup> The significant body of insightful analytical scholarship on jazz and free improvisation has largely focused on *either* improvisation based on such formal schemes *or* free improvisation (Al-Zand 2008, Aucouturier and Canonne 2017, Berliner 1994, Canonne and Aucouturier 2016, Canonne and Garnier 2011, 2015, Monson 1996, Waters 2011). The relationship between coexisting composed material and free improvisation thus warrants closer examination. I parlay my discussion of Abrams’s music into a presentation of a general framework for the analysis of musical

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<sup>2</sup> One of George Lewis’s insights regarding music theory resonates here: “the most central analytical fiction might not be any particular narrative or the crafting of it, but the culturally and professionally situated claim to authority for the practice of analysis itself” (Lewis 2013a, [6]). I do not suggest that analysis in any way validates Abrams’s music. Rather, I suggest that his music contributes to analytical approaches to jazz and improvisation.

<sup>3</sup> Pressing’s formulating of a “referent” is arguably broader than I imply. I employ “referent” in this case to describe song forms, ostinati, or harmonic materials (such as a set of scales) that function as a foundation for improvisation and group interaction.

improvisation. This framework constitutes the foundation of my analyses of Abrams's music in Chapter 3, although it could also be productively employed for analyses of other musicians' improvised performances.

One of the distinguishing features of the Association for the Advancement for Creative Musicians (AACM) is its ambivalence to binaries between improvisation and composition (Lewis 2008, 354, Steinbeck 2018, 276). Abrams's piece, "Levels and Degrees of Light," from his 1968 debut album of the same name, is an archetypal example—I find it extremely difficult and ultimately unhelpful to attempt to distinguish between its composed and improvised elements. In contrast, knowing what is composed ahead of time can be extraordinarily productive for both listening and formal analysis—this material influences what improvisers play. That knowledge shapes musicians' improvisations: they may interpret, develop, and respond to written material during their improvisation congruously and/or incongruously. With multiple performances I may also begin to understand musicians' varying interpretations of written material, a notion eloquently outlined by Nicholas Cook (2014).

The utility of understanding what is composed and what is improvised in a given musical performance is counterbalanced by recent scholarly work that problematizes any clear composition/improvisation binary. The two volumes of the *Oxford Handbook to Critical Improvisation Studies* contain copious and multifaceted critical discussions of this binary by renowned scholars such as George Lewis, Benjamin Piekut, David Borgo, Yves Citton, Davide Sparti, Jennifer D. Ryan, and Sabine Feisst (Lewis and Piekut 2016a). A critical dimension of my framework is that it retains a perforated boundary between composed and improvised musical material even as it distinguishes between these aspects.

The combination of composed material and free improvisation in Abrams's music is the generative impulse for my analytical framework. I also offer a new analytical perspective on a second important aspect of group improvisation: interaction. This contribution also derives from my analyses of Abrams's music, which often exhibits modes of improvised interaction that contrast with those foregrounded in analyses of conventional jazz. This mismatch likely results from differing musical aesthetics—most analyses of improvised interaction emerge largely from scholarship on conventional jazz, while Abrams and his collaborators, although indebted to that musical tradition, explore a more experimental musical aesthetic.

Music analysts tend to discuss interaction in jazz in terms of imitation, groove, or question-and-answer phrasing (Gratier 2008, Hodson 2007, Monson 1996). In such work, regularly occurring temporal structures such as song forms facilitate interaction at the level of the beat, measure, and phrase. Interaction in the selection of Abrams's performances that I analyze, in contrast, is not so easily distinguishable—improvisers' interactions are continuous and highly variable, a point that I return to below. Much of Abrams's music thus resists descriptions of interaction via commonly invoked principles of musical imitation, groove, and question-and-answer phrasing. Rather, interaction between improvisers in Abrams's music requires a more robust conceptual framework, one that accounts for the diversity of their interchanges. I outline my response to these challenges below, but first conclude my prefatory comments with a discussion of the power dynamic between my theoretical/analytical work and Abrams and his music.

Music-theoretical discussions of Abrams's music constitute just one of many possible modes of response to it: one should take care not to imply that academic responses invalidate other, "non-scholarly" responses, or that the music gains validity

from analytical scrutiny. Abrams commented directly on this theme when I voiced my concern to him regarding accurately representing him and his work in this dissertation: “My *own* representation is the representation of my work...You can certainly engage in analyzing or whatever and get your point of view from what you see if you analyze...I have no objection [to your work]...I may not even agree with it but I respect it.”<sup>4</sup> This response suggests that analysts should not hamstring themselves by attempting to provide an authentic or exhaustive account of Abrams’s music and instead focus on their own response to the music.

My analytical framework thus reflects my subjective experience of listening to Abrams’s music, and one of my analytical goals is to provide a nuanced account of my impressions, rather than to definitively represent improvisers’ perceptions, intentions, or projections. At the same time, however, improvisers *do* perceive, interpret, intend, and project as they perform—consciously and/or unconsciously. Put differently, improvisers act intentionally and, although one cannot simply reduce a collective improvisation to individuals’ intentions (Canonne and Garnier 2015), I do not wish to reduce them to anonymous, neutral, disembodied sounds. Thus I arrive at one of my central motivating questions for this chapter: “How can I characterize my aural interpretations of the ways that improvisers use the sounds that they hear during a performance to guide or influence their improvisations?” In Chapter 3 I deploy my framework to analyze two of Abrams’s performances. Thus a secondary goal with this framework is to outline a mode of listening to and analyzing these recordings that communicates their subtlety, intricacy, and depth.

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<sup>4</sup> Muhal Richard Abrams, conversation with the author, January 30, 2017.



The backbone of the analytical framework in this chapter is the concept of affordances. This concept was introduced by ecological psychologist J. J. Gibson as part of his cognitive model (Gibson [1979] 1986), and has been adopted and developed by scholars in numerous areas. Affordances are, in their basic form, opportunities for action that emerge from the interaction between organisms and their environment. I employ affordances to describe relational qualities between improvisers' *sonic gestures* and what I call their *sonic environment*. A *sonic environment* is the conceptual frame that facilitates musical performance. *Sonic gestures* are sounds that improvisers regard as meaningful parts of their sonic environment. *Sonic characteristics* are the constituent properties of sonic gestures that I use to analyze relationships between them, and are given by precursive and successive notated material as well as the emergent group improvisation. Sonic characteristics take two forms: elemental and referential. *Elemental characteristics* refer to musical segments' theoretically-defined constituent parts—aspects such as pitch, rhythm, texture, timbre, and dynamics. They resemble Dora Hanninen's concept of contextual criteria (Hanninen 2012, 34–9). *Referential characteristics* point to stylistic conventions, other pieces of music or genres, attitudes, and musicians not present in the performance or their musical styles. This category thus encompasses Monson's notion of "intermusicality" (Monson 1996, 97)—quotation of or allusion to other pieces of music—but also includes more general properties, such as playing in a style without referencing a specific composition, or adopting a particular musical attitude, such as stubbornness. Importantly, sonic characteristics afford responses rooted in similarity *and* contrast.

Precursive composed material provides a set of sonic characteristics that influences the beginning of free improvisation, and successive composed material offers

sonic characteristics that improvisers may “aim” toward, particularly at the conclusion of their improvisation. The sonic environment unfolds dynamically—improvisers’ sonic gestures contribute new characteristics to the sonic environment as others recede from memory—and improvisers remain attentive to potential musical directions. I argue that the concept of affordances allows us to hear collective free improvisation as a process in which musicians employ sonic characteristics to generate and guide their improvisation.<sup>5</sup> I elaborate on these definitions below.

This chapter unfolds in two parts. The first part outlines Gibson’s ecological model and explores its extensions in various scholarly areas. I discuss critical issues in this literature such agency, the ontology of affordances, animal-environment systems, temporality, culture, goals, and analysis. I argue that an ecological framework shows a high degree of congruence with issues in improvisation studies. My goals for this part are twofold: first, to provide a robust account of the concept of affordances; and second, to elucidate conceptual similarities between ecological psychology and improvisation studies. The second part of this chapter provides a comprehensive outline of my analytical framework. I also discuss the ways that my framework bears on music analysis, recomposition, and pedagogy. In my conclusion I differentiate my approach from recent work that also adopts affordances for the analysis of musical improvisation.

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<sup>5</sup> Although the concept of affordances stems from the field of psychology, my analyses proceed from the perspective of the listener, rather than the musicians involved in the performance. Thus, although Monson correctly reminds us that *musicians* (not “merely instruments or pitches or rhythms”) interact in improvised music, I intend my analytical framework to represent a listener’s subjective interpretation of musicians’ interactions, rather than the actual intentions or mindsets of the musicians themselves (Monson 1996, 26).

# Ecological Psychology

## Perception, the Environment, and Affordances

J. J. Gibson, in *The Ecological Approach to Visual Perception* (Gibson [1979] 1986), argues that visual perception is embodied, dynamic, situated, and direct. Previous “computational” approaches regard perception as a series of disembodied, two-dimensional snapshots, and representational knowledge as the means by which animals identify and use objects in their environment. Gibson’s ecological approach posits that perception depends “on the eyes in the head on a body supported by the ground, the brain being only the central organ of a complete visual system” that moves through its environment (1). Visual perception thus involves the entire, active body—it is embodied, situated, and dynamic. Perception is also *direct* for Gibson, meaning that it proceeds without recourse to analytical thought. This is not to say that animals cannot influence or guide their perception, however. I discuss questions of intention and agency below.

The environment for Gibson consists of “the surroundings of the perceiving animal” and includes inanimate objects as well as other animals (7). Animals detect “invariants” (61)—environmental characteristics that do not change—as they move through the environment, which allow them to recognize what Gibson calls “mediums, substances, and the surfaces that separate them” (16). Mediums include solids, liquids, and gasses, which afford locomotion and vision, among other things (16–7). Substances, in Gibson’s terminology, are solid, opaque, heterogeneous objects in the environment, such as rocks, soil, and wood (19). All persistent substances have surfaces, which can be described in terms of their characteristics: texture, viscosity,

cohesion, illumination, reflectivity, and layout, for example (83–4). Mediums, substances, and surfaces thus exhibit characteristics that play a crucial role in analyses of behavior. Within Gibson’s model of direct perception, characteristics are analytical (not perceptual) categories; that is, perception does not require the conscious apprehension of characteristics in order to determine whether an object affords a particular action. I elaborate on the distinction between perceptual and analytical categories below.

The concept of affordances is arguably the most compelling and influential aspect of Gibson’s ecological model. Affordances are “what [the environment] offers the animal, what it provides or furnishes, either for good or ill” (127). Put differently, animals perceive objects in the environment in terms of their potential interactions with or uses of them—that is, *directly*—rather than their constituent qualities, such as size, color, or weight (134). An animal that is threatened by a predator, for example, does not calculate the width or depth of a crack in absolute terms to determine its suitability as a hiding spot. Rather, the prey perceives the affordance of the hiding place (its “hide-ability”) directly: in terms of the size of the crack *relative* to its own body. Affordances thus neither inhere completely in objects or animals—they cut through “the dichotomy of subjective-objective...[and are] equally a fact of the environment and a fact of behavior, yet neither” (129). Affordances belong, as Anthony Chemero points out, to dynamic animal-environment systems (Chemero 2009, 140).

### **Animal-Environment Systems: Temporality, Ecological Niches, and Cognitive Processes**

To regard the animal and its environment as a system is to suggest that the two are

fundamentally intertwined. Animals' actions alter the environment while simultaneously engaging with its affordances: environmental changes alter the affordances offered to the animal (Chemero 2009, 151). A feedback loop thus emerges between the animal and its environment, whereby the consequences of an animal's actions return to influence its subsequent behavior: the ground's affordance of "dig-ability" may subsequently yield the affordance of "hide-ability," for example (Bertalanffy 1969, 17, Luhmann 2013, 191, Weiner [1948] 1985, 96). Feedback loops constitute a crucial part of many discussions of the neuroscience and cognitive processes of improvisation (Berkowitz 2010, Braasch 2011, Johnson 2011, Pressing 1984, [1988] 2001, Wilson and MacDonald 2016). This parallel between ecological psychology and improvisation studies suggests that the former helps confront one of the most fundamental aspects of the latter—the feedback loop between improvisers and their environment. Animal-environment systems foreground three additional critical issues that relate ecological frameworks and improvisation: temporality, ecological niches, and the interplay of higher- and lower-cognitive processes.

Chemero's theory of affordances differs from Gibson's with regard to temporality: "theories of affordances offered by Gibson and later ecological psychologists...define affordances statically...It seems clear that we (ecological psychologists, radical embodied cognitive scientists) need a theory of affordances that is dynamical root and branch" (2009, 150). Chemero's emphasis on temporality strikingly parallels Vijay Iyer's distinction between "in-time" and "over-time" processes and improvisation (Iyer 2016). Iyer argues that in-time processes are "embedded in time," while for over-time processes the time taken is largely irrelevant (78–9). Improvisation belongs in the former category in Iyer's model; the time taken for the action is critical to its meaning

and structure.<sup>6</sup> I therefore suggest that a temporally-sensitive ecological model such as Chemero's is well placed to account for one of the most important aspects of improvisation—its unfolding in time. Indeed, theorists of improvisation often note the congruence between their work and ecological psychology in terms of temporality and embodied activity (Borgo 2007a, 174, 2007b, 79, 2016a, 95, 2016b, Iyer 2002, 118, 2016, 86). I regard my affordance-based analytical framework as an extension of these authors' suggestive invocations.

The feedback loop between animal and environment implies that animals may purposely alter the environment to their benefit. I characterize this process using the term "ecological niches." A niche, according to Gibson, "is a setting of environmental features that are suitable for an animal, into which it fits metaphorically" ([1979] 1986, 129). A niche should not be confused with a habitat—"habitat" describes a geographical place (the "where" of behavior), whereas "niche" describes a mode of being (the "how" of behavior). Humans alter their niches in order to make "more available what benefits [them] and less pressing what injures [them]" (130). Animals and niches are, according to Chemero, "tightly coupled" within a dynamic animal-environment system (2009, 152).

Philosopher Lorenzo Magnani suggests that humans do not simply alter their environment so as to ensure their survival—they alter it so that "the offerings provided by the environment in terms of cognitive possibilities are appropriately selected and/or manufactured to enhance their fitness as chance seekers" (Magnani 2008, 720).

Environmental change drives cognitive development—changes in the environment

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<sup>6</sup> Computation, for example, belongs to the latter category, because the meaning of a computational result does not depend on the time taken to arrive at it.

create new affordances and problems, and exploration and problem-solving contributes to humans' cognitive development (721). Similar arguments abound in ecological psychology-based studies of human development, education, and socialization (Gibson 1969, Gibson and Pick 2000, Goldring 1991, Hodges 2007, Jensen and Pedersen 2016). Recent studies in music cognition suggest that the ability to improvise is predicated on understanding and implementing multiple, various affordance-relations. Andrew Goldman argues that a distinguishing cognitive process between improvisers and non-improvisers is the former's ability to apply musical knowledge (defined music theoretically) in multiple contexts (Goldman 2016).<sup>7</sup> Similarly, David Borgo invokes affordances to describe the process of learning improvised music: "Learning to play involves an affordance relation...On a physical level, we develop a relationship between our actions with the instrument and our perception of resulting sounds over time...Playing with a group necessarily creates an affordance situation, since the sounds that one produces trigger reactions and perhaps responses when perceived by others" (Borgo 2007b, 177). These scholars collectively suggest that development in ecological terms involves the ability to parse their environment in terms of body objects, people, and socially embedded interactions, draw on previous knowledge in novel situations, recognize alternate solutions to familiar ones, and purposively create advantageous cognitive niches.<sup>8</sup>

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<sup>7</sup> Although Goldman focuses on perception-action coupling, his broader point is congruent with my broader argument in this chapter that improvisers respond to the multiple affordances in their sonic environment.

<sup>8</sup> Psychologist Eleanor Jack Gibson adopts an ecological model to discuss psychological development, particularly in infants (Gibson 1969, Gibson and Pick 2000). At a basic level, infants engage with the affordances of their environment in three domains: communication with others, reaching and manipulation objects, and locomotion (2000, 22). Their development provides them with increasingly "effective action systems and sensory equipment" that assists with their spontaneous exploration of their environmental affordances (22). Goldring advocates that caregivers create conventional connections

There are two striking parallels between the purposeful construction of ecological niches and musical improvisation. First, if improvisers draw on affordances offered by their sonic environment, as I argue, then their efforts to hone and develop their musical skills (by practicing listening, technical, and conceptual abilities in private spaces, for example) represent the furtherance of their cognitive abilities so as to engender rich and productive interactions with other improvisers and compositions (Scott 2004).

Second and more importantly for my analytical framework, the notated sections of the performances that I analyze furnish performers with characteristics to engage with as they improvise. One of the goals of composing for improvisers, in this description, is to create engaging, affordance-laden environments that improvisers could use for their improvisation. A cognitive “niche” in this setting denotes a set of affordances that emerges from both the composer’s notation and the individual’s perception of it. This description recalls Magnani’s formulation of niches as problems-to-be-solved—the composer offers a set of characteristics that engages improvisers. Composed material provides beginning- *and/or* end-states for improvisation; that is, the composer may direct improvisers to freely improvise immediately *following* a composed section, and/or to *precede* one with free

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between words and aspects of their environment by helping children develop and sharpen their attention, providing tangible, perceptual translations of speech via bodily action, and often use specific linguistic accompaniments, such as “look” (also showing or demonstrating), to direct attention (Goldring 1991). “Children are not faced with infinite possibilities when attempting to relate what is said to what is happening,” she argues, “instead, caregivers continuously provide information that limits the number of alternatives, so that children can eventually detect the conventional relation between world and words” (152). Jensen and Pedersen argue that students in their study recognize “the affordances of creatively manipulating the situation” (98), which suggests that the educational environment develops their ability to recognize and implement the socially embedded (and in this case also affective) affordances of a situation. Finally, Hodges utilizes an ecological framework to reconcile a simple truth-telling task with social context (Hodges 2007). His ecological, socially-sensitive analysis of an experiment designed by Asch (Asch 1956) suggests that participants “were ecologically sensitive, pragmatically astute individuals”—“they were willing to make local errors in an attempt to express a larger truth, namely, that they are in an awkward, frustrating situation in which there are tensions among multiple obligations” (594).



improvisation. In the former instance I interpret musicians' collective and individual improvisations in relation to a set of precursive sonic characteristics, and in the latter instance I interpret them in relation to upcoming notated material and its corresponding sonic characteristics.

Furthermore, multiple animals in a single environment generate a set of overlapping but non-identical niches that facilitate interactive behavior—a theorization that resonates with improvisation as a mode of collective action. Ekaterina Abramova and Marc Slors draw on the concept of affordances in their discussion of coordinated, goal-directed action between two people (Abramova and Slors 2015). Coordination, they argue, does not involve people ascribing mental states to others on the basis of their perceived actions. Rather, it constitutes agents' overlapping and commingling fields of affordances (520). Others' actions thus influence one's field of affordances: "perceiving intentions in the actions and postures of others means perceiving them as co-determining the perceiver's own possible action-array so as to collaborate efficiently" (520). The authors contrast this description with a prevalent conception of coordination based on what they call "mind-reading," which involves the inferential attribution of mental states behind the observed behavior. Their model, a form of direct social perception (DSP), constitutes "a non-inferential understanding of a basic kind of intentionality that does not involve propositional attitudes" (520). The authors provide compelling elucidations regarding affordances, ecological niches, and social context, which resonate with common theories of musical improvisation. Adopting this terminology, I argue that collective musical improvisation constitutes a kind of joint action that takes place within a shared field of affordances—or overlapping niches. One person's actions—what they play during collective improvisation—influences others'

choices without determining them or requiring that improvisers fully comprehend one another's mental states.

The third issue regarding the feedback loop between animal and environment is that it mirrors a similar loop between higher and lower-level cognitive processes that helps explain how animals monitor their actions as they unfold and assess their effects. Giovanni Pezzulo and Paul Cisek assert that embodied, ecological cognition involves both an animal's ability to predict how the affordances of the environment will change given a particular action, and the continuous interplay of two cognitive mechanisms, one that carries out a proximal action (lower-level cognitive processes) and another that functions as a evaluative control mechanism (higher-level cognitive processes) (Pezzulo and Cisek 2016). "Brains," they state, "are continuously engaged in generating predictions (e.g., about future opportunities) rather than just reacting to already available affordances" (415). Animals therefore survey the environment and engage with behaviors based on their immediate needs, environmental factors, *and* possible future affordances that will result from their actions. Recent work by Roger Beaty suggests that similar cognitive processes are at work during musical improvisation (Beaty 2015). Although his work does not fit within the paradigm of ecological psychology due to its emphasis on representational knowledge, Beaty's synthesis of fMRI studies of musical improvisation suggests that large-scale brain networks function as control mechanisms for spontaneous thought (115). Finally, Thomas Fuchs's recent book, *The Ecology of the Brain: The Phenomenology and Biology of the Embodied Mind* (Fuchs 2018) forwards a cognitive model that combines both ecological and representational views of cognition, although he does not discuss improvisation. The crucial point from this literature is that improvisation appears to involve both

lower- and higher-level cognitive processes, and that such a cognitive model is congruent with my ecological framework.

Gibson's ecological model, although rich, contains many ambiguities. His work does not offer clear explanations of two further areas that are crucial for my analytical framework—first, the related issues of agency, constraints, and affordances' ontology, and second, the interplay between culture and ecological psychology and its relationship to animals' plans or goals. My discussion below confronts the ambiguities of Gibson's model and offer further clarification regarding factors that influence behavior.

### **Ambiguities and Clarifications**

Gibson's ecological model, and his theory of affordances in particular, has been criticized for being vague in a number of respects (Chemero 2003). This theoretical opacity has not stopped many scholars in a variety of fields from adopting ecological theory as an analytical lens, however. This proliferation of applications has resulted in a number of varying characterizations of affordances and the factors that influence them. In this section I first discuss the apparent binary between agency and constraints in Gibson's ecological model and the ontology of affordances. This issue is particularly relevant to my discussion because improvisation is often described using the paradigm of freedom-within-constraint. I argue, with reference to recent studies in critical improvisation, that constraints are bound up in the temporally emergent and always-already situated-ness of perception and behavior, and that factors normally regarded as constraints, such as intention, education, and socio-cultural norms are better regarded as *influences*. Regarding the ontology of affordances, I discuss and adopt Withagen, de Poel, Araújo, and Pepping's characterization of affordances as

possible invitations for action (Withagen et al. 2012). I then examine work in ecological anthropology to discuss culture, goals, and plans of action, and their relation to affordances.

### **Agency, Constraints, and Ontology**

A crucial contribution of Gibson's ecological model was the conceptual space it opened up between environmental determinism and nativism (Costall 2007, Costall and Morris 2015, 6–8). Animals, in his model, possess an agency that enables choice but is never absolute—behavior is always situated in the environment (Withagen et al. 2012, 252). In *The Ecological Approach to Perception*, Gibson casts animals' agency in opposition to the constraining environment—"the environment constrains what the animal can do" ([1979] 1986, 143). In a later essay, however, Gibson proposes that it is *affordances* that constrain behavior, not the environment (1982, 411). Thus although Gibson's ecological approach makes space for the agency of animals, the ambiguous relationship between agency and constraints in his work beckons further discussion.

Many scholars of ecological psychology address this relationship by suggesting that constraints consist of socio-cultural factors, intentions, goals, education and experience, body-scale, and/or ability, among other factors. William Warren's influential study on affordances and stair climbing, for example, argues that the affordance of "climb-ability" is an artifact of the ratio between leg length and stair height (Warren 1984). Chemero suggests that this finding led experimentalists to tacitly assume that body scale was a primary factor for the analysis of affordances (Chemero 2009, 143). He disagrees: "although body scale is easily measured, it is only occasionally a good placeholder for ability" (143). He cites work by Cesari, Formenti,

and Olivato (2003) as well as his own research in support of an alternative argument: that the affordance of stairs' climb-ability depends on participants' stepping ability and riser height (2009, 143–5).

Harry Heft, in addition, uses a mailbox and the affordance of mailing a letter as an example of how cultural factors constrain affordances—four legs and the color blue denote mail-ability in the United States, whereas red cylindrical objects may denote the same affordance in the United Kingdom (Heft 1989, 18). In Heft's analysis affordances are constrained by both a person's intent or goal (“I want to mail a letter”), characteristics of the environment (blue rectangular prisms with four legs or red cylinders, each with the requisite dimensions), and the cultural designations bound to geographical area (the United States or the United Kingdom).

This binary between agency (or freedom) and constraints leads to an implicitly idealist view of agency: that the absence of constraints would result in unfettered and total freedom. For Gibson, however, perception is always already situated. An idealist view of agency emerging from a binary of agency and constraint thus runs counter to the pragmatism that is central to Gibson's theory. Interestingly, the ambiguous role of animals' agency in ecological psychology parallels discussions of freedom-within-constraint in studies of improvisation (Benson 2003, Berkowitz 2010, Johnson-Laird 2002, Lewis and Piekut 2016b). I argue that recent work in the latter offers a solution to the quandary in the former.

Discussions of improvisation often refer to a binary between freedom and constraint. A common formulation posits pre-composed musical material—such as chord progressions or song forms—as a constraint on improvisation. Furthermore, and as George Lewis and Benjamin Piekut indicate, the binary of freedom/constraint in

discourses around improvisation often maps on to binaries of high/low culture and improvisation/composition, and simplistic associations in terms of race, gender, or class, among others (Lewis and Piekut 2016b, 8–9). Lewis and Piekut turn to work by sociologist of science Andrew Pickering and sociologist Pierre Bourdieu to circumnavigate the freedom/constraint binary. Pickering argues against constraints as factors that are imposed from outside the sphere of practice (Pickering 2014, 65), suggesting instead that constraints (he substitutes the term, “resistance”) are “genuinely emergent in time...arising in practice to this or that practice of goal-directed practice” (66). Similarly, Bourdieu’s notion of the *habitus*, which “produces practices which tend to reproduce the regularities immanent in the objective conditions of the production of their generative principle, while adjusting to the demands inscribed as objective potentialities in the situation” (Bourdieu 1977, 78), elides distinctions between freedom and constraint by including the latter as both a background to and emergent property of social interaction or performance. Improvisation therefore does not constitute unfettered agency that is curtailed by external constraints. Rather, improvisation is both always already situated in a set of constraints and tends to reproduce them. This reformulation suggests that it is more productive to consider how “given” factors (environmental, musical, etc.) afford improvised behaviors, rather than how constraints limit improvised freedom.

Returning to agency in ecological psychology, I argue that Gibson’s commitment to behavior as a situated and temporally emergent practice necessitates a reappraisal of constraints along lines similar to those in critical improvisation studies. Constraints, rather than functioning as a contrary force on the animal’s otherwise-unchecked agency, are both embedded in practice and temporally emergent. Perception, behavior, agency,

and constraints are, to adopt Pickering’s formulation, “all reconfigured at once” (2014, 67). I suggest that “constraint” is a misleading term for the discussion of affordances. Instead I propose referring to factors such as intent, education, and socio-cultural factors as *influences*. This term better captures the situated and temporally emergent nature of forces that shape behavior. Influences guide behavior as it unfolds in its environment, and are embedded in practice and the environment, rather than imposed from “outside” onto otherwise “free” behavior. Put another way, whereas the binary of constraints versus freedom suggests that without constraints, one would be free, the concept of influences acknowledges that all behavior involves *a priori* guiding forces. Finally, a crucial upshot of my substitution for the analysis of musical improvisation is that analysts can avoid implications that improvisers could theoretically operate in an ideal, completely free realm if “constraints,” such as chord progressions, were absent.<sup>9</sup>

A second ambiguity in Gibson’s ecological model concerns the ontological status of affordances themselves. Affordances emerge out of a combination of animals’ perceptual abilities, their bodily abilities, intentions, goals, and cultural milieu, and information contained in the environment. Thus, although Gibson states in *The Ecological Approach to Visual Perception* that affordances *transcend* the subject-object binary, he clarifies in a later essay that affordances themselves do not depend simply on an animal’s desires or intentions:

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<sup>9</sup> I do not want to undermine the powerful rhetoric by musicians and critics that aligns the removal of conventional jazz structures—such as chord progressions—with justified demands for social equality. Ingrid Monson provides a detailed discussion of this relationship in her book *Freedom Sounds: Civil Rights Call Out to Jazz and Africa* (Monson 2007). Rather, I argue that analytical approaches to improvisation are better served by rejecting the binary of freedom and constraint.

The *affordances* of the environment are permanent, although they do refer to animals and are species specific. The positive and negative *valences* of things that change when the internal state of the observer changes are temporary. The perception of what something affords should not be confused with the “coloring” of experience by needs and motives. Tastes and preferences fluctuate. Something that looks good today may look bad tomorrow but what it actually *offers* the observer will be the same.

(Gibson 1982, 410, emphasis in original)

Turvey, Shaw, Reed, and Mace define affordances as “dispositional properties of things referring to a thing’s potentialities—to what can happen” (Turvey et al. 1981, 261). Furthermore, they define “effectivities” as dispositions of animals to undertake those behaviors. Action arises from the pairing between environmental affordances and animals’ effectivities. Chemero correctly notes that despite their robust ontological account, this model under-theorizes the ontological status of affordances by suggesting that they only exist if animals and their relevant effectivities are present to take advantage of them—an apple is only edible *if* an animal with the complementary effectivity is present.<sup>10</sup> His rejoinder is complex and provocative.

Chemero defines affordances as *relations* between animal-environment systems (145) that are inherently dynamic (as discussed above) (150). Describing affordances as relations renders effectivities superfluous—no animal-centric complement to environmental affordances is required. Chemero describes affordances as “perfectly real entities” that exist even when there is no animal to perceive and interact with them, even as they also “depend on the existence of some animal that could perceive them, if the right conditions were met” (150). Perceiving affordances thus means placing features of the environment and understanding that the situation allows a certain

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<sup>10</sup> He also critiques their theory on the basis that it does not account for social and cultural factors (2009, 112).



activity (142). Chemero's ontological formulation of affordances is a subtle but significant improvement on Turvey, Shaw, Reed, and Mace's—affordances are “perfectly real” relational attributes that persist in the absence of animals but also necessitate at least the potential presence of and encounter with an animal.

Finally, Chemero uses the term *abilities* to describe the potential manifestation of an action given a set of environmental and animalistic characteristics. Abilities, unlike concepts such as *dispositions*, do not suppose that given actions will necessarily follow from a particular set of environmental conditions—animals may choose not to engage with a particular behavior even given current conditions.<sup>11</sup> Chemero also suggests that abilities may malfunction without undermining their conceptual competence—having the ability to walk does not mean one will never fall, for example (145–6). Finally, Chemero notes that describing affordances in terms of abilities rather than dispositions means that affordances and evolutionary selection pressures are co-constitutive: “Affordances, which are the glue that holds the animal and environment together, exist only in virtue of selection pressure exerted on animals by the normal physical environment. [Affordances] arise along with the abilities of animals to perceive and take advantage of them” (146).

If the environment is rich in meaningful affordances, as Gibson states ([1979] 1986, 33), then some environmental characteristics will “jump out” at us more than others. In musical improvisation certain sonic characteristics may be more conspicuous than others, depending on musicians' physical/physiological perceptive apparatuses, their musical predispositions (such as personal style or idiom), the musical

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<sup>11</sup> For a detailed discussion of affordances and dispositions, see Chemero (2009, 137–9).

context, and their intentions regarding the musical moment, among other factors. Recent work addresses the important relation between affordances and intention.

Withagen, de Poel, Araújo, and Pepping present a theory of affordances that combines Gibson's theory of affordances with ecological psychologist and philosopher of science Edward S. Reed's intention-oriented theories (Withagen et al. 2012). The authors agree with Gibson that affordances are opportunities for action, exist whether they are perceived or not, and do not change depending on the needs or tastes of the animal. *Pace* Gibson and Chemero, however, if affordances "are simply *opportunities* for action, concepts like motivation and intention seem needed to explain why animals utilize certain affordances and not others at a certain moment in time" (252, emphasis in original). They argue that affordances are better conceived as "action possibilities that *can* invite" (253–5, emphasis in original)—affordances *can* invite behavior, but not necessarily.<sup>12</sup> Persuasive support for their argument emerges from their interdisciplinary purview: ecological approaches to design and architecture demonstrate that contrived spaces and objects may invite certain behaviors (or groups of behaviors) rather than others (Hadavi, Kaplan, and Hunter 2015, Hopkins 2013, Jelić et al. 2016, Maier, Fadel, and Battisto 2009, Still and Dark 2013). These studies suggest that environments and objects can invite behaviors without negating human agency, and our interactions with spaces or objects are often interesting or meaningful precisely because of the influence they exert on us.<sup>13</sup>

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<sup>12</sup> The authors distinguish their theorization of "invitation" from phenomenological accounts that regard affordances as solicitations by the world. Rather, they offer what they call a "mutualist perspective" to argue that affordances "depend on the relation between the physical properties of the environment and the agent" and are dependent on multiple contextual factors (2012, 255).

<sup>13</sup> Work on new materialism provides a provocative and complementary perspective to Withagen, de Poel, Araújo, and Pepping's argument and my discussion of agency in the ecological model. Scholars such as

To summarize, affordances are relations between dynamic animal-environment systems that can (but may not) invite behavior. They exist irrespective of the presence or desires of animals but will only invite behavior in the presence of animals. Finally, behavior is always situated within a temporal environment, meaning that environmental influences are explored, produced, and even reinscribed through behavior. In their concluding remarks, Withagen, de Poel, Araújo, and Pepping suggest other factors that influence affordances. My final discussion for this section encompasses one set of these: cultural factors, goals, and plans.

### **Culture, Goals, and Plans**

Anthropologist Timothy Ingold argues that people and their environment are not only co-constitutive, but that affordances (and their meaning) are inseparable from their socio-cultural context (Ingold 1992, 2000, 2012, 2013). The cognitivist view of both psychology and anthropology, states Ingold, posits culture as something that imposes order onto the noisy flux of the environment to create meaning (1992, 39). His ecological perspective, in contrast, regards culture as integral to perceiving and acting in the environment.

In his discussions of basket weaving (2000, 339) and string bag making (2000, 349), for example, Ingold argues that making and using occurs within a field of relational and cultural forces between maker and material. These activities therefore do not consist simply of the mechanical application of a given plan to a set of raw materials,

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Rosi Braidotti, Manuel DeLanda, Karen Barad (Dolphijn and Tuin 2012), and Melissa A. Orlie, Elizabeth Grosz, and Sara Ahmed (Coole and Frost 2010) provide robust discussions of material, the body, and agency in a way that circumvents traditional divisions between subject and object. Furthermore, Edgar Landgraf's recent work interfaces critical improvisation studies with new materialism and posthumanism in a way that also complements my argument (Landgraf 2018).

but requires the maker to attend and respond to the interplay between the process of making and the material “resistance” that manifests while working. Making and using is thus a “process of guided discovery” (2000, 356) rather than the successful following of a set of rules, and functions in a liminal space between intentional action and attentive response.<sup>14</sup>

Ingold’s anthropological and ecological theorization of plans resonates with musical improvisation. The improvisations by Abrams and his musical collaborators, like Ingold’s examples of bag making and basket weaving unfold without a fixed plan. Rather, the musicians find their way as the performance progresses. The musical paths that they explore during their improvisation materialize out of their collective negotiation of emergent musical material, rather than comprising of a series of pre-defined routes. Abrams and his collaborators, like Ingold’s makers and weavers, *do* have overarching goals. These goals may be pragmatic—they may need to guide their improvisation toward upcoming notated material (more on this later)—or aesthetic—they intend to create interesting music. The field of organizational studies offers a way of theorizing these priorities.

Scholars that combine organizational studies and critical improvisation studies often describe behavior as guided, attentive action toward a “loosely defined goal.” Mark Perry, for example, theorizes the physical and metaphysical organizational

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<sup>14</sup> Ingold extrapolates his distinction between plan following and “guided discovery” by contrasting navigating a maze with navigating a labyrinth (2016). He characterizes maze navigation as a process of moving toward a clearly defined goal along a clearly delineated path. The walker employs representational knowledge in this paradigm: he or she must maintain orientation and logically induce the location of the exit from their previously explored paths. Walking in a labyrinth, on the other hand, does not presuppose a clearly defined goal or path, does not postulate fixed points of view or positions, and relies on the walker’s *imagination* as a mode navigating the environment. The walker in a labyrinth risks losing their way due to inattention, rather than getting lost within a set of clearly-marked paths.

structure of a construction-site office as a “loosely coupled system” (Perry 2013). He cites four defining traits for such a system: first, the constituent agents and artifacts of the system change over time; second, problems tend to be both ill structured (meaning they are not fully formed) and relatively unique to the situation; third, work proceeds in an ad hoc way with reference to high-level, abstract directives; and last, the time taken to solve a problem tends to vary, even between similar kinds of problems (162). These properties upend traditional organizational models, in which recognizable situations engender the implementation of a precomposed plan that is closely followed in order to achieve clearly defined goals. Similarly, Kendra and Wachtendorf theorize emergency response as a set of personal improvised responses to local conditions that are coordinated by a more general, over-arching framework (Kendra and Wachtendorf 2007, 329, Wachtendorf 2004), and David Mendonça, Gary Webb, Carter Butts, and James Brooks, as well as Karl Weick, suggest that effective plans for action leave room for improvisation in response to unique conditions (Mendonça 2014, Weick 1993, 1998). This scholarship undermines traditional binaries between improvisation and planning (a binary that is isomorphic to the aforementioned one of freedom versus constraint).

Perry’s observation that the loosely coupled systems he examines are “typical of many kinds of problem solving behavior seen in socially organized collective activity and organizational life” suggests a reexamination of goals and plans in musical improvisation using similar terms (Perry 2013, 148). The performances that I analyze in Chapter 3 resemble Perry’s four traits above: first, the “artifacts” of the sonic environment—what I call its sonic characteristics—morph as the improvisation proceeds; second, musical improvisation is ill-structured in the sense that the “goal” of improvisation emerges over time and is subject to revision; third, although improvisers,

as individuals or as a group, might develop their own “standard operating procedure” for free improvisation—a set of values or musical materials that they have developed over a period of time—those procedures do not function as rules to follow, but as a guiding framework that they interpret according to the musical situation at any given time; finally, the duration of free improvisation is underdetermined.<sup>15</sup>

One of Abrams’s key statements regarding musical structure implies that he and other AACM members were sensitive to the relationship between composition and improvisation in their performances and thus suggests a parallel between their creative work and the studies of culture, planning, and goals discussed above. Saxophonist Joseph Jarman recounts that Abrams would advise, “[d]on’t just think about what you’re playing when you’re playing a solo—think about what came before and what’s going to come after” (quoted in Lewis 2008, 70). Lewis proposes that this statement belies Abrams’s and the AACM’s interest in new modes of structuring both composition and improvisation. I suggest an additional and complementary interpretation: Abrams thought carefully about the relationship between improvisation and composition in performance. My analysis of “Munktmunk” in Chapter 3 suggests some of the ways that free improvisation may relate—in terms of both similarly and contrast—to preceding and/or following notated material. I argue that Abrams’s and his collaborators’

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<sup>15</sup> One basic goal of free improvisation in the performances I analyze in this dissertation is to connect two or more fully notated passages such that the improvisation is both aesthetically pleasing to the entire performance and provides space for individual improvisers’ agency. These two goals are not necessarily opposed: unlike traditional binaries between composer and performance, the AACM sought to explore a hybridized creative practice in which “musicians are performers, composers and all, at the same time” (Abrams quoted in Lewis 2008, 13). Another goal might be the achievement of what psychologist Mihaly Csikszentmihalyi describes as a state of “flow,” which “denotes the holistic sensation present when we act with total involvement...It is the state in which action follows upon action according to an internal logic which seems to need no conscious intervention on our part. We experience it as a unified flowing from one moment to the next, in which we feel in control of our actions, and in which there is little distinction between self and environment; between stimulus and response; or between past, present, and future” (Csikszentmihalyi 1996, 2014, 136–7).

improvisations resemble the theorizations of planning and goals offered by the organizational theorists and cultural anthropologists discussed above.

My analyses of the relationships between environment and behavior, as well as between what I call the sonic environment and improvisers' sonic gestures compels a discussion of information, characteristics, and analysis in ecological theory. This final section segues into my framework for the analysis of musical improvisation.

### **Information, Characteristics, and Analysis**

Environmental information is a crucial component of Gibson's ecological approach: it furnishes him with a set of characteristics that link perception and behavior.

Environmental characteristics thus provide the means of analyzing relationships between environment and behavior—the analyst suggests that the environment afforded a particular action or set of actions due in part to some group of environmental characteristics. Furthermore, the concept of characteristics in ecological psychology generates my notion of sonic characteristics in musical analysis. Sonic characteristics, as I explain further below, are primary components of my analytical framework.

Gibson concentrates on vision and light in his discussion of environmental information. Objects in the environment reflect and absorb light; that is, ambient light is “structured” by objects' diffraction, absorption, and reflection of it. Structured light “activates” (Gibson chooses this word to emphasize his pragmatic, action-oriented definition of perception) animals' ocular perceptual apparatuses, which then employ information to perceive characteristics of the environment and its mediums, substance, and surfaces. Mediums, substances, and surfaces relay information to the animal via their *characteristics*. The characteristics of a surface, for example—its layout, viscosity,

cohesion, texture, angle, size and shape, level of illumination, and reflectivity—will influence the affordance it offers to the animal (Gibson [1979] 1986, 23–4).

Characteristics therefore function as important conceptual categories for the analysis of affordances—they are properties that predicate the emergence of particular affordances.

If the animal and the environment are bound together as Gibson says, then characteristics constitute part of the “glue” that binds them. Characteristics are therefore an important component for analysis and can thus help explain why animals engage with the affordances that they do.

Harry Heft and Marilyn Nonken each offer important reminders that analysis and direct perception are categorically different (Heft 2003, Nonken 2008). They state that direct perception, by definition, proceeds without recourse to analytical cognitive processes. Analysis, in contrast, relies on conceptual categories. One must be careful not to confuse analytical categories for perceptual ones; to do so would be to undermine the basic tenet of ecological psychology that perception is direct (Heft 2003, 154).

Heft’s solution to this problem parallels selected epistemological discussions in music theory and analysis. He suggests that one can avoid conflating concepts and percepts by traversing phenomenological and analytical domains—“only by continually checking our present conceptualizations against everyday circumstances as experienced will we ensure that the work of ecological psychology can ultimately connect back to a world of human experience” (2003, 159). Thus even though prey may *directly* perceive the affordance of “hid-ability” of a crevice—without analyzing its width or depth—we may state, after the prey has slipped inside, that this affordance emerges from the size of the crevice relative to the prey’s body, as well as the context of being chased.

Furthermore, we can also imagine hiding, and reflect on the kinds of objects that afford



“hide-ability” for us. Analysis therefore involves relating observed behavior to environment characteristics, influence, and other factors such as goals, as well as a phenomenological attentiveness to our own experiences, real or imagined.

Dora Hanninen posits that music analysis concentrates on “the particular—on specific moments and qualities, pieces and passages, ways of hearing or thinking about musical experience” and that music analysts employ theoretical apparatuses to segment musical surfaces, as well as generate and articulate associations between those segments (Hanninen 2012, 3–4). Marion Guck foregrounds the subjective, phenomenological aspects of music analysis, arguing that analysts express their subjective hearing of a piece of music through a series of conceptual and verbal contrivances (Guck 2006). Both Hanninen and Guck emphasize the importance of concepts when articulating one’s experience of listening, as do other discussions of epistemology, listening, and music analysis (Boretz [1969] 1995, Dubiel 2005/2006). Similarly to Heft and Nonken’s distinction between concepts and percepts in analyses in ecological psychology, these music theorists point to the distinction and interplay between listeners’ subjective experience and the music-theoretical concepts used to articulate those experiences.

Like Guck and other feminist music theorists, I foreground my subjective listening experience in my analyses. I employ the concept of affordances to articulate relations that I hear between improvisers’ sonic gestures, as well as between notated and improvised musical material during performance. This approach contrasts with most affordance-based studies of music, which tend to focus on sound-making materials, listeners, and the body.<sup>16</sup>

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<sup>16</sup> Joel Krueger argues that music affords listeners with various kinds of pleasurable affective engagement via various kinds via entrainment (Krueger 2014). Similarly, W. Luke Windsor and Christophe de Bézenac argue that an ecological model casts listeners as co-creators of musical meaning (Windsor and

# An Ecological Framework for Music Analysis

## Using Sounds: A Motivating Question

In their 2015 article “Bringing Sounds into Use: Thinking of Sounds as Materials and a Sketch of Auditory Affordances,” Christopher Steenson and Matthew Rodger suggest that listeners “use” sounds’ affordances (Steenson and Rodger 2015). Their materialist take on sound foregrounds listeners’ interactions with what they hear, thereby shifting the focus from sounds being a carrier of information *about* the world to how and to what listeners respond. Listeners can estimate the size of ball from the sound it makes when it bounces, for example, and use this information to apprehend its potential affordances, such as its catch-ability or throw-ability (176). The information that sounds carry, they argue, “provides a multitude of potential uses, depending on how this information becomes available in interaction with the situated activity of the individual” (177). The motivating question for my analytical framework falls along similar lines: how do improvisers *use* the sonic characteristics of their environment to guide or influence their generation of sonic gestures?

The concept of affordances functions as the key concept for my answer to this question. To recapitulate, affordances are relations between dynamic animal-environment systems, and are influenced by intention and goals, socio-cultural

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Bézenac 2012). Listeners’ movements afforded by the music help them conceptualize musical structure (108), a point explored in depth from an analytical perspective by Mariusz Kozak (Kozak 2015) and from the perspective of embodied cognition by Rolf Inge Godøy (Godøy 2010). Both Godøy and Windsor and de Bézenac also point out that affordances can be used to describe musicians’ interactions with musical instruments (Godøy 2010, 110–1, Windsor and Bézenac 2012, 108). Godøy similarly argues that sound-gesture relationships revolve around the affordances engendered by instruments’ materiality—performers use musical instrumentals to produce sound based on the instruments’ affordances. Finally, Jonathan De Souza has recently elucidated the intertwining of musical compositions, their performance, performers’ bodies, and their instruments—“sound and action are facilitated and constrained by the [musical] instrument’s [invariant] affordances” (De Souza 2017, 15).

factors, and experience. Analysis occurs post hoc and uses a conceptual apparatus that should not be confused with perceptual experience—the analyst offers an interpretation of behavior in terms of the features of the animal-environment system. I thus reformulate the motivating question in the previous paragraph to reflect the implication of the analyst in analyses: How can I characterize my aural interpretations of the ways that improvisers use the sonic characteristics of their environment to guide or influence their generation of sonic gestures?

### **An Outline of an Ecological Analytical Framework**

In my framework, the *sonic environment* constitutes the conceptual and cognitive frame that facilitates musicians' interactions. The “sonic” in “sonic environment” denotes that my primary object of analysis is sound, while “environment” references the genesis of my analytical framework in ecological psychology.<sup>17</sup> My definition of a sonic environment draws on sociologist Erving Goffman's notion of “primary frameworks,” which render “what would otherwise be a meaningless aspect of the scene into something that is meaningful” (Goffman [1974] 1986, 21). Sonic environments therefore delimit and preliminarily organize the range of meaningful components for analysis.<sup>18</sup> They refer primarily to a performance in which musicians create and exchange sonic gestures (although, as I outline below, sonic gestures may also “point

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<sup>17</sup> I restrict my analyses to the sonic realm not because performer's physical gestures during performance have no influence on its unfolding (Moran 2013, Rahaim 2012), but because the primary artifacts available to me for the analysis of Abrams's performances are sound recordings. Furthermore, although these recorded performance undoubtedly sit within a larger network of animate and inanimate objects whose affordances also influence the performance (Kane 2017, Stanyek and Piekut 2010), I restrict my analyses to sonic gestures and the relations between them. Future work will incorporate visual records to incorporate gestural factors into my analyses.

<sup>18</sup> The sonic environment is also an ecological adaptation on Bourdieu's notion of the “rules of the game” (Bourdieu 1977, 58, 1993, 79), and R. Keith Sawyer's analysis of emergent “frames” (Sawyer 2000, 2003).

outside” of the sonic environment at hand). A musical performance aligns with what Goffman calls a “focused gathering”; i.e., “when people effectively agree to sustain for a time a single focus of cognitive and visual attention, as in a conversation, a board game, or a joint task sustained by a close face-to-face circle of contributors” (1961, 7).<sup>19</sup>

*Sonic gestures* are sounds that improvisers regard as meaningful parts of their sonic environment.<sup>20</sup> Sonic gestures are usually intentionally produced by musicians. They might, however, also be accidental (a drummer may accidentally hit a cymbal, for example), or produced by non-performers (a performer could interact with an audience member or react to the creaking of a door, for example). Although ultimately musicians may decide for themselves which sounds count as sonic gestures and which do not during any given performance, culturally-conditioned convention also plays a role. Musicians could also receive explicit direction as such from a composer or ensemble leader to include sounds often regarded as ambient noise as part of the performance.<sup>21</sup> In the performances that I analyze in this dissertation sonic gestures constitute the sounds inherent to the recorded performance. Sonic gestures thus consist largely of the sounds made by the musicians involved in the performance and captured on record.<sup>22</sup>

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<sup>19</sup> Adam Kendon, in addition to Goffman, also explores non-lingual influences of interaction during conversation (Kendon 1990).

<sup>20</sup> Improvisers, drawing on work by Michael Pelz-Sherman, are “interactive musical agents”— they are “any intelligent entity which can competently produce and interpret musical signals according to the conventions of at least one medium, acting of its own volition to modify its behavior in order to optimize the performance of the group, and ultimately to provide an engaging listening experience for the audience” (Pelz-Sherman 1998, 125).

<sup>21</sup> Pauline Oliveros’s *Sonic Mediations*, for example, suggest that the performer and listener move beyond the normative frame of performance.

<sup>22</sup> This claim is not meant to undermine the important connection between Abrams’s music and worldly aspects beyond the sonic realm. As DeVaux discusses, musical freedom in various guises was associated with freedom from oppressive political structures during the 1960s (DeVaux 1991, 550). Similarly, Attali theorizes free jazz, and the AACM specifically, in terms of freedom from hegemonic economic markets (Attali [1985] 2009, 138–40).

*Sonic characteristics* are constituent properties of sonic gestures that engender relations between them. I analyze musicians' responses to their sonic environment with reference to sonic characteristics; that is, if sonic gestures afford response from improvisers, then sonic characteristics provide analytical fodder. Sonic characteristics take two forms: *elemental* and *referential*. Elemental characteristics refer to musical segments' constituent parts, defined theoretically—aspects such as pitch, rhythm, texture, timbre, and dynamics—and derive from Hanninen's concept of contextual criteria (Hanninen 2012, 34–9). Referential characteristics point to stylistic conventions, other pieces of music or genres, personalities, musicians not present in the performance or their musical styles. This category thus encompasses Monson's notion of "intermusicality"—quotation of or allusion to other pieces of music—but also includes more general properties, such as playing in a style without referencing a specific composition, or adopting a particular musical attitude, such as stubbornness.

Importantly, relational qualities range from congruous to incongruous in my framework; that is, sonic characteristics afford responses rooted in similarity *and* contrast. I derive this aspect of my analytical framework from both music cognition and music theory and analysis. First, Wilson and MacDonald's psychological model of improvisers' choices during collective free improvisation makes an important distinction between improvisers' intention to *maintain* and *change* their activity in relation to the rest of the group (2016). Musicians may signal change by initiating a new idea or by responding to an existing idea. Responses might adopt, augment, or contrast with one or more existing musical elements (1034). Despite the resonances between Wilson and MacDonald's framework and mine, I do not describe musicians' cognitive processes and thus do not adopt their terms. Second, Paul Steinbeck's theorization of musical

interaction in terms of “interactive frameworks” describes interaction by employing valences of *convergence* and *divergence* (2008, 401–2). Interactive frameworks are “musical structures that are experienced interpersonally among a community of composers, performers, and auditors” that might be “improvisationally generated, compositionally determined, or both improvisational and compositional” (2008, 401).<sup>23</sup> His description resembles my framework in this chapter (arguably because it is formulated in relation to a flagship ensemble of the AACM, the Art Ensemble of Chicago) (Steinbeck 2008, 2011, 2013, 2017). My terms, congruous and incongruous, describe relationships between sonic gestures irrespective of their genesis in composition or improvisation. They also possess fewer implications regarding the direction of the improvisation; that is, they do not presuppose a teleological trajectory.<sup>24</sup>

### **Musical Interaction**

Steinbeck’s and Wilson and MacDonald’s work implies that interaction in collective free improvisation is markedly different, although not unrelated, from interaction in conventional jazz. Interaction is a central tenet of jazz performance and is often theorized in terms of conversational exchange, mimicry, or groove (Berliner 1994, 285, 349–50, Hodson 2007, 51, Monson 1996). Yet one of Thelonious Monk’s pieces of advice for improvising musicians, memorialized by saxophonist and collaborator Steve Lacy, suggests that interaction warrants further examination: “Don’t listen to me. I’m

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<sup>23</sup> Garret Michaelsen, in his study of jazz performances of the 1960s, also describes interaction in terms of the convergence and divergence of musical streams (Michaelsen 2013).

<sup>24</sup> Steinbeck also refers to multi-directional or multi-centered interactive frameworks, which productively mirrors the complex music of the Art Ensemble of Chicago (Steinbeck 2008, 401).

supposed to be accompanying you!”<sup>25</sup> In this section I relate some influential work on interaction in musical improvisation to my ecological model and explore resonances between them.

Benjamin Givan recently intuited that many analyses fail to capture the manifold interactions during collective improvisation, resulting “in an overly narrow and homogeneous conception of the [jazz] idiom” (Givan 2016, [27]). He offers three categories of interaction as a corrective: microinteraction—tiny, mostly imperceptible adjustments in tempo, articulation, dynamics, and pitch in response to others; macrointeraction—playing in compatible stylistic idioms or with complementary intensity levels; and motivic interaction—where musicians respond to one another in turn, or call-and-response. A crucial feature of Givan’s model is that improvisers interact *continuously* as they perform. Analytical emphasis thus shifts from locating interactive moments in a performance to describing multifarious valences of interaction throughout a performance. My use of a spectrum of congruous/incongruous interactions in my analytical framework draws on Givan’s notion of continuous interaction, transplanting it to largely non-groove-based “free” improvisation.

Ingrid Monson’s (1998) work has been influential in studies of interaction. She focuses on question-and-answer phrasing and groove. Yet some of her comments suggest the concept of affordances as a mode of analyzing interaction. Her discussion of bassists’ pedal points, for example, implies that musical techniques offer performers a set of possible responses that exceed categories of question-and-answer phrasing and groove:

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<sup>25</sup> See <http://www.listsofnote.com/2012/02/thelonious-monks-advice.html> (accessed August 17, 2018).

In jazz improvisation...pedal points also have interactional and rhythmic implications that contrast greatly with those of their classical counterparts. *When a bass player initiates a pedal point, he or she signals a range of musical possibilities to the rest of the ensemble.* The pianist and soloist can deviate more freely from the written harmonic progression while playing over a pedal. The drummer is temporarily freed from coordinating with the walking bass and may choose to play in a more active, soloistic manner.

(Monson 1996, 34, my emphasis)<sup>26</sup>

Monson's description suggests a mode of analyzing interaction that foregrounds the continuous and multifarious ways that improvisers employ one another's sounds for their own invention. An ecological perspective provides a compelling response to these issues. I suggest that interaction is a given in collective improvised music—one cannot improvise with others and not interact with them. Thus rather than point to moments where musicians are said to interact, I analyze Abrams's music by focusing on various ways that musicians *use* the characteristics of their sonic environment.<sup>27</sup>

### **A Micro-Analytical Illustration**

Figure 2.1 presents a summary of my analytical framework. In it, two hypothetical improvisers each play a different sonic gesture (represented by stars), which respectively exhibit elemental and referential characteristics (represented by pentagons). Those characteristics collectively influence improvisers' subsequent sonic gestures in terms of both congruity and incongruity (represented by arrows flowing from the sonic

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<sup>26</sup> Monson's book contains many similar passages that suggest that interaction comprises far more than her primary focus on question-and-answer and groove. In light of Givan's critique, these passages suggest that her work could be positively reread to expand the theorization of interaction.

<sup>27</sup> I intend "use" as an ethically neutral term; i.e., it is not meant to imply that musicians take advantage of one another. The topic of social interaction is extremely important for any discussion of improvisation. One of the founding gatherings in critical improvisation studies had an explicitly social component (Lewis and Piekut 2016a, xi–xii), many scholars have argued that improvisation and social practice are closely-tied, if not mutually inherent (Born, Lewis, and Straw 2017, 9, Caines and Heble 2015, Siddall and Waterman 2016, 1), and analyses of improvisation often link social, ethics and musical interaction (Hagberg 2008, 2016, Monson 1996, Nicholls 2012).



environment back to the players): improvisers may construct their subsequent sonic gesture in congruent and/or incongruent terms referencing one or more of the characteristics in the sonic environment. Furthermore, improvisers may vary their purview of the sonic environment to focus on only one or a few members, or on the entire group. In Figure 2.1, for example, Improviser A may decide to use only the characteristics from their own sonic gestures as the geneses of subsequent phrases.<sup>28</sup>

FIGURE 2.1: A REPRESENTATION OF MY AFFORDANCE-BASED ANALYTICAL FRAMEWORK

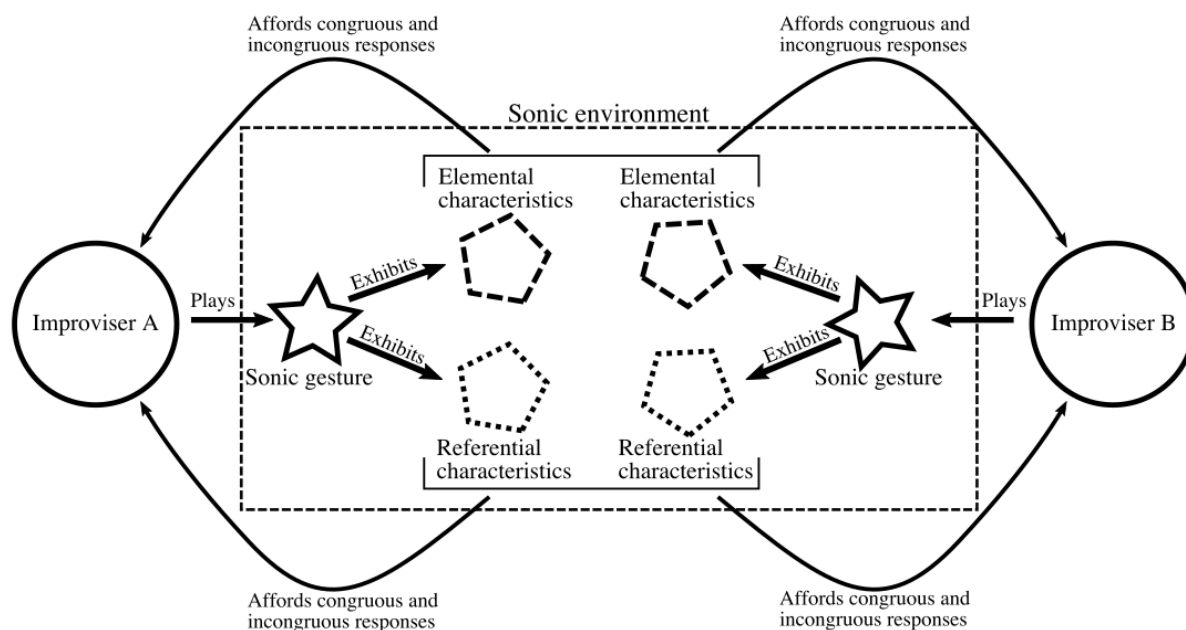


Figure 2.2 provides a brief, hypothetical example of my analytical framework. It shows sonic gestures by two improvisers, Anthony (a clarinetist) and Amina (a pianist) that are a part of a free improvisation. Boxes contain selected elemental and referential sonic characteristics for each gesture. Elemental characteristics of Anthony’s sonic

<sup>28</sup> Karim Al-Zand makes a similar point in his analysis of Julian “Cannonball” Adderly’s solo on “Straight, No Chaser” (2008). He considers Adderly’s solo from two vantage points: as a single stream of variations on previous material (what Al-Zand calls the reflective approach), and in terms of interactions with the other members of the ensemble (the reactive approach).

gesture include its rhythmic regularity, uniform dynamic, and concluding sustained pitch. It is also a quote from Muhal Richard Abrams's composition, "Munktmunk"—that title being a micro-poetic invocation of pianist Thelonious Monk (Edwards 2017, 188).<sup>29</sup> "Munktmunk," Abrams, and Monk therefore constitute referential characteristics of Anthony's phrase. Anthony's phrase affords congruous and incongruous responses. Elemental characteristics of Amina's sonic gesture include its varied durations, sustained initiation, and dynamic diversity. Its intervallic angularity also recalls Thelonious Monk's music (a representative example from Monk's "Skippy" is shown in Figure 2.3). Thelonious Monk is thus also a referential characteristic of Amina's sonic gesture. The relational qualities afforded by Anthony and Amina's respective phrases are summarized in a box at the bottom of Figure 2.2. Congruous relations are afforded in terms of the sustained pitch and reference to Monk (albeit in different ways from each player, Anthony via quotation of a piece whose title invokes Monk and Amina via an abstract representation of Monk's idiosyncratic intervallic angularity). Incongruous relations are afforded in terms of rhythmic regularity and dynamic levels.

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<sup>29</sup> For more on the complex relationship between the jazz avant-garde and Thelonious Monk, see Kelley (2009, 281–3, 339–41).

FIGURE 2.2: ANTHONY AND AMINA’S HYPOTHETICAL IMPROVISATION

**Selected Elemental Characteristics:**

- Rhythmically regular
- Sustained conclusion
- Uniform, loud dynamic level

**Selected Referential Characteristics:**

- Muhal Richard Abrams’s “Munktmunk”
- Thelonious Monk

**Selected Elemental Characteristics:**

- Highly contrasting durations
- Sustained initiation
- Dynamic variation
- Intervallic angularity

**Selected Referential Characteristics:**

- Thelonious Monk’s idiosyncratic melodic angularity

**Afforded Relations:**

<b>Congruous Relations:</b>	<b>Incongruous Relations:</b>
• Sustained duration	• Rhythmic regularity/irregularity
• References to Thelonious Monk	• Uniform/shifting dynamics

FIGURE 2.3: EXCERPT FROM THELONIOUS MONK’S COMPOSITION “SKIPPY,” MM. 9–10

This example demonstrates the interlaced relationship between elemental and referential characteristics. Referential characteristics emerge from combinations of elemental characteristics and listeners’ personal histories of listening. The referential characteristic of “Thelonious Monk” in my above analysis depends on the listener’s (i.e., my) association of angular intervals with Monk’s music and/or on their knowledge of Abrams’s music, specifically, “Munktmunk” and its allusion to Monk. Referential

characteristics thus depend on elemental characteristics without being reducible to them—the same set of elemental characteristics may imply different referential characteristics for different listeners. This formulation explodes the subject/object binary, which ecological psychology also eschews—the “meaning” of a given object depends on both the animal-environment system, which includes the animal’s socio-cultural condition and physiology, for example. Improvising together does not require that musicians either infer identical referential characteristics from the same sonic gesture or know other musicians’ intended referential characteristics. Put differently, one does not need to agree with one’s collaborators on the meaning or intent of a sonic gesture in order to interact with them. Furthermore, “Thelonious Monk” as a referential characteristic of Amina’s gesture arguably only emerges because it follows Anthony’s more explicit (although still coded) reference. Recalling Iyer’s temporal argument discussed above, the order of events matters in improvisation—to temporally rearrange events in an improvisation is to fundamentally alter the meaning of its sonic gestures.

The referential characteristic of “Thelonious Monk” thus creates a congruous relationship between the two gestures. The concept of affordances captures that relationship—one of the ways that Anthony’s phrase affords a congruous response is through references to Thelonious Monk. Amina might also have chosen to reference Monk in other ways—by explicitly quoting one of Monk’s compositions or recorded improvisations, for example. Other ways she could have engendered a congruous relationship with Anthony’s referential characteristic include other references to Muhal Richard Abrams, or other compositions that refer to jazz musicians who aren’t the composer, such as Charles Mingus’s composition, “My Jelly Roll Soul” (a reference to

Ferdinand “Jelly Roll” Morton), for example.<sup>30</sup>

Elemental characteristics are more conceptually straightforward than referential characteristics. They derive from music theoretical “building blocks”—pitch, rhythm, volume, timbre etc. Hanninen outlines three domains of analysis: sonic, contextual, and structural. The first two of these domains are the most clearly related to my analytical framework. The sonic domain, she writes, “encompasses the psychoacoustic aspect of music” and focuses on disjunction—the basic task in this analytical domain is to segment the musical surfacing by invoking dimensions of pitch, duration, timbre, and dynamic (5–6). The contextual domain shifts focus “from isolated segments to associations between segments and identification of the many contexts that impinge on musical objects to shape their sound in a particular way” (5–6). The analytical domain involves articulating associations between musical segments using a nominated system. In my analysis of Figure 2.2 I used timbre as the sonic criteria for my segmentation of the musical surface into two phases (a self-evident step). I then invoked contextual criteria in terms of rhythm and dynamics to discuss the similarities and contrasts between the two phrases. Finally, whereas Hanninen uses contextual criteria primarily to describe *similarities* between segments, I invoke them to describe both congruous and incongruous *relationships* between them.

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<sup>30</sup> Although I arrive at the notion of referential characteristics through ecological psychology, its genesis also lies in Monson’s work, as well as Henry Louis Gates Jr.’s notion of signifyin’ (which Monson also references) (Gates 1988, Monson 1996, 97). Thus I do not wish to ignore or underemphasize the role played by referential characteristics/intermusicality/signifyin’ in the history of jazz as a means of commenting on and resisting hegemonic discourses regarding African Americans and black music. In my hypothetical (but I would argue realistic) example, the references to Abrams and Monk by Anthony and Amina also gesture toward the intertextual richness of their practice and connect them with a tradition of black improvisers, composers, and improvising composers.

## Precursive and Subsequent Written Material

An important aspect of my analytical framework is the way it accounts for composed material in relation to free improvisation. The coexistence of written material and free improvisation is particularly important for my dissertation, because one of the distinguishing features of the AACM was its ambivalence regarding the traditional binary of the two (Lewis 2008, 383). Ronald Radano perceptively describes the basic relationship between composed and improvised sections in performance:

Lacking a harmonic platform, [AACM] musicians work instead from group example, building their improvisations first *from the musical style and the mood that the preliminary written sections or head arrangements set up* and, subsequently, in a collective, constructivist fashion, they work according to the rhythmic, motivic, and stylistic character of the ensemble's collaborative ideas.

(Radano 1992, 91–2, my emphasis)

The relationships between notated material and free improvisation that Radano observes are congruent with my analytical framework. He acknowledges that composed musical material “sets up” free improvisation—it provides a “beginning state” from which improvisers depart. Abrams and his collaborators virtuosically and subtly combine notated material and free improvisation in performance. Paul Steinbeck also notes that other members of the AACM share this concern (Steinbeck 2018, 276). The concept of affordances helps clarify these relationships in analysis.

Compositional material that precedes free improvisation provides a set of sonic characteristics, elemental and referential, that serve as a “beginning state” for the start of free improvisation. The “deep-rooted entwinement and entanglement of the old and the new” that Gary Peters describes in free improvisation takes on a temporally-compressed meaning in my framework (Peters 2009, 1). In ecological

terms, notated material that precedes free improvisation provides a set of sonic characteristics that influence the free improvisation that follows. This theorization imports Radano's description—musicians initially “build” their improvisations “from the musical style and the mood that the preliminary written sections or head arrangements set up”—into an ecological framework. My analysis of “Munktmunk” in Chapter 3 demonstrates this aspect of my analytical framework.

Improvisers are also attentive to notated material that will follow their improvisation. Abrams exhorted his collaborators to “think about what came before *and what's going to come after*” (quoted in Lewis 2008, 70, my emphasis). Improvisers may thus shape their individual and collective improvisation with sensitivity to upcoming notated material. Support for this idea appears in literature in both ecological psychology and improvisation studies. Heft, drawing on William James's “feelings of tendencies,” suggests that “immediate experience consists of objects and their relations, as well as a suggestion of what possibilities may follow, although the latter remain as yet unrealized” (2003, 168). Clément Canonne and Nicolas Garnier argue that improvisers may intentionally shape their performance into a set of collective sequences, “where a new collective sequence begins when the improvisers succeed in converging on a given shared musical idea or framework” (2015, 146). I propose that improvisers not only shape their performance into a set of collective sequences; they may do so to form arresting relationships with upcoming notated material.

Improvisers may congruously reference characteristics of upcoming written material in order to cue the next set of written material to the rest of the ensemble. Musicians could also create arresting contrasts, by preceding an upcoming loud notated section with sounds at a low dynamic level, for example. Practicality constitutes an

important factor for adopting some sonic characteristics over others and in more or less congruent ways. Musicians may establish a meter and tempo for upcoming notated material by congruously referencing its temporal and metrical characteristics; that is, musicians can cue a musical section by clearly articulating the tempo for that passage toward the end of their free improvisation.<sup>31</sup> My analysis of “Munktmunk” in Chapter 3 suggests some of the ways that improvisers can connect their free improvisation to upcoming notated material.

The affordances that I posit in my analyses depend on both the musical material at hand and my experiences and abilities as a listener and performer. Thus although music-theoretical work such as Hanninen’s provides a sound foundation for my framework, I turn to scholars who foreground subjectivity and embodied practice to supplement and further explicate my analytical methodology.

## **Subjectivity, Embodiment, and Creative Practice**

### **Situating the Analyst in Analysis**

Marion Guck offers a description of analysis that complements Hanninen’s taxonomical one by foregrounding the subjectivity of the analyst. Observations regarding musical objects and the relationships between them, Guck argues, are shaped by “the personal sensibilities, experiences, and inclinations of their authors, or their public personae” (Guck 2006, 197). Music thus forms an intersubjective relationship with its listener—

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<sup>31</sup> Musicians do not necessarily *need* to establish a tempo for an upcoming section—the group may have a good sense of the tempo from previous rehearsals or remembers it if it is identical to a previous section. Furthermore, musicians require less “help” with an upcoming tempo if that notated music clearly articulates an underlying pulse. An example of this can be heard in Abrams’s “Arhythm Songy” from *Colors in Thirty-Third* (1987), the trio reenters the notated material (at 8:26 in the recording) with no discernible cue regarding tempo.



different listeners respond differently and form different relationships with what is ostensibly the same piece of music or recording. Analyses should therefore account for the analyst's intersubjective experience and, argues Guck, direct "the reader's attention toward a way of hearing the music in question" (201). Similarly cogent enactments of this kind of music-listener intersubjectivity can be found in work by Susan McClary ([1991] 2002), Ellie Hisama (2001, 2004, 2015), Elizabeth LeGuin (2006), Kate Heidemann (2014, 2016), and Nina Eidsheim (2012), in addition to Guck's (1996, 1994). The acuity of this work demonstrates the value of both examining relationships between music and its listeners and foreground the analyst's intersubjective relationship to the pieces they analyze.

Suzanne Cusick's and Kate Heidemann's writings are particularly relevant to my analytical framework, as they foreground the analysts' embodied practice as part of their respective analyses. Cusick's analysis of Bach's organ prelude on "Aus tiefer Not" (in Bach's *Clavier-Übung, Part III*, BWV 686) revolves around her efforts to maintain bodily balance as she engages four limbs during a particularly gnarly passage (1994, 18). Heidemann, in her outline of a system for describing vocal timbre in popular music, uses her embodied feeling of singing as the foundation for her analyses of vocal timbre (2014, 2016). Drawing on Arnie Cox's mimetic hypothesis (Cox 2011), Cusick's feminist musicology (1994), and Merleau-Ponty's phenomenology (Merleau-Ponty [1945] 2012), Heidemann analyzes vocal timbre via her attempts to reproduce those heard on recordings (2016, [2.3]). Both Cusick and Heidemann incorporate their musical abilities into their analyses. This move foregrounds both their intersubjective relationship with the music and connects to embodied practice.

Historian and cultural theorist Paul Gilroy's notion of the "radically unfinished"

in black diasporic musical style strikes me as a resonant and complementary counterpoint to these examples (Gilroy 1995, 105). Gilroy's formulation illustrates the "openended-ness" of black music—the possibility of continuation, revision, and reengagement. The "radically unfinished" thus signals an emphasis on process over product, as well as on signifyin', sampling, and montage (105). Gilroy's theorization encompasses jazz and resonates with the domain of improvisation. Part of my analytical framework therefore takes Gilroy's notion to heart—any particular moment of an improvisation may be regarded as "radically unfinished" in that what follows represents only one out of many possible continuations. Put another way, any particular moment in an improvisation is a node that affords a vast number of responses or continuations. We hear (recorded or live) just one of those possible afforded continuations. In this sense, musical improvisation is always "radically unfinished." A listener/analyst can therefore revisit junctures in the performance and imagine, hear, and articulate alternative continuations of that moment. Those hypothetical continuations explore various implications evident at that musical instant and also illuminate the one that was actually taken. Put in ecological terms, such moments afford multiple continuations, given their characteristics and one's intent to respond more or less congruously. Embodied practice comprises a robust mode of exploring the radically unfinished and probing its affordances.

I explore musical segments' affordances in two ways. These approaches offer complementary analytical insights and are non-hierarchical—I toggle between them in order to generate multiple complementary observations. First, I transcribe performances into musical notation, analyze sonic gestures' sonic characteristics, and enumerate their similarities and differences. This approach, demonstrated above,

mimics traditional analytical processes that use transcription to transduce sound into written form and implement a kind of textual analysis. I do not reproduce these transcriptions in this dissertation, however, although they function as indispensable references for my analyses.

Second, I draw on my ability as an improvising pianist to explore affordances. This approach involves phenomenological accounts of my improvised responses to, and explorations of, various sonic gestures and their characteristics. For each task I play along with the recording of the sonic gesture under consideration on the piano. I configure the recording so that it stops immediately following the sonic gesture in question and at that point improvise a response or continuation. Reiterating this process allows me to explore various modes of response, ranging from the congruous to the incongruous and referring to multiple sonic and referential characteristics of the original sonic gesture. Congruous and incongruous responses come to have an embodied and affective valence in this task—they feel like moves “with” and “against” particular sonic characteristics.<sup>32</sup> I record and reflect on my responses in terms of their characteristics and the congruous and incongruous relationships they engender. My responses help articulate the range of affordances offered by the sonic gestures in question and illuminate important aspects of the performance; that is, one gains a more robust understanding of the *actual* response by considering its similarities and differences to a other, hypothetical responses.

## **Recomposition**

My implementation of affordances parallels the use of recomposition in music theory

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<sup>32</sup> In this sense my task resembles Nina Eidsheim’s use of vocally restrictive devices to interrogate vocal processes (Eidsheim 2012).

and analysis.<sup>33</sup> In this section I reference work by music theorists such as Nicholas Cook, Matthew BaileyShea, Joseph Dubiel, and Heinrich Schenker to support this claim. These resonances also extend to music theory pedagogy, which I address later in this section.

Cook states that “to analyze a piece of music is to weigh alternatives, to judge how it would have been if the composer had done this instead of that” (Cook 1987, 232). BaileyShea describes a similar process of “weighing alternatives,” this time while improvising, recomposing, and analyzing at the piano: “any time that we sit at a piano with a given piece and isolate motivic ideas, compare different phrases, and generally muse upon various alternate possibilities for rhythm, meter, and tonal structure, we essentially recompose the music” (BaileyShea 2007, [2]). His imaginative recompositions of settings of Goethe’s poem, *Nur wer die Sehnsucht kennt*, by Wolf, Schumann, and Schubert bring out unexpected intertextual associations between each composers’ work ([12]). Both Cook and BaileyShea emphasize that recomposition is a process of *weighing alternatives*—in ecological terms these theorists describe recomposition as an exploration of musical materials’ multiple affordances. For Cook this process is fundamental to understanding the composer’s chosen route, while for BaileyShea it allows him to explore inter-work relationships.

Recompositions are often regarded as either abstractions or inferior versions of the work in question. Schenker’s canonical, reductive graphs, which Dubiel describes as “fantasy recompositions,” are an archetypal example of the former, abstract category (Dubiel 1990, 327). Joseph Straus’s and Harald Krebs’s respective recompositions

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<sup>33</sup> I use “recomposition” to refer to analysts’ reworking of composers’ material, rather than composer’ reworking of their own or other composers’ material, cf. Burstein (2006) and Straus (1986).

function as inferior, normative examples that elucidate idiosyncratic aspects of the actual work (Krebs 2014, Straus 2012). Straus describes his recompositions of selections of Stravinsky's *Petrushka*, *The Rake's Progress*, and *Requiem Canticles* as "implicit, syntactically normal tonal prototype[s], which the actual music seems to distort in various ways" (2012, [1], Block one), and Krebs offers recompositions of Schumann *lieder* that "highlight and elucidate irregular declamation" (2014, [1.3]). These authors' recompositions provide readers with a simple or normative structure against which to read or hear the work.<sup>34</sup>

Cook's and BaileyShea's examples of recomposition explore alternate uses of given compositional material. Unsurprisingly, the process of "showing what might have been" resonates with work in music theory pedagogy (Aziz 2015, Hoag 2013, Laitz 2012, 27, 251–2, 326). In ecological terms, recomposition facilitates students' comprehension of various affordances of musical materials or concepts. Beethoven provides a particularly clear example of this idea in mm. 134–5 of his "Pathétique" Sonata No. 8, op. 13 (Figure 2.4), which could be used to pedagogically explicate the various modulations afforded by a diminished seventh chord. The second measure in Figure 2.4 is practically a recomposition of the preceding one. The F# diminished seventh chord in the first measure resolves to the local key of G minor. In the following measure, however, Beethoven enharmonically reinterprets the same set of pitches (Eb becomes D#) to modulate to the key of E minor. In other words, Beethoven demonstrates that diminished seventh chords afford modulation to distant key centers via enharmonic reinterpretation. A music theory instructor might ask students to realize the other two

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<sup>34</sup> Fred Maus also provocatively discusses score-reading as a mode of recomposition (Maus 2004).

modulatory implications using similar enharmonic diminished seventh chords, either in abstract terms, by recomposing Beethoven’s passage, or by composing original musical segments.

FIGURE 2.4: BEETHOVEN, SONATA NO. 8, OP. 13 (“PATHÉTIQUE”), MM. 134–5



These examples of recomposition, like my analytical framework, revolve around the drawing out of multiple affordances of the musical material at hand. Recalling Iyer’s distinction between “in time” and “over time” processes, a major difference between the two approaches is that the former occurs “over time,” or outside of the temporality of performance, while the latter occurs “in time”; that is, the phenomenological aspect of my analytical methodology shares the temporal embedded-ness of its analytical object, musical improvisation.

## Conclusion

Stefan Caris Love adopts affordances to analyze straight-ahead jazz in his recent article, “An Ecological Description of Jazz Improvisation” (Love 2017). He employs affordances to extrapolate on improvisers’ perceptions of the harmonic structures over which they solo. Beginning with the notion that jazz musicians improvise idiomatically and with

explicit reference to the harmonic referent, Love argues that “the aspiring improviser must learn to perceive the actions that the referent permits—its affordances—and to avoid inappropriate actions” (34). Jazz improvisers thus balance at least two tasks, argues Love, to “stay within the referent’s affordances while recognizing and exploiting opportunities for artistic expression” (34). He then analyzes recorded improvisations over well-known jazz standards such as “All the Things You Are” and “Sweet Georgia Brown” in either original or novel keys and at a variety of tempos. He suggests that improvisers’ incorrect note choices (or their temporal misalignment of correct notes) represent their misperceptions of the referent (36, 41).

My analytical framework diverges from Love’s in its treatment of “mistakes.” Early in his article Love suggests that affordances could engender analyses of improvisations that do not depend on theoretically rigid structures, such as chord-scale theory: “a referent’s affordances, the musical paths around its obstacles, relate ambivalently to music-theoretical ‘rules’—conceptually rigorous descriptions of a melody and its relationship to supporting harmonies (*chord-scale theory is one such rule*)” (34, my emphasis). In his analysis, however, Love describes pitches that fall outside of the scale posited by chord-scale theory as mistakes that reflect improvers’ misperceptions. The resulting ecological implication of Love’s description is that affordances are so constrained by idiom that any utterance that deviates from stylistic norms constitutes a mistake—an implication contradicted by actual practice.

Take, for example, pianist Paul Bley’s improvisation over “All the Things You Are” from Sonny Rollins’s 1963 album, *Sonny Meets Hawk* (mm. 1–16 are shown in Figure 2.5). This canonical solo contains multiple passages that fall outside of idiomatic

harmonic norms. Bley’s line in mm. 14–5 of his solo, over a  $iimin7b5-V7(b9)-Imaj7$  in G major, for example, implies E major and Db major—harmonic relations largely “unsanctioned” by chord-scale theory. One might object that Bley is simply an unidiomatic improviser—that his choices are not mistakes that belie his misperception of the underlying chord structure but simply lie “outside” of the harmonic rules given by bebop and chord scale theory. If this argument holds, however, then Love’s model becomes useful only for improvisers who strictly adhere (or wish to strictly adhere) to stylistic norms and chord scale theory—an unrealistic and unpragmatic premise. He therefore appears to reinstate a rule-based framework, despite his earlier critique of such models and suggestion that an affordances-based model improves on them (32).

FIGURE 2.5: PAUL BLEY’S IMPROVISATION ON “ALL THE THINGS YOU ARE” (MM. 1–16)

(TRANSCRIPTION BY KEVIN SUN)<sup>35</sup>

The musical score for Paul Bley's improvisation on "All the Things You Are" (measures 1-16) is presented in four staves. The key signature is two flats (Bb and Eb), and the time signature is 4/4. The score includes the following chords and markings:

- Staff 1: Fm7 (3:14), Bbm7, Eb7, Abmaj7
- Staff 2: Dbmaj7, Dm7(b5), G7, Cmaj7
- Staff 3: Cm7, Fm7, Bb7, Ebmaj7
- Staff 4: Abmaj7, Am7(b5), D7(b9), Gmaj7, E7(b9)

Additional markings include triplets (3), a "delay" marking, and a "3" marking.

<sup>35</sup> See <http://www.thekevinsun.com/2015/02/paul-bley-on-all-things-you-are.html> (accessed August 17, 2018).



I nonetheless agree with Love's basic postulation that an ecological, affordance-based model could engender an attractive description of musical improvisation. Interestingly, his conclusion contains a passage that corroborates the foundational premise of my analytical framework: "in free jazz there are no harmonic, rhythmic, or metrical obstacles...beyond those that the ensemble develops spontaneously...Whereas the tonal jazz musician must perceive affordances within predictable, predetermined chord progressions, the free jazz performer must learn to perceive affordances that emerge from the ensemble's spontaneous, collective choices" (Love 2017, 42). This passage suggests that affordances emerge during "free" improvisation and that skilled performers utilize them. Thus Love's and my approaches, despite their differences, both regard Gibson's concept of affordances as a powerful underpinning for the analysis of musical improvisation. I demonstrate my framework further in the following chapter, which features detailed and extended analyses of two performances by Abrams and some of his collaborators: "Focus, ThruTime...Time—>" and "Munktmunkt."

# 3—Using Sounds: Analyzing Abrams’s “Focus, ThruTime...Time->” and “Munktmunk”

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## Introduction

In this chapter I implement my affordance-based analytical framework outlined in Chapter 2 to analyze two of Abrams’s performances. My first analysis focuses on the opening of “Focus, ThruTime...Time->,” Abrams’s freely improvised duo with saxophonist Fred Anderson, and my second analysis considers “Munktmunk,” a quartet performance that bookends free improvisation with notated material.

I envision two goals for these analyses. First, I aim to explore and demonstrate the affordance-based analytical framework outlined in Chapter 2. I argued in that chapter that the concept of affordances constitutes a robust way of hearing and analyzing musicians’ interactions, one that avoids the emphasis usually found in jazz-oriented analyses of interaction on question-and-answer phrasing and imitation. Rather, the concept of affordances suggests that we hear improvisers’ sonic gestures as responses that “use” the sonic characteristics of their environment. These uses span the congruous and incongruous. The primary motivating question for my use of affordances in my analyses is “How can I characterize my aural interpretations of the ways that improvisers use the sounds that they hear during a performance to guide or influence their improvisations?”

Furthermore, in Chapter 2 I suggested that my embodied practice as a pianist informs my analyses. That claim will be borne out in this chapter, as I pause at various

moments in my analysis to consider how I might have responded to the sonic environment at that point. These reflections are not meant as gateways into Abrams's and his collaborators' cognitive processes. Rather, I suggest that these excursions, much like the process of recomposition in traditional music theory, provide counterfactuals that function as analytical foils for my analyses. My recompositions thus differ from those in traditional music theory, which often present as prototypical or simplified versions of the original work.

The second goal of my analyses in this chapter is to explicate the richness, subtlety, and creativity of Abrams and his bandmates. Discussion of Abrams and his music seldom appear in academic publications, music theoretical/analytical ones in particular. Out of all AACM members, Anthony Braxton's music has probably received the most extensive and detailed examinations. Mike Heffley's *The Music of Anthony Braxton* and Ronald M. Radano's *New Musical Figurations: Anthony Braxton's Cultural Critique* both contain extended, detailed discussions of Braxton's music (Heffley 1996, Radano 1993), as does issue sixteen of the online journal *Sound American*—Nate Wooley's explication of Braxton's Language Music (Wooley 2016), Erica Dicker's detailed examination of his Ghost Trance Music (Dicker 2016), and Carl Testa's of his Echo Echo Mirror House Music (Testa 2016), in particular. The most recent music theoretical examination of Braxton's music is by Paul Steinbeck (2018), whose expertise as both a music theorist and performer informs his perspective. In his closing paragraph Steinbeck laments the rather one-sided academic focus on music from the AACM: “[W]e need all the historical research we can get,” he states, “but these cultural contributions are ultimately rooted in music...[and] if we want to develop a full-spectrum perspective on Braxton and the organization widely considered one of the

most significant musicians' collectives in history, we must engage in analysis that gives the AACM's music its due" (Steinbeck 2018, 277).

Steinbeck's comment invokes music analysis as part of the broader project of investigating and elucidating work by AACM members. I echo this sentiment by interpreting Braxton's remark that "creative music...is an affirmation and testament to *all the people* participating in the music" (quoted in Steinbeck 2018, 277, my emphasis) as an invitation to participate from an analytical perspective—"all the people" might refer to music analysts in addition to audience members, historians, record collectors, etc. Abrams echoed this sentiment to me when I suggested that I occasionally detect a reticence from AACM musicians about having their music analyzed:

MRA: Well the thing is...I guess the reticence might be just in the area of having me participating it. You can certainly engage in analyzing or whatever and get your point of view from what you see if you analyze...at a performance the listener does that anyway. Of course...[anyone] who is invested in that kind of work would naturally do that. So I understand...but the reticence for me—I wouldn't call it reticence I'm just using your word—I just don't engage in it. I have no objection...[to] anyone doing their work...how they see it...and I certainly appreciate any time that...my work might be the temporary focus of what they're doing.

MH: I just want to be sensitive to representing you or your work in an accurate and fair light.

MRA: The thing is. I appreciate that and I understand it...however *my own representation* is the representation of my work...you follow me? So how it's represented and how you may interpret your analytical work...I would trust your integrity as a scholar to make an intelligent point of view...I may not even agree with it but I respect it...Because I doubt if I would have any objection or disagreement to what you may say because after all it's your point of view. So I would respect that, but I don't have to agree with you. But I would respect it. Again, I appreciate the momentary or cursory focus on my work.

Abrams states that he has no objections to analytical examinations of his music, providing that the analysis proceeds in good faith. His emphasis on the analyst's

individual perspective mirrors the philosophy of the AACM—he encourages individuals to develop their personal point of view and foregrounds “respect” as a bridge between them. I aim to embody this philosophy in my analyses by describing my interpretation of Abrams’s music using the affordances-based analytical framework outlined in Chapter 2 without foreclosing other listeners’ interpretations. I would nonetheless contend that my affordances-based framework represents a compelling mode of describing those impressions.

## “Focus, ThruTime...Time->”

### Background

“Focus, ThruTime...Time->,” an extended improvised duet between Abrams and saxophonist Fred Anderson from Abrams’s *SoundDance* (2011),<sup>1</sup> was recorded live on October 16, 2009 at the Community Church of New York (40 East 35th Street, New York) as part of the annual concert series by the AACM’s New York chapter.<sup>2</sup> The celebratory spirit of *SoundDance*, commemorating Abrams’s eightieth birthday, is tempered by the knowledge that the recording perhaps represents Anderson’s last: he passed away in 2010 at age 81.<sup>3</sup>

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<sup>1</sup> *SoundDance* segments Abrams and Anderson’s continuous performance into four tracks, and each track marker occurs at logical point in the performance—at a moment of silence between contrasting sections, for example.

<sup>2</sup> This concert series continues, which presents two sets by distinct AACM or AACM-adjacent artists each Friday in October. The AACM’s communitarian aspect is particularly evident at these concerts: Abrams’s wife (Peggy Abrams) and daughter (Richarda Abrams) often sell tickets and hand out programs (if they are not performing, ushering, or announcing), and other New York-based AACM members such as Amina Claudine Myers and Henry Threadgill usually attend.

<sup>3</sup> Abrams and Wang were also in the initial stages of discussing the recording and release [of] quintet material: Abrams’s final group consisted of trumpeter Jonathan Finlayson, vibraphonist Bryan Carrott, drummer Reggie Nicholson, and bassist John Hébert.

Anderson and Abrams's association goes back to the beginnings of the AACM: both are part of the collective's oldest cohort, who were all born between 1927 and 1932, and whose parents migrated to Chicago and St. Louis (Lewis 2008, 1). The parallels between Abrams and Anderson extend to their dispositions as young musicians: both exhibited attitudes geared toward individualism, self-motivation, and curiosity (2008, 25). Although Anderson began studying music in earnest earlier than Abrams, both men appeared committed to "new music"—meaning music at somewhat of a conceptual distance from conventional jazz—by around the summer of 1964 (2008, 88).

Anderson did not attend the fabled 1965 meetings that crystallized into the AACM. He was, however, part of the first AACM event, which took place on August 16, 1965 at St. John Grand Lodge on Chicago's South Side (2008, 125).<sup>4</sup> Anderson appeared as a member of the Joseph Jarman Quintet, in addition to bassist Charles Clark, Arthur Reed on drums, and Bill Brimfield on trumpet. Anderson's first two recorded appearances were for sessions led by Jarman—*Song For* (1967) and *If It Were the Seasons* (1968), the latter of which Abrams also performs on. *SoundDance* is Abrams and Anderson's only recorded duo collaboration, and thus constitutes a unique opportunity to examine these musicians' deep and shared commitment to collaborative, improvisative exploration.

My analysis is based on a detailed but unpublished transcription.<sup>5</sup> Although I do

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<sup>4</sup> Interestingly, this venue appears connected to Masonry, which subsequently bridges to Abrams's interest in Rosicrucianism, discussed in Chapter 1. I would tentatively suggest that this venue for early AACM concerts derives from musicians' interest in certain "alternative" spiritualism, such as Freemasonry and Rosicrucianism. For another discussion of "occult" spirituality and texts in Chicago in the middle of the twentieth century, see Szwed (1997, 64–73).

<sup>5</sup> I do not include any of my transcriptions in this dissertation due to issues related to copyright permission.

not include illustrative excerpts of this transcription in my analysis, I refer the listener to the commercially available recording using time stamps so that they may listen for the moments that I indicate in my analysis.

## **Analysis**

Abrams's opening gesture of "Focus"—at 0:14—contains multiple sonic characteristics. He begins with a quick C#4, B3, and D4, which he follows with an F#3/G3 dyad, Ab2, G1, before concluding with a D2/Eb2 dyad. His gesture spans D4 to G1 (31 half steps) and the complete set represents an (0, 1, 2, 5, 6, 7, 9) set class in prime form.<sup>6</sup>

My ear is drawn to smaller subsets that exhibit slightly clearer harmonic elemental characteristics. I hear the opening three pitches (C#, B, and D) as scale degrees two, one, and three in B minor, respectively. I can also hear the subsequent F#3–G3 dyad as scale degrees six and five in B minor but am equally drawn to their chromaticism.<sup>7</sup> I thus also characterize the F#3–G3 dyad as an (0, 1) set class. The F#3–G3 dyad imbricates with the following Ab2 to form an (0, 1, 2) set class, which also subsumes the subsequent G1. The final D3–Eb3 dyad transposes the previous (0, 1) set class. It also faintly reintroduces a sense of tonality—the dyad combines with the preceding G1 and Ab2 to imply the G Phrygian scale.

In this hearing, the lowest pitch of Abrams's opening gesture—G1—sounds as the tonic. I can also extend this G-as-root orientation to subsume the entire passage, thus recasting the opening B, D, and C# as the third and fifth of a G major triad with a chromatic neighbor, the first dyad (F#/G) as a major seventh to the G major triad, and

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<sup>6</sup> I employ the Acoustical Society of America's convention for indicating pitch, where middle C equals C4. "Prime form" denotes the most compact arrangement of a set class.

<sup>7</sup> '<' and '>' indicate ordered sets, while '(' and ')' indicated unordered sets.

the Ab and Eb as chromatic upper neighbors to the root and fifth, respectively.

Abrams's single notes and dyads are also latent with rhythmic expectation: his gesture temporally unfolds only gradually and unevenly, suggesting a kind of deliberation or attentiveness to the present. The elemental characteristic of rhythmic unevenness at a generally slow tempo only partially describes the gesture's temporal and affective profile—it sounds to me as though Abrams invokes an attitude or persona during these opening moments. I therefore also describe this feeling using the referential characteristic of being careful or deliberate. The gesture's quiet dynamic reinforces this interpretation, thus suggesting a mode of “stepping lightly.” Importantly, the referential characteristic of being careful is not meant to suggest that Abrams is unsure, but that I hear this persona within his opening gesture and that it affords response.

Before I consider Anderson's response to Abrams's opening gesture, I offer reflections on my own embodied practice as a way of drawing out some of its affordances. These initial moments afford responses of various kinds, ranging from congruous to incongruous. I can respond to Abrams's gesture in highly congruous ways by adopting one or more of the sonic and/or referential characteristics described above. I may *also* outline the key of B minor or include a series of (0, 1) set classes, either in isolation or as chromatic neighbor tones, for example. Abrams's gesture affords incongruous response by drastically altering the volume and making a declamation, thus interacting incongruously with the referential characteristic of being careful or deliberate. I may also interact with Abrams's tonal implications—by unambiguously stating a tonality such as A major, for example. This mode of response constitutes a partially congruous interaction by adopting and transposing Abrams's tonal



suggestions—B minor, G Phrygian, or G major—but interacts incongruously with the overall gesture’s harmonic ambiguity and chromaticism.

Anderson’s actual, arresting response consists simply of three, elongated Ab3s (0:30). He adopts Abrams’s halting temporal spacing and dramatizes the emergence of each note via intricate timbral manipulation—as if he says, “yes, let’s tread carefully here.” Put in ecological terms, Abrams’s opening gesture affords a congruous interaction via this referential characteristic, and Anderson obliges.

Anderson’s melodic stasis constitutes a highly incongruous response to Abrams’s thirty-one half step intervallic span, as if Anderson, in response to Abrams’s excursion between the middle and lowest register of the piano, wryly replies with three iterations of a single pitch. Anderson’s Ab also forms an interestingly ambivalent relationship with the harmonic characteristics in Abrams’s gesture. It represents a congruous response to Abrams’s Ab2 and the (0, 1, 2) set class of which it is a member. Anderson’s Ab also responds congruously to Abrams’s implied G Phrygian, although without necessarily confirming this interpretation (by further outlining the scale, for example).

Abrams’s next sonic gesture (0:35) transposes the (0, 1) set class from the opening to B3–C4 and then appends and dovetails it with a series of descending perfect fifths—C4–F3–Bb2. These descending fifths suggest a Bb chordal root—although the precise quality of this sonority resists interpretation in terms of conventional harmony. Abrams’s gesture thus preserves and interacts congruously with the harmonic ambiguity of his opening—in both cases his gestures ambiguously suggest tonal materials. One might also point out the congruous elemental characteristic regarding melodic shape between Abrams’s opening gesture and this one—both descend, although the second over a narrower range than the first.

This sonic gesture also maintains Abrams and Anderson's referential characteristic of proceeding carefully. Although this referential characteristic may derive from the fact that the performance is in its beginning stages, I prefer to interpret their carefulness as a mode of creating suspense and anticipation, both for one another and for the audience.

Anderson's subsequent sonic gesture (0:40) responds congruously to Abrams's harmonic implication of a Bb chord. Anderson's A4, D4, and C4 integrate with Abrams's Bb and F to suggest a Bb major seventh chord with an added ninth (Bb, D, F, A, C). Put in ecological terms, Abrams's Bb–F dyad affords a congruous harmonic interaction by realizing its implication of a harmonic sonority with a Bb root. This gesture elaborates on the mode of interaction embodied in Anderson's first one. Whereas his first sonic gesture expressed harmonic ambivalence in response to Abrams's multiple implications, his descending fifth gesture both adopts and transposes Abrams's C4–F3–Bb2 descending fifths *and* confirms a harmony that Abrams's gesture implies.

A marked schism with the prevalent, shared referential characteristic that I described as halting or deliberate emerges from Abrams's next sonic gestures—his accented C#4/D4 trill (0:44) seems to suddenly announce an arrival, rather than continue to probe gently forward. Alongside this incongruous relation between referential characteristics, however, Abrams continues to employ the (0, 1) set class, creating harmonic congruity over this break. His stepwise oscillation also relates congruously to Anderson's preceding vacillation between C4 and D4.

Anderson responds congruously by adopting Abrams's referential characteristic of announcement or declaration, embodying a more aggressive stance with a bluesy,

descending flourish that spans Bb4 and Eb4 (0:47). The space that the players leave between their sonic gestures during these moments adds an extra layer of complexity to their interaction. They invoke the halting opening moments of their performance in the space between and after their assertive gestures by allowing Abrams's trill to hang in the air before Anderson's flourish, and Abrams undampens the piano strings as Anderson responds, filling the subsequent space with a faint, resonating echo of his joyous outburst that lasts a full six seconds (0:48–0:54).

Although only a few moments have elapsed in the performance at this point, one can already detect a proliferation of sonic characteristics and affordances. My analysis so far emphasizes the (0, 1) set class, ambiguously tonal harmonies, and twin referential characteristics of a careful or tentative persona, and a declamatory or announcing one. Others may hear other characteristics, affordances, and thus describe and analyze this performance differently. The remainder of my analysis of "Focus" concentrates on the characteristics and affordances that seem most relevant to me as the performance unfolds.

In the wake of his and Abrams's incision into the prevalent referential characteristic of careful deliberation, Anderson returns to the referential characteristic of carefulness with a sustained, A4 quartertone sharp, and Abrams responds congruously with an Ellingtonian open voicing in his high register that implies E major (0:55). The congruity between Abrams's voicing and Anderson's sustained pitch emerges from their shared return to the opening referential characteristic, as well as the elemental characteristics of register (both high), rhythm (both sustained), and harmonic: Abrams's chord alludes to an E major seventh chord, which harmonizes Anderson's pitch as a kind of raised eleventh.

Rather than adopt this suggested tonality, Anderson reintroduces the  $i_5$  and  $i_2$  interval classes that both he and Abrams utilized at the opening of the performance to interact incongruously with Abrams's implied E major. Put in ecological terms, Abrams's implication of E major seventh (with a raised eleventh) at 0:58 affords an incongruous harmonic/melodic interaction via Anderson's pitch classes of A and D, which represent chromatic tones in relation to E Lydian, the scale that accounts for both Abrams's chord and Anderson's sustained pitch.

Anderson swiftly pivots to play two additional pitches that more congruously signify on Abrams's implication of E major. He returns to A#, a microtonal variation on the quarter-raised eleventh that he played a moment ago, and immediately descends by a half step to A $_4$  (1:04). His descending half step recalls the (0, 1) set classes in Abrams's opening gesture (F# $_3$ –G $_3$ , Ab $_2$ –G $_1$ , and D $_3$ –Eb $_3$ ), and also counterbalances his preceding ascending fourth with descending stepwise motion.

Abrams responds congruously to Anderson's invocation of the (0, 1) set class by deploying two sets of half steps in his next gesture—D/Eb and G/Ab—exploding the first set into the minor ninth D $_2$ –Eb $_3$  and using the second as a concluding, accented dyad (1:04). Incidentally, this pitch class set—(G, Ab, D, Eb)—is the exact one that he used to conclude his opening sonic gestures. The force of Abrams's gesture recalls the referential characteristics of announcement. This moment suggests that Abrams and Anderson will continue to oscillate between the two referential characteristics—carefulness and declamation—as the performance progresses. Anderson's response (1:06) reiterates his Bb $_4$  and A $_4$  from a moment ago but recasts them under the guise of Abrams's trill at 0:44. He thus responds congruously to Abrams's preceding minor-ninth gesture, as well as his own preceding one, via the elemental harmonic

characteristic of the (0, 1) set class.

Anderson cuts incongruously against his and Abrams's shared trope of recasting (0, 1) set classes at 1:10 by returning momentarily to the careful persona. He also returns to his preceding A quartertone sharp, although this time Abrams offers a very different kind of interaction. Abrams's response to Anderson's held pitch at 0:57 involved a sustained, Ellingtonian chord in the upper register of the piano. This time, at 1:16, he sharply punctuates Anderson's dwindling pitch with a five-note chord: G<sub>4</sub>, Ab<sub>4</sub>, Bb<sub>4</sub>, B<sub>4</sub>, E<sub>5</sub>. This chord includes two iterations of the (0, 1) set class: G–Ab and Bb–B. At the same time, however, it returns to his earlier notion of alluding to conventional harmonic materials but implying an E major triad with two chromatic neighbors (G and Bb).

Abrams's chord is also a subset of the E diminished scale that alternates half and whole steps (E, F, G, Ab, Bb, B, C#, D, E). This scale is often associated with harmonic developments from post-bop jazz in the 1960s, and typically outlines a dominant seventh chord with a lowered or raised ninth and possibly also a raised eleventh. Abrams's voicing thus implies an E dominant seventh chord with a raised ninth (G in this voicing) and raised eleventh (Bb/A#). Although neither Abrams nor Anderson adopts this harmonic and scalar interpretation in the performance, it informs my own congruous and incongruous responses to Abrams's accented interjection.

I can respond congruously to Abrams's chord by also playing short, sharply accented notes, thus also breaking with the referential characteristic of a deliberate persona and reinforcing the declamatory one. Adopting pitches from Abrams's voicing in my response produces congruity. I may also generate harmonically congruous responses by adopting the aforementioned E diminished scale. My responses that

employ this scale feel like an elaboration on Abrams's harmonic implication. Abrams's sharp chord suggests short rhythmic durations, which I can translate into rapid rhythms. In this instance, congruity emerges from the short duration of Abrams's single chord and the relatively short durations of each of the attacks I play during rapid melodic passages.

It is worth noting that one of the primary motifs in "Focus" so far has been the alternation between two referential characteristics, the first of which I identified with a careful and deliberate persona, and the second that I described as declarative. Abrams and Anderson have enacted three instances so far where the latter interrupts the former, although each time they reintroduce the deliberate persona. The first was Abrams's trill, responded to congruously with Anderson's bluesy flourish (0:44–0:47). In the second instance Anderson cut across Abrams's sustained chord with a declarative ascending perfect fourth (0:55–0:58). The third instance occurs with Abrams's sharply accented chord at 1:16. This occurrence contrasts with the previous two because it functions as a catalyst for an extended exploration of this more aggressive persona. In this sense Abrams and Anderson adapt their initial interjections into a structural shift away from "let's tread carefully here," to an extended and more energetic passage.

Anderson offers two short melodic flourishes in response to Abrams's *sforzando* chord (1:17). The accented beginning of first, two-note gesture, C#4–D4, relates congruously to Abrams's sharp chord. Anderson's gesture also draws from the aforementioned diminished collection and thus produces harmonic congruity. His second, four-note gesture begins with the same two pitches and continues with F#4 and E4. I hear the F# in this phrase as a modal shift away from the E diminished collection (which contains an F natural) to imply another E-based tonality, such as the E

Mixolydian scale. Importantly, Anderson's second phrase is faster than his first in this measure. I interpret his increased tempo as a congruous interaction with the brevity of Abrams's chord. Anderson's quick tempo, much like my own fast-moving melodic responses outlined above, propagates a congruous relation between fast rhythms and the short duration of Abrams's chord.

Abrams reintroduces the motif of holding the sustain pedal down as Anderson plays his second gesture, and both musicians appear to acknowledge the generated resonance by pausing for four seconds (1:19–1:23). This moment reinforces the importance of silence in this performance not just as something that occurs between sonic gestures but as a kind of sonic gesture itself—both musicians consciously deploy silence (which I also use to refer to moments where the piano strings resonate) as a way of varying their ongoing dialogue.

Anderson reenters with another energetic three-note sonic gesture a few moments later (1:24) and Abrams also adopts this declarative referential characteristic. What follows is a series of short, overlapping melodic outbursts from both players: Anderson remains in upper-middle register of this instrument, while Abrams descends over the course of his three gestures, from Gb<sub>4</sub> to G<sub>2</sub> (1:25–1:28). Abrams's three sonic gestures also each strikingly employ (0, 1) and (0, 1, 2) set classes, thus recalling and elaborating on the chromaticism of his opening sonic gesture as well as its subsequent iterations. Interestingly, Abrams's first two sonic gestures temporally parallel Anderson's—his first one begins in rhythmic unison with the last attack of Anderson's first group, and their second phrases occur concurrently. They therefore interact congruously via a shared referential declarative characteristic and through the elemental temporal characteristic of short, quasi-synchronized rapid gestures.

Abrams's third chromatic gesture, G<sub>2</sub>–A#<sub>2</sub>–A<sub>2</sub> at 1:27, appears after and is followed by a brief but notable moment of silence. His three pitches punctuates Abrams and Andersons' concise exploration of short, sharp melodic gestures and the silence that surrounds it once again emphasizes its importance as a characteristic in the performance. I characterize their use of silence using a referential characteristic of latent anticipation. This referential characteristic describes the function of silence as a contrastive moment that heightens ambiguity and expectation.

Following this latent, anticipatory silence, Anderson releases a descending flourish reminiscent of his earlier bluesy one. The rapidity of this sonic gesture (1:29) interacts congruously with his and Abrams's previous exchange using short, sharp phrases, but also recalls the melodic shape and tonal implications of one of his earlier ones. Like his bluesy flourish at 0:47, this gesture implies E minor—it consists of a smeared, descending arpeggio of an E minor seventh chord (D, B, G, E) and a raised leading tone (D#), faintly implying a i<sub>7</sub>–V progression in E minor.

The follow moments present a dramatic and compressed version of the interplay between the referential characteristics of treading carefully and declaration. First, Abrams responds with a sustained i<sub>15</sub> interval, F<sub>2</sub>–Ab<sub>3</sub> (1:29–1:30). Like Anderson's descending arpeggio, this gesture implies tonal materials—F minor in this case—but without the necessary context to confirm that tonality. Abrams's sustained gesture alludes to the referential characteristic of being careful or deliberate, and thus interacts incongruously with Anderson's descending, declarative flourish (although congruously with previous iterations of this referential characteristic). In response, Anderson reiterates the (0, 1) oscillation that has appeared multiple times in the performance so far, this time as D<sub>4</sub>–Eb<sub>4</sub> (1:30). Anderson's sonic gesture sounds to me as if he says to



Abrams, “yes, I hear you recalling our earlier, more spacious mood, here is my allusion to it.” Almost as if he has lured him into a trap, Abrams then interrupts Anderson’s sustained Eb<sub>4</sub> with another sharply punctuated chord (1:32). This chord echoes the similar one that Abrams used to punctuate Anderson’s sustained A quartertone sharp.

Anderson and Abrams again employ silence to punctuate their exchange (1:33–1:34). Following this episode of latent expectation, which lasts just over one second, Anderson returns to the same (0, 1) oscillation, this time concluding it with a foray into his low register with a D<sub>3</sub> (1:35). Abrams returns to the (0, 1) set class by reintroducing the trill (1:37). Unlike his earlier trill, however, which arrived as an accented interpolation into the prevalent referential characteristic of being deliberate or careful, Abrams’s double trill at this moment gently crescendos: it sounds like a congruous response to Anderson’s tender, low-register (0, 1) set class.

The overall trajectory of the performance so far has been toward increased activity—both Abrams and Anderson have gradually transitioned to playing more energetic, accented gestures. 1:40 of the recording presents a kind of crossroads—both players’ gestures contrast with the truncated, swift rhythmic activity beginning at 1:24 and thus suggest a return to the referential characteristic of being deliberate or careful. In my own practice, I might return to this referential characteristic by adapting Anderson’s combination of (0, 1) set classes and sustained low notes. I also offer more rhythmically sustained adaptations of the melodic gestures beginning at 1:24. These gestures shift the performance in a more explicitly melodic direction and thus interact incongruously with Abrams’s declarative accented chords and his and Anderson’s short gestures.

What actually occurs in performance foregrounds a temporal characteristic that

is embedded in Abrams's trill. Trills necessitate rapid rhythms, and Anderson extracts this rhythmic characteristic for his subsequent set of rapid-fire phrases, which shifts the performance into a new sonic arena (1:40). Anderson's expeditious phrase begins with a bluesy flourish similarly to the one at 0:47. Rather than simply functioning as a form a motivic repetition, however, Anderson extends these blurred pitches into a longer run that extends into his lower register, finishing on an accented C<sub>3</sub> (1:41). Immediately following this flurry of notes, Anderson offers a striking four-note descending gesture that contains two staccato pitches (C<sub>4</sub> and A<sub>3</sub>) followed by two slurred pitches (E<sub>3</sub> and D<sub>3</sub>). His staccato pitches respond congruously to Abrams's previous, sharply accented chordal responses, while the concluding stepwise legato descent creates a congruous relationship between this four-note gesture and his similar one at 1:29—both contain a descending arpeggio followed by a stepwise “resolution.”

Abrams's answering nimble phrase at 1:43 responds congruously to the temporal elemental characteristic of Anderson's preceding gesture. He also adopts Anderson's concluding punctuation by descending through the B<sub>b</sub> major scale and finishing with a staccato B<sub>b</sub> (1:44).<sup>8</sup> This overtly tonal reference interacts incongruously with the largely chromatic harmony in the performance thus far. I hear Abrams's B<sub>b</sub> major scale as a counter to the musicians' use of the (0, 1) set class, and also as a congruous interaction with the tonal implications of his opening gesture.<sup>9</sup> His staccato conclusion creates a congruous relation with the end of Anderson's gestures, although it is not as

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<sup>8</sup> Abrams's major scale also recalls Joseph Straus's discussion of post-tonal composers' employment of tonal materials such as triads in atonal settings (Straus 1990).

<sup>9</sup> Abrams's answering phrase also consists of a single melodic line in his middle register, thus imitating Anderson's tenor saxophone. Put in ecological terms, Anderson's saxophone affords congruous response via the elemental characteristics of monophonic texture and middle register, which Abrams adopts at this point in the performance.

aggressively accented. This congruity hinges on the twin elemental characteristics of articulation and rhythm; that is, Anderson and Abrams both accent the final pitches of their phrases.

Anderson then develops the elemental characteristic of descending melodic shape by playing a long, descending gesture (1:45). He mimics the accented concluding pitch of Abrams's preceding scalar descent by accenting his final E<sub>3</sub>. Anderson's concluding five pitch classes in this gesture—B, A, G, D, E—constitute a G major pentatonic collection and thus generate both congruous and incongruous relationships with Abrams's preceding unambiguous B $\flat$  major scale: both musicians employ tonal materials and thus interact congruously via their use of conventional harmonic materials, but outline contrasting harmonic areas, thus generating incongruity. Abrams also implements modal interchange by substituting B $\flat$  Phrygian for B $\flat$  major at 1:44. This turn toward the Phrygian mode recalls one of the harmonic implications of his opening gesture—Abrams's concluding pitches in his opening sonic gesture implied the G Phrygian scale.

Abrams's curt F<sub>4</sub>–B<sub>4</sub> gesture at 1:46—immediately following Anderson's pentatonic flourish—affords congruous response through similarly short gestures, and Anderson obliges with a two-note gesture of his own: D<sub>5</sub>–B<sub>4</sub> at 1:47. Abrams's single F<sub>5</sub> just a moment later intensifies this set of abrupt exchanges and he follows this train of thought with a single E $\flat$ <sub>5</sub>, which subsequently gives way to another rapid descending run, concluding at 1:51.

Anderson's four flourishes between 1:48 and 1:51 each begin with a strongly accented attack. These four evenly spaced initiations provide a temporary sense of isochronous pulses at approximately seventy-eight beats per minute. Anderson thus

introduces an incongruous elemental characteristic—regular tempo—into the surrounding flurries of activity. Having heard Anderson’s isochronous pulsations, I retroactively hear Abrams’s rhythms at 1:46–1:49 as syncopations based on an implied pulse. Heard in this way, Anderson’s isochronously spaced beginnings explicitly state what Abrams’s preceding gestures imply.

Furthermore, Anderson’s descending series of gestures beginning at 1:48 responds incongruously to Abrams’s ascent that begins on Bb3 at 1:44, continues through Bb4 and B4 at 1:45, and concludes on F5 at 1:47. Abrams’s ascending accents—B4 at 1:46 and F5 at 1:47—increase the intensity of the music as they unfold. Anderson’s four descending phrases from 1:48 to 1:51 thus represent a kind of “deflating” gesture, responding incongruously to Abrams. Abrams’s swift descending run beginning at 1:49—spanning C#5–F1—mirrors Anderson’s plunge and also balances his preceding melodic ascent.

Abrams’s long descending gesture also continues his trope of using conventionally tonal collections in the midst of chromatic surroundings. His three concluding pitches—F2–Bb1–F1 (1:51)—outline dominant-tonic-dominant scale degrees in Bb major and thus recall his descending Bb major scale at 1:43. The body of his descending run at 1:51 almost exclusively employs the diatonic collection with four sharps. This entire gesture concludes with an accent. It thus generates congruity by including an accented ending, even as it creates incongruity via its descending melodic shape and conventional harmonic materials.

Anderson begins a new gesture before Abrams finishes his long descent to F1 (1:51). His flourish begins with a four-note ascent before descending dramatically from A4 to A2. This up-down melodic arc recalls the shape of Abrams’s gesture at 1:44, which

began with a chromatic, four-note ascent and concluded with a descending Bb major scale. Anderson's gesture at 1:51 exhibits a more ambivalent attitude toward diatonic collections than Abrams's. It begins chromatically—with two (0, 1) set classes, D4–Eb4 and G#4–A4—turns toward the all white-note diatonic collection, which I hear as A natural minor, and concludes with a modal interchange to outline A major, emphasized by a descending arpeggio of the A major triad (1:52). This triadic conclusion forges a congruous relationship with the strongly diatonic ending of Anderson's gesture at 1:44, when he employed the Bb major scale. Finally, Anderson's diatonicism suggests a reappraisal of the chromaticism of his “deflating” gestures 1:48–1:51: with a little effort I hear the accented tones in this passage as an outline of D major, as tonic–dominant–tonic–dominant.

Abrams begins another fast-moving phrase at 1:52, during Anderson's descent through A major. He vacillates in the piano's middle/lower register and plays a set of three slurred phrases that conclude with a reference to F major (1:53). Although the first part of this gesture accents Db3, the concluding two gestures emphasize F and A, and the F1 from the end of Abrams's preceding gesture returns to punctuate the end of this one. Abrams and Anderson thus congruously interact during these moments of the performance by employing elemental characteristics derived from conventional harmonic materials, such as chords and scales, often at the ends of their gestures.

After a brief pause (1:53), Anderson continues the proliferation of rapid rhythms but this time begins with alternating ascending and descending pitches—Db4–F4–Eb4–G4–F4 at 1:54—that interact incongruously with some of the more uniform preceding melodic shapes. As Anderson crisscrosses the space between C4 and his concluding Eb3, Abrams plays a gesture (1:55) whose clear, ascending-then-descending melodic arc

responds incongruously to Anderson's angular zigzagging. Abrams also returns to the trope of invoking diatonic collections by mostly employing the white-note collection (Eb4 and G#4 constitute the exceptions). Anderson responds at 1:57 with a phrase whose melodic shape creates a congruous relationship with Abrams's. Although Abrams begins with an ascent—F4—B4—E5—and Anderson only ascends after a brief initial descent, Anderson's phrase mimics Abrams's ascending-descending motion, thus creating a congruous relation via the elemental characteristic of melodic shape.

Overall, 1:40–1:57 of Abrams and Anderson's performance represent a turn away from the referential characteristic of being careful and toward the declamatory referential characteristic. The musicians develop this declamatory characteristic using rapid rhythms, which in my hearing stem from the inherent dexterity of Abrams's trills. They also frequently adopt diatonic collections in the midst of chromaticism, and conclude their gestures with accents.

One of the critical aspects of my analysis is that intra-ensemble interaction does not depend on either traditional instrumental roles (such as soloist and accompanist) or the kind of turn-taking paradigm often found in analyses of jazz performance. Although there are times in "Focus" where Abrams and Anderson take turns, improvised interaction in my analytical framework does not depend on such clear divisions or treat them as given. Thus the overlapping snippets that occur more frequently as the performance progresses express congruous and incongruous interactions with both the musician's contemporaneous gestures and preceding material. Abrams's repeated turns to diatonic collections, for example, chafe against Anderson's largely chromatic phrases, yet both harmonic approaches can be heard as outgrowths of sonic characteristics earlier in the performance: I hear Anderson's chromaticism as an elaboration of the

(0, 1) set class contained in Abrams's open gesture and restated in various trills, and Abrams's use of diatonic collections as an elaboration on some of the harmonic implications of his opening gesture—B minor by the opening three pitches and G major by the entire phrase, for example. Thus, even as Abrams and Anderson interact incongruously as their sonic gestures unfold together, they also interact congruously via their common references to implications of earlier material.

To return to the performance, Abrams and Anderson almost telepathically converge at 1:59: they each create a dramatic contrast with the rapidity of the previous material by playing declamatory sustained pitches in their respective upper registers. Importantly, this marked moment occurs immediately after the return of the “latent pause” referential characteristic (1:58). This breath arrives after a period of intense activity—during the preceding thirty seconds both improvisers largely employed rapid-fire rhythms. Their silence at 1:58 symbolizes a brief telepathic conversation: “should we do something different?” “Yes, but let's maintain the intensity that we've established.” Abrams's accented E<sub>5</sub> and Anderson's accented F quarter-sharp 5 at 1:59 represent the outcome of this imagined conversation.

Abrams sustains his E<sub>5</sub> as he plays a series of descending arpeggios—either by holding the E<sub>5</sub> with one hand while playing the arpeggios with the other, or by holding the upper pitch with his fifth finger and using his other fingers for the remaining pitches. The first two arpeggios outline seventh chords from the all-white diatonic collection—F major seventh and E minor seventh, respectively. Abrams subsequently develops these descending gestures, initially by recasting them scalicly, and then by converting them into glissandi and chromatic clusters. Abrams's progression from arpeggios, scales, and chromatically inflected glissandi suggests a development of a

basic idea—short, repetitive descending gestures—via a progression through different harmonic and melodic terrains—diatonic, whole-tone, and chromatic. Abrams punctuates this series of gestures with two more that interact congruously with some of his previous ones: an oscillation between Eb<sub>4</sub> and Db<sub>4</sub> at 2:02—recalling both his previous trills, Anderson’s C<sub>3</sub>–D<sub>3</sub> oscillation at 0:40, and Anderson’s concurrent oscillation between B<sub>4</sub> and D#<sub>5</sub>—and an accented concluding C<sub>1</sub> (2:02), which echoes the many previous accented endings.

Anderson employs an oscillating figure following his sustained pitch at 1:59. His twelve-fold repetition of the B<sub>4</sub>/D#<sub>5</sub> dyad beginning at 2:00 occurs as Abrams unfolds his arpeggios, scales, and glissandi, and recalls and amplifies his C<sub>3</sub>–D<sub>3</sub> oscillation at 0:42. Anderson’s gesture sounds to me like a pronouncement: a joyous exclamation that shifts the performance away from the short, sharp phrases in the preceding section. It thus appears as a congruous development of the declamatory referential characteristic established near the beginning of the performance. The latent pause that immediately preceded Abrams’s and Anderson’s declamations also influences the sound of this passage. Whereas earlier in the performance this declamatory referential characteristic interrupted the prevalent referential characteristic of carefulness, at 1:59 it functions as a kind of celebratory announcement following a latent pause.

If Abrams and Anderson’s bursts at 1:59 seem to suggest the end of a series of entangled sets of elemental and referential characteristics, then one may well wonder how the musicians will proceed. In my own set of explorations of this moment at the piano, returning to the kinds of gestures that were previously the focus of the performance feels like a regression: it feels like what follows 1:59 should constitute a new section. When I play a trill that echoes Abrams’s early ones, for example, I feel as



though I am returning to material that has already been covered and that my gesture is somewhat redundant. A similar feeling emerges if I adopt the pattern of a descending scale punctuated with an accented ending. To me this moment in the performance—just under two minutes since Abrams’s opening gesture—calls for a different path, a new topic or set of topics, around which to improvise.

Abrams’s gesture beginning at 2:03 adopts a slightly gentler demeanor than the preceding material. He reduces his dynamic level, employs legato phrasing, and eschews pronounced accents. His gesture begins on D#3, proceeds scalicly upward through the white-note diatonic collection to a slightly accented B3, falls to a sustained E3 using the same diatonic collection (this time employ Gb3 as a chromatic passing tone), and concludes with a soft, short B1. Thus although this gesture echoes the ascending/descending melodic shape used by both musicians in the preceding section, employs a diatonic collection, and concludes with a detached low pitch, his shift in articulation and dynamic level at this moment generates a marked incongruity. Abrams’s concluding low pitch sounds more like a delicate ushering of a new, gentler sonic environment, rather than a declamatory punctuation. In contrast, Anderson continues forcefully, offering three sets of dyads that each begin with an accented pitch and conclude with a staccato C4 (2:04). He thus continues the declamatory referential characteristic that he so effectively deployed in the preceding passage, while Abrams pivots away from it.

Abrams’s and Anderson’s respective projections for the performance thus diverge at 2:04. Anderson prolongs the declamatory referential characteristic, while Abrams invokes a gentler continuation. This divergence differs to mere contrast between their streams—by this point in the performance the musicians have already invoked

contrasting sonic characteristics. Rather, this moment sounds to me like a kind of crossroads, as if the musicians simultaneously suggest different routes for continuation. Almost as if acknowledging this difference, Abrams and Anderson pause for two seconds, invoking the referential characteristic of latent expectation (2:05). One could imagine the two musicians asking one another, “Well, what’s next?”

Anderson breaks this long silence with a striking, legato, chromatic, microtonal descent from B<sub>4</sub> to G<sub>3</sub> (beginning at 2:07). This gesture introduces new sonic characteristics while recasting older ones. It interacts incongruously with both the relatively short, crisp preceding phrases and the prevalence of loud dynamics. Simultaneously, however, Anderson’s long phrase returns to and elaborates on the (0, 1) set class, concatenating multiple iterations to produce a chromatically descending figure that he also inflects microtonally.

Anderson’s legato phrase affords Abrams with an opportunity to create contrast by the way of short, scurrying phrases in his middle-lower register (2:08–2:13). His gestures primarily employ the B Lydian scale, continuing his trend of using diatonic collections, although he gradually elaborates. Abrams begins with a diatonic cluster of scale degrees surrounding the tonic of B, and then gradually expands upward; first to the third (D $\sharp$ ) and then to the fourth degree (E $\sharp$ ). His longer flurry at 2:11 expands this collection up to the fifth degree (F $\sharp$ ) and continues with a double chromatic neighbor figure around the sixth degree (G $\sharp$ ).

This passage highlights the utility of my framework for the analysis of interaction. Abrams’s and Anderson’s respective concurrent sonic gestures from 2:08 to 2:13 may appear to have very little to do with one another. Conventional jazz-based models of interaction, such as those utilized by Hodson (2007) and Al-Zand (2008) underplay

musicians' interactions in these moments. My ecological framework, in contrast, provides a conceptual structure that recognizes the musicians' interactions by means of their contrasting sonic characteristics. Thus Abrams and Anderson interact incongruously in this passage through contrasting elemental characteristics of phrase length (long versus short), rhythm (sustained and slowly accelerating versus swift and segmented), and harmony (chromatic versus diatonic).

Abrams continues his train of thought after Anderson concludes his chromatic phrase (2:13). His left hand recrosses the diatonic terrain covered by his previous gestures, descending through scale degrees three and seven in B Lydian. Abrams's three-note answering right-hand gesture creates a striking harmonic incongruity with earlier material (2:14). These three pitches—Bb<sub>3</sub>, A<sub>3</sub>, F<sub>3</sub>—sound to me like a descent from the tonic to dominant scale degrees in Bb major. Abrams thus answers the diatonic material in his left hand with diatonic material from the key a half step lower. As if further reinforcing the stratified harmonic domains of each of his hands, Abrams concludes this moment with three pitches that also come from B Lydian: C#<sub>3</sub>, A#<sub>2</sub>, and G#<sub>1</sub>. The sudden descent to an accented G#<sub>1</sub> at 2:14 recalls the accented endings of many of his previous phrases in the performance. Thus even as they move into a new sonic area in the performance, Abrams and Anderson continue to invoke previous sonic characteristics.

Anderson's response at 2:14 consists of another rapid phrase, which interacts incongruously with his previous relatively slow, chromatically descending gesture. Previously, Anderson's rapid phrases consisted primarily of chromatic tones, rather than ones drawn from common scales such as the major or whole tone scale. For his gesture at 2:14, however, Anderson concatenates such materials as he weaves through

multiple key areas. His initial four pitches—Ab<sub>3</sub>, Bb<sub>3</sub>, D<sub>4</sub>, and F<sub>4</sub>—outline a Bb dominant seventh chord. Anderson subsequently pivots from the D and F in this collection into the all-white diatonic collection, which concludes with D<sub>4</sub> and C<sub>4</sub>. Continuing this trend of harmonic pivots, Anderson extends his E<sub>4</sub>, D<sub>4</sub>, and C<sub>4</sub> to employ the whole tone collection, which proceeds stepwise downward to D<sub>3</sub> and back up to Bb<sub>3</sub>. Finally, Anderson repurposes his Bb<sub>3</sub> to pivot into a compound melody: he alternates between Bb<sub>3</sub> and a chromatically descending line—Ab<sub>3</sub>, G<sub>3</sub>, Gb<sub>3</sub>, F<sub>3</sub>. Anderson concludes this long line by pivoting into an extension of the (0, 1) set class: he employs a chromatic cluster, an ordered <Gb<sub>3</sub>, D<sub>3</sub>, E<sub>3</sub>, F<sub>3</sub>, Eb<sub>3</sub>> pitch set, or an (0, 1, 2, 3, 4) set class, for his final five pitches.

Abrams's answer at 2:17 noticeably combines both diatonic and chromatic harmonic materials, as well as selected sonic characteristics that he and Anderson have contributed thus far. He plays a set of strongly accented chromatically descending minor triads. Although he muddies the first two of these chords with neighboring pitches, these triads and this chromatic sequence emerges by the end of the passage (2:18). Abrams's dramatic gesture deploys the (0, 1) set class as a mode of transposition and thus recalls Anderson's descending chromatic scale beginning at 2:07. At the same time, his minor triads interact congruously with both musicians' deployment of conventional harmonic materials. Abrams's gesture thus functions as a kind of synthesis of mutually incongruous harmonic materials that have informed both musicians' gestures up until this point. Put another way, this gesture amalgamates the twin elemental chromatic and diatonic harmonic characteristics that were latent in Abrams's opening gesture.

Abrams's sonic gesture returns the musicians to the referential characteristic of

declamation or announcement: at 2:18 they appear to adopt the declamatory referential characteristic, thus reacting incongruously against Anderson's preceding gentler chromatically descending gesture and Abrams's scurrying one in B Lydian. Anderson responds to Abrams's dramatic chords at 2:18 with a three-pitch gesture that recalls his bluesy flourish at 0:47. His phrase here suggests B as a tonic, which casts his preceding Eb and D as a signification on the blues. His sustained concluding pitch interacts incongruously with the performance's trope of finishing phrases with short accented pitches. Abrams's witty answer at 2:20—a single, short B<sub>0</sub>—redeploys the trope of accented endings and also interacts congruously with Anderson's B. Anderson then answers Abrams's low B with a short melodic segment that develops this implied tonic (2:20): his D<sub>5</sub>–B<sub>4</sub>–A<sub>4</sub> sounds to me like a fragment of the B minor pentatonic scale.

Finally and after a short pause, Anderson lets out a series of call-like gestures that shift the harmony toward A major (2:22), as well as echo his declamatory oscillation at 2:01 and his three, calling dyads at 2:04. Anderson's redeployment of this figure suggests an emerging referential characteristic that one might denote as "calling," although I would need to examine more of this performance to determine this this referential characteristic's analytical traction.

Abrams and Anderson's performance continues beyond this excerpt for almost an additional forty minutes. My analysis of the opening minutes evinces a number of elemental and referential characteristics as well as a variety of interactions between the musicians. These characteristics and relations represent only one out of many possible interpretations of this excerpt: other analysts may segment and analyze the musical surface differently and thus highlight different relations between both musical segments and the two musicians. Furthermore, possible interpretations multiply as the

performance unfolds, and the analyst is forced to confront a myriad of possible relationships between sonic gestures and characteristics. In this sense, alternate analyses of this performance will reflect the listener's predilection, training, and priorities. Nonetheless, I offer mine as a demonstration of both my affordance-based analytical framework and an explication of some of the intricacies of this performance.

## **“Munktmunk”**

### **Background**

Abrams's discography does not lack recordings of remarkable performances. *Colors in Thirty Third* (1987), his eighth album for the Italian label Black Saint, is a beautiful document of Abrams's creative practice approximately ten years after he moved from Chicago to New York (Lewis 2008, 334). Abrams's first release for the label was his duo album with Art Ensemble of Chicago bassist Malachi Favors, *Sightsong* (1976). Abrams subsequently released *1-OQA+19* (1978), *Mama and Daddy* (1980), *Spihumonesty* (1980), *Duet* (with Amina Claudine Myers) (1981), and *Blues Forever* (1982) for the label. His recordings for Black Saint also continue after *Colors in Thirty* and comprise *Duets and Solos* with Roscoe Mitchell (1993), *Familytalk* (1993), *Think All, Focus One* (1995), and *Song for All* (1997). This considerable recorded output demonstrates Abrams's tireless work ethic and the communities of musicians that he collaborated with during this period.

Other musicians on these Black Saint recordings include fellow Chicagoans and AACM musicians such as Anthony Braxton, Henry Threadgill, Amina Claudine Myers, Roscoe Mitchell, Leroy Jenkins, George Lewis, and Thurman Barker, but also a number

of musicians who were either New Yorkers or had also moved to New York in the 1970s and 80s, such as Baikida Carroll, Jimmy Vaas, Reggie Nicholson, Jack Walrath, Eddie Allen, and Andrew Cyrille. This group connects Abrams to a New York jazz milieu that reflects his Chicago roots, his somewhat ambivalent involvement with the jazz lofts of the 1970s (Heller 2017), and his expanded circle of collaborators. According to Lewis, Abrams had been intermittently visiting New York since 1959 (2008, 335). Abrams decided to move in the mid 1970s because of New York's apparently greater selection of musical opportunities and Anthony Braxton's encouragement (who had moved there from his Paris sojourn in early 1970):

Basically I felt I needed to [move to New York]—as others had done before me, but not so much because of that—to make a presence, to follow the reputation that we had garnered through our activities [with the AACM]. And, to expand my business base, because Chicago was no longer challenging me as a musician. The most cutting edge stuff in every place is around [New York], or if it's not, it's headed here from someplace else. If I need a saxophone player who plays all the reeds, he's a phone call and subway ride away.

(Quoted in Lewis 2008, 335)

The personnel on *Colors in Thirty-Third* represent a cross section of Abrams's musical life in New York during mid 1980s. It comprises of reedist John Purcell, bassist Fred Hopkins, bassist Dave Holland, violinist John Blake, and drummer Andrew Cyrille. Not every musician performs on every cut, however, which lends the recording a noticeable orchestral variety. For "Munktmunk," the third track on the album, Fred Hopkins plays bass, and Dave Holland and John Blake both sit out. The performance thus comprises of a quartet: Purcell on tenor saxophone, Hopkins on bass, Cyrille on drums, and Abrams on piano.

Born in New York on May 8, 1952, John Purcell began his musical life playing French horn at a summer program at the Westchester Conservatory (Kennedy 2002).

He started playing saxophone because his school did not own a French horn, and also took up trombone. Purcell studied at the Manhattan School of Music, earning his Bachelor's degree in 1974 and a Master's in 1978. By the early 1970s he was playing regularly in New York in a variety of bands, and although he was forced to cease activity in 1975 due to a tumor in his larynx, he returned with an ardent knowledge of instrumental and mouthpiece design, acoustics, and issues related to musicians' physical health. By the early 1980s Purcell was performing and recording with high profile musicians such as Chico Freeman and Jack DeJohnette. Prior to *Colors in Thirty-Third*, Purcell appears on DeJohnette's *Tin Can Alley* (1981), *Inflation Blues* (1983), and *Album Album* (1984), as well as Chico Freeman's *The Pied Piper* (1984). Both Freeman and DeJohnette hail from Chicago. Abrams appears on two Freeman recordings that precede his work with Purcell, *Morning Prayer* (1976) and *Chico* (1977), and recorded with DeJohnette only once—his final recording, *Made in Chicago* (2015). Freeman or DeJohnette may have recommended Purcell to Abrams for the recording session that would be released as *Colors in Thirty-Third*.

An AACM member, Fred Hopkins (1947–1999) constituted one-third of the influential AACM ensemble Air, along with saxophonist Henry Threadgill and drummer Steve McCall. The group recorded eleven albums between 1975 (*Air Song*) and 1986 (*Air Show No. 1*). Hopkins thus personally knew and played with Abrams in Chicago, and moved to New York at around the same time. Hopkins, like many of the Chicagoans who made this move, spent a lot of time around the jazz loft scene in lower Manhattan (Heller 2017). According to Chico Freeman, Hopkins was sharing a loft with David Murray and Stanley Crouch above the loft/club on Bowery, The Tin Palace, where Crouch also served as programmer (Lewis 2008, 336). An in-demand bassist for the



kinds of musical experimentation that the jazz lofts hosted, Hopkins likely also knew drummer Andrew Cyrille, who was also part of the loft scene.

Cyrille was born in 1939 in Brooklyn, New York and is arguably best known for his role in Cecil Taylor's groundbreaking ensemble The Cecil Taylor Unit. He appears on many of Taylor's classic early recordings, such as *Unit Structures* (1966), *Conquistador* (1966), and *Student Studies* (1966). By the early 1980s the New York Chapter of the AACM had already begun presenting concerts, which included presentations from both New York- and Chicago-based members as well as from other musicians who were not necessarily AACM members but whose work aligned with their aesthetic. Lewis notes that Cyrille performed in many of these concerts (Lewis 2008, 440), suggesting that Abrams and Cyrille moved in similar circles and held overlapping musical aesthetics.

*Colors in Thirty Third* represents a cross section of Abrams's involvement in the multifaceted New York jazz scene in the 1980s, which included musicians from various backgrounds but with coinciding musical interests. The musicians on this recording often deftly navigate both Abrams's complex composed material and collective free improvisation within a single performance, which makes many the tracks exemplars of the kind of formal structure that I address with my affordance-based analytical framework.

## **Analysis**

Abrams, Purcell, Hopkins, and Cyrille's performance of "Munktmunk" begins with two iterations of Abrams's written material, which comprises two contrast sections, proceeds to "free" improvisation, and then returns to the same written material for one rendition.

This performance therefore mimics the “head-solo-head” format of much conventional small-group jazz.<sup>10</sup>

In this analysis I focus on the middle, freely improvised section of the performance. This episode expresses a multilayered approach to ensemble improvisation—the musicians work together, supporting one another with clear temporal and harmonic cues, but also maintain autonomy and develop their individual streams of music. The four improvisers also demonstrate an acute awareness of the preceding and subsequent written material; that is, they connect their “free” improvisation to that material in logical yet unexpected ways.

The sonic characteristics of the written material of “Munktmunk” provide a foundation for which to consider the group’s free improvisation. During the A section, piano (Abrams), bass (Hopkins), and tenor saxophone (Purcell) play Abrams’s melodic part and the drum set (Cyrille) plays a single-line percussion part. The same orchestration occurs during the B section, except that Hopkins improvises an independent bass part.

Arguably the most immediate characteristic of Abrams’s composition derives from its name. “Munktmunk” alludes to one of Abrams’s heroes, Thelonious Monk. Abrams’s title follows Brent Hayes Edwards’s perceptive theorization of song titles as significations on “insider” status (2017, 188) and/or micropoetic stimulations that implicate the reader/listener in their meaning (2017, 196). In my ecological framework Abrams’s title generates a referential characteristic of “Thelonious Monk”: that is, the figure of Thelonious Monk suggests an associated set of sounds, attitudes, and musical

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<sup>10</sup> This analysis references my unpublished transcription.

approaches for the performance.

The sonic profile of this title also offers some clues regarding the sound of Abrams’s composition. The title is rhythmic, dynamic, and contains inherent repetition. The title separates into two similar parts—“munkt” and “munk”—thus implying a binary rhythm. The internal structure of each half, however, adds further dynamism. The “kt” and “k” that respectively conclude each half creates a hard, percussive sound, almost like the click of a stick on a drum frame or the clip of a hi-hat played by a foot. The “mun” that begins each half produces a gentle beginning that gradually crescendos to the hard ending. The soft-hard relationship between “mun” and “kt/k” mirrors a typical 4/4 jazz feel, which archetypically accents the second and fourth beats with the hi-hat. One can experience these rhythmic implications of Abrams’s title by imagining four-beat cycles at a medium tempo, clicking their fingers on beats two and four, and saying the title as shown in Figure 3.1.

FIGURE 3.1: A MUSICAL EMBODIMENT OF ABRAMS’S TITLE

The figure consists of three musical staves. The top staff is labeled 'Voice:' and uses a treble clef. It shows the syllables 'mun - kt' and 'mun - k' with 'x' marks above the syllables indicating accents. The middle staff is labeled 'Finger snaps:' and uses a bass clef with a double bar line. It shows 'x' marks above the second and fourth beats, with a small upward-pointing arrow below each 'x' indicating the snap. The bottom staff is labeled 'Typical jazz pattern (swing):' and uses a bass clef with a double bar line. It shows a sequence of notes with 'x' marks above the second and fourth notes, and a downward-pointing arrow below each 'x' indicating the swing feel.

The dynamic, rhythmic sound of Abrams’s title carries into the musical material of the composition. Both upper and lower parts express a clear pulse. The A section

expresses no clear meter, while the B section outlines what I hear as a cycle of three half notes. The melodic line during the A section comprises primarily of five rhythmic gestures—quarter notes, groups of an even number of eighth notes, the “Lombard rhythm” (sixteenth note–dotted eighth note), and rapid bursts. During the B section the melodic line alternates between sustained durations, usually four beats long, and two-beat phrases using some combination of eighth notes, quarter notes, and Lombard figures.

The melodic part of both sections is both rhythmic and remarkably unsyncopated, Lombard rhythms excepted. The piece thus clearly expresses the related elemental characteristic of isochronous pulses, either unmeasured or in 6/4 (or 3/2), and rhythms that clearly mark these pulses. These rhythms constitute important elemental characteristics in my analysis, and their rhythmic markedness also resonates with the referential characteristic of Thelonious Monk, who is known for his rhythmic approach to composition and improvisation.

Like the melody, the march-like percussion part expresses a clear pulse but no recurrent metrical scheme. It comprises primarily of quarter notes, eighth notes, eighth-note triplets, and sixteenth notes. Cyrille largely plays the same rhythms in each of the three renditions of the written material, which suggests that Abrams composed the percussion part. The eighth-note triplets in the percussion part, first articulated on the third beat of m. 1 (0:01), add a crucial non-duple rhythmic characteristic to the composition. Abrams’s composition thus expresses rhythmic subdivisions of both two and three, with subdivisions of two as primary and subdivisions of three as incongruous gestures against them.

“Munktmunk” does not clearly express a tonality, harmony, or tonal center. The

first twelve notes of the melody employ the chromatic aggregate, although the line does not progress similarly. The melody is distinctively angular with frequent changes of melodic direction, perhaps already a signification on the referential characteristic of Monk via the elemental characteristic of melodic angularity.

Finally, the upper part of “Munktmunk” mostly employs single notes. Exceptions to this rule are almost always sixths, either major or minor, and occur sporadically throughout the A section and saturate the B section. I hear these sixths as additional congruous significations on the referential characteristic of Thelonious Monk, who frequently employed sixths in his music. Figure 3.2 shows his compositions “Misterioso” and “Worry Later,” which make liberal use of sixths, melodic and harmonic, respectively.

FIGURE 3.2: SIXTHS IN MONK’S (A) “MISTERIOSO” AND (B) “WORRY LATER”

(a)



(b)



In summary, Abrams’s composition offers a number of generative sonic characteristics. The title produces a referential characteristic, “Thelonious Monk,”

which is reinforced by the elemental characteristics of rhythmicity, sixths, and melodic angularity. The composition also expresses the elemental characteristics of a clearly stated isochronous pulse (reinforced by the poetic rhythm of the title), a relatively small set of rhythmic figures (quarter notes, eighth notes, Lombard figures, triplets, sixteenth notes, and rapid-fire bursts), and chromatic tonality. These characteristics comprise the sonic environment that precedes “free” improvisation in this performance.<sup>11</sup> They thus provide a kind of “set state” from which the improvisers depart. Because this same material also follows the group’s improvisation, these characteristics also furnish the musicians with a sonic environment to “aim” toward. In pragmatic terms, the improvisers must find some way to guide their free improvisation to a point where they can easily begin the recapitulation.

My analysis begins at the B section that immediately precedes the collective free improvisation (2:09). I begin my discussion at this moment because Hopkins improvises a countermelody during this B section (as he does in every B section), which continues into the collective improvisation beginning at 2:25.

Hopkins’s bass part from 2:09 to 2:25 (while the other musicians continue to play notated material) repeatedly emphasizes the pitch class A. He anticipates the B section with it at 2:09, returns to it again at 2:12, 2:13, and 2:15. He often precedes these As with Es, such as at 2:14 and 2:21, just before the beginning of the group improvisation. This E–A descending fifth progression reinforces A as Hopkins’s primary pitch even though no larger tonal context materializes. Hopkins’s surrounding elaborations resonate in relation to his A “tonic.” His arpeggio figure at 2:23 outlines a

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<sup>11</sup> Other listeners and analysts may detect other characteristics. My list in this introductory passage reflects my hearing of the piece and is not meant as a definitive description.

C dominant seventh chord with a lowered ninth (C, E, G, Bb, Db). He then inverts this ascending third relation between A<sub>2</sub> and C<sub>3</sub> and lands on F#<sub>2</sub> at 2:27. Purcell also implies a dominant seventh chord with a lowered ninth when he returns to A at 2:28.

The musicians maintain the underlying isochronous pulse of “Munktmunk” at the beginning of their collective improvisation (2:25). This continuity creates temporal congruity as the group crosses the indistinct threshold between written and improvised material. Turning to my own practice, my obfuscations or forfeitures of the established pulse create incongruous relations with the previous material. At 2:25, however, the group sails smoothly into improvisation by maintaining this primary temporal elemental characteristic.

Abrams and Purcell further reinforce the connection with the preceding material by beginning their respective streams with dialogic references to the melodic gesture that concludes the preceding B section—Ab<sub>4</sub>–C#<sub>5</sub>–D<sub>5</sub>–Bb<sub>4</sub>–F<sub>5</sub> with a rhythmic profile of four eighth notes with a sustained conclusion (2:22–2:25)

Abrams marks the end of the written section with two staccato quarter notes using the second harmonic sixth from Phrase A (2:25). These quarter note dyads combine with the preceding Ab/F dyad to suggest a Db major triad. Thus Abrams’s sixths generate a tonal elemental characteristic of Db major that incongruously interacts with the chromatic preceding material. Abrams then repeats Phrase A in its entirety (2:27–2:28), thus signaling that he plans to interact congruously with the preceding material through repetition.

Purcell pauses before offering any new sonic gestures: he simply holds the F<sub>5</sub> that concludes the written B section while Abrams reiterates Phrase A. Abrams’s quotation affords Purcell with an opportunity to interact congruously in multiple ways. He might

also refer to Phrase A, refer to other written material, either from the A or B section, or play a phrase that also outlines Db major, for example.

Purcell offers a slightly altered version of Phrase A as Abrams returns to his staccato “tonic” dyad at 2:30. Purcell’s alteration consists of rhythmic augmentation: the original eighth notes become dotted quarter notes. This trifold polyrhythmic expansion interacts both congruously and incongruously with the established pulse—Purcell’s gesture remains yoked to it while also chaffing polyrhythmically against it.

Abrams’s next iteration of Phrase A at 2:31 concludes with an extra beat. The original duration of Phrase A is six beats, and Abrams extends this duration to seven by inserting a quarter note rest at the end. This subtle alteration responds congruously with Purcell’s polyrhythm. Purcell’s phrase affords a congruous interaction via temporal alterations of Phrase A and Abrams obliges.

Between 2:30 and 2:41 Abrams and Purcell repeat Phrase A in quick succession. These gestures cement their back-and-forth dialogue using Phrase A, which I characterize with two referential characteristics: question-and-answer phrasing and stubborn repetition. The referential characteristic of question-and-answer phrasing captures Abrams and Purcell’s turn-taking in this passage, while “stubborn repetition” represents their incessant referral to Phrase A.<sup>12</sup> Importantly, their question-and-answer relationship *emerges* from this free improvisation, rather than as a given for my analysis of interaction. Put differently, Purcell and Abrams generate this referential characteristic through their free improvisation, rather than assuming it as a default

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<sup>12</sup> I also relate the referential characteristic of stubborn repetition to Abrams’s title, which divides into similar halves.



mode of interaction.<sup>13</sup>

Purcell's next reference to Phrase A, at 2:40, interacts congruously with and extends the motif of temporal elongation, although this time his gesture cuts more aggressively against the underlying pulse. Purcell's sonic gesture sounds like a temporally stretched version of Phrase A that bears an oblique relation to the underlying pulse. This gesture thus represents an incongruous interaction with established beat.

Cyrille's drumming up until this point continues the train of thought established by his composed percussion part. Put in ecological terms, Cyrille interacts congruously with some of the elemental characteristics from the written material as he begins his improvisation. At 2:10—the beginning of the B section that precedes the group improvisation—Cyrille orchestrates various eighth- and sixteenth-note figures between the snare drum and high and low toms. These figures continue in a similar fashion in until 2:26 and represent reorchestrations of the rhythm of the melodic part during section A of “Munktmunk.” Both this melody and Cyrille's part use a small but varied set of sixteenth-note-based rhythmic cells. Cyrille's playing for 2:10–2:26 thus congruously adapts this rhythmic profile and orchestrates it between these three drums.

Cyrille marks the beginning of the improvised section with an accent on both his snare drum and ride cymbal (2:26).<sup>14</sup> This change from drums to cymbal-and-snare marks a timbral shift that aligns his improvisation with the composed percussion part

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<sup>13</sup>I do not mean to imply that their generation of this referential characteristic does not signify on the well-established tradition of question-and-answer phrasing in jazz and black music, but that I do not view this mode of interaction as a given, as is sometimes the case in analyses of improvised musical interaction (see Chapter 1 for a discussion of this point).

<sup>14</sup>My impression of this moment is that the ostensible beginning of the group improvisation is spread between the members of the group, rather than beginning precisely at the point that Cyrille marks; that is, it sounds to me as though the members of the quartet have slightly different ideas about where the written material ends and the group improvisation begins.

during the A section of “Munktmunk.” Abrams’s composed percussion part contains frequent instances of the snare and ride cymbal together (audible at the very beginning of the performance, for example), and Cyrille marks the transition to group improvisation by shifting to this timbral characteristic and generating a contrast between the preceding B section.

Throughout 2:27–2:30 Cyrille transfers his sixteenth note figures to the ride cymbal, creating a double-time feel, and uses the snare drum for accompanimental accents. This orchestration—time-keeping on the ride cymbal and sporadic accents on the drums—recalls conventional drumming in straight-ahead jazz, and thus generates a referential characteristic of jazz time-keeping. Figure 3.3 shows some of Paul Berliner’s examples of archetypal drum accompaniment in a bebop style (Berliner 1994, 619). This orchestration articulates the beat in a ride cymbal by alternating between quarter notes and two eighth notes and includes sporadic accents on the snare drum. Cyrille’s playing for 2:27–2:30 adopts a similar orchestration and set of accents, although his rhythmic values are halved.

FIGURE 3.3: BERLINER’S EXAMPLE OF TIME-KEEPING



Abrams, Purcell, Hopkins, and Cyrille each engage differently with the characteristics offered by the composed material of “Munktmunk” at the outset of their improvisation. Abrams and Purcell swap the final melodic phrase of the B section and manipulate it rhythmically, Hopkins circles around A3, with forays into areas a minor third both above (C) and below (F#), and Cyrille refers to both the rhythmic profile of

the melody the accompanimental percussion part of the A section, as well as alluding to a more traditional mode of time-keeping. These layers generate arresting relations between them: Purcell's double-time ride cymbal at 2:27 interacts congruously with Hopkins's pedaling eighth notes, for example.

Arguably more interesting, however, is the notion that the four musicians interact not by explicitly and congruously referring to one another's contemporaneous sonic characteristics but by variously referencing the sonic characteristics of the composition.<sup>15</sup> Put in ecological terms, the written material of "Munktmunk" provides a set of sonic characteristics that affords group interaction via references to some of those characteristics. Importantly, it is not critical for all players to reference the same characteristics in order to interact: Abrams and Purcell reference a phrase at the end of the B section, Cyrille references the A section's melody and accompaniment part, and Hopkins fixates on the A<sub>3</sub> that he established during the B section and maintains the established pulse. This is a crucial contribution of my affordance-based analytical framework; that is, although the "vertical" relationship between players or groups of players may be obtuse and incongruous, congruity emerges through their common reference to written material as well as their similarly autonomous musical streams.

Hopkins and Cyrille develop their respective musical streams during 2:30–2:42, while Abrams and Purcell continue to swap Phrase A. The stasis of Abrams and Purcell's question-and-answer phrasing around Phrase A affords Hopkins with an opportunity for harmonic invention—Abrams and Purcell's stasis affords incongruous interaction via melody/harmonic variety. Hopkins returns to outlining pitch class C at

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<sup>15</sup> I also do not wish to underplay the extent to which the musicians continue to attend to one another as the performance unfolds. Rather, I want to emphasize that their concurrent interactions emerge from both their attention to one another *and* their common emergence from Abrams's written material.

2:33, recalling his allusion C7(b9) chord at 2:28, before cascading through sequential fifths—G—C—F—Bb—and landing on an accented Ab2 (2:35–2:37). His invention does not stop here, however: he pivots from this Ab upward through an arpeggiated, open-position Db major triad in second inversion to reach Db4 (2:38), which he then elaborates through a series of diatonic steps in Db major, landing on a Bb at 2:39. Hopkins then pedals on octave Dbs, which he embellishes with an upper chromatic neighbor (2:40).

Abrams abruptly shifts his focus away from Phrase A and toward the A-section melody of “Munktmunk” at 2:42. He offers a rhythmically altered version of the opening melody—essentially treating it as an ordered pitch set. Abrams may have memorized his melody and recalled it at this moment in the improvisation, but also might have referred to notation on the piano’s music stand. Abrams’s reference to the melody of the A section marks the beginning of further references to this and other excerpts of the melody of “Munktmunk” by both him and Purcell.

Purcell temporarily maintains the previously established question-and-answer referential characteristic by holding his high F as Abrams departs on this new path (until 2:44). Purcell then shifts to interact congruously with Abrams by *also* referring to the same opening pitches of the melody. He begins by refracting these pitches through a set of rhythms that, much like his “rhythmic smear” 2:40, drapes across the underlying pulse (2:45–2:46), but then concludes with more marked rhythms, including Lombard rhythms at the beginning of three consecutive phrases (2:47–2:50). Purcell utilizes only the first nine pitches of the original melody. The rhythmic profile of his gesture, however, stretches his nine pitches over a longer period: the original melody spreads its opening nine pitches over seven beats, Abrams takes six beats, and Purcell takes ten

beats.

Abrams continues his paraphrase of the opening melody as Purcell embarks on his temporal expansion. At 2:47 Abrams reorders the Bb4, C4, F#4 from the melody to create a repetitive, three-note figure, thus returning to the referential characteristic of stubborn repetition. Interestingly, in this example this referential characteristic operates both on a “local” level to capture Abrams’s repetition of this three-note figure and a larger structural level to describe Abrams’s repeated employment of the original melody in his improvisation. Following this repetitive cell, Abrams picks the melody up where he left off, proceeding through it note-for-note. This long paraphrase beginning at 2:49 utilizes a more complex rhythmic profile compared to the composed version, almost to a point where it is difficult to tell its relation to the original melody.

Hopkins and Cyrille continue to develop their respective ideas as Purcell and Abrams reference the melody. Hopkins revisits his double time, eighth note figure from 2:38 to create a temporary double-time feel for 2:46–2:47. Hopkins uses a whole-tone segment—D–E–Gb–Ab—to begin this gesture, and then briefly alternates between half steps and an ascending fourth to eventually land on F3. Cyrille’s percussion part interact congruously with Hopkins’s eighth notes to reinforce the implied double-time feel. He plays a congruous series of eighth notes on his cymbals beginning at 2:43, as well as rhythmically diminished version of the standard ride-cymbal, time-keeping pattern at 2:46. Both cases represent standard time-keeping patterns played at double the rate and thus interact congruously with Hopkins’s temporal characteristics.

Cyrille intricately syncopates using combinations of eighth notes and sixteenth notes between 2:32 and 2:45, and alternates between the two modes of orchestration that he contrasted earlier—one centered around the referential characteristic of

time-keeper and the other which centers on drums (rather than cymbals). His sixteenth-note figure at 2:38 spreads a melodic pattern across the snare drum and two toms, for example. He then returns to the referential characteristic of time-keeping by reintroducing his ride cymbal (2:40). Similar alternations between these two modes of orchestration continue through Abrams and Purcell's respective rhythmic manipulations of the melody.

Beginning at 2:52 and continuing until 2:57, Purcell develops his earlier idea of obscuring the pulse using polyrhythm and syncopation. His rhythmic figures pull strongly against the underlying pulse that the other members of the band adhere to. Hopkins interacts congruously with Purcell's rhythmic activity by introducing some syncopations of his own. His sixteenth-note rest, dotted eighth-note figures at 2:53 and 2:55 create marked rhythmic disturbances in the underlying rhythmic foundation. The Lombard figure—which Hopkins introduces into his bass part a moment earlier (2:48)—undergirds his syncopations between 2:53 and 2:55, which replace the first attack in the figure with a rest. Hopkins therefore interacts congruously with Purcell's polyrhythms and syncopations by introducing syncopations into his line. At the same time, however, Hopkins's disturbance of the pulse interacts congruously with the melody via one of its primary rhythmic components, the Lombard figure.

At 2:58 Purcell returns to a clear rhythmic pulse with a scalar ascent through the diminished scale (E<sub>3</sub>–B<sub>b4</sub>) using sixteenth notes. This gesture, combined with his quarter note figures that immediately follow it, reiterates the established beat. During the same passage, Cyrille begins to obscure the underlying pulse by using drum rolls and a loping quarter-note triplet figure (2:59). Abrams also emits a fast burst of notes that chafe against the pulse, and Hopkins continues to syncopate using the Lombard rhythm.

Despite Purcell's rhythmic reinforcement, this moment thus represents a broader turn by the ensemble toward clouding the underlying pulse. To me this obfuscation increases the intensity of the performance, as though the temporal elemental characteristic that has functioned more or less continuously in the performance is gradually exploding.

Abrams's rapid phrases from 2:57 to 3:00 paraphrase some of the rapid-fire passages in the original melody. His first gesture across in this passage derives from the burst in the melody that begins at 0:14, his quasi-ametrical gesture at 2:59 derives from the sixteenth-note figure that begins at 0:29, and his longer gesture at 3:02 returns to the burst from the melody at 0:14. Abrams thus continues to refer to the original melody, although in an increasingly obtuse fashion by employing rhythms that chafe against the pulse.

Purcell's long phrase at 3:01 begins by clearly marking the pulse, then proceeds to pull against it, and concludes with a Bb<sub>3</sub> that lands with a thud on the beat. Cyrille's and Hopkins's playing also become increasingly complex in this passage. Hopkins continues to alternate between the Lombard rhythm, quarter notes, half notes, and eighth notes, and utilize large intervals in angular combinations. His intervallic angularity derives from the angularity of the melody. Cyrille increases the rhythmic and orchestral complexity of his drumming by moving swiftly between different parts of the drum kit and introducing his open hi-hat, projecting a climax.

During this passage the group continues to refer to elemental characteristics from the melody—its rhythmic profile, intervallic angularity, as well as specific melodic fragments—while also incrementally destabilizing the underlying pulse. During the next moments Abrams and Purcell commit to the referential characteristic of stubborn repetition as a means of ushering the group into the next section, which constitutes a

solo saxophone improvisation followed by a solo piano improvisation.

At 3:06 Abrams alternates between a F#4/D5 harmonic sixth and an E4 while gradually accelerating. This sixth interacts congruously with the many harmonic sixths in the melody, while his accelerating tremolo relates incongruously to the still-present underlying pulse. His tremolo gesture gives way to a chromatic phrase beginning at 3:07. He then once again returns to the opening pitches of the main melody at 3:09. This melodic reference lasts only a few moments, however. At 3:11 Abrams begins a six-note cycle, C#5–D4–C5–Bb4–F4–F#4, that he stubbornly repeats in various forms until the end of the group improvisation. Abrams embarks using eighth-note triplets but gradually accelerates to sixteenth notes. He continues the unbroken pattern until 3:20, when he plays small fragments of this melodic cell, as if echoing his previous repetition. These fragments continue until 3:22, when he drops out to allow Purcell to take over.

Purcell also converges on a repeated figure during this passage, although he transitions to the referential characteristic of stubborn repetition after Abrams. Beginning at 3:06 Purcell's playing becomes increasingly angular and syncopated. He first plays a zigzagging gesture that reaches a low Ab, and then works his way back up to Bb4 at around 3:08. He increasingly utilizes glissandi and scoops (3:11, 3:14, and 3:16, for example). Purcell's material during this passage transpires while Abrams focuses on his six-note ostinato, and Purcell finally joins in him with a three-note descending figure—E4–D4–C#4—at 3:18. He repeats this figure repeatedly until 3:22. This passage therefore represents a gradual convergence of Abrams and Purcell's streams around the referential characteristic of stubborn repetition.

Hopkins also transitions toward more repetitive material in the passage leading



up to Abrams and Purcell's convergence. He continues the elemental characteristic of intervallic angularity, utilizing intervallic spans of up to two octaves, such as during 3:11–3:14, where he leaps from F#2 to F#4 in just a few beats. Although his playing during this passage contains a number of intervallically arresting moments, no clear harmonic schema underlies it. I do not mean to suggest that Hopkins's note choices are arbitrary or random. Rather, Hopkins develops the referential characteristic of intervallic angularity in a chromatic setting. During this passage he also implies the rhythmic structure that he subsequently adopts as a repetitive gesture. This gesture consists of a long, low pitch alternating with faster, higher, descending pitches. Hopkins's repetitive figure, which he adopts at 3:17, consists of a half-note E2 preceded by two quarter notes, G4 and C#4. This repetitive figure represents the unwinding of his preceding intense activity. It is almost as if Hopkins exhales each time that he reaches his low E, releasing the tension established by his preceding melodic angularity. Importantly, Hopkins repeats this figure at a moment in the performance where both Purcell and Abrams have converged on the referential characteristic of stubborn repetition—Abrams with his six-note figure and Purcell with his three-note figure. This convergence thus represents their congruent interaction around the referential characteristic of stubborn repetition.

Cyrille does not converge on a repetitive figure and hence does not allude to the same referential characteristic as the rest of the group. Nonetheless, his increasing rhythmic, orchestral, and textural complexity during this passage adds directionality and intensity to his playing, which produces a congruent relation with the rest of quartet. He continues to alternate between ride-cymbal oriented passages, which invoke the referential characteristic of jazz time-keeping, and more linear passages,

which focus primarily on the toms and snare drum. Between 3:06 and 3:19 he shifts increasingly frequently between these two timbral profiles to the point where it becomes hard to distinguish them. At 3:10, for example, he begins with a series of cymbal hits that suggest the time-keeping referential characteristic, but which do not adhere to a regular rhythmic pattern. Cyrille's rolling quarter-note triplet figure at 3:11 contrasts markedly with the almost marching-band rigidity of the surrounding sixteenth-note figures. He contrasts these cymbal beats with the more linear, snare-drum-focused moment that begins at 3:14 and continues until approximately 3:17. His sixteenth-note rhythmic patterns here evoke his percussion part during the A section of the main melody. After two more cymbal hits, Cyrille begins a phrase that alternates between snare drum and toms.

By 3:20 Abrams, Purcell, and Hopkins have converged on their respective repeated note figures. In response to this convergence Cyrille punctuates the musical texture with a series of hits using both the snare drum and ride cymbal. Cyrille unloads a flurry of drum activity beginning around 3:17, as if he understands that the convergence by the three other musicians indicates that some kind of drastic musical change is afoot.

Sure enough, between 3:23 and 3:31 Abrams, Hopkins, and Cyrille fall silent and leave Purcell to improvise alone. Purcell's phrase at 3:27 announces his status as featured soloist with a grand, romantic ascending arpeggio: G<sub>3</sub>, Ab<sub>3</sub>, C#<sub>4</sub>, E<sub>4</sub>, G<sub>4</sub>, B<sub>4</sub>, Bb<sub>4</sub>. This phrase sounds to me a like a C# half-diminished seventh chord (C#, E, G, B) adorned with chromatic neighbor tones of Ab and Bb. His next two phrases continue the themes of chromatic neighbors and arpeggios: his phrase at 3:29 outlines a D–A dyad and adds a double chromatic neighbor to the D (C# and Eb), while his subsequent

phrase at 3:31 constitutes a descending arpeggio of a G major seventh chord. In the remainder of his solo cadenza, which continues until 3:53, Purcell draws mostly on the diminished scale that alternates between half steps and whole steps beginning on E (or G/Bb/C#). This harmonic profile interacts congruously with his rhythmically marked scalic gesture at 2:58, which employed the same diminished scale to move from E<sub>3</sub> to Bb<sub>4</sub>.

Purcell uses register to create drama in his short cadenza. His long phrase beginning at 3:39 zigzags from D<sub>4</sub> up to Ab<sub>4</sub>, down to B<sub>3</sub>, up to G<sub>4</sub>, down to G<sub>3</sub>, and finishes with a rapid, undulating run that concludes at the very bottom of the tenor saxophone's register (3:42). He then creeps his way back up again, concluding this long phrase at 3:48 on B<sub>4</sub>. His final exclamation takes him into his registral stratosphere: a squealing F#<sub>6</sub> at 3:53 concludes the solo component of his cadenza. At this climactic moment, Abrams reenters the fray by once again paraphrasing the opening melody of "Munktmunk." His opening sonic gesture thus invokes the referential characteristic of stubborn repetition by returning to the six pitches that he continually reiterated at the conclusion of the group improvisation. Abrams then returns to Phrase A at 3:56, which also reinforces this referential characteristic.

Purcell gradually fades into the background while Abrams establishes himself as the new soloist. Purcell ends at 4:10 after a final reference to the opening melody (4:01), and a set of descending polyrhythms (4:06). Interestingly, Purcell's line rubs polyrhythmically against Abrams's constant even stream of notes. He thus transfers his polyrhythmic approach during the group improvisation to this new context, where a pulse emerges from Abrams's attacks rather than being given by the written material.

Repetition of the opening melody of "Munktmunk" risks tedium and

undermining the forward motion of the performance. Abrams, perhaps detecting this danger, develops a prominent intervallic elemental characteristic from both Phrase A and the melody of “Munktmunk”—the harmonic sixth. At 3:58 Abrams initiates a pattern whereby two iterations of the harmonic sixth F<sub>4</sub>–D<sub>b5</sub> alternate with neighboring dyads. At first these alternate dyads consist of two iterations of F<sub>#4</sub>–E<sub>5</sub>, although Abrams soon introduces other sixths, such as F<sub>#4</sub>–D<sub>5</sub> and G<sub>4</sub>–E<sub>5</sub>, and eventually the fifth A<sub>b4</sub>–E<sub>b5</sub>. Toward the end of this passage (4:06) he breaks the pattern to occasionally play only one F<sub>4</sub>–D<sub>b5</sub> dyad.

At 4:07 Abrams returns one of rapid phrases of the original melody (first heard at 0:30). He then works his way back down the piano, reaching its lower-middle register by 4:14. An interesting feature of this passage is his employment of two contrapuntal voices by holding B<sub>b4</sub>, thus creating an upper voice, while a lower voice descends chromatically (4:12 and 4:17). These polyphonic moments points to a crucial elemental characteristic of Abrams’s improvisation thus far: he appears to only use his right hand for the entirety of this performance. Moments of polyphony, such as these ones, are easily playable using one hand. I suggest that Abrams’s single-handedness in this performance generates a congruent relation with the textural element characteristic of the original melody, which is also playable using only one hand. Abrams’s single-handed playing throughout this performance also creates a congruous interaction with both Purcell and Hopkins, who play single-line instruments. He continues this texture throughout his improvisation although he occasionally and briefly augments it through small polyphonic excursions.

Abrams concludes his next phrase at 4:18 with a three-one figure—G<sub>3</sub>–A<sub>b3</sub>–B<sub>3</sub>—that he repeats three times the begin his next sonic gesture (4:20). This continuation

thus again points congruously to the referential characteristic of stubborn repetition. This three-note gesture reinforces the two roles that the referential characteristic of stubborn repetition plays during the improvisation—as a mode of repeatedly returning to written material from the A and B sections, but also as a way of reiterating material on a more local level.

Abrams returns to the opening pitches of the melody at 4:22, this time including a short pause in the middle of the phrase (4:23). He then reapplies his preceding tactic of repeating the final three elements of a gesture: Abrams repeats the  $Ab_4-D\#_5-G_4/E_5$  dyad segment that concludes (4:25). Between 4:26 and 4:32 Abrams first repeats and transforms this figure. These transformations maintain the concluding harmonic sixth (although the quality of this sixth changes), which is preceded by a pair of tones that functions as combinations of upper or lower neighbors. In this set of gestures, preceding neighbor notes always resolve by half step (up or down) to members of the harmonic sixth, and the concluding sixths are related as diatonic transpositions within the all-white diatonic collection. Abrams repeats  $Ab_4-D\#_5-G_4/E_5$  and combine this gesture with  $A\#_4-F\#_3-B_4/G_5$  and  $Db_4-G\#_4-C_4/A_4$ .

Abrams returns to the opening melody of “Munktmunk” yet again at 4:34. His next phrase also begins with a reference to the original melody but pivots into a chromatic cluster and concludes with an arresting and angular outline of an open-position F minor seventh chord in second inversion,  $C_4-Ab_4-F_4-Eb_5$ . He re-invokes the referential characteristic of stubborn repetition by beginning his next phrase, at 4:38, with these four pitches. The concluding seventh of this set bridges to his subsequent diatonic phrase in F minor (4:38), which employs diatonic, melodic sevenths. Abrams’s sevenths generate an incongruous relationship with both his and

the composition's emphasis on sixths. I also hear Abrams's sevenths during this F minor passage as a congruous interaction with the melodic sevenths in the melody, such as between the Bb4–C4 heard at 0:06. Nonetheless, in the more local context of his improvisation, Abrams's sevenths created a marked intervallic incongruity with the prevalent sixths. Abrams then returns to a series of harmonic sixths that begins chromatically (4:41), proceeds diatonically in Eb major (4:43), and concludes with a subtle reference to a Db major triad (4:45). He then plays the first part of Phrase A but pivots from any further reference to the melody of "Munktmunk" to a descending, polyphonic phrase that comes to rest on a E3–F3 cluster (4:51).

At 4:55 Abrams plays Phrase A in a tempo that clearly mimics the opening notated material. This moment exemplifies one of the primary facets of my ecological analytical framework. Conceived of as a sonic environment, written material may furnish improvisers with a set of characteristics that they can "aim toward" in order to transition *from* free improvisation *to* written material. My analysis of "Munktmunk" so far has emphasized the musicians' relationships to preceding material as well as one another, but it is equally important to consider how they engage with written material that follows their improvisation.

In this instance the group will recapitulate the same written material that began the performance. Abrams, as the lone soloist at this moment in the performance, must therefore find a way to indicate to the other musicians that they should prepare to play that material and must also provide a "cue" so that all of the musicians begin the recapitulation together. To these ends, Abrams revisits Phrase A and utilizes particular temporal elemental characteristics.

Abrams returns to Phrase A to cue the group's recapitulation. Abrams resolutely

adopts a similar tempo to the beginning of the piece (in fact it is a little faster). This temporal elemental characteristic functions as the first crucial bridge: it allows the group to entrain to a common pulse, which is important for their collective return. The internal rhythmic structure of Phrase A is also important for the reinstatement of written material. Its repeated alternation between four eighth notes and one whole note affords metrical entrainment. Abrams plays Phrase A twice—enough for the other musicians to entrain to the tempo and be ready to enter (5:03).

Abrams's return to Phrase A suggests that cues of written material following free improvisation function most effectively when they utilize highly congruous elemental characteristics. Put another way, it is difficult to cue material by adopting highly incongruous characteristics *or* by employing only referential characteristics. In both cases the relation between improvisation and upcoming material is too unspecified to function as a cue. In this performance of "Munktmunk" Abrams needs to reestablish the pulse of the written material and establish a metrical scheme that allows the other musicians to return together. Put another way, improvised cues function most clearly when they unambiguously and congruously adopt elemental characteristics of the upcoming written material.

Musicians may employ other tactics to cue the end of free improvisation and beginning of written material. They may use physical cues, such as conducting with an arm or mouthing a count ("1, 2, 3, 4").<sup>16</sup> Recording studios often facilitate clear lines of

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<sup>16</sup> In a video of a 2012 live performance Abrams's Experimental Band (a reference to the group that Abrams led in the 1960s), Abrams uses hand signals to cue sections of the written material (cf. 6:28 of [https://www.youtube.com/watch?v=sPYwp8rdUAg&list=PLfQTZ3jSoVCSq3GPJb\\_ymGzSyaPwMYomS&index=2&t=0s](https://www.youtube.com/watch?v=sPYwp8rdUAg&list=PLfQTZ3jSoVCSq3GPJb_ymGzSyaPwMYomS&index=2&t=0s)). Similar conducted cues occur at 5:30 of a video recording of the same band, live at Chicago Jazz Festival in 2015: [https://www.youtube.com/watch?v=PmiYpj3hqTc&list=PLfQTZ3jSoVCSq3GPJb\\_ymGzSyaPwMYomS&index=18](https://www.youtube.com/watch?v=PmiYpj3hqTc&list=PLfQTZ3jSoVCSq3GPJb_ymGzSyaPwMYomS&index=18) (accessed July 20, 2019).

sight between musicians even if they are in different rooms, and these sight lines facilitate physical cues during the performance. In such instances, musicians may not need to express all the sonic characteristics necessary to cue written material in the way that Abrams does in “Munktmunk.”<sup>17</sup>

Finally, recording technology makes it possible to splice different performances together such that musicians may record subsequent written material separately from their free improvisation (i.e., as a separate “take”). In such instances improvisers do not *need* to cue performers using sonic gestures and thus may explore a wider set of relations between the end of their free improvisation and the written material. Put differently, recording technology that enables musicians to combine separate recorded performances into a single one means that they may not use sonic gestures and their characteristics to cue their fellow improvisers. Nonetheless, improvisers may (and often do, in my experience) still consider the kinds of relationships between the end of the free improvisation and the subsequent written material.

## **Conclusion**

My analyses in this chapter elucidate both my affordance-based analytical framework and the performances. They suggest a rich array of elemental and referential characteristics, as well as multifarious relations between musicians as well as between musicians and musical material. As I suggested in Chapter 2 and elaborated in this chapter, my analytical framework provides a robust account of intra-ensemble interaction.

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<sup>17</sup> Musicians may also use a combination of musical and physical cues.



My analyses often trace musicians' gestures to earlier material (improvised or composed) in a way that may suggest organicist musical aesthetics. My goal is not to argue that these performances constitute an organic, complete, unified whole. Rather, drawing on Holly Watkins's recent posthumanist reevaluation of organicism in music theory and criticism (Watkins 2017), I argue that my analyses suggest some of the ways that musicians respond to a temporally dynamic sonic environment that is partly of their own creation.<sup>18</sup> One might thus regard my analysis in terms of organicism, but I would suggest only in Watkins's terms, which update the concept from its invocation in work by score-oriented thinkers such as Schoenberg and Schenker.

Watkins suggests that one can trace the "liveliness of music" to the self-organization of its dynamically emergent constituents (such as motives and themes). One way that Watkins addresses this dynamic view of organicism is by contrasting a performance of a score with a listener's experience of that performance. The latter case, Watkins argues, better exemplifies a posthumanist view of organicism, in that it both implicates the listener's perceptual apparatus and foregrounds music's temporal unfolding. I suggest that musical improvisation constitutes an exemplar of Watkins's intervention and that my analytical framework encapsulates this parallel: improvisers create and revise their temporally unfolding sonic environment through their congruous and incongruous interactions with it and one another.

Finally, Watkins suggests that moments that point "outside" of the musical work, such as references to other pieces of music, might be thought of "traces of the autopoiesis of the music system" (113). My ecological framework, in contrast, describes

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<sup>18</sup> I use "partly" here to suggest that other elements of the sonic environment—the room and its acoustics, for example—may be beyond the musician's immediate control.

these moments in terms of referential characteristics. I therefore jettison the binary between “inside” and “outside” the frame of performance that Watkins appears to uphold. I nonetheless consider her emphasis on the autopoiesis of musical systems compelling, which also aligns with my analytical framework.

My analyses in this chapter demonstrate the utility of the analytical framework that I outlined in Chapter 2. My framework intervenes in music theoretical examinations of improvised interaction in that it includes modes of exchange not predicated on similarity or question-and-answer phrasing. Put another way, my framework augments analytical models of improvised interaction by casting instances of dissimilarity as vital aspects of the performance: creating contrast constitutes an important mode of playing together. In particular I would like to highlight the way that my framework casts silence as a profound carrier of musical meaning. My analysis of “Focus, ThruTime...Time->” underlines moments where silence plays an important role in the performance. This analytical observation follows AACM member Roscoe Mitchell’s 1967 comments on contemporaneous New York musicians identified with the “New Thing,” such as John Coltrane and Eric Dolphy: “A lot of musicians play so loud all the time that you can’t really hear the true value of the notes” (quoted in Lewis 2008, 151). Paul Steinbeck also notes the importance of silence in selected performances by the Art Ensemble of Chicago (Steinbeck 2017, 235–6). My framework allows for these silences to function as meaningful gestures in performance and thus makes a critical intervention in analyses of improvised interaction, which overwhelmingly focus on sound as the carrier of musical meaning.

My concept of the sonic environment and its role in free improvisation as something that conditions musicians’ improvised responses highlights the ways in

which musical materials, whether improvised during the performance or composed ahead of time, influence free improvisation. In “Focus, ThruTime...Time->” the sonic environment begins in earnest as soon as the Abrams and Anderson commence playing. Their gestures generate a proliferation of sonic characteristics that function as material for their collective improvisation, and these characteristics play crucial roles in my analysis. A similarly temporally unfolding sonic environment manifests in “Munktmunk,” although in this performance Abrams’s written material provides an additional set of sonic characteristics. In this instance Abrams’s composition functions as both a precursor and end state for “free improvisation.” My analysis of this performance shows some of the ways in which the musicians shape their improvisation in relation to these sonic characteristics.

## 4—Abrams, the Writings of Joseph Schillinger, and Fugitive Music Theory

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*The Schillinger stuff taught me to break things back down into raw material—where it came from—and then, on to the whole idea of a personal or individual approach to composition.*

—Muhai Richard Abrams (quoted in Lewis 2008, 60)

### Introduction

Russian composer, theorist, and polymath Joseph Schillinger (1895–1943) conspicuously appears in many discussions of Abrams and his work, albeit usually in a cursory fashion. Abrams cites Schillinger in connection to The Experimental Band, a primary precursor to the AACM, in a 2009 interview with Don Ball for the National Endowment for Arts:

The Experimental Band, I put that together because I had encountered a series of study methods: the Schillinger method...was one. I had compiled a lot of information from studying the Schillinger system and other areas of study also. I had amassed all of this information about composing and it wasn't necessarily a mainstream approach, so I needed some apparatus in order to write this music and express it. So as a result, I organized the Experimental Band for that purpose, and also to attract other composers so they could develop their skills in writing for the group ensemble also.

(Abrams 2009)

Schillinger's name also appears in public, musicological, and personal discourses regarding Abrams. Obituaries for Abrams in both the *Guardian* and *New York Times*

mention Schillinger (Fordham 2017, Mandel 2017), and Greg Thomas referenced Schillinger's texts as a testament to Abrams's determined and robust auto-didacticism during a talk with George Lewis at the National Jazz Museum in Harlem on February 6, 2018.<sup>1</sup> Furthermore, it appears that Abrams used Schillinger's theoretical writings in *both* his compositional and pedagogical practice—Amina Claudine Myers, John Stubblefield, and George Lewis, among others, recall Abrams teaching them Schillinger's methods during the first decades of the AACM (Lewis 2008, 79, 178–9).<sup>2</sup> Pianist and former student of Abrams Jason Moran remembers attending Abrams's Schillinger-based composition classes at Greenwich Music House in Greenwich Village, New York as late as 1998—demonstrating that Abrams's use of Schillinger extended well beyond his tenure in Chicago.<sup>3</sup>

Abrams's engagement with Schillinger's work has not been critically examined in academic music scholarship, despite these appearances in discussion of his life and work. This lack arguably derives from both academic music theory's focus on canonic repertoires, musicians, and writers, and Abrams and Schillinger's perceived incommensurability—they represent an encounter between black experimental music and formal music theory, fields that are not normally associated with one another. In this chapter I explore the connection between Abrams and Schillinger's work from historical, music theoretical, political, and critical theoretical perspectives. My discussion reveals important and overlooked facets of both Abrams's practice and Schillinger's writings.

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<sup>1</sup> See <http://jazzmuseuminharlem.org/events/harlem-speaks-george-lewis/>.

<sup>2</sup> George Lewis, personal communication, March 6, 2018.

<sup>3</sup> Jason Moran, email to the author, April 8, 2018.

My chapter unfurls in three parts. First, I introduce Schillinger and his work, trace Abrams’s discovery and initial study of his two-volume set, *The Schillinger System of Musical Composition* (SSMC) (Schillinger [1946] 1978), and suggest resonances between Abrams and Schillinger’s respective practices. Second, I argue that the text of SSMC offers some unexpected clues as to why the treatise strongly appealed to Abrams. Third, I deploy Britt Rusert’s concept of “fugitive science” to theorize Abrams’s engagement with SSMC to connect it to a practice of radical, racialized resistance that extends at least back to the nineteenth century (Rusert 2017). I also posit a tradition of practice-based, improviser-engaged music theory that runs alongside the traditional, academic music theory canon, of which Abrams’s appropriation of SSMC is emblematic.

## **History and Resonances**

### **Schillinger and Abrams’s “Discovery”**

Born on September 1, 1895 in modern-day Kharkov, Ukraine, Schillinger was a lauded composer in Russia and friends with Dmitri Shostakovich, who viewed him as a successor to the great European composers such as Beethoven and Tchaikovsky. Shostakovich even created a picture depicting a young Schillinger pondering nature, arm in arm with Beethoven (Figure 4.1).<sup>4</sup> Schillinger also loved American music: he organized and lectured at Russia’s first “jazz” concert on April 28, 1927, which included

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<sup>4</sup> The back of this picture contains an excerpt from the memoir of Joseph Schillinger’s wife, Frances Schillinger: “Shostakovich, a good friend of Schillinger’s, made this composite as a prank and sent it to him as a souvenir of the programs in which only Beethoven and Schillinger were performed in Russia, in 1927–28.” Archival documents for this chapter are housed in from the Columbia University Rare Book and Manuscript Library, the New York Public Library for the Performing Arts, Ablah Library at Wichita State University, The Library of Congress Music Division, and the Paul D. Fleck Library and Archives at The Banff Centre.

performances of pieces by American composers such as George Gershwin and Irving Berlin (Figure 4.2). In the following year Schillinger was invited to visit the United States by a committee that included John Dewey, Leopold Stokowski, and Edgard Varèse (among others) “for the purpose of giving lectures and concerts devoted to the young Russian school of composers which is yet unknown in America” (Figure 4.3).<sup>5</sup>

FIGURE 4.1: SHOSTAKOVICH’S DEPICTION OF SCHILLINGER AND BEETHOVEN



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<sup>5</sup> The American Society for Cultural Relations with Russia U.S.S.R. held a reception for Schillinger on February 2, 1929 on the Upper West Side in New York City. Pianists Emanuel Bay and Nicolai Kopeikine, cellist Evsei Beloussoff, violinist Naoum Blinder, and baritone Moses Rudinoff performed, in order, Schillinger’s “Sonata for violin and piano,” Op. 9 (1921), ““Excentriade,” suite for piano,” Op. 14 (1924), ““Orientalia,” two vocalises,” Op. 10 (1921), the premier of ““Tanzsuite,” for cello alone,” Op. 20 (1928), “Two vocalises,” Op. 18 (1928), and “Sonate-Rhapsody for piano,” Op. 17 (1927).

FIGURE 4.2: PROGRAM FROM APRIL 27 CONCERT IN RUSSIA

# ПРОГРАММА КОНЦЕРТА Первого концертного Джаз-бэнда

ПОД УПРАВЛЕНИЕМ

Л. Я. ТЕПЛИЦКОГО.

## I Отделение.

1. F. Black.—„Faust frivolities“ („Легкомысленный Фауст“).  
(Гуно.—„Фауст“).
2. G. Kahn, W. Donaldsen.—„Jes, Sir, that's my baby“  
(„Да, Сэр, это мое дитя“).
3. B. Davis.—„Dream of love and You“ („Мечта о любви и о Вас“).  
(Лист.—„Liebestraum“ № 3).
4. I. Berlin.—„At peace with the world“ („В мире с миром“).
5. L. Kazman.—„Hymn to the sun“ („Гимн солнцу“).  
(Римский-Корсаков.—„Золотой Петушок“).
6. W. Donaldsen.—„After a say a'sorry“ („Грусть после  
разговора“).
7. I. Berlin.—„Charleston“ („Чарльстон“).
8. R. Friml.—„Song of the Vagabonds“ („Песнь бродяг“).
9. A. Lange.—„Fantasie Orientale“ („Восточная фантазия“).  
(Римский-Корсаков.—„Шехеразада“. Чайковский.—„Арабский танец“, „Славянский марш“. Кюи—  
„Orientale“).

## II Отделение.

1. A. Lange.—„Kamennoi ostrow“ („Каменный остров“).  
(Рубинштейн.—„Каменный остров“).
2. G. Gershwin.—„Fascinating rhythm“ („Чарующий ритм“).
3. A. Taylor.—„Lonesome and sorry“ („Одинокий и печаль-  
ный“).
4. S. Pasternack, R. Whiting.—„There's a boatman on the  
Volga“ („Волжск. бурлак“).  
(„Эй ухнем“ и др. песни).
5. B. Rose, G. Gerschwin.—„In the middle of the night“  
(„В полночь“).
6. I. Berlin.—„A'm on my way home“ („На родину“).
7. G. Gershwin.—„Song of the flame“ („Песнь пламени“).
8. M. Ager.—„A'd rat her be alone“ („Побудь одна“).
9. F. Black.—„Rigoletto riggles“ („Шутки Риголетто“).  
(Верди.—„Риголетто“).



FIGURE 4.3: SCHILLINGER'S INVITATION TO THE UNITED STATES

Telephone: MADISON SQUARE 8545

Cable Address: AMRUSCULT

AMERICAN SOCIETY FOR CULTURAL RELATIONS WITH RUSSIA (U.S.S.R.)

49 EAST 25TH STREET, ROOM 316

NEW YORK CITY

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DOROTHY BREWSTER

EDWARD MEAD EARLE

JOHN ESKINE

HAVEN EMERSON

JOSEPH WOOD KAUTCH

FOLA LA. FOLETTA

FLOYD DELL

May 8, 1928.

Professor Schillinger,  
Mochovaja Ulitza 10,  
Leningrad, U.S.S.R.

Dear Professor Schillinger:

At the request of our Music Committee, composed of Joseph Achron, Kurt Schindler, Leopold Stokowski, Sergei Radamsky and Edgar Varese, we extend a most cordial invitation to you to visit the United States this summer for the purpose of giving lectures and concerts devoted to the young Russian school of composers which is as yet unknown in America.

One of the aims of our Society is to bring about a closer collaboration between the two countries in the music field. We therefore hope that you will be able to arrange your work to include this tour.

Very sincerely,

*Lucy Branham*  
Secretary.

Although Schillinger's work "First Airphonic Suite for RCA Theremin and Orchestra" was performed in late 1929 by the Cleveland Orchestra under the direction of Nikolai Sokoloff in both Cleveland's Masonic Hall and Carnegie Hall in New York, Schillinger appears to have soon shifted his focus to presenting and teaching his theories of music and arts.<sup>6</sup> In 1931 Schillinger gave a series of twelve weekly lectures titled "Rudimentary Analysis of Musical Phenomena" at the Theremin Studio on West 54th

<sup>6</sup> Joseph Schillinger Papers 1919-1943. Columbia Rare Book and Manuscript Library.

Street, and at the end of 1932 he offered a twelve-week course, “New Art Forms: A Speculative Theory of Art” at the New School for Social Research. In 1934 the Florence Cane School of Art at the Rockefeller Center hosted concurrent afternoon and evening streams of his course “Rhythmic Design, Pure and Functional,” Teachers College at Columbia University offered his course “Rhythmic Design,” and he presented “Mathematical Basis of the Arts” at a science roundtable for the American Institute. He gave a paper “General Theory of Rhythm as Applied to Music” at the annual meeting of the American Musicological Society (AMS) in December 1936, which he also cofounded (“The Founding of the Society” 1936). *The Schillinger System of Musical Composition* (SSMC) and *The Mathematical Basis of the Arts*—Schillinger’s *magnum opera*—were published posthumously in 1946 and 1948, respectively, and present definitive representations of Schillinger’s compositional method, teaching materials, and aesthetic (Backus 1960, 221). His *Encyclopedia of Rhythms* was published much later, in 1976, and tabulates many of the rhythmic patterns outlined in SSMC (Schillinger 1976).

Schillinger’s most famous student is George Gershwin, who took three lessons per week with him for over four years, from the spring of 1932 through the summer of 1936 (Nauert 1994, 10). According to a letter Schillinger sent to writer David Ewen in 1942, Gershwin studied every branch of Schillinger’s theory (excluding orchestration) and composed *Porgy and Bess* during this period. Steven Gilbert, Ilya Levinson, and Paul Nauert have each examined Schillinger’s influence on Gershwin’s music in terms of motivic transformation, rhythmic permutation, cyclical harmony, rhythmic patterning, and fugal techniques (Gilbert 1984, Levinson 1997, Nauert 1994). These analyses constitute an important precedent for my own in regards to Abrams’s compositions.

Abrams was introduced to SSMC by fellow Chicagoan and pianist Charles

Stepney (1931–1976) in 1957. Stepney was a consummate composer and arranger who read theory treatises in order to augmented his already considerable creative palette, and applied Schillinger’s methods, in addition to ideas from Henry Cowell’s *New Musical Resources*, to his work as a producer with The Rotary Connection, Minnie Riperton, Earth Wind and Fire, the Dells, and Muddy Waters, among others (Lewis 2008, 58). Stepney was also a professional vibraphonist, and performed in the Chicago jazz scene during the 1950s and 60s. He appears on a number of recording sessions with one of Abrams’s early mentors, Walter “King” Fleming (1922–2014).<sup>7</sup>

Abrams thus probably met Stepney through his association with Fleming at Chess Records. According to Lewis, Abrams soon bought his own copies of SSMC and carried those two massive tomes “everywhere he went over the next four years” (Lewis 2008, 58). Those four years with Schillinger’s theory treatise, 1957–1961, thus appear to mark somewhat of a revolution in Abrams’s musical thinking. His playing and composing on his first commercially available recording, *Daddy-O Presents MJT + 3* from 1957, presents him as a consummate post-bop jazz pianist; his improvisations and compositions suggest the influence of Horace Silver, in addition to Fleming and others. Although this recording places Abrams firmly in Chicago’s “modern” jazz scene, it hardly exhibits the experimentalism that marks Abrams’s later recordings.<sup>8</sup> Schillinger’s treatise thus appears to have helped facilitate a crucial shift in his artistic trajectory. In 1961 Abrams founded an outlet for his new, Schillinger-influenced

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<sup>7</sup> Stepney appears on four 1957 cuts with Fleming for vocalist Lorez Alexandra, and some of King Fleming’s cuts for *Stand By* in 1962. For further discussion, see <http://campber.people.clemson.edu/fleming.html> (accessed May 29, 2018).

<sup>8</sup> I use “experimentalism” in this context, following Benjamin Piekut, to mean a kind of testing of limits (Piekut 2011, 7–8).

compositions—The Experimental Band.

The Experimental Band functioned as an outlet for a community of musicians' experiments in composition and improvisation. It grew out of a group that was formed by mainstream players to read through charts and rehearsed at the C&C Lounge on Chicago's south side (Lewis 2008, 60). The group "became a forum for Abrams to test his new, Schillinger-influenced compositional palette" (Lewis 2008, 62), and thus represents what Lewis calls an "alternative pedagogy" (2008, 69)—a collaborative mode of developing compositional and improvisational skills outside of both the formal school system and the often-competitive jam sessions.<sup>9</sup>

As referenced in the epigraph to this chapter, Abrams described the importance of SSMC in terms of analysis, composition, and individuality: "I was really educated now, in a big way, because I was impressed with a method for analyzing just about anything I see, by approaching it from its basic premise. The Schillinger stuff taught me to break things back down into raw material—where it came from—and then, on to the whole idea of a personal or individual approach to composition" (quoted in Lewis 2008, 60).<sup>10</sup> SSMC thus provided Abrams with a method of both analyzing existing compositions and, crucially, generating musical material that did not directly derive from the jazz idiom. Although Abrams's music is not reducible to Schillinger's system, SSMC marks an important musical development in Abrams's life, one that orients his creative output toward the experimental aesthetic that would eventually crystalize with

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<sup>9</sup> As Lewis discusses, The Experimental Band also provided a forum for *all* of its members' to experiment with new musical ideas, and developed a model of collectivity that foreshadows the AACM. I restrict my discussion of the group to its function as the first outlet for Abrams's Schillinger-influenced compositions.

<sup>10</sup> Abrams reiterated the notion of SSMC providing "raw material" when I asked him about Schillinger (conversation with the author, January 30, 2017).

the formation of AACM. In the next section I discuss resonances between Abrams and Schillinger's respective creative practices to show that, despite their contrasting backgrounds and spheres of activity, there are a number of congruencies between them. I focus on three aspects: their interest in multidisciplinary, technologies, and their "maverick" stance toward their respective "art worlds."

## **Conceptual Resonances between Schillinger and Abrams**

### **Multidisciplinary**

Schillinger and Abrams were both multidisciplinary thinkers and artists. Although Schillinger's theoretical work began with music, it eventually extended into other artistic domains (Schillinger 1948). The courses he gave in New York (listed above) belie his interest in design, a fertile medium given his interest in proportion and perspective. Schillinger invokes the visual arts in SSMC to illustrate selected compositional methods. He cites proportion in the visual arts in support of his method of geometrical expansion and contraction (his terms for intervallic augmentation and diminution) (Schillinger [1946] 1978, 208): "[proportional expansion and contraction] is one of the natural tendencies in the visual arts...These variations, when executed geometrically [that is, proportionally] and in accordance with optics, give a greater amount of esthetic satisfaction because they are more natural" (208).<sup>11</sup> He also adopts a distinctly visual approach in his discussion of retrograde, inversion, and retrograde-inversion

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<sup>11</sup> Schillinger even argues that coefficients of expansion and contraction provide a means of comparing and contrasting composers' musical styles: "drawing comparisons between the music of Chopin and Hindemith...either by expanding Chopin to the coefficient 5, or by contracting Hindemith into the coefficient 1, we find that the versatility of Chopin is much greater than that of Hindemith" (211). A "coefficient" provides the factor of diminution or augmentation—Schillinger's example suggests that Hindemith's musical language results when one multiplies Chopin's intervals by five.

transformations (what he calls “geometrical projection”) (187–9). Schillinger notates melodies on graph paper (where the x-axis represents time and the y-axis represents pitch), and physically rotates and flips the graph paper to produce retrograde, inversion, and retrograde-inversion transformations. He equates this process to “the principle of angle-perspective” in “skillful paintings made by German and Italian artists...since about 1533” (185).

Schillinger’s multidisciplinary extends to film. His infamous letter to Walt Disney in 1940 following the release of Disney’s film *Fantasia*, in which he offers his own “scientific method of art production” as a means of precisely coordinating the sonic, semantic, and visual domains, expresses his aesthetic of multidisciplinary cohesion. Schillinger regarded the visual and sonic components of Disney’s film as only haphazardly coordinated, a relation that he vehemently disliked due to its reliance on chance and/or inspiration.<sup>12</sup> As the opening chapter of Schillinger’s *The Mathematical Basis of the Arts* states, “Scientific method in the arts provides an inconceivable number of ideas, technical ease, perfection, and, ultimately, a feeling of real freedom, satisfaction and accomplishment” (Schillinger 1948, 3).<sup>13</sup> “Scientific method” often equates to mathematical formulae in SSMC: Schillinger frequently represents musical elements in numerical terms, and arranges and transforms those numbers in order to produce new but related musical material (I specify and elaborate on some of these methods below). He then invokes what he regards as the objectivity of mathematics to suggest

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<sup>12</sup> Schillinger expressly states that his theory is meant to rid composition of all reliance on chance and inspiration, which he associated with unprofessionalism and outmoded romantic models of the composer (Schillinger [1946] 1978, 1351).

<sup>13</sup> “Scientific method,” as I discuss below, indicates Schillinger’s reliance on math as a mode of controlling constituent aspects of art par excellence.

correspondences between his theory of musical composition and other artistic domains, such as painting and film, as well as other disciplines, such as the natural sciences.

Ideally, for Schillinger, all art should conform to the so-called inherent structure of the natural world, described in numerical terms. Mathematics is thus Schillinger's primary means of crossing artistic domains. He uses it to model aspects of the artistic domain at hand, which then affords analysis, composition, and cross-domain comparison.

Abrams was also active in multiple artistic domains. He established a strong connection between music, drawing and painting, and individualism as early as 1951 when he met bassist Donald Rafael Garrett (Lewis 2008, 28). This connection in Abrams's early years appears to have born multiple fruits later. In an interview with Graham Lock, Wadsworth Jarrell, a co-founder of AfriCOBRA (African Commune of Bad Relevant Artists), recounts that Abrams asked him in the 1960s if the AACM could hold concerts in his Chicago studio, which engendered both a set of AACM concerts in gallery spaces and art exhibition openings that included live performances from AACM musicians (Lock 2008, 158). According to John Fischer, pianist, visual artist, and organizer of the New York loft Environ, Abrams turned up at the venue late in the Summer of 1975, once he and many other members of the AACM had moved to New York, which led to numerous AACM concerts being held there (Heller 2017, 55). These examples implicate Abrams's multidisciplinary outlook in the fact that the AACM sought to performance their music in venues other than jazz clubs (Lewis 2008, 106).<sup>14</sup> They thus suggest that Abrams's early interest in painting also initiated AACM performances

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<sup>14</sup> In a telling moment during the second meeting, Abrams interrupts trombonist Julian Priester, who suggests that "as musicians we're going to be working in front of the public, and different people, club owners or promoters..." by unequivocally stating that "We're not working for club owners, no clubs...This is strictly concerts" (Lewis 2008, 106). "Concerts" partially refers to venues such as halls or art galleries.

in venues such as art galleries, as well as close relationships with a number of visual artists.<sup>15</sup>

Abrams also painted, and his work in this domain arguably bears the influence of Jarrell, Jeff Donaldson, and other artists associated with the AfriCOBRA collective. A significant number of Abrams's commercially released recordings feature his original artwork on their cover, including *Levels and Degrees of Light*, *Blues Forever*, and *Think All, Focus One*. The visual and musical domains both function as outlets for a creator's individualism, according to this view. A listener/viewer could regard Abrams's sonic-visual coupling as an opportunity to compare, contrast, and find resonances between the visual and sonic domains. In this view Abrams's covers function as visual, aesthetic portals into the recordings' respective soundworlds.<sup>16</sup>

Abrams's multidisciplinary work also helped engender two plays, *Platu* and *The Dream*, only the latter of which remains documented in any detail.<sup>17</sup> Saxophonist Joseph Jarman's self-published collection *Black Case, Volume I & II: Return from Exile* (Jarman 1977), describes *The Dream* as a "two-act 'play' written and directed by Muhal with the AACM players" (76). The "AACM players" comprised primarily of musicians: Amina Claudine Myers, Fontella Bass, Henry Threadgill, Anthony Braxton, Leo Smith, Lester Bowie, M'Chaka Uba, Ajaramu, Wallace McMillan, Thurman Barker, Byron Bowie, in addition to Abrams (184). These plays serve as a reminder that multidisciplinary work was a foundational aspect of the AACM.

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<sup>15</sup> For more discussion of relationships between the AACM and AfriCOBRA, see Lewis (2010, 2015).

<sup>16</sup> This assertion draws on Brent Hayes Edwards's argument that song titles engender poetic resonances between text and music (Edwards 2017, 196).

<sup>17</sup> A flyer for *Platu* is included in Beckwith and Roelstraete (2015, 56).



Jarman's account of the creative process for *The Dream in Black Case* suggests that the AACM's multidisciplinary approach lay at the intersection of manifold artistic domains and individuals' lived experience:

W???., METHOD

reach down deep inside of what you are  
and bring up the reality of  
the "part" - you don't need the  
"training" of the "actor"; you need the training  
of yourself, what you are already - that IS enough.

HOW TO ACT IN EACH "SCENE":

don't "act" at all become yourself out  
of your life and do the scene, the reality  
of it, as it is the facts of your life  
are the only theatre needed.

(Jarman 1977, 76)

Lewis's unpublished transcription of an audio recording of the play reveals that the AACM players incorporated music, social dynamics, race, familial relations, and drug and alcohol use into their realization (Lewis 2013b). *The Dream* thus marks an important contribution to the vision of Abrams's multidisciplinary.

Schillinger's and Abrams's work both expand beyond music to include other domains, albeit in different ways. Schillinger's mode of crossing disciplinary boundaries is primarily theoretical and mathematical—he employs numbers to analyze, generate, manipulate, and combine material from multiple domains. Abrams's multidisciplinary modes are more varied. His musical-visual multidisciplinary hinges on juxtaposition. Players in *The Dream* were urged to make scenes out of "the facts of your life" rather than formal training or general theatrical principles. Abrams trusts that players' "facts of life" will allow them to negotiate the performance as it emerges in real-time. The themes of community, performance, and improvisation thus lie at the foundation of

Abrams's multidisciplinary theatrical practice.<sup>18</sup>

## **Technologies**

Schillinger and Abrams were both progressive technologists. Schillinger's first work composed in the United States—"First Airphonic Suite for RCA Theremin and Orchestra"—testifies to his work with Léon Theremin on contemporary musical technologies. Additionally, he and Theremin gave a public talk and demonstration in 1931 titled "Electrical Musical Instruments" at the Theremin Studio, and Schillinger demonstrated the Hammond Organ as part of a presentation for the League of Composers in 1938 (see Figure 4.4). Arguably Schillinger's most profound contribution to music technology is his work with Cowell and Theremin on the first electronic drum machine, the Rhythmicon, which was publicly debuted by all three at the New School for Social Research in 1932. The Rhythmicon produced rhythms outlined in SSMC (discussed below) (Miller and Lieberman 2004, 12), and also enacted Schillinger's vision for technologically assisted performance.<sup>19</sup>

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<sup>18</sup> For a detailed discussion of community as it relates to the AACM, see also Radano (1992).

<sup>19</sup> "If and when an automatic instrument can carry out the composer's intentions to any desirable degree of subtlety, the composer can celebrate the arrival of a new era that will liberate him from the centuries of slavery imposed upon him by the performer" (Schillinger [1946] 1978, 228). Although the Rhythmicon faded into obscurity relatively quickly, a similarly Schillinger-influenced rhythmic synthesizer recently reemerged as the Moog Corporation's synthesizer, the Sub-Harmonicon. The Sub-Harmonicon was debuted at Moogfest 2018 in Durham, NC. See also, <https://www.moogfest.com/> and <https://sonicstate.com/news/2018/03/20/q-whats-a-moog-sub-harmonicon/> (accessed May 28, 2018). Schillinger's dreams of leaving human performers behind appear to predate well-known proclamations by Milton Babbitt (Peles et al. 2011). See "The Revolution in Sound: Electronic Music" (70–7) and "Twelve-Tone Rhythmic Structure and the Electronic Medium" (109–40), for example. On the whole, Schillinger's vision for the future of composition is markedly more sympathetic to popular culture as well as disassociated from the university than Babbitt's. I discuss this "maverick" attitude further below. I also do not have space in this dissertation to discuss all of the similarities and differences between Schillinger and Babbitt's respective music theories, temperaments, and philosophies, however fecund this comparison appears to be.

FIGURE 4.4: FLYERS FOR LECTURES AND DEMONSTRATIONS

**YOU** are cordially invited to attend a demonstration of Electrical Music Instruments which make it possible to explain musical phenomena of a most vital importance as well as the new method of instruction adopted by the Music Department of the Theremin Studio.

This demonstration will be accompanied by explanatory talks by Joseph Schillinger and Leon Theremin and will be held at the Theremin Studio, 37 West 54th Street, New York City on Wednesday, March 27, 1931, at 8:30 P. M.

**The LEAGUE**  
of **COMPOSERS**

INVITES YOU TO  
A DEMONSTRATION  
of  
**MUSIC AND ELECTRICITY**

Given By  
Benjamin Miessner ..... Electronic Instruments  
Leon Theremin ..... Space Controlled Instruments  
Hammond Organ demonstrated by Joseph Schillinger

With  
Dr. Orestes H. Caldwell  
as  
Chairman  
and Assisting Artists  
at the  
**TOWN HALL CLUB**  
123 WEST 43rd STREET  
THURSDAY, MAY 5th at 9 P. M.

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Admit One

Abrams embraced contemporary technology in his creative practice. Discussions of black music, improvisation, and synthesizers and other technologies that focus exclusively on Sun Ra and his Arkestra underrepresent what might be described as the AACM’s Afro-Futurist streak. Lewis notes that Abrams’s first recording after the formation of the AACM, *Levels and Degrees of Light* (1967) makes innovative use of electronic processing and studio reverberation (Lewis 2008, 148). Abrams’s first album that includes synthesizer is 1972’s *Things to Come from Those Now Gone*. “1 and 4 Plus 2 and 7,” the sixth track on the album, opens with Abrams on piano, improvising with his right-hand and playing a calmly repetitive accompanying figure in his left. Percussionist Steve McCall joins him with various rattling sounds and gongs. Halfway through the track, after a brief cessation in the piano figure, Abrams yields the acoustic

piano to a synthesizer (or perhaps a clavinet or organ) and begins a series of alternatively halting and cascading improvised episodes. Abrams lets his harmonies sit and resonate during sparser moments, as if he is pausing to consider the interplay between his chords and the timbre of the synthesizer. Such moments contrast with dense passages, which saturate the performance with rolling, synthesized waves of sound.

Selected scores by Abrams suggest that he incorporated synthesizers into some of his works for large ensemble. The scores for “Fortex” and “Symtre” simply list “synth” in their instrumentation—specific makes, models, and sounds appear to have been worked out during rehearsal, recording, and/or performance. The score for “Hearinga” includes two markings that imply synthesized timbres. “I16” appears at the beginning of the score and immediately before the synthesizer’s first entry, and “I-86” appears at measure 61, directly following the trumpet solo. The recorded version of “Hearinga” from the 1989 album, *The Hearinga Suite*, offers only partial explication of these indications. “I16” appears to designate a breathy but percussive timbre that both compliments and reinforces the flute and vibraphone melody that it doubles. In the second instance, the timbre designated by “I-86” is largely indistinguishable among the ensemble activity around it, and if anything strongly resembles the earlier, “I16,” timbre.

The scores for “Fortex” and “Symtre” do not include any similar indications. There are, however, markings that imply that Abrams accounted for synthesized timbres in these pieces. The synthesizer part at the beginning of “Fortex” contains the instruction “Patch to be determined,” and “Symtre” similarly contains “Patch as directed.” Additionally, the synthesizer part in “Fortex” contains multiple iterations of “Patch as directed.” These instructions suggest that Abrams had an intended palette of

analog synthesized timbres for various sections of the piece. Finally, the synthesizer player in “Fortex” is instructed to “envelop [sic] as directed” at rehearsal-marking 3. Although “envelop” could be interpreted as a music-poetic mandate to sonically “surround” other members of the ensemble, it is more likely that the instruction refers to the synthesizer’s attack-decay-sustain-release profile; that is, its envelope. This instruction thus seems to demonstrate that Abrams not only utilized synthesizers’ preset timbres, but was also engaged with sound synthesis on a foundational level.

Abrams’s interaction with music technology extends beyond synthesizers in performance. First, Abrams’s score for “Duet for Violin and Piano,” commissioned by the McKim Fund in the Library of Congress in 1996 and premiered in the John F. Kennedy Center for the Performing Arts Terrace Theater by violinist Regina Carter and pianist Anthony Davis on October 10 of the same year, suggests his embrace of computer-based notation programs.<sup>20</sup> An accompanying note to the score states that the work “was written, developed and copied on an Atari Mega ST4 computer using the Emagic Sequencer/Notation program, ‘Notator SL.’” Notator SL was a MIDI sequencer and notation program developed exclusively for the Atari ST range of computers and was popular during the late 1980s and early 90s.<sup>21</sup> Many of Abrams’s later scores and parts are also computer generated, including “ASOADV15,” composed for and performed at the AACM’s 50<sup>th</sup> anniversary celebrations at the Chicago Jazz Festival in 2015, and “Quint17,” which was performed in his final year at Wesleyan. Earlier scores are largely hand-written.

Second, Abrams also appears to have incorporated MIDI (Musical Instrument

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<sup>20</sup> This archival material resides at the Music Division of Library of Congress, Washington, D.C.

<sup>21</sup> See <http://www.notator.org/index.html> (accessed May 29, 2018).

Digital Interface) programming into performance. His 1994 album, *Think All, Focus One* finishes with a track, arrestingly titled “Focus One, Think All,” that transports the listener into a technology-laden sonic uncanny valley. The rhythmic precision of the opening, polyrhythmic two-part texture, which employs a clavinet-like timbre, suggests that it has been sequenced using MIDI. The percussion that follows employs synthesized drum sounds and matches the tempo of the keyboard part exactly, further suggesting Abrams’s embrace of MIDI. The textural, temporally unquantized improvised section in the middle of the piece, however, strongly suggests the presence of human performers. In contrast, however, most of the timbres sound synthesized, suggesting that if humans are performing, then they are using synthesizers, electronic drums, or similar interfaces. The uncanny valley in this performance thus emerges from the intermixing and interactions between MIDI programmed and human aspects of the performance.

“Focus One, Think All,” assuming that it contains both sequenced MIDI and human performers, problematizes straightforward descriptions, such as Babbitt’s and Schillinger’s, of computer-generated performance as an evolutionary step that renders human performance redundant. Abrams’s piece transplants the exactitude of computer-generated performance from desideratum to generative origin—the MIDI passage that opens “Focus One, Think All” establishes a provocative sonic environment that spurs the improvisers into action. Its arresting rhythmic and timbral profiles offer an alluring set of sonic characteristics with which to improvise.

Abrams and Schillinger were thus both technologically open-minded and explored and employed new technologies into their work. It is important to note, however, that where Schillinger viewed music technology as an evolutionary step

beyond the human domain of performance in terms of the exactitude of realizing a composer's score, Abrams took both a more pragmatic approach by employing music notation software, and a playful one by *incorporating* synthesizer and MIDI technology into improvised performance.

Schillinger's regard of technology as a replacement for the human performer aligns him with music theorists such as Babbitt. In reality, Schillinger distanced himself considerably from academic music circles. Both Schillinger and Abrams thus rejected established norms in their respective fields—Schillinger rejected institutional musicology, and Abrams rejected the singular critical and aesthetic frame of jazz, first in Chicago and later in New York. I describe these similar attitudes in terms offered by sociologist Howard Becker.

### **Abrams and Schillinger as “Mavericks”**

Becker, in his influential book *Art Worlds*, describes four kinds of artists, each defined in terms of how they and their work interact with existing (and continuously evolving) art worlds (Becker 1982, 226). These four types of artists range from those “totally involved in and completely dependent on the paraphernalia of an art world to those who are only marginally related to it because their work does not fit in to the way things are done” (226). The category of *mavericks* represents artists who find the regular art world too constricting and thus operate at somewhat of a distance from it, although they also remain partially connected to it. Mavericks often “propose innovations that the art world refuses to accept as within the limits of what it ordinarily produces” but which, given a consensus, might later be accepted and assimilated into the mainstream art world. Mavericks succeed, when they do, by circumventing the usual means of

production, dissemination, and reception—they find or create their own spaces, audiences, and materials, and may create works that implicitly critique the very institutions that resist them and their work (233–5).<sup>22</sup> Becker’s primary examples of maverick artists are American composers—Charles Ives, John Cage, Harry Partch, and Conlon Nancarrow—a list that is particularly striking given that his book is not solely concerned with music.

Abrams and Schillinger were, I suggest, both mavericks, albeit in relation to different “art worlds.” Schillinger placed himself at somewhat of a distance from both academic theorists and the canon of Western art music, although his work partly depends on the cultural cache that accompanies academia. The AACM’s published “nine purposes,” as well as Lewis’s analysis of the meetings that preceded the official formation of the AACM, reveal that Abrams and other AACM members explicitly distanced themselves from mainstream jazz practice and discourse even as many of them came from that tradition.<sup>23</sup> Schillinger and Abrams thus both operated at somewhat of a distance from their respective art worlds, although they occasionally and

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<sup>22</sup> Becker’s other categories of artists are *integrated professionals*, who fit unproblematically into art worlds; *folk artists*, who create purely within community settings, albeit with some skill (Becker’s primary example is quilting); and *naive artists*, who are not at all connected with an art world, and often begin or proceed haphazardly or accidentally. Becker’s discussion of “naive” art is deeply problematic and belies the narrow (and arguably racist) epistemological foundation of his discussion. For Becker, naive artists are those that are unaware of the “history, conventions, or the kind of work ordinarily produced” of the art world (1982, 258–9). Although Becker states that naive artists states that they are disconnected to “any” art world, his ensuing discussion suggests that what he really means is that they are disconnected from *Western* art worlds. Thus Becker’s statements that “no explanatory language exists” for naive artists’ work (259), and that their works do not belong “to any tradition of artistically defined problems and solutions” (264) belie his designation of conventional Western canons and art worlds as the metric by which other work is measured. Becker also conflates “naive” artists with “primitive” artists, which perhaps suggests a more sinister epistemological frame. I elaborate on primitivism and black music later in this chapter.

<sup>23</sup> As Eric Lewis points out, however, AACM members often strategically accepted genre and aesthetic designations, such as “jazz,” as a means of both demonstrating a wide-reaching and inclusive set of influences and confounding simplistic, essentialist descriptions of their music (Lewis 2017).



strategically accept that association.

Schillinger's invocations and discussions of the canon of Western art music divulges his maverick status. *SSMC* is peppered with statements that suggest he was less interested in being an heir to the European art music tradition than he was using it as a springboard to promote his own work. These statements contrast with those (by Dimitri Shostakovich and Vladimir Horowitz, no less) that described Schillinger as "the next Beethoven" (Brodsky 2003, 51). Schillinger states that Chopin, Schumann, Liszt, and Tchaikovsky are "failed contrapuntalists" (794), Beethoven's phrase structures are "crude" (21), Debussy lacks harmonic variety (144), and that Bach, Mozart, and Beethoven represent the ultimate failure of "so-called European classical music" (34). Schillinger's method, in contrast, "offers much greater versatility—yet preserves the unity [of the composition] more—than [sic] any composer in the past was able to achieve" (193).

He does, however, comment positively on the work of past composers when it helps validate his theory. These comments sometimes contradict his critiques. Wagner's "greatness" derives from his emphasis on harmony over melody, a position Schillinger also shares (619), J. S. Bach is a "great contrapuntalist" (374), and Palestrina, Chopin, Scriabin, Ravel, Debussy, and Hindemith "all have sufficient unity in their harmonic expressions" (552).<sup>24</sup>

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<sup>24</sup> Unsurprisingly, Schillinger's measure of a composer's success or (mostly) failure is the very theory outlined in *SSMC*. His analyses and critiques thus enact at least three rhetorical and circularly-reinforcing functions: first, they demonstrate the universality of his theory (any music can be analyzed according to his principles); second, they provide a measure of musical quality (that is, good music adheres to the formal qualities that Schillinger's theory outlines, bad music does not); and third, they position him as an outside, objective observer who is able to improvise on the work his predecessors. Schillinger portrays himself in the pages of *SSMC* as a detached observer who comments and critiques other composers' work with the appearance of scientific objectivity (more on the scientific nature of *SSMC* below). He even uses his theory to describe the history of Western art music in evolutionary terms (cf. his descriptions on pages 135, 144, 211, 237, and 299).

Schillinger also distanced himself from the contemporaneous, academic music “art world” in the United States. He taught independently, unaffiliated with any institution, choosing an entrepreneurial route instead. Babbitt mentions that Schillinger “heckled” Ernst Krenek during the latter’s paper at a meeting for the New York section of the American Musicological Society (AMS) (Peles et al. 2011, 482). Babbitt’s conspicuous omission of Schillinger in his essays seems indicative of Schillinger’s status as an outsider, given that so many aspects of SSMC resemble (and prefigure) Babbitt’s work. Schillinger was also notorious for publicly humiliating music academics by duping them into mistakenly identifying pieces of music as if they were written by some well-known composer, only to reveal that he had written them just hours before using his system (Brodsky 2003, 53). He also described AMS meetings as “dull and stodgy.”<sup>25</sup> It therefore appears that his cofounding of AMS did not translate into lasting enthusiasm for academia (Schillinger 1976, 122).<sup>26</sup>

Schillinger nonetheless employs tropes from empirical musicology/music theory in SSMC and thus trades on the authority of the “art world” that he otherwise distanced himself from. The “detached observer” persona that Schillinger cultivates throughout his text invokes a kind of authority normally reserved for academics and music theorists.

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<sup>25</sup> Schillinger’s theory itself is egalitarian, which contrasts with the elitism expressed by academic music theorists such as Babbitt. He boasted that his method could turn *anyone* with reasonable intelligence into a Beethoven within five years (Duke 1963, 118). This attitude implies that Schillinger’s desideratum for composition students was based in traditional models of the Western art music canon. In fact, Schillinger’s text is largely genre-agnostic, although he occasionally recommends particular compositional techniques for popular music—extremely smooth voice leading for “music intended for mass consumption—as in dance music,” for example (553). He thus signals his elitism via his mastery of the Western art music canon while at the same time engaging with the commercial marketplace and layperson—*anyone* who comprehends and employs SSMC will, according to its author, be able to both analyze, rationalize, and critique past music and generate original, contemporary music in any style, including popular ones.

<sup>26</sup> See also Jacquelyn Sholes “Joseph Schillinger and American Academia,” (poster presented at the annual meeting of the Society for American Music, Boston, MA, 2016).

Unsurprisingly, Schillinger often promotes his system as “scientific” or “objective”—“if melody can be expressed in terms of harmony, i.e. as a sequence of chordal functions and their respective tensions, then a *scientific and universal method* of the harmonization of melody can well be formulated” (619, my emphasis). Schillinger’s invocations of science as justification for his system follows a tradition, according to Suzannah Clark and Alexander Rehding, of similar rhetorical moves by music theorists as a means of generating “supposedly incontestable laws” (Clark and Rehding 2001, 2). A representative example is Schillinger’s reference to “albumen” in relation to musical texture:<sup>27</sup>

The behavior of sounding texture in any music composition is such that it fluctuates between stability and instability, and so remains perpetually in a state of unstable equilibrium. The latter is characteristic of albumen which is chemically basic to all organic forms of nature. For this reason, unstable equilibrium is a manifestation of life itself, and, being applied to the field of musical composition as a formal principle, contributes the quality of life to music.

(Schillinger [1946] 1978, 1226)

In this passage Schillinger compares the chemical instability of the particular protein to the instability resulting from variations in musical texture. Both, he asserts, exist in a state of controlled instability (“unstable equilibrium”). Music thus contains “the quality of life” because it shares the fundamental characteristic of instability with a protein that is biologically foundational. My central point is that Schillinger’s description of his system in scientific terms aligns him with a music-theoretical tradition that he distanced himself from in other ways. This ambivalence is a quintessential trait of a maverick, according to Becker (1982, 236).

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<sup>27</sup> It is unclear whether Schillinger refers to albumen—the protein contained in egg white—or albumin—the class of proteins—in this passage.

Abrams, like Schillinger, both distanced himself from and strategically embraced the jazz “art world.” The AACM’s nine “founding purposes” reveal that one of the collective’s primary concerns was to establish means of musical production and presentation independent from Chicago’s jazz scene:

- To cultivate young musicians and to create music of a high artistic level for the general public through the presentation of programs designed to magnify the importance of creative music.
- To create an atmosphere conducive to artistic endeavors for the artistically inclined by maintaining a workshop for the express purpose of bringing talented musicians together.
- To conduct a free training program for young aspirant musicians.
- To contribute financially to the programs of the Abraham Lincoln Center, 700 E. Oakwood Blvd., Chicago, Ill., and other charitable organizations.
- To provide a source of employment for worthy creative musicians.
- To set an example of high moral standards for musicians and to uplift the public image of creative musicians.
- To increase mutual respect between creative artists and musical tradesmen (booking agents, managers, promoters and instrument manufacturers, etc.).
- To uphold the tradition of cultured musicians handed down from the past.
- To stimulate spiritual growth in creative artists through recitals, concerts, etc., through participation in programs.

(Lewis 2008, 116)

Abrams was also adamant in the foundational roundtable discussions of the AACM that the focus of the collective would be on “original music” rather than “standard music” (Lewis 2008, 98); that is, AACM members would compose their own repertoire, rather than rely on existing jazz compositions and/or jazz “standards” (99).<sup>28</sup> Importantly, “original music” was not meant to regulate style—AACM members could and did still write swinging or blues-style music if they wished. Thus the AACM’s regulation regarding original music functioned to both separate them from jazz scene,

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<sup>28</sup> Abrams reiterates this point in his interview with WKCR (1977), where he states that he would sooner compose original music dedicated to other musicians than play their compositions.

which they associated with Tin Pan Alley songs and canonical compositions by jazz musicians, and remain connected to it, in that could write original music that sonically resembled and signified on that repertoire.

This claim is borne out in Abrams's discography, which includes such a wide variety of music that no single genre categorization suffices to encapsulate it. Abrams often juxtaposes sharply contrasting genres on a single album. "Rarely," states John Diliberto, "does a Muhal Richard Abrams album explore only a single direction of thought" (Diliberto 1980).<sup>29</sup> Similarly, "Focus One, Think All," the electro-acoustic performance that closes *Think All, Focus One* discussed earlier, is preceded by "Encore," a swung, medium-tempo, funk tune with heavy blues inflections that alternates between 4/4 and 5/4 meters. Before "Encore," is "Scaledance," a medium-up swing tune that alternates between a kind of off-kilter "oom-pah" two-feel and harmonically-open "time-no-changes" sections. The album also contains "Junction," a through composed, pointillistic chamber piece, "Before and After," a Latin-style composition, and "Harmonic Veil," an almost-tonal balladic tone-poem that frames conjunctive improvisations. One could easily listen to *Think All, Focus One* (or many of Abrams's other albums) and hear it as both part-of and at-a-distance-from the art world designated by the genre, "jazz."<sup>30</sup>

Abrams's status as a "maverick" allowed him to practice a version of critical theorist Gayatri Chakravorty Spivak's notion of "strategic essentialism," whereby he

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<sup>29</sup> Chip Stern cites pluralism as the downfall of Abrams's *Lifea Blinec* (1978), which he describes as an "uneven collage of pretense and polyphony" (1978b).

<sup>30</sup> Abrams's solo piano performances also often represented his broad knowledge of various musical idioms. Dan Morgenstern notes that Abrams's solo performance at the Newport Jazz Festival in 1979 included references or allusions to Scriabin, boogie-woogie, stride, blues, Monk, impressionism, and late romanticism "in an idiom hard to categorize" (1979).

could claim the “jazz” designation while not having his creative practice reduced to it (Landry and MacLean 1996, Spivak 1989–1990, 1990). This move is one way of interpreting Abrams’s acceptance of awards from the mainstream jazz and academic art-worlds, such as his designation as “jazz master” by the National Endowment for the Arts (NEA) and his induction into the *Down Beat* Hall of Fame, both in 2010, and his commendation as an “honorary member” by the Society for American Music in 2006.<sup>31</sup> The award ceremony for the NEA included a solo performance by Abrams as well as a performance of his composition, “2000 Plus The Twelfth Step” by the Jazz at Lincoln Center (JALC) Orchestra.<sup>32</sup> Abrams’s music largely does not fit within the ultra-conservative frame promoted at JALC. Yet his maverick status allowed him to enter and navigate various art-worlds when it was advantageous.

In this section I argued that a general point of contact between Schillinger and Abrams is their shared status as what Becker calls a maverick artist. Schillinger’s art world of reference was academic musicology, whereas Abrams’s was “mainstream” jazz. In both instances these mavericks were able to both define themselves and their practice in opposition to their respective art world while also taking advantage of it in various ways. Finally, I suggest that Schillinger’s status as a maverick was probably one of the many textual factors that resonated with Abrams as he read SSMC. Put differently, Schillinger probably appeared to Abrams via SSMC’s text as a compelling example of an artist who forged an individual, idiosyncratic path while drawing from various rich musical traditions.

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<sup>31</sup> See <https://www.american-music.org/page/Abrams>.

<sup>32</sup> See <https://www.npr.org/templates/story/story.php?storyId=122457086> (accessed June 6, 2018).

## Textual Resonances between SSMC and Abrams

SSMC is a highly idiosyncratic music theory treatise. In this section I suggest three of its textual aspects that arguably resonated with Abrams.<sup>33</sup> Many early AACM musicians studied multiple music theory texts, including Paul Hindemith's *Elementary Training for Musicians* and *The Craft of Musical Composition*, and Arnold Schoenberg's *Style and Idea* (Lewis 2008, 67). Yet it is Schillinger's work that remained prominent in Abrams's practice as a composer and teacher (as established by Jason Moran's mention of having attended Abrams's Schillinger-based composition classes in New York as late as the 1990s). My discussion thus aims to suggest why Abrams spent four years, 1957–1961, studying SSMC so intensely, and why it continued to appeal to him beyond this initial spurt of concentrated study. First, I point to Schillinger's use of examples from Tin Pan Alley composers and his positive attitude toward popular music in general—a notable break from the condescension toward the repertoire that Abrams knew that is typical of academics and composers from the middle of the twentieth century. Second, I argue that Schillinger's reverence for mathematics and the primacy of numbers in the pages of SSMC aligns with Abrams's interest in numerology. Finally, I highlight one of the most striking passages in SSMC, where Schillinger comments directly on the relationship between race, African American music, and his idealist musical vision.

### Popular Music

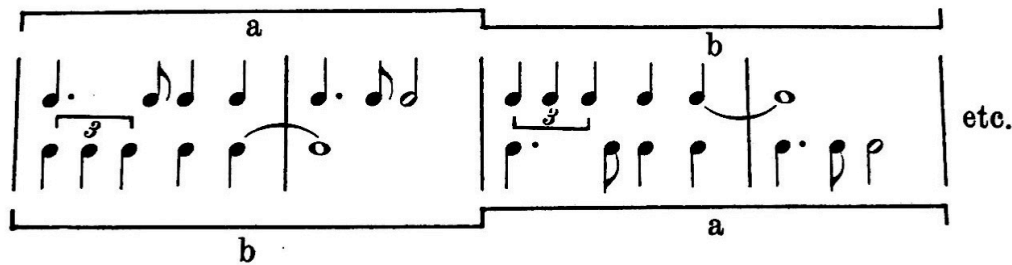
Schillinger embraced popular culture in the United States. His attitude is discernible in

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<sup>33</sup> I use “probably” to indicate that I cannot know for sure why SSMC appealed to Abrams initially for so long, although the points that I outline offer some suggestions.

his repeated use of “Pennies from Heaven,” a song written in 1936 by Arthur Johnson and Johnny Burke and popularized by Bing Crosby, Billie Holiday, and Jimmy Dorsey, among others, as fodder for his demonstrations of various compositional techniques in SSMC. Bing Crosby’s recording of the song topped the charts for ten weeks in 1936 (Sullivan 2013)—while Schillinger was in New York teaching, delivering lectures, and writing the papers that eventually came to comprise much of SSMC. Schillinger first uses the song to demonstrate his method of generating a counter melody by permuting segments of the primary melody. He focuses on rhythm in this section, although this basic principle holds true for much of his text. His illustration—shown in Figure 4.5—segments the rhythm of the melody in the first four measures of “Pennies” into two halves and reverses their order to generate a counter melody—mm. 3 and 4 of the original melody become the accompaniment for measures 1 and 2 and vice versa (50).

FIGURE 4.5: SCHILLINGER’S FIRST USE OF “PENNIES FROM HEAVEN”



Co-editors Arnold Shaw and Lyle Dowling, in a footnote on the same page, state that Schillinger, unlike other music theorists, often references repertoire beyond the Western art music canon: “Schillinger’s study of musical styles and the development of music took him from the earliest forms of recorded sound to contemporary popular American song. *With an unusual catholicity of interest*, Schillinger chooses illustrative materials frequently from popular songs” (50, my emphasis).



Segments may be of any length and need not be equal, and Schillinger returns to “Pennies” to demonstrate: he divides the melody into three parts of unequal length in order to generate two countermelodies to the original a few pages later (Figure 4.6), and again into four equal parts to generate three countermelodies for a total of four parts (Figure 4.7).

FIGURE 4.6: SCHILLINGER’S TRIPARTITE SEGMENTATION OF “PENNIES FROM HEAVEN”

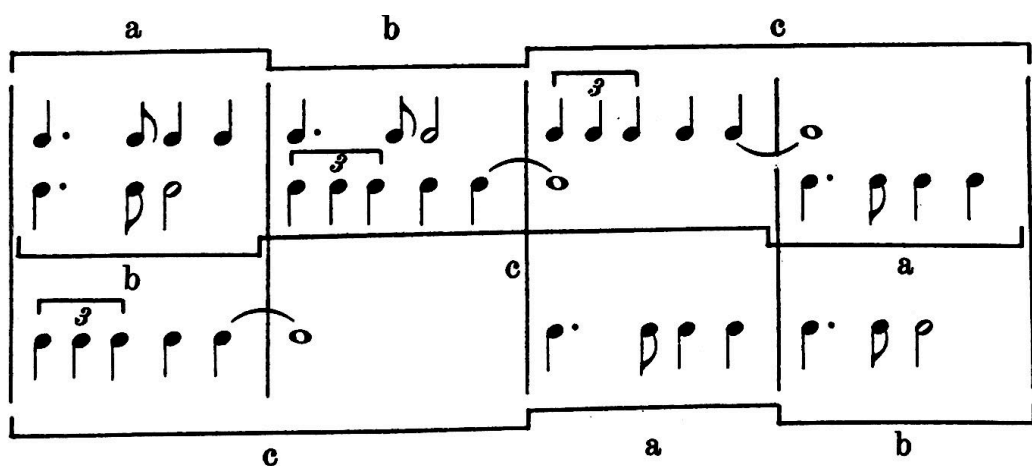
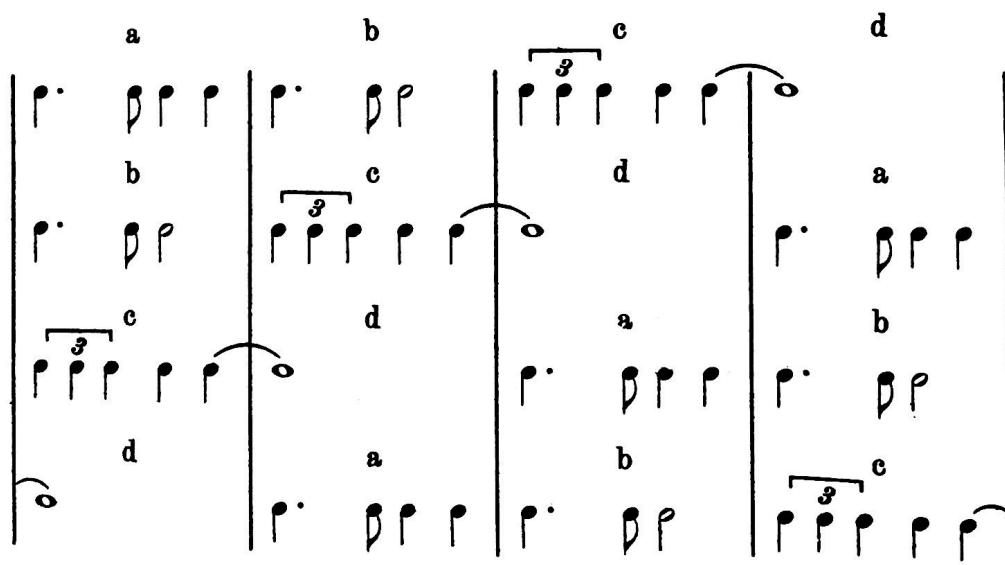
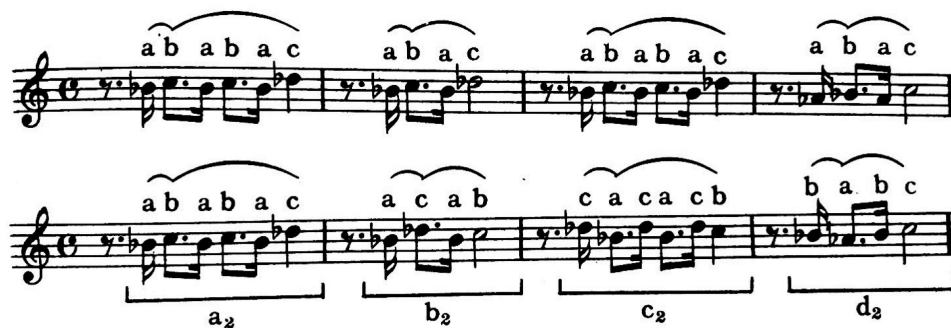


FIGURE 4.7: SCHILLINGER’S FOUR-PART SEGMENTATION OF “PENNIES FROM HEAVEN”



Gershwin’s “The Man I Love” appears in Schillinger’s chapter on pitch-scales (111). In this passage Schillinger individuates the pitches in each phrase and permutes them to create “thematic fill-in,” or motivic variation (Figure 4.8). Schillinger’s use of “Pennies from Heaven” and “The Man I Love” thus indicates his interest in popular music.

FIGURE 4.8: SCHILLINGER’S MOTIVIC VARIATIONS ON THE OPENING FOUR MEASURE OF GERSHWIN’S “THE MAN I LOVE” (ORIGINAL MELODY FOLLOWED BY VARIATIONS)



To my knowledge, no other contemporaneous music theory treatise draws on popular American song to the extent that SSMC does. Abrams had been performing as part of Chicago’s jazz, blues, stage-show, and rhythm-and-blues scenes prior to his encounter with SSMC and thus would probably have immediately recognized both “Pennies” and “The Man” immediately (Lewis 2008, 17). Although Abrams’s aspirations at the time no doubt extended beyond arranging American popular songs, Schillinger’s examples make it clear that his techniques can be applied both to original musical material and material “at hand,” which for Abrams probably meant repertoire with which he was already familiar.<sup>34</sup>

<sup>34</sup> Abrams did also continue to work with other musicians as an arranger. Two remarkable instances testify to his continued yet under examined work in this area. First, Abrams tells a fascinating story

## Numbers

The second point of resonance between the pages of SSMC and Abrams concerns numbers. Schillinger's opening chapters of SSMC make it apparent that his goal of providing a comprehensive and systematic theory of composition depends in large part on the representation of musical materials (and their combinations) in mathematical terms. Although he states that the objectivity of his system derives from his use of graphs (1), numbers and mathematical formulae appear more often and hold greater theoretical power in his text. Number values allow for the "computation" of possible musical elements, which will liberate composers from "ordinary musical notation" (1) and their reliance on inspiration (227).

### **Schillinger's Generative Methods: Resultants and Distributive Powers**

Schillinger's methods of generating and manipulating rhythm furnish a vivid illustration of the importance he bestows on numbers and mathematics. These methods provide the conceptual basis for much of SSMC, and thus also provide a general sense of Schillinger's priorities throughout. The two modes of generating rhythms that I summarize are "resultant rhythms" (or "resultants") and "distributive powers."

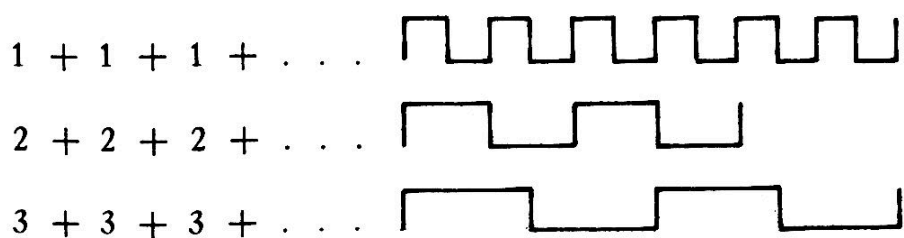
Resultant rhythms issue from the overlay (or "interference") of two or more isochronous streams of pulses. Integers represent duration: larger numbers

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during his appearance on Marian McPartland's radio show, "Piano Jazz," whereby he recounts how he came to arrange two Duke Ellington pieces, "Melancholy," and "Reflections in D," for Mercer Ellington's orchestra: "Mercer happened to come to Chicago once when I was playing....you know Marshall Thompson...we were playing at [the venue] the Jazz Showcase....we were playing with some other people. Marshall came to me and said, 'Mercer and Stanley Dance are in the house, why don't you play those two Duke pieces you always play'...so I played them [solo] and Mercer asked me to make these arrangements...for the band." Second, Abrams (along with Jaki Byard, Carla Bley, Bill Frisell, Ron Carter, and Wynton Marsalis, among others) appears on a 1981 collection of arrangements of film composer Nino Rota's themes. Abrams's arrangement of "Notturmo" from the film *La Dolce Vita* features AACM luminaries Amina Claudine Myers and Henry Threadgill, among others.

representing longer durations and hence slower rhythms. Schillinger calls isochronous pulsation streams “monomials” to reflect their representation using a single integer. He uses “polynomial” to describe sets of integers with two or more distinct elements, although he occasionally distinguishes between binomials, trinomials, and quadrinomials. Figure 4.9 shows his introductory monomials ([1946] 1978, 3).

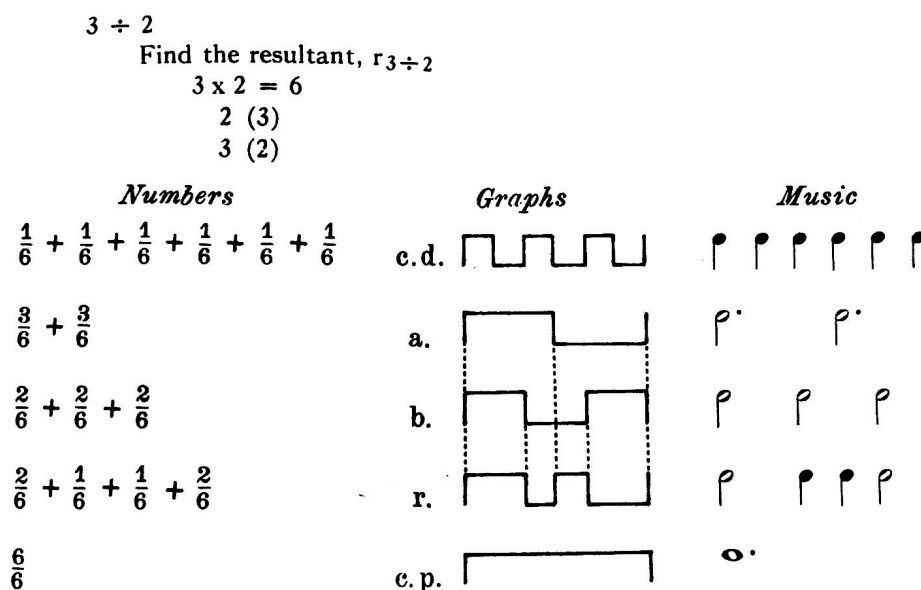
FIGURE 4.9: SCHILLINGER’S MONOMIALS



Schillinger represents resultants using the formula  $T = r_{a \div b}$  where  $T$  = time,  $r$  = the resultant, and ‘a’ and ‘b’ refer to the each stream’s periodicities. ‘A’ is the “major generator” and ‘b’ is the “minor generator.” Note that the division sign in this formula does not represent an arithmetical process, even as it invokes the objectivity of mathematics. Rather, it represents interference. Thus  $T = r_{3 \div 2}$  represents the resultant that derives from the interference of two isochronous pulsation streams: one with pulse durations of three and the other with pulse durations of two. Figure 4.10 shows Schillinger’s derivation for this resultant and should elucidate. First, the product of ‘a’ and ‘b’ generates the total duration of the resultant and the common temporal “denominator” of the two periodicities: six in this case, indicated on the first line with “c.d.” Next, periodicity ‘a’ occurs ‘b’ times and periodicity ‘b’ occurs ‘a’ times; lines two and three. The resultant is generated by overlaying ‘a’ and ‘b’ and collapsing their attacks onto a single plane, shown on line four with “r.” Figure 4.11 provides a second

example, using  $4 \div 3$ , for clarification. The process for this resultant mirrors the one shown in Figure 4.10. Schillinger's use of the quarter note as the basic temporal unit in these examples is incidental—the proportions between attacks are the primary outcome of this process.

FIGURE 4.10: SCHILLINGER'S DERIVATION OF A  $3 \div 2$  RESULTANT



Schillinger represents resultants as polynomials, where each integer represents the duration of each attack in reference to the underlying common rhythmic denominator; i.e.,  $r_{3 \div 2}$  can be represented as a  $2+1+1+2$  binomial and  $r_{4 \div 3}$  can be represented as a  $3+1+2+2+1+3$  polynomial (see the penultimate lines of Figure 4.10 and Figure 4.11, respectively). Polynomials dissociate rhythms from any particular rhythmic division or meter—polynomials may theoretically be placed in any metrical setting.<sup>35</sup>

<sup>35</sup> A resultant's first attack will coincide with metrically strong pulses in instances where the total duration of a polynomial is equal to, a multiple of, or a divisor of the duration of one measure. Resultants will occur more than once when the ratio between their duration and the duration of the measure cannot be reduced beyond  $2 \div 3$  (or  $3 \div 2$ ) before their start point returns to coincide with the beginning of the measure. A  $3+1+2+2+1+3$  polynomial ( $r_{4 \div 3}$ ), for example, totals 12 and would thus be metrically consonant when realized using eighth-notes and placed in a meter of  $12/8$ ,  $3/2$ , or  $6/4$ . This resultant

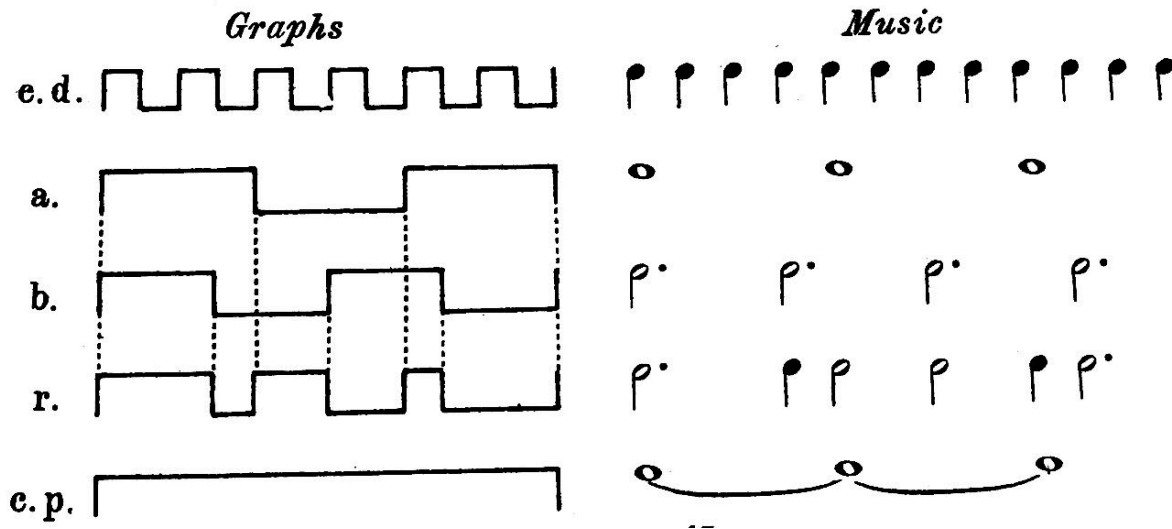
FIGURE 4.11: SCHILLINGER'S DERIVATION OF A  $4 \div 3$  RESULTANT

$$4 \div 3$$

Find the resultant,  $r_{4 \div 3}$

3 (4)

4 (3)



“Fractional resultants” are an important variation on this process of rhythm generation. Figure 4.12 shows Schillinger’s fractional resultant of  $4 \div 3$ . Fractional resultants are represented as  $r_{x \div y}$ . In this process, the resultant is generated by squaring the major generator, four in this case, then beginning the minor generator periodicity, three in this case, on each of the pulsations in the major generator without exceeding the total length of the resultant. Periodicity  $b$  is thus superimposed on periodicity  $a$  twice in Figure 4.12: on its first and second attacks (a third would result in periodicity exceeding the total duration). One then collapses  $a$ ,  $b_1$ , and  $b_2$  onto a single plane to generate the fractional resultant. My primary point is that Schillinger provides two interference methods that each produce different polynomials using the same initial

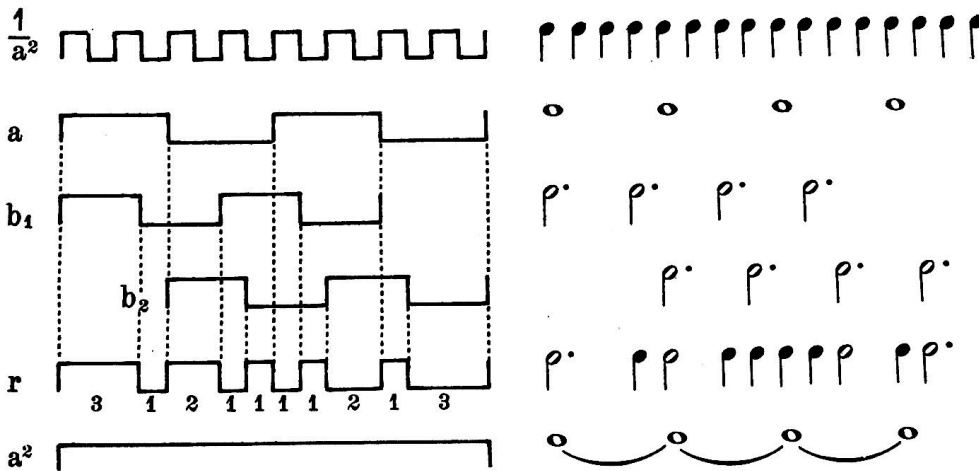
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would need two measures of  $6/8$  or  $3/4$  to coincide with the beginning of the measure, seven measures of  $7/4$ , five measure of  $5/4$ , etc.

isochronous streams, and that mathematics is his primary means of generating musical material.

FIGURE 4.12: SCHILLINGER'S DERIVATION OF A  $4 \div 3$  FRACTIONAL RESULTANT

$$\begin{array}{l} \underline{4 \div 3} \quad \text{Find } r_{4 \div 3} \\ 4^2 = 16 \\ 4 \quad (4) \\ 4 \quad (3) \\ N_3 = 4 - 3 + 1 = 2 \end{array}$$



Schillinger, toward the end of his chapter on resultants, asks the reader to generate and notate all resultants using combinations of two monomials up to nine; i.e.,  $r_{3 \div 2}$ ,  $r_{4 \div 3}$ ,  $r_{5 \div 2}$ ,  $r_{6 \div 5}$ ... $r_{9 \div 8}$ . “All rhythmic patterns in music,” states Schillinger with typical self-assuredness, “are either complete or incomplete resultants” (10), “including all possible rhythms of the Orient or of the primitives” (6). The reader may thus segment and rearrange the polynomials generated by the process of resultant rhythms, as well as analyze others’ music in terms of resultants.

Schillinger’s claim that his method generates *all* rhythmic patterns and makes special mention of non-Western music (in typically antiquated terms), reflects both his

lofty goal regarding the comprehensiveness for his system and his problematic belief that Western systems of musical thought should also “explain” music from non-Western cultures. As I discuss below, some of Schillinger’s comments on non-Western music in SSMC privilege it over the Western art music canon. One cannot ignore, however, that Schillinger’s discussions of non-Western art music and race are simplistic at best.<sup>36</sup>

Schillinger’s second generative method concerns distributive powers. His implementation of the square and cube forms of this algebraic process provides a second mode of generating larger polynomials from smaller ones. Thus a polynomial containing any number of terms can be squared or cubed to generate complementary rhythms. A simple example will demonstrate this generative mode.<sup>37</sup>

Let  $a = 3$  and  $b = 2$

$$\begin{aligned} &\text{Squaring a } (3+2) \text{ binomial using the formula } (a + b)^2 = a^2 + ab + ab + b^2 \\ &= 3^2 + (3 \times 2) + (2 \times 3) + 2^2 \\ &= 9 + 6 + 6 + 4 \end{aligned}$$

Schillinger continues this train of thought in the subsequent pages and provides a generalized formula for both squares and cubes of polynomials with any number of

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<sup>36</sup> Schillinger appears to have used comparative musicologist Eric von Hornbostel’s work as the primary source for his understanding of non-Western music: a copy of Hornbostel’s “African Negro Music” is part of the Schillinger papers, Columbia University Rare Book and Manuscript Library (von Hornbostel 1928). Interestingly, Schillinger’s friend and composer Henry Cowell, who also wrote an introductory chapter, “Overture to the Schillinger System,” for SSMC studied with Hornbostel, suggesting a genealogy that connects Schillinger and early ethnomusicology (Nicholls and Sachs 2013).

<sup>37</sup> Note that the addition sign (+) in Schillinger’s process does not signify arithmetic addition, but rather the circumscription of durations.



elements.<sup>38</sup> Schillinger's central point is that any polynomial, such as  $3+2$ , can be subject to the processes of distributive powers and resultant rhythms in order to generate a set of related material. Structurally sound composition results from the use of related material, according to Schillinger, and generative modes such as these provide means of deriving a relatively large amount of material from only a few seeds.<sup>39</sup>

Numerical and mathematical representations in SSMC of musical materials extend far beyond the section explicitly on rhythm. Schillinger preliminarily investigates two of the key concepts in his theory—interference across multiple domains (what Schillinger calls, “Coordination of Time Structure”) and permutation—in his book on rhythm. Both concepts reinforce his reverence of mathematics. A single example of each concept should elucidate. Schillinger outlines the principles of combining rhythm and melody in terms of the “interference” between the number of attacks in a rhythm and the cardinality of a pitch set. The resultant,  $r_{3 \div 2}$ , contains four attacks and interferes with a pitch set of cardinality of five to create a phrase that comprises five iterations of the resultant and four iterations of the pitch set. Schillinger represents this process of interference between the pitch and rhythmic domains using ratios. The first line in Figure 4.13 tells the reader that the pitch set contains five attacks (“ $a_a = 5a$ ”), and that the rhythm contains four attacks (“ $a_r = 4a$ ”) and is the resultant of  $3 \div 2$  and six

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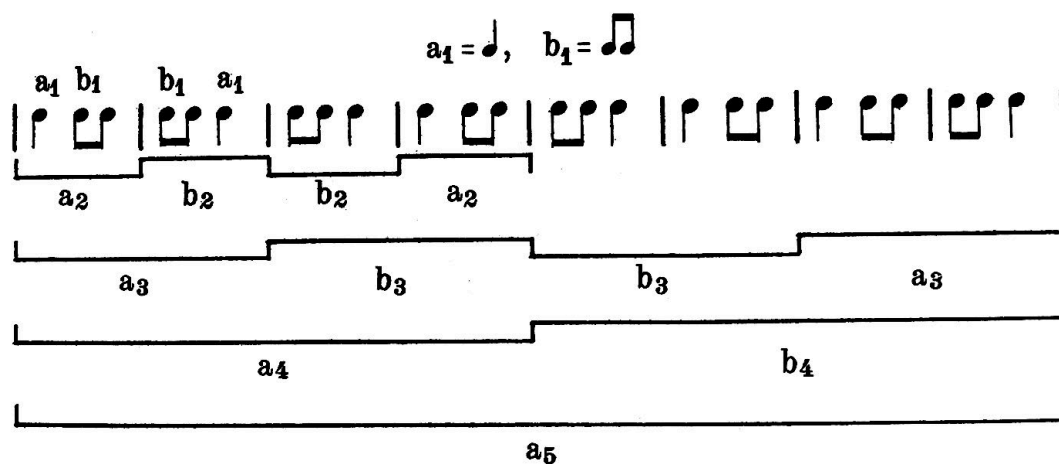
<sup>38</sup> In actuality he restricts himself in SSMC primarily to polynomials with 2, 3, or 4 elements.

<sup>39</sup> Book Eleven of SSMC, “Planning a Composition,” states that “the degree of perfection in a work of art” is embodied in its directly linked to the cohesion between its component parts and overall structure. This attitude aligns with music-theoretical notions of organicism, as exemplified by Arnold Schoenberg argument that “individual sections are organic components of a living being, born of a creative impulse and conceived as a whole” (Schoenberg 1950, 23). Furthermore, Schillinger often adopts explicitly organicist metaphors, such as when he describes melodic contour and modulation: “As a winding plant, such as ivy, stretches from one branch to another, winds around its coils—and, when it grows out of the length of the respective branch, stretches to a new one, so in music an analogous case would be the use of modulation as an outcome of excessive tonal stability” (Schillinger [1946] 1978, 247).





(b)



A final testament to the importance of numbers in SSMC is Schillinger’s almost obsessive listing of the number of possible combinations. His extrapolation of cyclic permutation (or “rotation” in set-theory terms) contains laborious enumerations of the number of combinations that result from permutation of sets containing between one and twelve elements (Schillinger [1946] 1978, 911–27). Schillinger states in bolded text that his system yields a total of 443,312 permutations ([1946] 1978, 928). This pronouncement captures Schillinger’s investment for numbers and mathematics.

### **Abrams’s Interest in Numerology**

Abrams’s fascination with numbers and their power both mirrors and contrasts with Schillinger’s. In an arresting portion of the AACM’s foundational meetings, Abrams helps evaluate a proposed name for the group (the Association for the Advancement of Creative Music, the final term was changed to “Musicians” moments later) using numerology. Abrams states that the acronym, AACM, “would put a nine on us, initial-wise” (Lewis 2008, 110). Trumpeter and co-founding AACM member Phil Cohran seems surprised but encouraged, and defers to Abrams to provide the explanation to confused members, stating that “this was your [meaning Abrams’s]

conversation, not mine” (110). Abrams thus appears as the authority on numerology in the group. He states that “‘A’ represents ‘1,’ ‘M’ represents ‘4,’ ‘C’ represents ‘3,’ M and C would be 7, and the two A’s are one apiece. That’s nine” (110). Nine, Abrams goes on to state, is “as high as you can go” (110).

In most versions of numerology, “expression numbers” describe one’s innate talents and predilections. Expression numbers are calculated first by mapping the letters in one’s name on to integers with base one and mod nine; “C,” “M,” and “L” thus all correspond to three.<sup>40</sup> These numbers are then summed. If this total is greater than nine, then the component integers are summed together until the total is nine or less. The total of MEH, for example, is seventeen, which reduces to eight (M = 4, E = 5, H = 8,  $4 + 5 + 8 = 17$ , and  $1 + 7 = 8$ ). Although the precise translations of expression numbers vary slightly between factions, the AACM’s total of nine signifies traits often associated with collectivity and imagination—humanitarianism, creativity, generosity, and idealism. Expression number nine also often denotes openness to new experiences, trust in others, and a predilection for teaching. These values map uncannily well onto the AACM’s philosophy of community-based experimental music- and art-making, and the founding members appeared to be acutely aware of this correspondence in their initial meetings.

The numerological meanings of *Abrams’s* names are equally interesting.<sup>41</sup> “Abrams” *also* totals nine. The meanings of the Association’s expression number are thus mirrored in its first president. “Richard” totals seven; a number that corresponds

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<sup>40</sup> There are also the “master numbers,” eleven and twenty-two, although neither Abrams nor other members of the AACM mention them.

<sup>41</sup> Lewis does not discuss the numerological meanings of Abrams’s name (or any other individual members) in his history of the AACM.

to a desire for truth and knowledge, an analytical mind, and a prediction for answers, philosophy, and science. I discuss the importance of science in the relationship between Abrams and Schillinger's work further below. Suffice to say that Abrams probably noticed the implications of the expression number of his then first name.

Lewis notes that Abrams's adoption of the name "Muh" in 1967 connects to a new black consciousness whereby African Americans modified or dropped "slave names"—names inherited from European slave-masters—and adopted names associated with black culture (Lewis 2008, 165). Scholars such as Obiagiele Lake and Annette J. Saddik connect naming and renaming to African Americans' efforts to reclaim histories and subjectivities subjugated by European colonialism and American slavery, to creatively imagine a better future, and to signify on the "fiction" of a unified black subjectivity (Lake 1997, 262, Saddik 2003, 117). Renaming can thus function as part of what Robin D.G. Kelley calls "freedom dreams"—"creative, expansive, and playful dreams of a new [and better] world" (Kelley 2002, 5).<sup>42</sup>

The numerological meaning of Abrams's selection of "Muh" adds a complementary layer to these authors' perspectives; it suggests that Abrams adopted the name as part of a creative imagining of a better future, expressed through numerology. Pianist and radio host Marian McPartland asked Abrams directly during his 1988 appearance on her show on National Public Radio, *Piano Jazz*, if his adoption of "Muh" was for religious reasons. Abrams replies: "it was a numerical addition...having to do with numerology."<sup>43</sup>

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<sup>42</sup> I do not mean to imply that Africa was the only tradition that Abrams and other AACM members drew inspiration from—as Lewis pointedly describes, the AACM was not tied to any one ideology members were free to explore "mobile, heterophonic notion[s] of the possibilities for unity" (Lewis 2008, 214).

<sup>43</sup> This recording is available in the New York Public Library and has not been released commercially (see

The numerological “expression number” of “Muhā” is one (M = 4, U = 3, H = 8, A = 1, L = 3;  $4 + 3 + 8 + 1 + 3 = 19$ ;  $1 + 9 = 10$ ,  $1 + 0 = 1$ ).<sup>44</sup> That number has a profound numerological meaning: it is associated with leadership, individualism, ambition, and a pioneering spirit. There is therefore a striking symmetry between the AACM’s and Abrams’s respective expression numbers—if the AACM’s numerological meaning is primarily concerned with collective creativity and positive idealism, then Abrams’s adopted name represents the means of leading that collective toward their imagined, ideal future. Abrams’s self-renaming thus concatenates the above theorizations in terms of black consciousness, persona creation, and imagined ideal futures with his belief in the power of numbers. It suggests that Abrams adopted “Muhā” in order to both represent personal qualities he felt that he already exhibited and creatively project an ideal future. His reverence for numbers revolves around the imagining and projection of a better future via numerology. In contrast, Schillinger employs arithmetic as a means to comprehensiveness. Despite this contrast, Abrams probably detected this affinity in SSMC, which thus engendered the treatise to him.

## **Race in SSMC**

The final set of factors that probably recommended SSMC to Abrams was the combination of the primary place it reserves for rhythm, its reference to racialized histories of music, and its speculative optimism. I do not intend in this section to reinscribe racist connotations of blackness and rhythm (Perchard 2015, Radano 2003). Rather, I argue that SSMC, despite representing (in part) a branch of music scholarship

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<http://www.worldcat.org/oclc/124554005>). The episode with Abrams is Season 9, no. 6.

<sup>44</sup> Lewis notes that French readers discovered that “Muhā” means “number one” in a 1973 article for the French magazine *Jazz* but does not elaborate (Lewis 2008, 300).

that traditionally “Others” non-Western music and musicians, contains declarations that insinuate a sympathetic and supportive stance vis-à-vis black music in America.

Unlike Hindemith’s and Schoenberg’s texts, which follow the trend in Western-European musical thought of the primacy of harmony, Schillinger states that *rhythm* is the eternal foundation of music (1, 34).<sup>45</sup> Furthermore, he criticizes canonical composers such as Bach, Mozart, and Beethoven for their apparent defective temporal coordination of multiple streams of music (35). American music, in contrast, promises to improve on this past due to its connection to a different, ancient tradition:

A score in which several coordinated parts produce, together, a resultant which has a distinct pattern—has been a “lost art” of the aboriginal African drummers. The age of this art can probably be counted in tens of thousands of years!...Today in the United States, owing to the transplantation of Africans to this continent, there is a renaissance of rhythm. Habits form quickly—and the instinct of rhythm in the present American generation far surpasses anything known throughout European history.

(Schillinger [1946] 1978, 35)

This provocative passage acknowledges and emphasizes a long history of African music-making, attributes the vitality of contemporary American music to the influence of African Americans, and exalts contemporary American music above Western art music—uncommon occurrences in music theory treatises! Simultaneously, however, it expresses deeply problematic and racist associations between blackness and “instinctual” rhythm, refers to an imaginary African past that Schillinger probably only knew through contemporaneous publications comparative musicology, and ignores the

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<sup>45</sup> “All forms of music have one fundamental property in common: *organized time*. The plasticity of the temporal structure of music, as expressed through its attacks and durations, defines the quality of music. Different types and forms of intonation—as well as different types of musical instruments—come and go like fashions, while the everlasting strife for *temporal plasticity* remains a *symbol of the ‘eternal’ in music*” (34, emphasis in original).



manifold differences between African and African American musicians and the schism produced by slavery.

Abrams likely perceived all of these factors in this passage, and perhaps others. He also encountered the institutional erasure of black people as early as grade school (7). Schillinger's elevation of African American music and rhythm thus represents a striking divergence from conventional music theory treatises and well as music institutions in the United States. Schillinger's affirmations also aligns with Abrams (and the AACM's) vision of music extending both backwards in time and all over the world, and forward toward greater equality in America—a trope later captured in the AACM dictum "Ancient to the Future." Abrams also cites rhythm as the primary foundation of music in interviews and talks.

In conclusion, Schillinger's interest in modern music, his reverence for numbers, and his comments invoking race in contemporary music presented Abrams with theory of music that supported his efforts to develop a new compositional voice. Abrams's future-oriented "freedom dreams" thus found a technical foundation in Schillinger's text—if Abrams intended to compose a new sonic world for himself and move beyond the Chicago jazz, blues, and stage-show scenes, then Schillinger's text and compositional systems provided fertile grounds for him to do so. In this futurist reading of SSMC vis-à-vis Abrams, Schillinger's many in-text prompts suggesting that the reader work out various compositional concepts for themselves or undertake analyses on his or her own become invitations to reinvent oneself—to reimagine and recompose musical identity. His statement toward the end of his section on four part harmony and voice leading is representative: "Inasmuch as the actual quality of voice-leading depends on the structures of the two allied chords, the student will be able—*upon completion of all*

*these charts in musical notation—to make his own preferential selection”* (478, my emphasis).<sup>46</sup>

Abrams leveraged SSMC to help develop “a personal or individual approach to composition” (quoted in Lewis 2008, 60). His emphasis on Schillinger’s “raw materials” echoes the opening of Schillinger’s chapter on planning a composition, which states that “composition is a process of coordinating raw materials and techniques into a harmonic whole” ([1946] 1978, 1277). This parallel emphasis on generating entire compositions from fundamental musical ideas captures many of the correspondences between SSMC and Abrams. Abrams studied Schillinger’s text and channeled his new musical material into the Experimental, the AACM, and beyond.

## **Abrams, SSMC, and “Fugitive Music Theory”**

In addition to providing Abrams with a method of analyzing and generating original musical material, I also interpret SSMC as a counter to simplistic and essentialist characterizations of black music. Put differently, Abrams’s engagement with SSMC directly contradicts descriptions of Abrams and other AACM musicians purely as improvisers (rather than composers), who had little interest in formal study, the abstraction of music theory, and/or Western art music in general, and who drew simply on inspiration in order to create their art. Many of these tropes were intensified during the period when the AACM was formed—critics regarded free jazz, a genre designation they also often used for the AACM, as a complete abandonment of all music structure, a

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<sup>46</sup> In our conversation, Abrams emphasized this pragmatic aspect of SSMC, stating, “the things that are created from that information use it vastly differently from the basics of the information...If you’re talking about Schillinger, that’s what he intended. He intended for people to go forward and create from a knowledgeable generic basis” (conversation with the author, January 30, 2017).

reading that flattens the musical output of musicians of the period, ignoring the fact that the AACM was primarily focused on musical composition.

I outline my argument regarding Abrams's interaction with SSMC with reference to Britt Rusert's concept of fugitive science (Rusert 2017). Fugitive science traces and explores "the dynamic scientific engagements and experiments of black writers, performers, artists, and other cultural producers who mobilized natural science and produced alternative knowledges in the quest for and name of freedom" (4). I adopt Rusert's concept to theorize Abrams's embrace of SSMC as "fugitive music theory," which represents a mobilization of music theory as part of his personal quest for freedom. Conceptualizing Abrams/Schillinger in these terms connects SSMC and Schillinger perhaps unexpectedly to race and American music. It also connects Abrams to a rich tradition of scientific, anti-white-supremacist engagement that extends back at least into the nineteenth century, as well as opens up new vistas regarding other instances of fugitive music theory.

I do not mean to suggest that Abrams *deliberately* viewed his engagement with SSMC as an explicit intervention in music theory, although at one point he suggestively invokes science as part of the AACM's purpose (Lewis 2008, 122). Rather, given the primitivist and anti-intellectualist critiques of the AACM and free jazz at the time,<sup>47</sup> I interpret Abrams's engagement with SSMC as a counterbalance to simplistic associations modes of reception, which associate blackness with jazz and anti-intellectualism.<sup>48</sup>

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<sup>47</sup> See Lewis's discussion, subtitled "Critical Response: Anger, Noise, Failure," in his history of the AACM (Lewis 2008, 43–50), and also Leslie B. Rout Jr. (1967).

<sup>48</sup> John Coltrane and Eric Dolphy, in their famous interview in *Down Beat* in 1962, "John Coltrane and Eric Dolphy Answer the Jazz Critics," suggest that "a lack of profound analysis" on the part of critics

I begin this section by outlining Rusert’s concept of fugitive science as well as some of her examples. I focus in particular on the work of James McCune Smith, as his practice is both practical and creative and thus aligns with Abrams’s. I then revisit the text of SSMC to examine the ways in which Schillinger employs scientific tropes in his text. I argue that SSMC aspires to scientific status in three ways, which include both explicit and implicit invocations of scientific method. The scientific aura of SSMC, in Abrams’s hands, subsequently becomes a means of critiquing essentialist characterizations of black music. Such characterizations occur in both academic writing and the press, and I survey examples from each area. Having outlined both the “science” in SSMC and some essentialist discourses of black music I arrive my primary argument—that Abrams’s use of SSMC represents what I call “fugitive music theory.” Finally, I turn to music theoretical practices by other improvisers to suggest a rich yet under-examined tradition of music-theoretical engagement by black improvisers.

## **Fugitive Science**

Rusert defines fugitive science in flexible terms so as to incorporate a broad range of actors and practices, not just who and what we may imagine when we think of scientists and science.<sup>49</sup> She carefully points out that her definition of “science” is intentionally inclusive—it encompasses the work and performances of scientists, performers, teachers, writers, and artists, among others. Hence her definition “veers closer to

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engenders superficial critical responses. Their suggestion directs critics toward improvisation, but this comment might apply equally well to improvisers’ compositions, such as Abrams’s (DeMichael 1962). Abrams’s employment of SSMC, which manifested semi-publicly in the Experimental Band just one year before this *Down Beat* interview was published, suggests that evidence of musicians’ formalist and systematic methods of creative investigation were only barely under the surface of musical performance.

<sup>49</sup> I am indebted and grateful to ethnomusicologist Mark Lomanno, who introduced me to Rusert’s monograph and whose talk at the 2017 Rhythm Changes conference in Amsterdam functioned as the germ for this section of the chapter (Lomanno 2017).

‘praxis’ and ‘experiment’ than to specialized study of the natural world in institutional and academic contexts” (4–5). Her unifying thread is African Americans’ active and dynamic appropriation of scientific discourse for their own ends, whether audacious criticisms of racialized science or as a point of departure for “complex meditation on [black] being, subjectivity, and existence.” By producing knowledge, Rusert argues, black subjects resist the “object” status assigned to them by hegemonic power structures such as white supremacy and slavery (5).<sup>50</sup>

Rusert categorizes three kinds of fugitive science: “Oppositional forms of fugitive science are composed of explicit critiques of racial science that aim to make a direct intervention into scientific discourse. Practical fugitive science seeks to ‘instrumentalize’ science and technology in the struggle for emancipation, as, for example, in the widespread promotion of the compass as a trusty tool for slaves escaping slavery. Finally, speculative fugitive science uses the rich imaginative landscape of science to meditate on slavery and freedom, as well as the contingencies of black subjectivity and existence” (18).

Her opening chapters sketch out a variety of fugitive scientific practices that elucidate her three categories. She begins with a set of responses of Thomas Jefferson’s *Notes on the State of Virginia*, which served as the cardinal oppositional text for fugitive science in the early national and antebellum periods (33). Benjamin Banneker inaugurated a history of black critique of Jefferson’s book via both his 1791 correspondence with Jefferson and his own almanacs. Other responses, such as those

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<sup>50</sup> Although Rusert’s book examines nineteenth-century practices only, her work emerges out of the broader body of literature on fugitivity and black studies that includes both pre- and post-civil war periods. Scholars such as Daphne Brooks, Fred Moten, and Alexander G. Weheliye deploy fugitivity as a mode of examining theory, practice, and states of being (Brooks 2006, Moten 2003, 2013, Weheliye 2014).

by David Walker, James W. C. Pennington, and James McCune Smith, drew on Banneker's work, averring him as a founding figure of black science and its critical stance toward racialized theory. Walker, for example, published and covertly distributed a pamphlet—*Appeal to the Coloured Citizens of the World*—that details the hypocritical mistreatment of Africans in the Americas by Christian whites (40–1). Importantly, although Walker vigorously rejects Jefferson's argument, he implores freed *and* enslaved people to read it so that they are informed in their rejection. Walker thus performs two fugitive scientific moves, oppositional and pragmatic: first, he composes and distributes a response in his *Appeal*; second, he turns Jefferson's *Notes* into a tool against white supremacy by suggesting oppressed people read it.

McCune Smith's rejoinders to racialized science inhabit a contrasting aesthetic realm that spans the pragmatic and speculative (57). A striking and particularly inventive example in this regard is his article "Civilization: Its Dependence On Physical Circumstance" (McCune Smith [1859] 2006). First written in 1844, the article deploys eighteenth-century climate-based theories of racial difference as part of an argument against slavery and for the coexistence of and collaboration by people from various races and regions. "The essential condition of civilization," argues McCune Smith, "is expressed in the etymology of the word, which is derived from civil, co-ivis, 'coming together' '*in unum co euntes vivunt.*' Not only is the dwelling and assembling together of men an essential condition of civilization, but the more men mingle, the larger the dwelling together, the greater is their achievement" ([1859] 2006, 247). McCune Smith argues that coastal regions, due both to their temperate climate and facilitation of the "mingling" of people from a variety of regions, represent ideal sites for the development of the human race. As Rusert persuasively points out, his reformulation of

climate-based theories of race inverts arguments such as Jefferson’s “about the superiority of people in ‘temperate’ zones over those from ‘torrid’ zones,” which presented a justification of white supremacy and slavery (Rusert 2017, 58).

In Rusert’s terms, McCune Smith’s reformulation is both practical—he employs climate-based race theory to include non-white populations in a theory of race—and speculative—he makes his argument by creatively remapping geographical regions that represent sites for the progress of civilization. Rusert’s crucial points for the purpose of my discussion are that “racist theories prompted black intellectuals to develop their own theories of race,” that these fugitive scientific theories could both be entirely new or assembled from existing ones, and that they could be direct critiques of particular aspects of racialized science, support arguments against slavery and white supremacy more broadly, and/or facilitate and represent meditations on black subjectivity (58).

I argue that Abrams’s appropriation of SSMC aligns with Rusert’s notion of practical fugitive science, albeit expressed through the speculative medium of music. SSMC in my theorization functions as a hyper-scientific music theory and Abrams’s appropriation of it constitutes an emancipative and pragmatic use of music theory against discourses that were unwilling to acknowledge the study, implementation, and/or generation of music-theoretical texts by black improvisers. Importantly, this interpretation requires a kind of conceptual flattening of Schillinger’s status as a kind of “maverick” (discussed earlier)—SSMC becomes broadly representative of academic music theory/musicology in my fugitivist interpretation. This rendering of SSMC gains credence from the parts of SSMC that appeal (both explicitly and implicitly) to science, which represents music theory’s objectivity in the text.

## SSMC as Science

Schillinger often enthusiastically equates his system of composition with science in the text. These explicit references to scientific disciplines and their principles imply objectivity—what I refer to as the first meaning of science in SSMC. Schillinger definitively and explicitly states his scientific aspirations at the beginning of his section on planning of an entire composition. A scientific system of composition is valuable, he argues, because composers can then rid themselves of the contingencies of inspiration; i.e., the compositional process relies on objective principles rather than subjective, humanist ones:

The chief practical advantage of scientific planning over intuitive creation lies in the fact that, regardless of the value of intuition *per se*, scientific planning can be accomplished any time and is independent of inspiration. For this reason, scientific method is more to be associated with professional performance, as such performances requires the achievement of high quality with regard to time consumed. Intuitive creation is beyond the artist's control. He cannot guarantee the amount of time which will be required in order to write a certain composition, nor can he guarantee the quality of the prospective work; forever, even though the first two requirements may be satisfactorily fulfilled, the character of the work, when completed, may not possess the required characteristics.

(Schillinger [1946] 1978, 1351)

Schillinger's objective, scientific method allows the composer to consistently produce high quality work whose length is calculable in relation to the time and effort spent. Such objective detachment from humanistic factors such as inspiration is a primary contribution of this system toward professionalism in music as he sees it.<sup>51</sup>

Two additional, complementary meanings of science emerge from and reinforce this one: transparency of method and comprehensiveness. If an objective scientific

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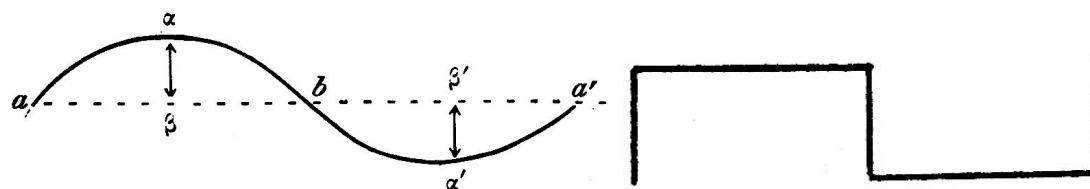
<sup>51</sup> Schillinger's conception of "professionalism" obviously carries implications regarding capitalism, labor, the music industry, and music theory in the United States.



system of composition allows one to circumnavigate inspiration, as Schillinger argues, then that system must outline a series of logical and achievable steps that the reader can implement for themselves, *and* encompass and comprehensively account for every aspect of music. SSMC embodies these three meanings of science in its text, which identifies it with science proper as he sees it.

Schillinger frequently mentions science in conjunction with objectivity throughout SSMC. The first chapter of his first volume argues that graphs offer a better mode of representing and manipulating musical materials than standard musical notation because they provide “a common basis for computations” (1).<sup>52</sup> Schillinger tellingly recommends economics, medicine, biology, meteorology, and physics as fields of study that effectively utilize graphs, which provide “a general method and [are] therefore objective” (1). He then progresses from a basic analysis of a sine wave in terms of its period, phase, and amplitude to his proposed method of graphing music (Figure 4.16). Although the lines in his graphs of music are “a simplification of the general curve [of the sine wave],” the purported objectivity of the aforementioned scientific fields is meant to carry over into his system of notation and, by extension, musical composition (3).

FIGURE 4.16: SCHILLINGER’S TRANSITION FROM SINE WAVE ANALYSIS TO MUSICAL GRAPH



<sup>52</sup> Schillinger overstates his case for graphs in this opening passage—graphs *are* used throughout the books, but so is standard musical notation.

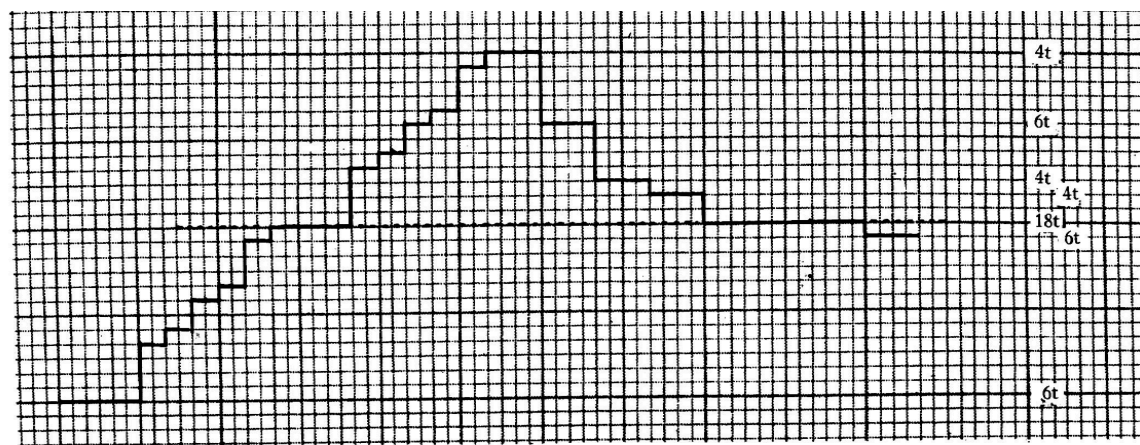
The “general objectivity” of Schillinger’s graphical notation is particularly apparent in his discussion of melodic axes, climax, and resistance. He begins this section by invoking concepts from physics to describe melodic climax and the passages that precede them, and the level of generality at which his theory works affords comparison across disparate domains. Put another way, Schillinger’s method presents itself as objective because its’ principles apply equally to the physical and music worlds.

Schillinger’s graphical representations of melody are reasonably intuitive—pitch is measured vertically and time is measured horizontally. The vertical axis is measured in half steps and the horizontal axis is usually measured in the smallest rhythmic subdivision of the passage in question (Schillinger represents this unit with “t”). The “primary axis” of a melody is the pitch with the greatest durational value for the melodic segment in question; i.e., “Sum up all the [durations of] pitch levels occurring the continuity; then establish the pitch which has the greatest value” (246).<sup>53</sup> One of Schillinger’s example analyses should clarify. Figure 4.17 shows his melodic graph of first theme from the first movement of Beethoven’s Piano Sonata No. 8, (*Pathétique*). C5 is the primary axis for this passage because it occurs for a total of 18t, or eighteen eighth-notes.

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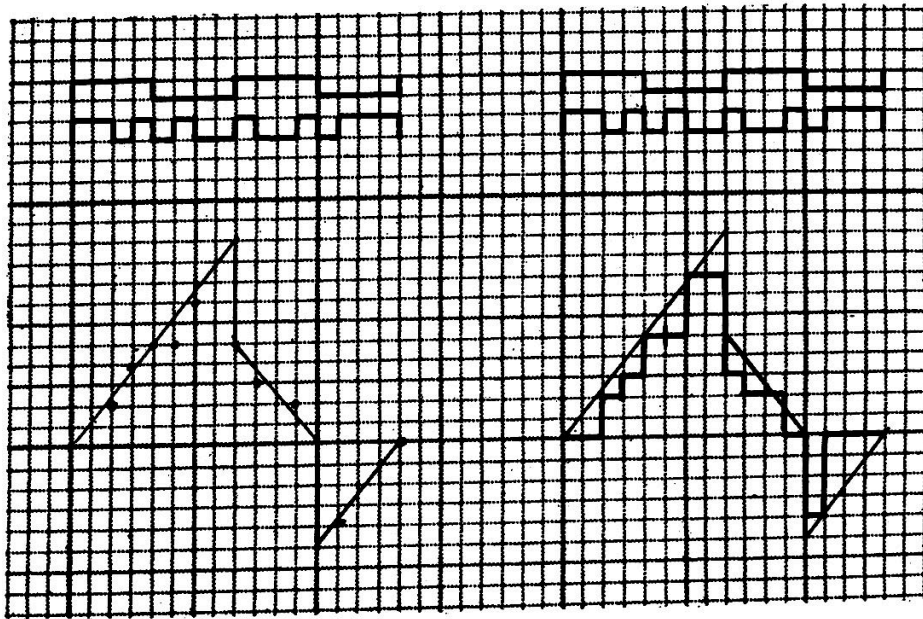
<sup>53</sup> The “primary pitch axes” of a melody is often the tonic, but not always. Schillinger also offers interesting comments regarding the psychological progression from one primary axis to another (what we might call modulation), although a full discussion of these points is beyond the scope of this study.

FIGURE 4.17 SCHILLINGER'S MELODIC GRAPH FOR BEETHOVEN'S "PATHÉTIQUE" SONATA



Secondary axes trace the movement of the melody in relation to the primary axis—away from or back to and above or below. Secondary axes connect the primary axis to a melodic extreme in a single direction. There are five kinds of secondary axes: a horizontal, static movement, and movement away from and above, back to and above, back to and below, and away from and below. Schillinger labels these as “O,” “a,” “b,” “c,” and “d,” respectively. Figure 4.18 shows Schillinger’s graph for his own melody, included below. The right-side graph is simply a more detailed version of the graph on the left. In both cases the vertical scale is half steps and the horizontal scale is eighth notes. The two graphs at the top of the diagram represent the total duration of the excerpt and rhythm of the melody.

FIGURE 4.18: SCHILLINGER'S SECONDARY AXES



The primary axis for this melody is C4. The first secondary axis connects the opening C4 with the Ab5. The second secondary axis maps the return to the primary axis. The third and final secondary axis represents the ascending major third from Ab3 to C4 in the last measure.

Schillinger's introduction to his section on melodic climax and "resistance" is laden with invocations of the physical sciences. He thus implies that his theory of melody, like the laws of physics, is objective:

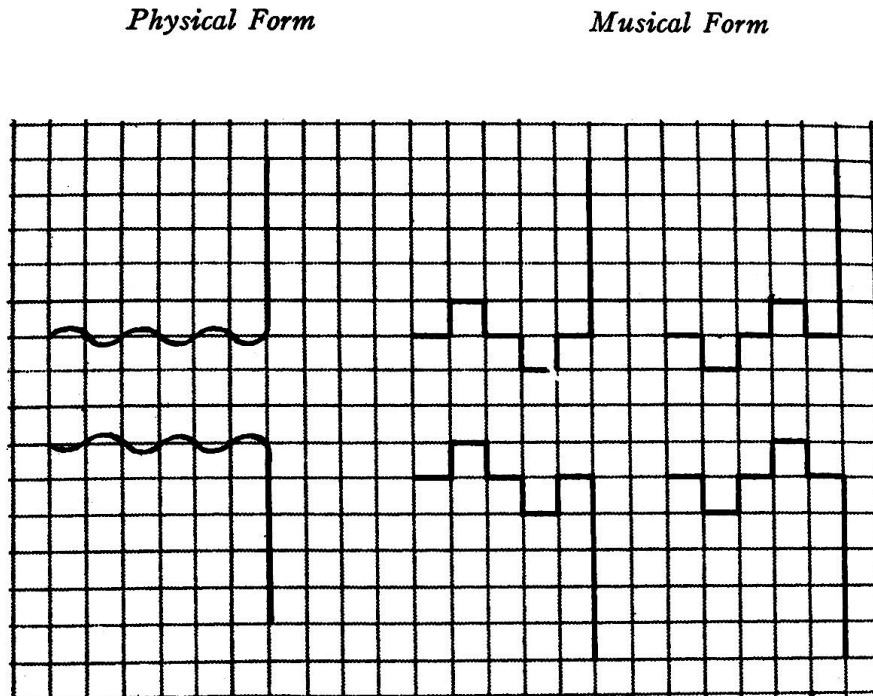
The projection of melody is a mechanical trajectory. Its kinetic components are balance, impetus and inertia. Resistance produces impetus, leading either towards the *climax*, which is a *pt* (pitch-time) *maximum with respect to the primary axis*, or towards balance. The impetus is caused by resistance which results from rotation. The geometrical rotation is a circle which extends itself in time projection into a cylindrical or spherical spiral, or ultimately (through time extension) into wave motion...The kinetic result of rotary motion is *centrifugal* energy. The discharge of accumulated centrifugal energy is equivalent to a *climax*. A heavy object attached to a string and put into rotary motion about an axis-point develops considerable energy—enough to move it a long distance when detached from the string.

(Schillinger [1946] 1978, 279, emphasis in original)

A melody achieves “momentum” by oscillating around its primary axis and resolves this momentum by returning to it. Such oscillation is apparent in Figures 4.17 and 4.18—the melody extends both sides of the primary axis.

Schillinger’s subsequent graphs in this section present his theory of climax and resistance and reinforce the cross-modality of these principles. Their alternation of ascending and descending secondary axes corresponds to the development of centrifugal energy. Figure 4.19 presents Schillinger’s graph representing the oscillation either side of a primary axis and a subsequent climax. His use of a graph’s “physical form” and “musical form” mirrors his shift between the natural and musical worlds at the opening of the volume.

FIGURE 4.19: SCHILLINGER'S GRAPHS OF CENTRIFUGAL ENERGY AND CLIMAX



Schillinger subsequently proceeds through a variety of melodic movements that he argues generate centrifugal energy in order to reach a climax. Each kind of melodic motion is equated with particular kinds of motion vis-à-vis kinetic energy: Figure 4.19, for example, corresponds to “a [spinning] top, somersaults—with diving or without—lasso...orbit rotation of the planets, Dervish dances” (283). Schillinger’s “general method” of graphing therefore allows him to equate aspects of his system of composition with phenomena in the physical world. He suggests that the objectivity of physics also applies to his theory of melody due to their shared principles.<sup>54</sup>

The second meaning of science in SSMC concerns transparency. Schillinger leads the reader through many of his compositional systems step-by-step. His pedantic coaching implicitly functions as a counterweight to the romantic trope of the composer

<sup>54</sup> Unsurprisingly, these kinds of correspondences occasionally lead Schillinger to invoke actual scientific methods or theories, such as Fourier analysis (2) and the Weber-Fechner law (280, 1324).

creating via divine inspiration that he aimed to challenge.<sup>55</sup> One application of the concept of distributive powers, for example, is to generate the rhythm of countermelodies. This method, according to Schillinger, “solves the rhythmic problem of composing counter themes to any theme...The law of distributive powers is a common esthetic law of proportionate distribution of...contrasts...[It] gives esthetic satisfaction as to both simultaneity and continuity” (74, my emphasis).

I outlined Schillinger’s process of distributive powers above. Suffice to say that his presentation and explanation proceeds step-by-step, with clear instructions and illustrations to the reader along the way. Despite its density, this passage presents a completely general and transparent method of forming rhythmic counter-themes. The culminating passage of this section contains a “perfect” eight-measure countermelody for the theme of “Pennies From Heaven.” In this example Schillinger first describes the first four durations in terms of eighth notes: dotted quarter note, eighth note, quarter note, quarter note becomes  $3+1+2+2$ . He then squares this polynomial, the result of which generates the durations of each of the durations in the countertheme, measured in eighth notes (Figure 4.20).

FIGURE 4.20: SCHILLINGER’S COUNTERMELODY FOR “PENNIES FROM HEAVEN”

The image shows two lines of musical notation. The top line is labeled 'Theme:' and consists of eight measures. The first four measures are: a dotted quarter note, an eighth note, a quarter note, and a quarter note. The last four measures are: a dotted quarter note, an eighth note, a quarter note, and a quarter note. The notation uses stems and beams to indicate eighth notes, and a '3' over a group of three notes indicates a triplet. The bottom line is labeled 'Counter-theme:' and also consists of eight measures. The first measure has a dotted quarter note. The second measure has an eighth note. The third measure has a quarter note. The fourth measure has a quarter note. The fifth measure has a dotted quarter note. The sixth measure has an eighth note. The seventh measure has a quarter note. The eighth measure has a quarter note. The notation uses stems and beams to indicate eighth notes, and a '3' over a group of three notes indicates a triplet.

<sup>55</sup> In this sense Schillinger’s theory occupies a similar conceptual space to that Charles Wuorinen, whose *Simple Composition* embodies a similarly spirit of pragmatism ([1979] 1994). Unlike Wuorinen, however, Schillinger does not prioritize the twelve-tone system.

A similar mode of presentation continues into Schillinger's section on cubed polynomials and concluded with his presentation of a generalized formula for all powers. The transparency of method that Schillinger utilizes preceding this final, generalized formula coaches the reader to understand the general process of deriving rhythmic material using polynomials: "The procedure remains the same. To obtain the distributive  $n$ th power of any group, it is necessary to obtain the distributive  $n-1$  power of the same group, multiple each term of such group by the terms of the first power group consecutively, and then add the products in sequence" (83).

The third and final meaning of science in SSMC relates to comprehensiveness. SSMC demonstrates this meaning of science in two ways. First, it aims to provide an exhaustive account of the musical topic at hand, and second, its goal is to provide a systematic account of every aspect of music. The discussion of Schillinger's method of deriving rhythmic counterthemes provides one testimony to his desideratum of exhaustive itemization. His elucidation of voice leading provides a second, complementary example.

This section of SSMC outlines all of the possible combinations of voice leadings between the upper three voices of two four-note chords (478–88). First, he presents nine forms of what he calls hybrid four-part sonorities ("S"). In more conventional music theory parlance, this table shows harmonies that contain the root in the bass voice but vary the scale degrees that appear in the upper three voices (Figure 4.21). Schillinger's numbers can refer to scale degrees of any scale. Importantly, these three-note sets are unordered.



FIGURE 4.21: SCHILLINGER' NINE TYPES OF FOUR-NOTE CHORDS

The Three upper parts.	5 3 1	5 3 13	7 5 3	7 3 1	9 7 3	9 7 1	11 9 7	13 9 7	13 11 7
The bass.	1	1	1	1	1	1	1	1	1
Forms of tension.	S(5)	* S(5)	S(7)	* S(7)	S(9)	* S(9)	S(11)	S(13)	* S(13)

FIGURE 4.22: SCHILLINGER'S VOICE LEADING TRANSFORMATIONS

$\circlearrowright$	$\circlearrowleft$	Const. a	Const. b	Const. c	Const. abc
a → b <sup>1</sup> b → c <sup>1</sup> c → a <sup>1</sup>	a → c <sup>1</sup> c → b <sup>1</sup> b → a <sup>1</sup>	a → a <sup>1</sup> b → c <sup>1</sup> c → b <sup>1</sup>	a → c <sup>1</sup> b → b <sup>1</sup> c → a <sup>1</sup>	a → b <sup>1</sup> b → a <sup>1</sup> c → c <sup>1</sup>	a → a <sup>1</sup> b → b <sup>1</sup> c → c <sup>1</sup>

FIGURE 4.23: SCHILLINGER'S BINOMIAL COMBINATIONS OF SONORITIES

S(5) ↔ S(7)	S(7) ↔ S(9)	S(9) ↔ S(11)	S(11) ↔ S(13)
S(5) ↔ S(9)	S(7) ↔ S(11)	S(9) ↔ S(13)	
S(5) ↔ S(11)	S(7) ↔ S(13)		
S(5) ↔ S(13)			

Schillinger subsequently itemizes all possible combinations of voice leading transformations between any two sets of three notes (Figure 4.22), which he names the original and prime groups, respectively.<sup>56</sup> To explain, Schillinger labels the three voices “a,” “b,” and “c” and then tabulates all of the possible voice leading combinations

<sup>56</sup> There is a striking resemblance between Schillinger's discussion of voice leading transformation and David Lewin's in his *Generalized Musical Intervals and Transformations* (Lewin 1987).

between two sets of three voices. The table shown in Figure 4.22 comprises instances where every voice rotates forwards or backwards through the series (which Schillinger calls clockwise and counter-clockwise motion, respectively, hence the circular arrows in the first two columns), instances where one voice remains constant, and the case where all voices remain constant.

Next, Schillinger lists all of the combinations of two sonorities using his earlier list of chords (Figure 4.23). Combining these two tables facilitates an exhaustive, five-page account of all possible voice leading transformations between the upper three voices of any progression between two hybrid sonorities (Figure 4.24) as well as partial presentation of these combinations in musical notation (Figure 4.25).

The top table in Figure 4.25, for example, represents voice leading transformations from the upper three notes of S(5) to the upper three notes of S(7); that is, between 1, 3, 5 and 3, 5, 7. The left-most box in Figure 4.24 thus corresponds to the left-most box in Figure 4.22, where the voices rotate forward in the series. Thus,

S(5):  $a = 1, b = 3, c = 5,$

S(7):  $a^1 = 3, b^1 = 5, c^1 = 7,$

Clockwise rotation:  $a \rightarrow b^1, b \rightarrow c^1, c \rightarrow a^1,$

Thus,

$1 \rightarrow 3, 3 \rightarrow 5, 5 \rightarrow 7$  for  $S(5) \rightarrow S(7)$

The other boxes in Figure 4.24 similarly correspond to the boxes in Figure 4.22. Note also that Schillinger tabulates the voice leading transformations for S(5) to S(7) and vice versa; that is, each pair of sonorities generates two progressions with different

sets of voice leading transformations. The subsequent pages continue in a similar fashion, and tabulate all of the possible voice leading transformations between two chords from his set of sonorities.

FIGURE 4.24: THE FIRST PAGE OF SCHILLINGER'S COMPREHENSIVE VOICE LEADING CHART

S(5) → S(7)					
1 → 5	1 → 7	1 → 3	1 → 7	1 → 5	1 → 3
3 → 7	3 → 3	3 → 7	3 → 5	3 → 3	3 → 5
5 → 3	5 → 5	5 → 5	5 → 3	5 → 7	5 → 7

S(7) → S(5)					
3 → 3	3 → 5	3 → 1	3 → 5	3 → 3	3 → 1
5 → 5	5 → 1	5 → 5	5 → 3	5 → 1	5 → 3
7 → 1	7 → 3	7 → 3	7 → 1	7 → 5	7 → 5

S(5) → S(9)					
1 → 7	1 → 9	1 → 3	1 → 9	1 → 7	1 → 3
3 → 9	3 → 3	3 → 9	3 → 7	3 → 3	3 → 7
5 → 3	5 → 7	5 → 7	5 → 3	5 → 9	5 → 9

S(9) → S(5)					
3 → 3	3 → 5	3 → 1	3 → 5	3 → 3	3 → 1
7 → 5	7 → 1	7 → 5	7 → 3	7 → 1	7 → 3
9 → 1	9 → 3	9 → 3	9 → 1	9 → 5	9 → 5

The realizations using musical notation that follow these tables further reinforce Schillinger's drive toward comprehensiveness (Figure 4.25). The three systems in Figure 4.25 correspond to the six boxes in the top line of Figure 4.24. The first system

realizes these voice leading transformations using a descending third progression, the second system uses a descending fifth progression, and the third system uses a descending seventh (or ascending second) progression (these root “cycles” are represented by Schillinger with  $C_3$ ,  $C_5$ , and  $C_7$ , respectively). All progressions use the pitches of the C major scale (although the reader is expected to apply this process to any key and any scale).

FIGURE 4.25: MUSICAL NOTATION FOR THE FIRST PART OF SCHILLINGER’S VOICE LEADING CHART

$S(5) \rightarrow S(7)$

$C_3$

The figure displays three systems of musical notation, each consisting of a treble and bass staff. The first system is labeled  $C_3$  and shows a descending third progression. The second system is labeled  $C_5$  and shows a descending fifth progression. The third system is labeled  $C_7$  and shows a descending seventh progression. Each system contains six measures of music, with notes and chords written in a way that illustrates the voice leading between successive chords.

Perhaps the most striking aspect of these examples is their agnosticism regarding voice leading rules—Schillinger makes no claims regarding acceptable or stylistically appropriate voice leading. Rather, he presents all combinations and defers to the reader’s judgment regarding their implementation. Obviously this section of SSMC presents only a small set of all possible realizations of Schillinger’s conception of voice

leading—he expects the reader to implement the same process in other keys and tonalities. The major implication of this section of SSMC is that one can systematically and comprehensively tabulate all possible combinations between two (or more) chords of varying cardinality and in any number of tonalities or pitch spaces. The comprehensiveness of this section stands as a synecdoche for the entire text.

Finally, SSMC also represents the scientific meaning of comprehensiveness via the sheer number of musical elements that it discusses. Volume 1 of SSMC consists of Books I–VII: Theory of Rhythm, Theory of Pitch-Scales, Variations of Music by Means of Geometrical Projection, Theory of Melody, Special Theory of Harmony, The Correlation of Harmony and Melody, and the Theory of Counterpoint. Volume 2 contains Books VIII–XII: Instrumental Forms, General Theory of Harmony (Strata Harmony), Evolution of Pitch Families (Style), Theory of Composition, and Theory of Orchestration. Although these titles demonstrate Schillinger’s coverage of the traditional concerns of music theory treatises—melody, harmony, rhythm, texture, and orchestration, he also includes and systematizes aspects of music normally reserved for specialized study or avoided entirely: dynamics, timbre, and forms of attack (staccato etc.) (1323). He even advances a theory of semantic musical meaning, referencing both psychology and physiology along the way (1410). Predictably, Schillinger systematizes musical meaning, using what he calls a “psychological dial” in conjunction with an expectation-fulfillment paradigm (1413–5). He reintroduces the form of graphical notation outlined at the beginning of Volume 1 in order to notate and systematize a spectrum of matching/mismatching musical expectations and fulfillments, thus also reinforcing the purported universalism and objectivity of this method of notation (1422–5).

This discussion returns us to the three meanings of science in SSMC. The first meaning is explicit—Schillinger references scientific disciplines to justify and promote his method as objective. This rhetorical move also allows him to equivocate his theory of music with other activities and disciplines, which functions (circularly) to demonstrate the so-called objectivity of his theory. What I have called the second and third meanings of science—transparency of method and comprehensiveness, respectively—implicitly reinforce this primary claim. SSMC aims to provide an exhaustive account of all aspects of music using transparent methods.

Schillinger's appeals to science are not atypical in the field of music theory, which contains numerous instances where music theorists appealed to, aspired to, and/or directly engaged with science: Helmholtz's with physiology and psychology (Steege 2012), Lerdahl and Jackendoff's with linguistics (Lerdahl and Jackendoff 1981), and Huron's with evolutionary theory and statistical analysis (Huron 2008) represent three prominent examples. Abrams's engagement with SSMC, however, presents a different interpretation, one that links the "science" in SSMC to issues regarding race and music.<sup>57</sup>

## **Racialized Theories of Black Music**

Black music has a long and unfortunate history of being misunderstood and mischaracterized. These misreadings often ignore diverse modes of music making and collapse black music into a minimal set of tropes. Conflating black music with rhythmic vitality, "soul," or improvisation are all examples of this tendency (Perchard 2015,

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<sup>57</sup> Recent work has investigated historical intersections between musicology/music-theory, phrenology, and race—David Trippett's "Exercising Musical Minds: Phrenology and Music Pedagogy in London circa 1830" (2015) and Céline Frigau Manning's "Phrenologizing Opera Singers: The Scientific 'Proofs of Musical Genius'" (2015).

Radano 2003). As Radano states, “the view...of an immutable black musical essence...must either depend on musical universalism in black form...or presume a vital, unrelenting force that, despite claims honoring culture over nature, betrays racist sentiments” (Radano 2003, 3). Ruser’s concept of “fugitive science,” as a reminder, describes black people’s appropriation of racialized scientific discourse to resist racism. In my theorization, Abrams’s appropriation of SSMC challenges simplistic and essentialist descriptions of black music that ignore black musicians’ study of music theory (as well as their generation of it: more on this later) and composition. Such descriptions emerge from both academic circles and the press.

Academic music theory has a long history of excluding, objectifying, essentializing, and “othering,” non-Western and black music. Philip V. Bohlman argues that both modernist conceptions of race and modern science fundamentally shaped the sciences of music (Bohlman 2007, 11). Musical notation, and audio recordings later, assisted in the separation of “the music itself” from its contexts, such that music was only able to signify its race—the racialized “other”—via speech, bodily movement, or ritual (11). Similarly, Guthrie P. Ramsey Jr. contends that social scientists’ transcriptions of spirituals transported those oral expressions into the realm of scientific discourse, to function as part of a racialized discourse of sonic capture, preservation, and analysis (Ramsey Jr. 2007, 26–7). In reference to music theory specifically, Peter A. Hoyt argues that within the tradition of European music, “the savage served simultaneously as a locus for fantasy and as a component of fundamental presumptions. Primitive man [which is to say, non-Europeans] was both an absolutely and part of the bedrock of truth upon which the West built its self-image” (Hoyt 2001, 199). Finally, Benjamin Givan convincingly demonstrates how Gunther Schuller’s well-meaning,

formalist analysis of one of saxophonist Sonny Rollins's improvisations led to gross and influential mischaracterizations of the latter's musical aesthetic by the jazz press and audiences (Givan 2014).

Schuller's 1958 article on Rollins positions the saxophonist as one of the leading soloists in contemporary jazz. Crucially, however, Schuller's Eurocentric frame mischaracterizes Rollins's improvisatory process: "With Rollins," Schuller states toward the beginning of his article, "thematic and structural unity have at last achieved the importance in *pure* improvisation that elements such as swing, melodic conception and originality of expression have already enjoyed for many years" (Schuller [1958] 1999, 6, emphasis in original). This statement announces Schuller's methodology for the remainder of the article: he employs motivic analysis to argue that Rollins's improvisations exhibit a structural unity akin to great works by Western art music composers. Schuller then associates jazz improvisation with the tradition of "free vibration [*invenio*]" in the classical tradition, describes Rollins and drummer Max Roach's improvisatory coordination on the cut "Blue Seven" in terms of structural unity, and bizarrely both distinguishes Rollins's mastery from other established jazz musicians such as Dizzy Gillespie and aligns him with the "great masterpieces of art" by Mozart, Shakespeare, and Rembrandt (8–9).

Although Schuller was one of the first white music scholars to publish in-depth analyses of jazz (Schuller 1989, [1968] 1986), Givan points out that his analysis of Rollins's improvisation not only mischaracterizes the saxophonist's improvisatory methodology, but also resonated with other critics and the broader public, thus heavily



influencing Rollins's reception in the long term (Givan 2014, 172).<sup>58</sup>

The crucial point of Schuller's and Givan's articles for my discussion here is that music theory and analysis exhibits a long history of mischaracterizing work by black musicians. Schuller's example demonstrates how a Eurocentric frame of reference, such as using motivic analysis as a means to showing structural unity, can both cause an analyst to mischaracterize aspects of the performance and engender misleading statements about the musician(s) in question. An even more gratuitous mischaracterization concerns the trope of primitivism in discussions of jazz in the press.

Characterizations of jazz in primitivist terms have plagued critics' writing on jazz since its inception. Kenneth Prouty, Ted Gioia, John Gennari, and Bernard Gendron have all examined the figure of the "noble savage" and its associated tropes in twentieth-century writings on jazz in both the United States and Europe (Gendron 2002, Gennari 1991, Gioia 1989, Prouty 2006). Such descriptions contrast black musicians' supposed naturalness and intuition with white musicians' refined technique, formal knowledge, and technical mastery.<sup>59</sup>

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<sup>58</sup> Givan adeptly rebukes Schuller's characterization through his own analyses. He highlights the multiple roles that contingency plays in Rollins' performance—his initial melodic cell is already part of the improvisation (not a composition), and Rollins uses his improvisation to realign the ensemble when they lose their place in the form, for example—and examines other contemporaneous performances by Rollins and other jazz musicians to suggest that many of Rollins's melodic cells may in fact be stylistic markers, rather than parts of an autonomous, structurally unified work (Givan 2014, 211).

<sup>59</sup> Gendron's discussion of French avant-garde composer Darius Milhaud provides an acute example. Milhaud first heard jazz in the summer of 1920 and was immediately struck by both jazz's formal and timbral innovations and its rhythmic sensibility (2002, 87). Crucially, Milhaud's introduction was the all-white group, Billy Arnold's Novelty Jazz Band. His subsequent trip to Harlem in 1922 resulted in a subtle but significant shift in his description, one that marked a shift in focus from formalist and experimentalist elements to lyricism and primitivism (88). Gendron's quote-laden description of Milhaud's visit to a jazz club in Harlem is an archetypal instance of the trope of the noble savage: "A friend took him [i.e., Milhaud] to Harlem, which, in his words, 'had not yet been discovered by the snobs and the aesthetes.' In a club where they 'were the only white folks,' he encountered a music that was "absolutely different from anything he had ever heard before.' He was most astounded by the 'negress' singer whose 'grating voice' seemed to originate 'from the depths of the centuries' and who, 'with despairing pathos and dramatic feeling,' sang the same refrain 'over and over again to the point of exhaustion' "(88). Milhaud regarded

At least three, interrelated binaries emerge from such primitivist views: white/black, European/American, and written/improvised. Black musicians in this view represent the intuitive and natural, and are anti-literate and uninterested in Western art music and its associated theoretical traditions; that is, they are unable or unwilling to read or write music, and/or understand music theory or formulate theories of their own. Prouty traces some of the complex manifestations of the written/oral binary in jazz (Prouty 2006, 322). He states that “the belief that jazz musicians have historically operated without the benefit of knowing theory or the ability to read music is a powerful conceptual force in jazz history to the present day, and has been a relatively common theme in historical writings on jazz” (322).

Primitivist descriptions of jazz and black experimental music continued well beyond the first decades of the twentieth century. Radano notes that descriptions of free jazz as “black rage” represents the same tendency evident in early primitivist descriptions of jazz (Radano 1993, 242). Radano cites an excerpt from a 1977 *Newsweek* article on Anthony Braxton in this regard:

Braxton is a virtuoso on the saxophone, and the instrument has never been subject to such assault. He squeezes out bizarre sounds and clashing, hitherto unheard tone colors. He plays like a man possessed, in a paroxysm of animalistic grunts, honks, rasps, and hollers. He rends the fabric of conventional musical language as he reaches into himself—and back into pre-history—for some primordial means of communication.

(quoted in Radano 1993, 242)<sup>60</sup>

Other AACM members and contemporaneous black musicians experienced very

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his integration of jazz into his modernist compositions as a kind of process of civilization, where the “precision” of both white jazz and European composition formed an ideal unity with the “ease” and “playfulness” of black jazz (88).

<sup>60</sup> For more far-reaching discussions of primitivism and black music, see Radano (2003).

similar discriminatory attitudes to other black musicians before them. Critics invoked the sonic abstractions of “free jazz” to reinscribe primitivist tropes—extended playing techniques are “primordial” and the lack of a clear tempo and instrumental virtuosity emanate from supernatural dimensions. As Prouty, Radano, and Lewis each note, these views and their accompanying binaries disintegrate as soon as one casts a cursory glance over actual practice.

Members of the AACM largely sought to eviscerate such simplistic descriptions of their music that ignored its multiplicity of references. In their 1977 publication, Abrams and Shenoy Jackson state that part of the AACM’s mission is to protect against “the prevalent attitude that *anybody* can play jazz and blues” and that they embrace “the idea that the creative learning process should never cease” (Abrams and Jackson 1973, 73, my emphasis). Their stress on study and learnedness speaks to a failure by writers and critics to recognize that their music does not represent “the death of chord structures and patterns,” but that the music is structured in ways that extend beyond accepted jazz practice (Rout Jr. 1967).

Lewis also notes that critical responses to music by AACM members often expressed significant anxiety about its relation to “the jazz tradition” (Lewis 2008, 358), with Abrams’s 1978 album *Lifea Blinec* coming under notable fire in a review by Chip Stern for *Down Beat* magazine for its apparently incongruent and explicit references to “high art” (Stern 1978b). Stern’s implication that avant-garde jazz should remain on one side of high/low art binary represents a larger trend of ignoring AACM musicians’ interest in variety of music, including the European avant-garde.<sup>61</sup> In this regard it is

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<sup>61</sup> Anthony Braxton notes that “It’s taken for granted that a European or European-American jazz musician has borrowed some aspects of African-American language: why should it be such a big thing that I’ve learned from Europe? I’m a human being, just like Ronnie Scott or Derek Bailey. Why is it so natural

telling that a primary musical focus of the AACM at its inception was composition—the AACM (like the Experimental Band) served as a platform for music *composed* by its members. In the context of the present discussion, I interpret this focus on composition, which I argue is fundamentally connected to Schillinger’s work, as a critique of racialized, primitivist descriptions of black music that conflated blackness with spontaneity and naturalness and therefore racially-coded composition as white. The extent to which AACM musicians achieved this erasure is evidenced by their reception by “entrenched sectors of New York’s jazz and new music communities” when some of them moved there in the 1970s. Lewis suggests that the Midwesterners’ music was met with “considerable resistance” and was often “frankly dismissed” due, in part, to the fact that it drew on multiple, seemingly incommensurate musical traditions simultaneously (Lewis 2008, 354).

Abrams’s engagement with SSMC represents a crucial counterpoint in these racialized critiques. SSMC helped Abrams and other AACM members significantly develop their compositional practice. In contrast to descriptions of their music that foregrounded spontaneity and inspiration, Abrams’s study and implementation of SSMC demonstrates their studious, pragmatic, and deliberate efforts to develop their skills as composers and, I would argue, theorists.

## **Fugitive Music Theory**

I theorize Abrams’s appropriation of SSMC as “fugitive music theory.”<sup>62</sup> Like Ruser’s

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for Evan Parker...to have an appreciation of Coltrane, but for me to have an appreciation of Stockhausen is somehow out of the natural order of human experience? I see it as racist” (Lock [1988] 2018, 92).

<sup>62</sup> Lomanno arrives at a more explicitly Afro-futurist designation: “Critical Technoscience.” I use “fugitive music theory” here to foreground the critical intervention I aim to make into the field of music theory. Nonetheless Lomanno and I share the goal of highlighting theoretical contributions of musicians often

protagonists, Abrams adopted and adapted “scientific” material in the “quest for and name of freedom” (4). The concept of freedom in the context of black experimental music and jazz in the 1960s is complex and multifaceted.<sup>63</sup> I use “freedom” in the context of Abrams and SSMC to denote a resistance to characterizations in essentialist, racist, primitivist terms. Following Rusert, the scientific discourse Abrams adapted was music theory, embodied in SSMC (as well as the other texts they studied). This theorization thus strategically interprets SSMC as a characteristic music theory text in order to foreground the role it plays in Abrams’s fugitive practice. Fugitive music theory does not predefine the kind of freedom that one aims for—although Abrams’s aims are likely common. It does, however, point to musicians’ engagement with music theory—broadly construed—as part of their creative practice.

I do not mean to minimize the complicated power imbalances that continued to plague Abrams, the AACM and its members, and other jazz communities—SSMC by no means marks the end of essentialist descriptions of jazz and experimental music in racist terms.<sup>64</sup> As Rusert notes, an integral aspect of fugitive theory is its broader challenge to grand narratives of emancipation (2017, 17). Thus Abrams’s fugitive music theory does not represent emancipation. Rather, it constitutes one node in a long and ongoing history of practical, philosophical, and artistic practices that represent a kind of

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disregarded by the academy. A crucial point of difference between Lomanno’s formulation and my work in this chapter is that he focused exclusively on *texts* generated by various musicians. I adopt a more expansive view, *vis-à-vis* Rusert, in order to include a variety of knowledge-producing practices.

<sup>63</sup> See Monson (2007), for a broad overview. Lewis notes that, during the first meeting of what would become the AACM on May 8, 1965, that Abrams’s view of freedom encompassed views of freedom as both personal (to live and create from the point of view of a personal philosophy or “system”) and broadly political (Abrams states that “we,” imply a broader racial identity, “need to be remembered as representing ourselves” (Lewis 2008, 101).

<sup>64</sup> See Lewis’s discussion of the AACM in New York (Lewis 2008, 353) and Tyshawn Sorey’s reflection on the reception of his work *Perle Noire* (Sorey 2017), for example.

“radical comportment to the world” (17).

“Fugitive music theory” describes black musicians’ engagement with and generation of music theoretical texts. This formulation contradicts generalizations regarding black music as a plainly oral, rather than literate and literature-generating, tradition. Furthermore, it highlights work by black musicians rather than jazz educators (who are often white) to problematize the traditional oral/written binary.<sup>65</sup> Finally, it explores connections between musical worlds that are conventionally regarded as incommensurable—black music on one hand and music theory on the other. In its most radical formulation, “fugitive music theory” suggests a tradition of music theory beyond (but not incommensurable to) the canonical one, beyond Guido of Arezzo, Hugo Riemann, Heinrich Schenker, Arnold Schoenberg, and Milton Babbitt, among others. Fugitive music theory represents a branch of music theory largely ignored by academic discourse outside of jazz studies, one that comprises black writers and artists engaged in a broad range of knowledge-generating activity.

Fugitive music theory is a music theory-specific manifestation of what Fred Moten and Stefano Harvey call “black study” (Harney and Moten 2013).<sup>66</sup> One of Harney and Moten’s primary goals is to subvert paradigmatic conceptions of what counts as study as well as where and how it occurs—black study transpires outside traditional institutional structures and is inherently disruptive, social, and ateleological

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<sup>65</sup> Prouty, for example, uses Jamey Aebersold’s “playalong” series as an example of the literature tradition in jazz. This argument unfortunately implies that literacy in jazz is primarily the domain of jazz educators, rather than performers. This dichotomy between “literate” educators and “oral” performers carries obvious racial/racist implications.

<sup>66</sup> Fugitive music theory also intersects with what Eric Porter discussed in his provocative chapter, “Writing ‘Creative Music,’” which details written texts generated and published by Yusef Lateef, Marion Brown, Wadada Leo Smith, and Anthony Braxton. Unlike Porter, one of my goals in this section of my chapter is to intervene in mainstream canons of institutional music theory (Porter 2002).

(110). “Study,” they state, “is what you do with other people. It’s talking and walking around with other people, working, dancing, suffering, some irreducible convergence of all three, held under the name of speculative practice. The notion of a rehearsal—being in a kind of workshop, playing in a band, in a jam session, or old men sitting on a porch, or people working together in a factory—there are these various modes of activity. The point of calling it ‘study’ is to mark that the incessant and irreversible intellectuality of these activities is already present” (Harney and Moten 2013, 110). Black study thus does not subsist on tight schedules, rigid syllabi, defined learning objectives, or with deference to institutional norms. Rather, it embraces “not finishing oneself, not passing, not completing; it’s about allowing subjectivity to be unlawfully overcome by others, a radical passion and passivity such that one becomes unfit for subjection, because one does not possess the kind of agency that can hold the regulatory forces of subjecthood, and one cannot initiate the auto-interpellative torque that biopower subjection requires and rewards” (110). Black study is also playful and interactive: tools of study, like toys, require one to imaginatively arrange, rearrange, and distribute them among sets of collaborators. Tools and their playful organization thus beget “new sets of relations...ways of being together, thinking together” (106). Black study is playful, collaborative, pragmatic, and subversive.

Harney and Moten’s theorization of black study provides crucial guidance for my conception of “fugitive music theory.” Fugitive music theory encompasses a variety of knowledge-producing acts, including rehearsal, private practice, workshopping, jamming, performing, and improvising in addition to traditional, writing-based modes of knowledge generation and preservation. Many of these acts may also occur collaboratively—fugitive music theory can and often does transpire by working with

others. Finally and perhaps most importantly, fugitive theory does not require one to demonstrate their learning via the production of sanctioned outcomes—the fact that Abrams did not generate theoretical texts himself does not preclude him from being a music theorist. Rather, fugitive music theory points to his employment of music theory for his artistic and pedagogical work, as well as his quest for emancipation from racist descriptions of his practice.

The Abrams/Schillinger connection that I examine in this chapter is a portal into a potentially extremely rich area of research, one that I do not have time to fully explore here. Lomanno points to George Russell’s Lydian Chromatic Concept of Tonal Organization, Ornette Coleman’s concept of Harmolodics, Steve Coleman’s research of rhythms in the natural world, Hafez Modirzadeh’s “Makam X,” as well as Don Cherry’s and Yusef Lateef’s respective “sound grammars” (Lomanno 2017).<sup>67</sup> John Coltrane’s use of Nicholas Slonimsky’s *Theaurus of Scales and Melodic Patterns* is arguably the most famous instance of fugitive music theory (Bair 2003, Slonimsky 1947). Although Lomanno correctly points out that Coltrane’s legendary canonical status often causes his study of Slonimsky’s book to overshadow many other similar fugitive practices, I dwell on it here for two reasons. First, the connections between Schillinger and Slonimsky unexpectedly link Coltrane and Abrams,<sup>68</sup> and second, Coltrane/Slonimsky provides another example of fugitive music theory that does not rely on the production of original theoretical texts.

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<sup>67</sup> Russell’s theory is a fascinating and is yet to be thoroughly discussed from a music-theoretical perspective (Russell [1953] 2001). Eric Porter offers an excellent critical discussion Russell’s book in terms of race and gender (Porter 2008). Jason Bivins also discusses it briefly in his work on spirituality in jazz (Bivins 2015, 230).

<sup>68</sup> “Unexpected” because the two never met, as far as we know, and are often associated with relatively different streams of the jazz and improvised music traditions.



Slonimsky wrote a glowing early review of SSMC, in which he describes its publication as a “cultural event of considerable import” and the text itself as “a strong antidote to the growing belief among composers...that multiplicity of musical resources is harmful to the development of a spontaneous talent” (Slonimsky 1946, 465).

Slonimsky’s review precedes the publication of his *Thesaurus* by one year, which mirrors some of SSMC’s principles of scale-formation. Slonimsky cites Schillinger’s text in his introduction as a precedent for his own. The clear correspondence between Schillinger and Slonimsky’s method of generating scales makes the influence clear.

Both texts generate scales by dividing one or more octaves into equal parts and then appending those pitches (Schillinger calls them all “tonics”) with others to create scales. The first page of Slonimsky’s book, which divides one octave into two halves and generates scales by placing notes one, two, four, or five half steps above each member of the tritone, closely resembles Schillinger’s “two-unit” scales, which show precisely the same process (see Figure 4.26). Slonimsky eschews the combination that yields a diminished-seventh arpeggio while Schillinger does not. This resemblance continues as each author first adds an increasing number of pitches to each “tonic” and then turns to smaller divisions of the octave, as well as divisions of multiple octaves.

FIGURE 4.26A–B: (A) SCHILLINGER’S TWO-TONIC SCALES AND (B) SLONIMSKY’S FIRST SET OF SCALES

(a)



(b)

The image shows a musical score titled "Interpolation of One Note". At the top, there is a single treble clef staff with a whole note G4. Below this, there are four systems of music, each consisting of a treble and bass clef staff. Each system is numbered 1 through 4. Circled numbers in the treble clef staves indicate fingering: System 1 (1 6 7 12), System 2 (1 3 5 7 9 11), System 3 (1 3 5 7 9 11), and System 4 (5 6 12). The music is written in a complex, rhythmic style with many accidentals.

The three other examples of fugitive music theory that I briefly discuss in this section all emerge from Chicago and thus counter the New York-centricity embodied in Coltrane's use of Slonimsky's text.

Saxophonist Fred Anderson's *Exercises for the Creative Musician* (1939–2010) is intended to facilitate a level of technical and aural facility that engenders individual

creativity (Anderson and Steinbeck [2002] 2010). The book comprises various melodic patterns, selected transcriptions of Anderson’s recorded improvisations, and a number of Anderson’s original compositions. Anderson began writing the exercises that comprise this book around 1960 as a way to “find connections” between chords (vii). The first melodic patterns in the book fit over common harmonic progressions, such as iimin7–V7 and V7–Imaj7, but soon evolve to more chromatic patterns using triads, seventh chords, intervallic patterns, chromatic and diatonic passing tones, and less systematic melodic cells. Anderson transposes each pattern through all twelve keys, chromatically, via the cycle of fourths, or through compound sets of transpositions. Figure 4.27, for example, presents one of Anderson’s exercises for diminished-seventh chords, which includes “scalar inflections.” The four-beat melodic segment undergoes T1 transformations in subsequent measures.

FIGURE 4.27: ANDERSON’S DIMINISHED-SEVENTH CHORD EXERCISE WITH SCALAR INFLECTIONS



This melodic line implies multiple harmonic settings. I offer three potential harmonic interpretations. First, beats one and two could be interpreted as a diminished

triad with a passing tone and beats three and four as a diminished seventh chord one whole step higher. This interpretation interprets the harmonic progression in m. 1 as B $\flat$ –C $\sharp$ dim7, a rather unconventional progression. This harmonic interpretation is shown in Figure 4.28a.

My second analysis yields a more conventional harmonic progression—a pair of dominant seventh chords that progress via T5. In this interpretation the first two beats constitute the third, root, and seventh of a dominant seventh chord with an upper chromatic neighbor to the root, and the second half of the measure constitutes the third, fifth, seventh, and flattened-ninth of a dominant seventh chord (see Figure 4.28b). The harmonic progression for the first measure is C $\sharp$ 7(b9)–F $\sharp$ 7(b9) in this interpretation, which ascends by a half step in each subsequent measure: D7(b9)–G7(b9), E $\flat$ 7(b9)–A $\flat$ 7(b9), etc.

This dominant-seventh-oriented analysis also affords a third analytical interpretation. Positing a continuous T5 cycle of chordal roots throughout the exercise reveals alternate melodic functions, ones that utilize the symmetry of the diminished-seventh chord and its potential function as some combination of the third, fifth, seventh, and lowered-ninth of a dominant seventh chord. The second measure becomes a B7–E7 progression, with D5 and C5 functioning as passing tones, the raised- and lowered-ninths, respectively, over the B7. The first four notes of each measure cycles through different chordal functions: 3–b9–1–7 of C $\sharp$ 7(b) in m. 1, 5–3– $\sharp$ 9–b9 of B7(b) in m. 2, the 7–5–b5–3 of A7(b) in m. 3, 7–5– $\sharp$ 11–3 of B $\flat$ 7 in m. 4, and so on. This interpretation is shown in Figure 4.28c.

FIGURE 4.28A–C: THREE HARMONIC INTERPRETATIONS OF ANDERSON’S EXERCISE

(a)



(b)



(c)



Anderson states in his introduction to the book that, for each pattern, “you can start anywhere...to get a connection, going from one chord to another chord” (vii). My analyses demonstrate various harmonic implications of his patterns. Anderson therefore does not simply provide a novel set of intervals or outline chords or scales in all keys—he steers the reader toward lines that imply multiple harmonic contexts and thus facilitate the kind of cognitive flexibility required of improvisation (Goldman, Jackson, and Sajda 2018, Goldman 2016). “You don’t have time to think while improvising,” states Anderson, “so by playing these exercises you’ll automatically hear these *different places to go*” (viii, my emphasis). My analysis demonstrates some of these “different places.”

Paul Steinbeck makes a poignant connection between Anderson’s book and music theory, one that speaks to the twin concepts of black study and fugitivity: “At first these

exercises were essentially written music theory...lessons that Anderson assigned to himself so he could stay engaged with music while working a day job and helping his wife raise their three young sons. Eventually Anderson was able to integrate the exercises into his saxophone practice routine” (65). Anderson’s book exemplifies the balance between written and practice-based work that fugitive music theory encompasses.

Abrams’s friend and fellow Chicagoan Eddie Harris (1934–1996) published three books, collectively titled *The Intervallistic Method*, which could be described as both a theoretical treatise and saxophone method book (Harris 1984).<sup>69</sup> Harris’s book contains a multitude of single-line exercises. Like Slonimsky and Schillinger, he often generates melodic material via cycles of intervals. Figure 4.29 presents some of his melodic exercises based on minor-seventh intervals: in ascending half steps in the first three systems, followed by concatenated minor sevenths, alternatively ascending and descending, in ascending half step transpositions (Harris 1984, 40).

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<sup>69</sup> Abrams appears on four of Harris’s recordings, *Instant Death* (1972), *Sings the Blues* (1972), *Excursions* (1973), and *That is Why You’re Overweight* (1976).

FIGURE 4.29: HARRIS'S STUDY OF MINOR-SEVENTH INTERVALS

The image displays a musical score for a study of minor-seventh intervals. It consists of ten staves of music. The first three staves are in treble clef, and the remaining seven staves are in bass clef. The music is written in a single melodic line, featuring a sequence of notes and chords that explore the minor-seventh interval. The notes are often beamed together, and the chords are indicated by vertical lines and accidentals. The key signature is one flat (B-flat), and the time signature is 4/4. The score is a comprehensive exercise for understanding the minor-seventh interval in various contexts.

Importantly, Harris's book embodies both the practical and speculative aspects of fugitive music theory. Harris includes fundamental information about the saxophone (how to assemble and maintain it), how to practice, the basics of music notation, and even elements of his personal philosophy (what he calls "Eddieisms"). Harris's book, like Anderson's, combines the tendency toward exhaustive itemization found in

Schillinger and Slonimsky with embodied practice. It thus suggests that for improvisers the drive toward comprehensiveness is interesting precisely because it inevitably yields unfamiliar combinations of musical materials and hence helps extend and develop instrumental technique.

The final text I discuss in this section on fugitive music theory is arguably the most famous—Anthony Braxton’s *Tri-Axium Writings* (Braxton 1985). I do not have space in this chapter to do justice to these monumental volumes and explore the myriad of ways they interact with my discussion of Abrams, Schillinger, and fugitive music theory. I nonetheless offer some cursory comments on these texts and their potential resonances with themes in this chapter.

Braxton’s overview of the structure of his books and his suggested mode of engaging with the text, which opens Volume 1, resonates with Schillinger’s principles of permutation and recombination:<sup>70</sup>

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<sup>70</sup> Thanks to Eric Lewis for this suggestion regarding permutation in Braxton’s *Tri-Axium* writings.



These books are constructed so that the reader must read through the material in at least six different ways, and the interconnection of concepts are set up so as to give maximum diversity. In other words, the reader will be able to view a given concept from as many different standpoints as possible....Thus, to really utilize this book in the way I have intended, the reader is expected to read the book: (1) completely from the beginning to the end; (2) with respect to the arguments of only one level region at a time (i.e., read only level one sections in each chapter, later only read level two chapters, etc.); (3) read the whole book interconnected with the other books in this series through what I call the integration code—which is in every section of every focus; (4) read only the isolated concepts that have been marked in bold type; (5) study the isolated terminology chart—or glossary of terms (at the back of the book)—to understand the systematic interconnection (as well as application) of these concepts through the total integration complex of all three books—as a means to better understand both my extended viewpoint as well as logic dynamics of its total application, and (6) the reader is asked to translate my terminology—from the glossary and throughout the whole book—as a means to view each focus in one’s own terms: in other words, I am saying, ‘this is my viewpoint in this concept, and these are my terms, but what do you think?’—with respect to your own personal viewpoint and/or perception dynamics (in the context of my terminology—as well as your own terminology) about this same information.

(Braxton 1985, vii–x)

Braxton’s six methods of reading the *Tri-Axium Writings* imply that his text may be segmented and ordered in a variety of ways; in short, permuting the component parts of the texts reveals alternate and complementary meanings. One of Schillinger’s basic modes of developing musical material is it may be segmented and permuted in a number of ways. Thus both authors recognize that a single set of material contains within it multiple possible configurations, and those permutations generate complementary and contrasting perspectives.

Reconfiguring and permuting material imbricates the reader in the creative/interpretive process—Schillinger and Braxton both suggest that the reader develop or translate the principles outlined for his or her creative ends. Braxton’s sixth mode of reading—in which the reader “translates” his terminology and develops their

own point of view—resembles Schillinger’s exhortations for his reader to work out more fully the examples he presents, as well as rely on their personal judgment as to how best of use the materials and processes he outlines in musical compositions.

Both writers also develop a highly stylized, idiosyncratic vocabulary for their theory of music, replete with acronyms, abbreviations, and graphical representations. Compare, for example, Schillinger’s notations for the “interference” between duration, instrumental, and attack groups, and Braxton’s glossary of “integration abbreviations,” shown in Figure 4.30a and 4.30b, respectively. Braxton’s graphical representations of his arguments—what he calls “schematics,” shown in Figure 4.31a—also resemble Schillinger’s graphical representations of melodic axes, shown in Figure 4.31b.

FIGURE 4.30A–B: (A) SCHILLINGER’S NOTATION AND (B) SOME OF BRAXTON’S ABBREVIATIONS

(a)

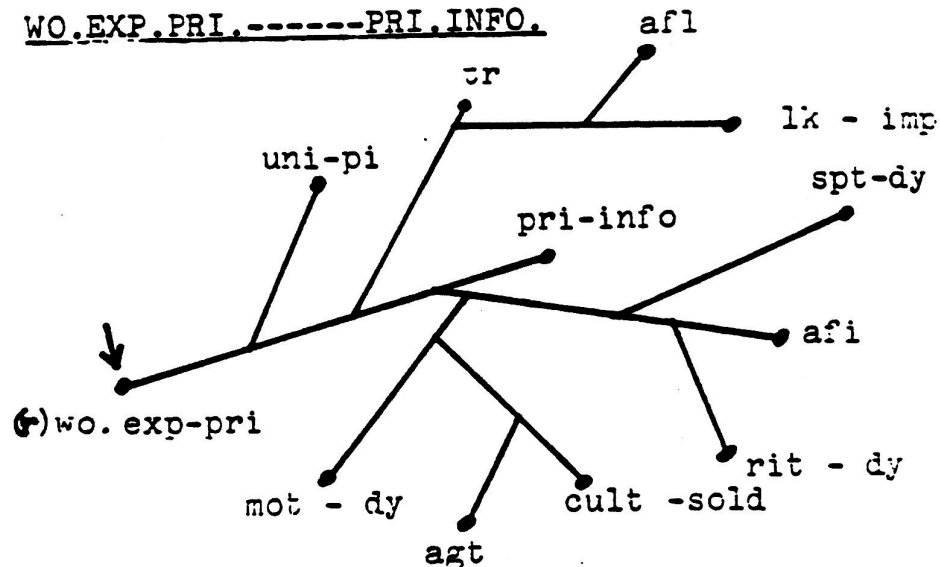
pli	number of places in the instrumental group.
pla	number of places in the attack-group.
a <sub>a</sub>	number of attacks in the attack-group.
a <sub>T</sub>	number of attacks in the duration-group.
PL	the final number of places.
A	the synchronized attack-group (the number of attacks synchronized with the number of places).
A'	the final attack group (number of attacks synchronized with the duration-group).
T	the original duration-group.
T'	the synchronized duration-group.
T''	the final duration-group.
N <sub>T''</sub>	the number of final duration-groups.

(b)

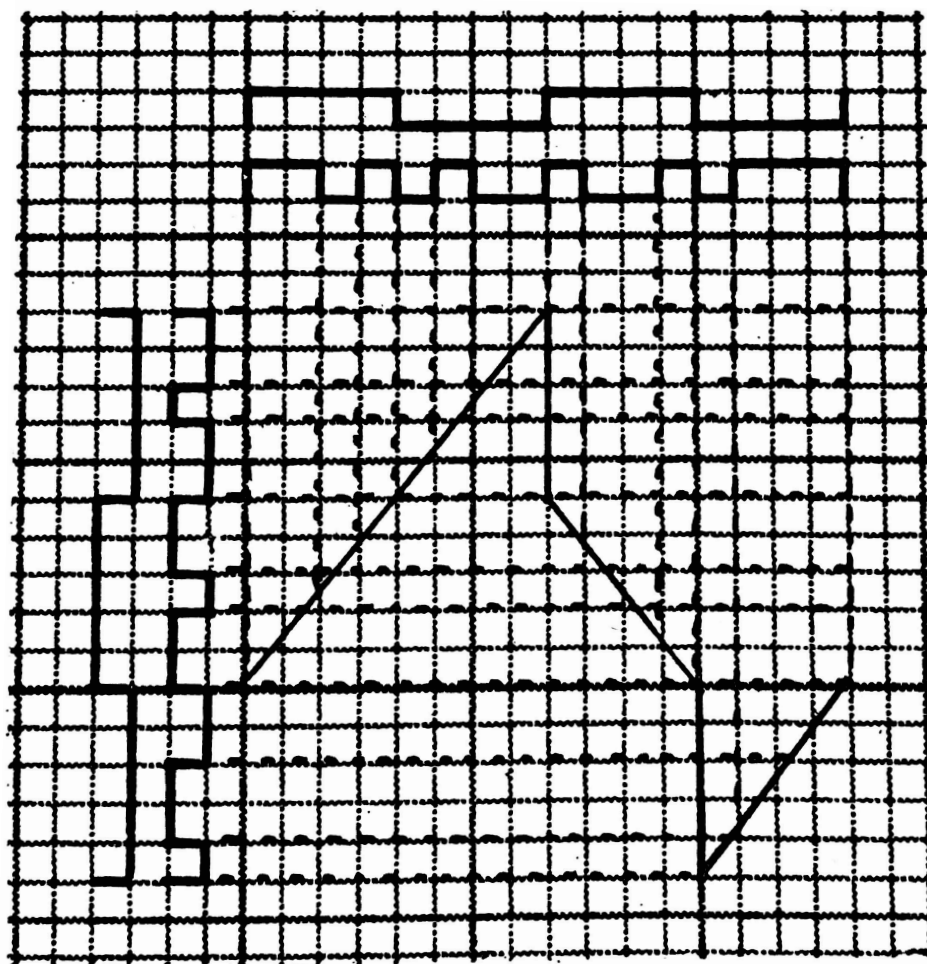
PHY-U-C	- physical universe context
PHY-U-P	- physical universe particular
PHY-U-FUND	- physical universe fundamental
POL-CON	- political consciousness
POL-DYM	- political dynamics
POL-OR	- political order
POL-P	- political policy (or execution of)
POL-SIGN	- political significance
POL-ST	- political state
POST	- postulation
PR-INT	- primary intention
PRI-AF-TO	- primary affinity tendencies
PRI-INFO	- principle information
PRI-VT-TD	- principle vibrational tendencies
PROG-CONT	- progressional continuance
PROG-EXT-FT	- progressional extended functionalism
PROG-SIGN	- progressional significance
PROG-TF-C	- progressional transfer cycles
PROJ	- projection
PROJ-CONT	- projectional continuance
PROJ-DY	- projectional dynamics

FIGURE 4.31A-B: (A) BRAXTON'S SCHEMATIC AND (B) SCHILLINGER'S GRAPHICAL REPRESENTATION

(a)



(b)



Each writer values abstract, graphical representation. Furthermore, both Schillinger and Braxton utilize graphical representations as a means of developing the material presented beyond its preliminary form. Schillinger's graphical representations allow the reader to easily implement transformations such as retrograde, inversion, retrograde-inversion, and geometrical expansion/contraction (intervallic augmentation/diminution); that is, the composer can easily approach the material from a variety of perspectives (to adopt Schillinger's analogy with the visual arts). Braxton's graphical representation also facilitates alternate perspectives on a single set of material: he states that his diagrams facilitate multiple, personal interpretations of the

concepts he discusses:

To use the integration schematics one must first become familiar with the abbreviation of terms. The basic idea of this system is that all of the concepts in this book—and this series of books—must be viewed in more than one context. The reality of a given schematic is not isolated to only what it poses for a given focus, rather I have designed this approach as a means to keep an extended information platform—which is to say each given schematic should be viewed as axiom tenets. To read a given schematic the reader must first view it in terms of its basic designation—which has an arrow to denote its starting point. In actual fact the term (or abbreviation) with the arrow pointing to it is the subject of the schematic...The reader is expected to probe the dynamics of this axiom as a means to better understand these terms...as well as what all of this information means when calibrated [sic] into a composite philosophy...for his or her own philosophy.

(Braxton 1985, xii–xv, emphasis in original)

This typically dense excerpt both instructs the reader on the primary way to read a schematic—begin with the subject, designated with an arrow, and follow the straight line to understand the primary argument—as well as possible reinterpretations—the reader may investigate any of the trees that run tangentially from this primary line to suggest alternate interpretations. Thus the primary argument in Figure 4.31a (above), “WO.EXP.PRI-----PRI.INFO” (“WQ.EXP.PRI” translates to “world expansion principle,” and “PRI.INFO” translates to “principle information”), roughly correlates to one of Braxton’s sentences preceding this schematic: “to deal with world creativity is...to understand the vibrational and cultural base with actualized it.” Put differently, the guiding principle for the expansion one’s understanding of the world is to understand the principle information of others’ creative worlds. The lower tangential tree that contains three nodes—“mot-dy,” “agt,” and “cult-sold”—implies that the reader may also consider this basic subject in light of “motivation dynamics,” “agreement,” and “culture solidification”; my translation of these subsidiary nodes is that the reader should

critically assess his or her motivation for investigating other creative worlds, investigate congruent and incongruent elements between those worlds (i.e., in what ways are they in agreement and/or at-odds with one another?), and consider that creative exchange may result in the respective creative worlds galvanizing their foundational principles.

This interpretation, in Braxton's terms, represents *my* composite philosophy as much as it does his: it is my subjective "translation" of his argument. The crucial point here is that Braxton's abstract, schematic representations of his argument provides (albeit with a not insignificant amount of effort on the reader's part) a means for the reader to investigate and develop their primary point and personal point of view. For both Schillinger and Braxton, abstract graphical representation provides the bridge toward personal creative engagement with the presented material.

I do not mean to suggest that Braxton's *Tri-Axium Writings* stem directly from Schillinger's work. Rather, I want to suggest that Braxton's treatise represents a particular robust instantiation of fugitive music theory—he outlines an expansive view of creativity that expresses a transnational music scene as well as his complex metaphysical system. Furthermore, Braxton's *Composition Notes* traces various instantiations of his Tri-Axium system in his own works, and resembles Olivier Messiaen's *The Technique of my Musical Language* in that it both outlines musical materials and analyzes their application in the author's work (Braxton 1988, Messiaen 1966). Braxton often refers to his *Composition Notes* as "my analysis books," strengthening the connection to music theory and analysis (Lock [1988] 2018, 108). Braxton's collected writings explicate his musical and metaphysical system, outline musical materials and notational methods, and contain analyses of his own works. His fugitive music theory confronts "the challenge of redefinitions [that] can no longer only

be left to the so-called experts” (Braxton 1985, i)—Braxton aims to take control of the narrative surrounding his music and creativity in general. In this sense, his work belongs to a tradition of creative work by African Americans formulated in the name of and quest for freedom.

## Conclusion

Fugitive music theory offers a vast network of music theoretical engagement by black improvisers. My future research will place Abrams’s work in dialogue with a plethora of other improvisers’ engagement with and generation of theoretical texts and concepts, including (but not limited to) George Russell’s *Lydian Chromatic Concept of Tonal Organization* (Russell [1953] 2001), Ornette Coleman’s concept of Harmolodics (Rush 2017), Yusef Lateef’s *Repository of Scales and Melodic Patterns* (Lateef 1981) and *Method on How to Perform Autophysiopsychic Music* (Lateef 1979), Buddy Collette’s study of Schillinger’s texts (Isoardi 2006, 30), and Olly Wilson’s theorization of heterogeneity in African-American music (Wilson 1992).

My future work on fugitive music theory will also consider intersections between race, gender, and music theory. I conclude this section by offering three examples from literature on women improvisers that suggests fugitive music theory. Subsequent work will trace and expand these networks of black women’s engagement with music theory and investigate the complex intersections of race and gender. Monica Hairston O’Connell and Sherrie Tucker note that composer, arranger, and trombonist Melba Liston “invented her own notational system” as a young musician (O’Connell and Tucker 2014, 14). Liston’s in(ter)vention predates Braxton’s, Cecil Taylor’s, and other male musicians’ alternative notational systems, inverting the common assumption that

women in jazz are relegated to the margins of arranging for their male counterparts, who compose and perform (cf. Kernodle 2014). Tammy Kernodle notes that pianist and composer Mary Lou Williams experimented with complex harmonies prior to bebop's more celebrated harmonic inventions (Kernodle 2004, 113). Williams's fugitive music theory thus undermines associations between bebop's harmonic innovations and its hypermasculinity. Finally, Franya Berkman's welcome book on Alice Coltrane suggests a kind of fugitive music theory that combines a theory of collaborative musical performance with metaphysical and spiritual elements (Berkman 2010). Coltrane's thus practice suggests provocative Afro-Futurist connections with music theory.

Abrams constitutes a pivotal node in a rich network of black improvisers engaging with music theory. His example depicts a particularly prominent and influential instance, one that also involves an unusually idiosyncratic figure in Schillinger. In considering Abrams's practice as a composer, Chapter 5 analyzes selected compositions as evidence for Schillinger's influence on Abrams and examines his fully notated composition *Piano Duet #1*.



## 5—The Visibility of Thought: Analyzing Abrams’s Selected Compositions

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*For me, there are two ways of composing: writing it on...paper and improvising. So when I’m playing the piano, it’s improvised composing or composed improvising. The memory of what you’ve been and what you are and whatever you will be comes out.*

—Muhai Richard Abrams (quoted in Oteri and Abrams 2016)

### Introduction

Abrams produced a rich body of work as a composer. His discography comprises largely of original material—after the formation of the AACM he never recorded jazz standards and only rarely recorded open-ended free improvisations. As he emphasized at the AACM’s foundational meetings, Abrams focused on “original creative music” (Lewis 2008, 99–102).

Other musicians testify to Abrams’s compositional influence. Percussionist and bandleader John Hollenbeck states that for him Abrams represents one of the very few improvising composers who considered musical structure on a foundational level.<sup>1</sup> Hollenbeck observes that his composition lessons with Abrams at the Banff Centre in Canada constitute a foundational pillar in his own development. He dedicates “R.A.M.” to Abrams on *A Blessing* (2005), a title that permutes Abrams’s initials.<sup>2</sup>

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<sup>1</sup> John Hollenbeck, email to the author, September 30, 2018.

<sup>2</sup> Abrams visited The Banff International Workshop in Jazz and Creative Music multiple times. Dave Holland, who appears on Abrams’s *Colors in Thirty Third*, was director of the workshop from 1986 to

Jason Moran notes that his “Fragment of a Necklace,” a piece from *Facing Left*, pays tribute to his composition lessons with Abrams (Margolis 2000). Moran recalls that Abrams taught him that “that the essential aspect of music lies within the rhythm.” This statement echoes Schillinger’s axiom that rhythm constitutes the foundation of music. Moran specifies he composed “Fragment of a Necklace” by beginning with a “thoroughly worked out” rhythm, which he then adorned with randomly selected pitches. Furthermore, Moran remembers that Abrams’s multiple filing cabinets in his Manhattan Plaza apartment were bursting with old and new compositions that he never recorded.<sup>3</sup>

Abrams’s compositions remain largely unexamined in published music theory and analysis, despite this plethora of compositions and his influence. I address this lacuna over the two parts of this chapter. First, I examine “Inner Lights,” “Charlie in the Parker,” and “Hearinga,” compositions that feature improvisation, for evidence of the influence of Schillinger’s *The Schillinger System of Musical Composition* (SSMC). My analyses of these works also suggest that Abrams never simply imported Schillinger’s system in its entirety. Rather, he maintained creative autonomy, incorporating *some* aspects and eschewing others.

Second, I consider Abrams’s fully notated work Piano Duet #1. This analysis eschews Schillinger’s principles in favor of an analysis that draws on embodied performance, disability, and race. These analyses therefore suggest the influence of

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1989, and records at the Banff Centre Library show that Abrams attended all four years. Trombonist Hugh Fraser directed the workshop from 1991–1998, and a media release from the Banff Centre states that Abrams was a featured participant from 1986–1993, confirming that Abrams’s continued his work there once Fraser began directing.

<sup>3</sup> Jason Moran, email to the author, April 8, 2018.

SSMC on Abrams's compositional practice, although it is important to note that Abrams does not simply dogmatically adopt Schillinger's principles, and also link his work to contemporary analytical methodologies.

## Abrams's Compositions and SSMC

### “Inner Lights”

“Inner Lights” appears as the final track on *View From Within* (1985). The composition is relatively compact and alternates between written material and “free” improvisation—twelve-measure A- and B-sections give way to a freely improvised bass solo (section C), followed by a five-measure D-section that is played twice, a freely improvised piano solo (section E), a three-measure F-section that is played four times, and finally a free flugelhorn solo.<sup>4</sup> I discuss the opening four measures of the piece and the final, three-measure section. My analyses foreground Schillinger's predilection for permutation as well as some of his methods of generating rhythm.

One of the fundamental principles in Schillinger's system is that elements of a group may be permuted to generate new and related groups. Permutations may be systematic, such as the retrogression or rotation of elements, or more ad hoc. Although for Schillinger compositional “perfection” comprises of nested relations at every level of musical structure (Schillinger [1946] 1978, 1277), I would argue that it is unlikely, given his pluralistic aesthetic and the primacy of improvisation in many of his pieces, that Abrams took this principle to heart. Rather, I suggest that for him permutation and

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<sup>4</sup> My analysis of “Inner Lights” references a score which is available at Ablah Library, Wichita State University: [https://www.worldcat.org/title/inner-lights/oclc/22643510&referer=brief\\_results](https://www.worldcat.org/title/inner-lights/oclc/22643510&referer=brief_results) (accessed May 1, 2019).

reordering functioned as a fruitful and productive mode of generating localized musical material.

The opening four measures of “Inner Lights” suggest the influence of Schillinger’s rhythmic processes in a number of ways. The rhythm of the first measure consists of an eighth note followed by two sixteenth notes for the first beat, and four sixteenth notes for the second beat (or a  $2+1+1$  binomial for the first beat and a  $1+1+1+1$  monomial for the second beat). At the level of the beat, Abrams’s second measure utilizes the rhythm from the first beat of m. 1 (an eighth note and two sixteenth notes,  $2+1+1$ ) followed by its own retrogression (two sixteenth notes and an eighth note,  $1+1+2$ ). Measure 4 retrogrades the order of the two figures from m. 1: it comprises four sixteenth notes ( $1+1+1+1$ ) followed by an eighth note and two sixteenth notes ( $2+1+1$ ). At the level of the measure, m. 3 is the retrogression of m. 1—six sixteenth notes followed by an eighth note ( $1+1+1+1, 1+1+2$ )—and m. 4 represents the retrogression of the order of elements from m. 1 (four sixteenth notes followed by an eighth note and two sixteenth notes,  $1+1+1+1, 2+1+1$ ). In summary, the rhythm in the second, third, and fourth measures of “Inner Lights” comprise permutations or transformations of those in the first measure. Importantly, each measure in this passage is rhythmically unique and this variety aurally obscures the underlying duple meter.

These four measures can also be segmented so that they resemble Schillinger’s resultants, which always position longest durations at the beginning and end. This segmentation reveals just two constituent rhythms, what I call A and B. Rhythm A comprises an eighth note, followed by four sixteenth notes, and concludes with an eighth note, and can be represented as a  $2+1+1+1+1+2$  binomial. Rhythm B is similar, but includes two extra sixteenth notes in the middle: it can be expressed as a

2+1+1+1+1+1+1+2 binomial.

Rhythm A is a segment of one Schillinger's examples of "fractional resultants" in his book on rhythm. Figure 5.1 shows Schillinger's fractional resultant of  $4 \div 3$ , grouped in sixteenth notes (Schillinger [1946] 1978, 19). Rhythm A (2+1+1+1+1+2) comprises the second and third beats of this resultant (indicated in Figure 5.1).

FIGURE 5.1: SCHILLINGER'S FRACTIONAL RESULTANT FOR  $4 \div 3$

*Grouping by  $a^2$*

$\frac{16}{16} = \frac{4}{4}$ 
 $\frac{1}{16} =$

$a^3 \left( \frac{1}{a^2} \right) = 16 \left( \frac{1}{16} \right)$   
 $a = 4 \left( \frac{4}{16} \right)$   
 $b_1 = 4 \left( \frac{3}{16} \right)$   
 $\frac{4}{4} b_2 = 4 \left( \frac{3}{16} \right)$   
 $r =$   
 $a^2 = \frac{16}{16}$   
 $r = \frac{3}{16} + \frac{1}{16} + \frac{2}{16} + \frac{1}{16} + \frac{1}{16} + \frac{1}{16} + \frac{1}{16} + \frac{1}{16} + \frac{2}{16} + \frac{1}{16} + \frac{3}{16}$

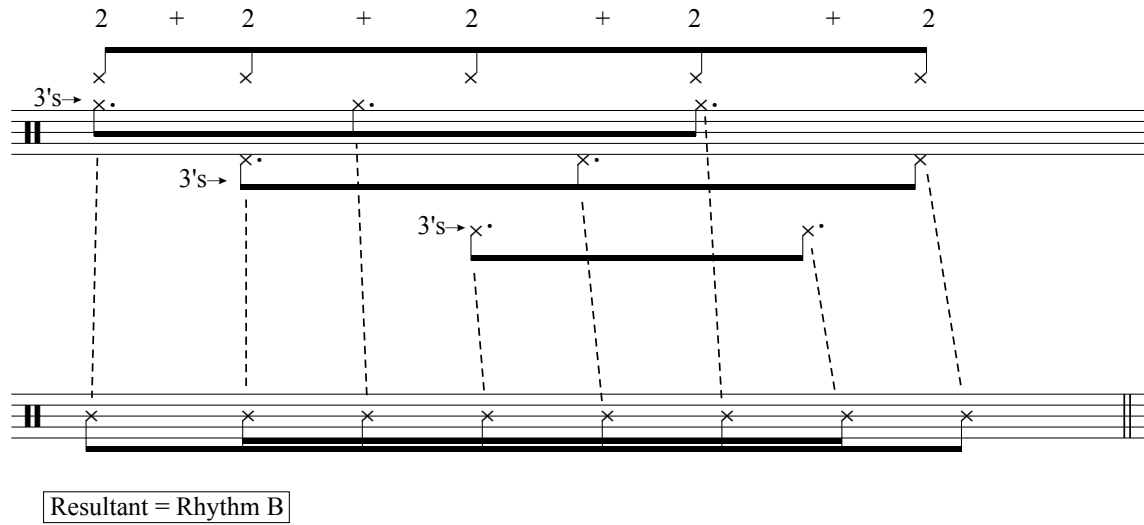
*Figure 34.*

Rhythm B can only be derived by tweaking Schillinger's methods. It emerges from the superimposition of three layers of monomials with a periodicity of three on a monomial with a periodicity of two (Figure 5.2a). This method is not entirely faithful to Schillinger's, which demands that the larger integer be used as the major generator, rather than the smaller one. One can also generate Rhythm B by overlaying a monomial with periodicity two with the symmetrical binomial 3+2+2+3 (Figure 5.2b). This

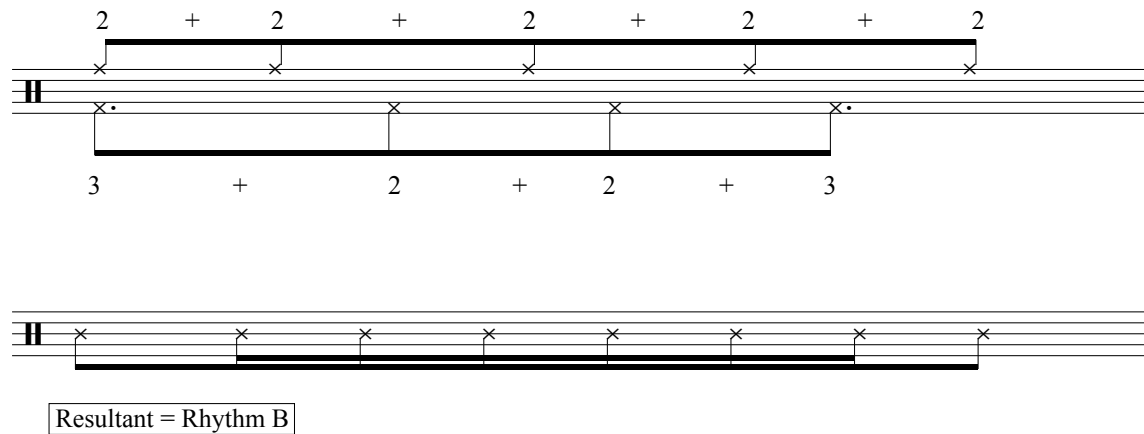
3+2+2+3 binomial occurs as the middle four members of a 5÷4 resultant.<sup>5</sup>

FIGURE 5.2A–B: POSSIBLE GENERATIONS OF RHYTHM B USING SCHILLINGER’S METHODS

(a)



(b)



How Abrams *actually* generated what I am calling Rhythm B is unverifiable and

<sup>5</sup> The complete 5÷4 resultant is 4+1+3+2+2+3+1+4.

perhaps ultimately unimportant. Nonetheless, it is easy to imagine Abrams experimenting with Schillinger's principles of fractional resultants and overlaying various polynomials and emerging with Rhythm B, lifting Rhythm A from the pages of SSMC, and then concatenating these phrases to generate the rhythm of the opening four measures of "Inner Lights."

Excerpt two of "Inner Lights" comprises the three measures of polyphony that constitutes its final notated section. The instrumentation for this section is alto saxophone, tenor saxophone, flugel horn, vibraphone, double bass, drums, and piano. Each beat constitutes a group in my analysis; i.e., there are four groups per measure. Taking a horizontal view first, m. 2 in every part rotates the groups of m. 1 "to the left" (or -1) and m. 3 applies the same transformation to m. 2. Put differently, the rhythmic groups on beats 1, 2, 3, and 4 in m. 1 appear on beats 4, 1, 2, and 3 in m. 2, respectively, and the same relationship applies for m. 2 in relation to m. 3.<sup>6</sup>

Adopting a vertical view, the first measure of the tenor saxophone part retrogresses the order of the one-beat groups in the first measure of the alto part. The same retrogressive relationship holds for the double bass in relation to the flute. The relationship between the drum and vibraphone parts is retrogressive at the level of the sixteenth note; i.e., the drum part is the vibraphone part read from right to left. The piano part is not a transformation of any other part. Table 5.1 summarizes these

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<sup>6</sup> A striking parallel with this rotational transformation subsists in the fourth movement of Ruth Crawford Seeger's String Quartet (1931). For additional discussion, see Hisama (2001), particularly Chapter 4, "Inscribing Identities in Crawford's String Quartet, Fourth Movement." There are two minor inconsistencies in Abrams's original score: the flute part loses its tie in mm. 2 and 3, and the bass part's fourth beat in m. 1 either requires the on-beat eighth note to be dotted or the off-beat sixteenth note to be an eighth note. The removal of the flute's tied note is consistent with Schillinger's model, where he explicitly states that removing a tie may be necessary when permuting rhythmic segments (Schillinger [1946] 1978, 62). Subsequent measures in the bass part show the one-beat segment to be two eighth notes. I hence convert the bass part's fourth beat of m. 1 to two eighth notes in my reduction.

transformational relationships. Reading the letters horizontally in each part shows rotational transformations, and matching letters show retrogressive relationships between parts.

TABLE 5.1: COMBINED HORIZONTAL AND VERTICAL TRANSFORMATIONS IN THE FINAL NOTATED SECTION OF “INNER LIGHTS”

Al.	a	b	c	d	b	c	d	a	c	d	a	b
Tnr.	d	c	b	a	c	b	a	d	b	a	d	c
Fl.	w	x	y	z	x	y	z	w	y	z	w	x
Vib.	l	m	n	o	m	n	o	l	n	o	l	m
Bs.	z	y	x	w	y	x	w	z	x	w	z	y
Drm.	R(o)	R(n)	R(m)	R(l)	R(n)	R(m)	R(l)	R(o)	R(m)	R(l)	R(o)	R(n)
Pn.	e	f	g	h	f	g	h	e	g	h	e	f

Both sets of transformations in the final three notated measures of “Inner Lights” unequivocally evoke Schillinger’s methods. I shift the analytical focus from rhythm to harmony and melody for my next example.

### “Charlie in the Parker”

Abrams’s arrestingly titled 1977 album *1-OQA+19* contains the also remarkably titled “Charlie in the Parker,” which evinces the influence of Schillinger’s theories of harmony and harmonization of melody.<sup>7</sup> Chapter 5 of Schillinger’s “Special Theory of Harmony” discusses “the Symmetric System of Harmony (Type III)” (Schillinger [1946] 1978, 396). It outlines two requirements for this method: first, chordal roots correspond to symmetrical divisions of one or more octaves, and second, chordal qualities “are

<sup>7</sup> My analysis of “Charlie in the Parker” references my unpublished, lead-sheet style transcription of the commercially available recording. I also used time stamps to reference this recording.





Schillinger posits his requirement of “pre-selected chord qualities” to systematize chord qualities in a harmonic progression. He is particularly interested in combining symmetrical sets of tonics and chordal qualities whose cardinalities do not contain a common factor. One of Schillinger’s basic examples is shown in Figure 5.4, where a cycle of two roots—C and F#—“interferes” with a three-member cycle of chordal qualities—major, major, minor, delineated by  $2S_1 + S_2$ . The result of this interference is a six-chord progression: C major, F# major, C minor, F# major, C major, F# minor.

FIGURE 5.4: SCHILLINGER’S CYCLE OF ROOTS AND CHORD QUALITIES



A crucial consequence of Schillinger’s stipulation regarding chord qualities is that chord tones other than the root should not reduce to a scale that also accounts for the symmetrical chordal roots. Put differently, Schillinger wishes to maximize harmonic variety within progressions using symmetrically spaced roots: chord qualities for a two- or three-tonic system should not all derive from the whole-tone scale, for example. Such instances would, for Schillinger, actually constitute a *diatonic* system of harmony, which he has already addressed at this point in the text. Finally, Schillinger clarifies in his book on harmony that composers may both combine progressions with multiple tonics and add passing or embellishing chords; the symmetrical form of root movement is meant to provide a basic harmonic structure that the composer ideally subsequently

embellishes.

SSMC's section on the harmonization of melody builds on many of the principles outlined in the preceding sections on harmony and melody. Schillinger covers all nine combinations of harmony and melody, which may each be diatonic, symmetric, or chromatic: diatonic harmonization of a diatonic melody, chromatic harmonization of a diatonic melody, symmetric harmonization of a diatonic melody, symmetric harmonization of a symmetric melody, etc. Confusingly, Schillinger's "symmetric harmonization" in this section only partially corresponds to the notion of evenly spaced tonics outlined in his "Special Theory of Harmony" (discussed above). Nonetheless there is a clear implication in this section that any melody—diatonic, symmetric, or chromatic—can be harmonized with chords with evenly-space roots.<sup>9</sup> He thus suggests a mode of harmonizing a melody that is clearly present in "Charlie in the Parker."

Two further aspects of Schillinger's theory of melody complete the preliminary information for my analysis of "Charlie in the Parker." First, Schillinger outlines a relatively conventional theory of melodic embellishment in which embellishing tones may be added above or below primary melodic notes such that stepwise resolution by either whole step or half step precipitates. Furthermore, additional passing or auxiliary tones may precede those one, thereby creating a chain of embellishing notes. Second, he includes a description of what is commonly referred to as "compound melody" in his theory of melodic axes.<sup>10</sup>

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<sup>9</sup> Schillinger's use of "symmetric" harmony in this section is somewhat confusing because he downplays (although by no means eliminates) some of the concepts he introduced in his "Special Theory..." and emphasizes others. These emphases vary considerable depending on the kind of melody at hand; melodies that use a symmetrical scale engender symmetric harmony of slightly different kind compared to a diatonic melody.

<sup>10</sup> Schillinger delineates multiple streams in a compound melody in terms of "primary," "secondary" etc.

The fundamental melodic and harmonic structure of “Charlie in the Parker” consists of a diatonic melody with segments of symmetrical harmony. The vast majority of the melody of “Charlie in the Parker” uses the diatonic collection with three flats—Eb major or C minor (Abrams’s composition does not clearly express a tonic).<sup>11</sup> Pitches that do not belong to this collection follow aspects of Schillinger’s theory of melody outlined above. The E<sub>5</sub> in m. 6 (0:08) corresponds to Schillinger’s theory of leading tones—it resolves to F<sub>5</sub> in the following measure (0:09). The interpolated G<sub>4</sub>–Ab<sub>4</sub> forms a compound melody with the E<sub>5</sub>–F<sub>5</sub>. Similarly, C#<sub>5</sub> at the end of m. 8 (0:10) functions as a leading tone to D<sub>5</sub> that immediately follows it. C#<sub>4</sub> in m. 8 represents an octave doubling with regard to this C#<sub>5</sub>, what Schillinger calls “coupling.” C#<sub>5</sub>–D<sub>5</sub> is thus the primary resolution in this passage, and C#<sub>4</sub> functions as an embellishment. Db<sub>4</sub> in m. 12 (0:13) is an octave displacement of a chromatic passing tone that connects the C<sub>5</sub> in m. 11 (0:13) to the Db<sub>5</sub> that begins m. 14 (0:15).

The chromatic melodic passage in mm. 17–18 (0:19–0:21) can also be analyzed as an embellishment of the fundamental, three-flat collection. This passage builds on the similar, descending melodic line in mm. 14–15 (0:15–0:18). Both passages use a segment of the pentatonic scale to connect G<sub>4</sub> to C<sub>4</sub>: G<sub>4</sub>–F<sub>4</sub>–Eb<sub>4</sub>–C<sub>4</sub>. Measure 14 precedes this segment with three pitches that are separated by whole-tones: D<sub>5</sub>–C<sub>5</sub>–Bb<sub>4</sub>. In m. 17 this whole-segment is transposed chromatically up a minor third (T<sub>3</sub>) so that it begins on F<sub>5</sub>. The B<sub>4</sub> that links these upper three pitches with the lower pentatonic segment extends the upper whole-tone scale by one degree: F<sub>5</sub>–Eb<sub>5</sub>–Db<sub>5</sub>–

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axes.

<sup>11</sup> In this analysis that follows I eschew the melodic flourishes in mm. 13 and 16. I regard these gestures as embellishments of the primary melodic structure.

B4. This melodic whole-tone segment also expresses Schillinger's method of geometrical expansion, whereby some portion of the excerpt is either transposed or rhythmically displaced. In this example the first three pitches in the earlier phrase are transposed by three half steps. This transformation is apparent when these two melodic phrases are represented as ordered pitch sets (where C4 = 0): The passage from the D5 in m. 14 to C4 in m. 15 can be represented as <14, 12, 10, 7, 5, 3, 0>.<sup>12</sup> The passage from F5 in m. 17 to C4 in m. 18 can be represented as <17, 15, 13, 11, 7, 5, 3, 0>. Both excerpts contain the same pentatonic fragment—<7, 5, 3, 0>. The whole tone fragment in the first excerpt appears as <14, 12, 10>, while the transposed and elongated whole tone fragment in the second excerpt appears as <17, 15, 13, 11>. This analysis shows the identical intervallic spacings (i2) of both whole tone fragments, the T3 transposition of the first to the second, as well as the supplemental pitch (i1) that connects the end of the transposed fragment (13) to the beginning of the pentatonic one (7).

E5–F#5 in m. 25 (0:27–0:28), despite sounding somewhat detached from the surround music due to this phrase's registral and temporal contrast, constitute a pair of embellishing tones that connect the F3 that concludes m. 24 (0:26) to the G3 that begins m. 26 (0:29). Thus F#5 functions as a leading tone to G3 (despite its octave displacement) and E5 is a leading tone to that F#5. Put differently, F# functions as a chromatic passing tone between F and G, and E functions as a whole-step leading tone to that F#.

The F#5 that concludes the melody (0:33) functions in three ways. The first two functions are melodic and the last harmonic. First, reinterpreted as Gb, it represents a

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<sup>12</sup> Ordered pitch sets represent groups of pitches that are numbered according to their distance, measured in half steps, from a given point, and which reflect their order in the music.

chromaticization of the preceding melodic climax, the G5 in m. 29 (0:30). Second, it is a whole-step leading tone to the Ab4 that begins the piece. Finally, the concluding F# gestures towards the harmonic language of one of Abrams’s musical heroes—Thelonious Monk.

Many of Monk’s compositions finish with harmonic misdirection, whereby the final cadence resolves to an unexpected major-seventh chord. Figure 5.5 shows two typical examples, from the final phrases of “Monk’s Mood” and “Pannonica.” Both compositions are in C major and imply a return to the tonic chord at the end of the form using a subV7/V–V7 progression. Both, however, conclude with a Db major seventh chord. Abrams knew and loved Monk’s music: the title of his composition “Munkmunkt” (examined in Chapter 3) invokes and plays on the pianist’s iconic last name, the arrangement of “My One and Only Love” that appears on Abrams’s first recording—*Daddy-O Presents MJT+3*—uses the introductory material from Monk’s famous “Round Midnight” as its coda, and Abrams plays a Monk-esque whole-tone run to conclude his composition from the same recording, “No Name.”

FIGURE 5.5A–B: CONCLUDING CADENCES IN MONK’S (A) “MONK’S DREAM” AND (B) “PANNONICA”

(a)





The harmony of “Charlie in the Parker” contains a preponderance of symmetrical roots and thus displays the influence of Schillinger’s concept of symmetric harmony. Chordal roots in the first three measures (0:01–0:05) outline ST4—F, Ab, B, Ab, and D. A second set of symmetric roots—G and Db—represent ST2 and wedge between the final two members of opening ST4 constellation.<sup>15</sup> The G/Db set reappears in m. 4, albeit with new chordal qualities (I discuss chord qualities further below). Ab, C, and E chords follow in mm. 5 and 6 form ST3 (0:06–0:08). Next, a series of descending ST6 tonics—Db, B, A, and G—are embellished using chromatic passing tones (0:08–0:12): C appears in a progression from Db to B (mm. 7 and 8) and Ab in a progression from G to A (end of mm. 8 and 9).

The Gb and Bb chords that appear the end of m. 10 (0:12) and in m. 11 (0:13) respectively seem to come out of nowhere—a root of D would form ST3, but a chordal root of D has not occurred since the piece’s opening. Casting an eye forward reveals an ST3 set: Bb in m. 11 combines with Gb at the end of m. 15 (0:18) and the opening D chord in m. 17 (0:19), which marks the beginning of the second half of the 32-measure form. Symmetrical chordal roots therefore not only structure harmonic progressions on a local level; they also link beginnings and/or ends of phrases. This ST3 structure also serves to explain the Gb chord that concludes the otherwise diatonic progression in mm. 14 and 15.

The harmony of mm. 14 and 15 (0:15–0:18) is deceptively multi-layered. At first glance all of the roots barring the final Gb belong to the same, three-flat diatonic set that the melody utilizes. Embedded within this diatonicism, however, is the ST2 outlined by

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<sup>15</sup> Interestingly, G and Db combine with the surrounding roots, Ab and D to form another set—Db, D, G, Ab—that is symmetrical about E/F.



the roots of D and Ab. These roots oscillate—D—Ab—D—as if to emphasize the ST2 available in the three-flat diatonic set. Furthermore and to invoke chord qualities in addition to root movement, this progression also tonicizes G: D7 functions as V7, and the two Ab chords function as tritone substitutes thereof. I interpret the Fmin7 chord as a link between the local tonic of G and dominant of D.

ST6 also accounts for the five chords in mm. 17–18 (0:19–0:21). The B chord at the end of this line (0:23) combines with the D, Ab, and B chords in mm. 21, 22, and 24 respectively to form an incomplete ST4 set, and the A chord in m. 22 (0:25) functions as a chromatic neighbor chord to the contiguous Ab in the following measure (0:26). The harmonic progression that begins with the Gb chord at the end of m. 24 constitutes a ST6 constellation consisting of Gb, Ab, Bb, C, and E (beginning at 0:26 and continuing until the end of the melody at 0:33). The two chords that do not fit into this structure in this passage are easily accounted for. The A chord at the beginning of m. 25 (0:26) represents a chromatic leading-tone chord in relation to the Bb chord that follows it (0:27). Finally, the penultimate, G chord facilitates the Monk-esque harmonic misdirection discussed above. Importantly, this analytical interpretation of this G chord hinges on its quality as dominant seventh.

Abrams appears to have eschewed Schillinger’s notion of “pre-selected” chord qualities in favor a more ad hoc approach that invokes idiomatic post-bop jazz harmony. He does, however, largely avoid chord qualities that are “diatonic” to the symmetrical “tonic” structures and thus adopts the philosophy of Schillinger’s method. His reference to the jazz idiom may at first glance to go against the motivation for employing Schillinger’s system in the first place; that is, I argued in Chapter 4 that SSMC appealed to Abrams because it offered an alternative to the harmonic language that Abrams

already knew through his work as a jazz and blues pianist. My present analysis affords a more nuanced point—SSMC *augmented*, rather than replaced, Abrams’s existing musical knowledge.

Abrams’s amalgam of Schillinger’s preference for symmetrically spaced roots and jazz-invoking chord qualities in “Charlie in the Parker” testifies to an overriding aesthetic philosophy that values an *expanded* and multi-faceted palette of approaches, some of which may even be contradictory or incommensurable. SSMC’s methods are therefore frameworks that Abrams freely implemented and embellished. Schillinger promotes this kind of take-what-you-want-and-leave-the-rest approach to some extent in his text, although it is borne out clearly in the varied musical output of his students (cf. Gershwin and Earle Brown), although at other times he argues that the most aesthetically sound compositions contain calculated sets of hierarchical, tightly nested theoretical structures (Schillinger [1946] 1978, 1277).

“Charlie in the Parker” demonstrates that Abrams adopted the former approach—Schillinger’s text provided an impetus to move beyond the jazz idiom, but Abrams never lost sight of the music in which he cut his teeth. Abrams’s aesthetic expansiveness testifies to his philosophy of both/and rather than either/or. This point relates to my earlier discussion of the multiple, seemingly contradictory, genres that Abrams juxtaposes on his recordings. I argue that the same kind of artistic gregariousness is epitomized in the harmonic structure of “Charlie in the Parker,” which integrates Schillinger’s symmetric system of chordal roots with chordal structures that inflect that system with an idiomatic, post-bop jazz sound.

## “Hearinga”

My third analysis in this chapter concerns the centerpiece of Abrams’s 1989 album *The Hearinga Suite*, “Hearinga.” I offer two analyses of piece’s 16-measure primary melody (which begins at 0:36 of the commercially available recording), as well as its accompanying material.<sup>16</sup> These analyses suggest manifestations of Schillinger’s system, albeit in different ways. I use time stamps to reference the commercially available recording. My measure numbers in this discussion begin at the start of the melody (0:36). The piece is in common time with a quarter note at approximately one 130 quarter note beats per minute.

Salient features of the melody already suggest two aspects of Schillinger’s method: it is highly chromatic but also makes use of consonant sonorities, such as the C minor triad in m. 1 (0:36) and G minor and B minor triads in m. 3 (0:39–0:40), and the G major triad on the first beat of m. 10 (0:52); a large part of its chromaticism appears to derive from chromatic auxiliary notes, such as the chromatic triplets on the third and fourth beats of mm. 1 and 2 (0:37); finally, some moments suggest Schillinger’s concept of symmetrical tonics, such as the C–E–G# chord that appears on the first and third beats of m. 1 (0:37) and first beat of m. 2 (0:38), or the sequential G- and B-minor triads in m. 3 (0:39–0:40).

My first set of voice leading reductions suggest that the melody comprises a highly embellished i–V–i progression in C minor. My first level of reduction implements Schillinger’s theory of embellishing (or leading) tones. Primary tones are by default the final tones in stepwise movement, even despite their metrically weak

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<sup>16</sup> My analysis of “Hearinga” references the score at the Ablah Library, Wichita State University: [https://www.worldcat.org/title/hearinga/oclc/25136514&referer=brief\\_results](https://www.worldcat.org/title/hearinga/oclc/25136514&referer=brief_results) (accessed May 1, 2019).

position—F# and A emerge as the primary pitches on beats three and four of m. 1, for example. I preserve the C minor triad outlined on the first two beats because it clearly sounds like a fundamental, tonic-like sonority. Schillinger's concept of secondary melodic axes also functions in my analysis to augment this basic voice leading principle.

Secondary axes in Schillinger's theory of melody equate at a local level to compound melodies, and at a larger temporal scale to quasi-Schenkerian voice leading progressions and prolongations. The first two beats of m. 2 demonstrate this principle at a basic level: G#4–C5–A4–C5 divides into two voices, G#–A and a sustained C. A more complex example appears in mm. 6 and 7, where the opening three pitches—E5, C#5, and A4—progress through respective stepwise movements to converge on a B4–D5 dyad: E5–Eb5–D5, C#5–D5–Eb5–D5, and A4–Bb4–C5–B4.

My second reductive level highlights the primary tones from my first level, and groups sets into symmetrical divisions of the octave, tonal triads, or prolongations of single pitches. I then combine the primary pitches in this second level of reduction into simultaneities, and invert some of these harmonies so as to maximize parsimonious voice leading. This harmonic reduction consists of fourteen chords in total.

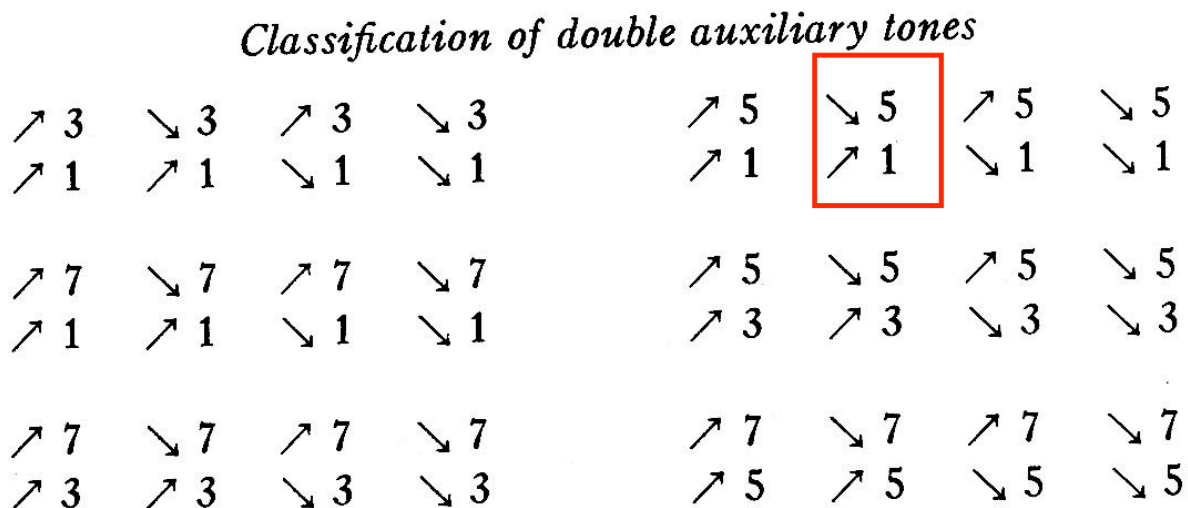
This progression begins with a C minor triad and then tonicizes G minor. A B minor triad follows this G minor one. This progression represents Schillinger's notion of embellishing chords that are formed by a collection of leading tones.<sup>17</sup> In this instance the uppermost voice (the fifth) of the primary, B minor chord, F#, is preceded by a pitch a half step higher (the root of the G minor triad), the lowermost voice of the primary chord (the root), B, is preceded by a pitch a half step lower (the third of the G

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<sup>17</sup> Schillinger unambiguously states that primary structures occur last in a progression of auxiliary tones: "A melodic form containing directional units may start either on a chordal or an auxiliary tone. However, it must end with a chordal tone" (Schillinger [1946] 1978, 585, emphasis in original).

minor chord), and the middle voice remains unchanged on D. Figure 5.6 reproduces Schillinger's graphic for this combination of directional units, which omits static voices.

FIGURE 5.6: SCHILLINGER'S VOICE LEADING COMBINATIONS FOR TWO VOICES



Next in this second level of reduction, what I interpret as a string of dominant seventh chords tonicize a prolonged dominant in C minor: A7–D7–G7. I regard my next symmetrical set—Cb, Eb, G—as a Db dominant seventh chord with a raised eleventh, which tonicizes the F# dominant seventh chord that immediately follows. My interpretation of this augmented triad as the lowered seventh (Cb), ninth (Eb), and raised eleventh (G) of a Db chord not only draws on the same idiomatic jazz harmony with which Abrams was probably familiar, it also constitutes a chordal structure that Schillinger explicitly lists as a mode of voicing a dominant seventh chord with a raised eleventh in four parts (Schillinger [1946] 1978, 452). This Db7 chord progresses to F#7, which subsequently functions as a leading-tone chord that progresses to the V7b9 chord in C minor. I infer this V7b9 chord from a D/Ab dyad. I also interpolate a D7b9 chord between these F#7 and G7b9 chords, which derives from a D#/F# dyad and functions as

a V7/V chord in C minor. This concluding G dominant seventh chord leads the progression back to its opening C minor triad.

My interpretation of these dyads as incomplete dominant seventh chords with lowered ninths also draws on aspects of Schillinger’s theory of harmony. More specifically, Schillinger outlines what he calls “strata harmony” as a mode of generating abstract harmonies from more basic ones. In this method, the composer sketches large, compound harmonic structures spanning up to six octaves and extracts only some of those tones to construct surface-level pitch material. The final two dyads derive from dominant seventh chords with added flattened ninths with respective roots of D and G, as shown in Figure 5.7. The lower system in this figure shows macro sets—a half-step/whole-step diminished seventh scale—which generate dominant seventh chords with flattened ninths (shown in the upper stave) and subsequently reduce to dyads; the third and lowered ninth of the chord in the first measure and the fifth and the lowered ninth of the chord in the second measure.

FIGURE 5.7: “STRATA HARMONY” ANALYSIS OF DYADS

Macro sets: halfstep/wholestep diminished scale

My penultimate reduction contains only the primary sonorities given dominant-function relations, prolongation, and auxiliary tones. The B minor triad can also be regarded as a set of auxiliary tones to the G dominant seventh chord (the G

minor triad that it previously led to is reduced out of this layer), with the F# of the former “splitting” to lead to both the G and F of the dominant chord while the two lower voices remain unchanged. As I mentioned above, I make a similar claim for the F# dominant seventh chord in relation to the G dominant seventh chord that leads the entire progression back to C minor—A# leads to B, C# to D, E to F, and F# to Ab and/or G. My final line presents the resulting structural i–V–i. The three concepts of auxiliary tones, prolongation, and tonicization suggest that Abrams’s melody suggests the influence of Schillinger’s method of generating a highly complex and chromatic melody from a fundamental tonal harmonic structure.

My second analysis implies that Abrams’s melody is based not on a standard tonal harmonic progression but on the principle of symmetrical divisions of one or more octaves. My first level of reduction finds primary tones by awarding priority to pitches in relatively strong metrical positions. This analytical *modus operandi* derives from the symmetrical pitches that arrive on the first three half-note beats of the melody—C4 on beat 1 of m. 1, E4 on beat three of m. 1, and G#4 of beat 1 of m. 2. This ST3 structure is so conspicuous that it strongly suggests a symmetrical foundation. Level 1 of my analysis highlights primary tones, which form symmetrical structures. My second level of reduction indicates that the melody forms a progression of symmetrical chords: ST3(C)–ST3(G)–C-4–ST3(F)–ST4(D)–ST3(F)–ST2(F#)–ST4(C#)–ST4(D). “C-4” adopts Schillinger’s nomenclature to indicate a cycle of perfect fourths, F–Bb–Eb in this case.

Arranging these chords so as to maximize parsimonious voice leading reveals a somewhat symmetrical progression that moves smoothly between chords. All voices in this progression move by a maximum of a whole step. The C, E, G# in the first chord

progresses to B, D#, and G in the second chord—all voices descend by a half step—and the F, Bb, and Eb in C-4 progresses smoothly to the F, A, and C# in the ST<sub>4</sub>(F)—the F remains, the Bb descends by a half step and the Eb descends by a whole step, for example. My second analysis therefore reveals that the melody from “Hearinga” could also be based on symmetric harmonies and linked by parsimonious voice leading.

The principle of symmetry also extends to parts of the texture that are contemporaneous with this melody: the countermelody (played by Bb clarinet and ’cello when this section is played the second time), as well as the chordal accompaniment (played by four trombones second time only) that occurs in rhythmic unison with a bass part. The countermelody consists almost completely of symmetrical set classes. The multiple, prominent sets of tritones—the C<sub>4</sub>–F#<sub>3</sub> in m. 1 (1:04), the Bb<sub>3</sub>–E<sub>3</sub> and A<sub>3</sub>–Eb<sub>3</sub> in m. 2 (1:06), the B<sub>3</sub>–F<sub>4</sub> in m. 4 (1:09), the C#<sub>4</sub>–G<sub>3</sub> in m. 9 (1:18), and the Bb<sub>3</sub>–E<sub>4</sub> in m. 12 (1:22), for example—propose pitch symmetry as a primary structuring device. My analysis reveals that symmetrical set classes account for the entire countermelody. This segmentation arranges some symmetrical set classes so that they bridge phrases, and also treats Bb<sub>3</sub> in m. 15 as an upper chromatic neighbor tone to the final, symmetrical (0, 4, 8) set class.

Abrams’s countermelody for “Hearinga” thus appears to abide by principles of pitch symmetry similar to those in the primary melody. It also does not appear to reduce to a tonal chord progression, unlike the primary melody. Thus rather than being founded on a progression of symmetrical chords that are subsequently embellished, Abrams’s countermelody offers a string of either distinct or overlapping symmetrical set classes. One possible reason for this linear approach, rather than the harmonic one found in the primary melody, concerns vertical relationships between the four parts. I



consider vertical relationships after examining each of the musical layers in isolation.

The four-note chords that the trombone play during the melody's repeat are both symmetrical set classes and arranged to accentuate that symmetry. Every chord forms a (0, 3, 4, 7) set class, which can also be considered as a triad with both a major and minor third. Abrams always arranges this set class in this passage as a symmetrical <0, 3, 8, e> set; i.e., so that the chordal major and minor third appear at the bottom and top of the voicing, respectively.<sup>18</sup> This voicing therefore positions the major-triad component of the set class as the lowest three pitches of the voicing, the minor-triad component of the set class as the highest three pitches of the voicing, and the shared root and fifth of these triads as the two middle voices.

The transpositional relationships between these chords also express symmetry. The first set of three chords comprise T(0) as well as the neighbor tones a half step either side of this chord (T1 and T-1). The second set of three chords represent the same arrangement, although now the neighbor chords are a whole step either side of the T(0) chord. The third set of three chords reorders those in the first set—T(1), T(-1), T(0)—and the fourth set of four chords augments the T(1)/T(-1) symmetry with a T(2) chord, thus shifting the axis of symmetry from D to C#/D. Symmetry thus manifests in Abrams's chords in terms of both the single set class that he deploys and the subsequent transpositions of it.

Symmetry and transposition also interact in Abrams's bassline, which emerges from the imbrication of two, related symmetrical set classes. The first comprises E, F#, G#, and Bb—also the first four notes of a whole tone scale based on E—which form a

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<sup>18</sup> Abrams thus utilizes a symmetrical set class and orchestrates it so as to accentuate that symmetry.

symmetrical (0, 2, 4, 6) set class. The second set comprises F, G, and A—or the first three notes of a whole tone scale based on F. This (0, 2, 4) set is also symmetrical and constitutes a transposed subset of the first (at T<sub>1</sub>). The bassline comprises of imbrications of these two sets: E, F#, G#, F, F#, G, A, Bb, F, A, F#, E, G#; that is, three members of the E set, followed by one member of the F set, one member of the E set, two members of the F set, one member of the E set, two members of the F set, and three members of the E set.

I interpret the distribution of members of these two related pitch class sets using Schillinger's notion of interference and the Fibonacci series. The bassline consists of thirteen attacks, which comprise of eight instantiations of the E-based set and five instantiations of the F-based set. The integers of five, eight, and thirteen are related through the Fibonacci series, which appears repeatedly in Schillinger's text. Schillinger uses the Fibonacci series, as well as other number series, as either a way of generating polynomials that he then applies to various musical domains (Schillinger [1946] 1978, 90–5), or structuring musical “growth” ([1946] 1978, 316).<sup>19</sup> Abrams's bassline appears to adopt a principle from this second category: the Fibonacci series mediates the relationship between sets and subsets.

The particular distribution of members of the two sets in the complete series also suggests Schillinger's influence. The same three members of the E whole-tone set bookend the progression (E, F#, and G#) and two additional single-member occurrences appear in the middle of the set. The symmetry of this, 3+1+1+3 distribution recalls Schillinger. His method locates this 3+1 binomial as the first two attacks of a 4÷3

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<sup>19</sup> Schillinger uses number series to manipulate many different kinds of musical materials. He uses them to generate durations, ranging from individual attacks to formal sections, the number of pitches in a phrase, or as means of grouping and permuting other phrases or sets.

resultant, and the larger set combines this binomial with its retrograde (see Schillinger [1946] 1978, 68). One can also find a complete  $3+1+1+3$  binomial as the sixth, seventh, eighth, and ninth members of a  $9\div 5$  fractional resultant.<sup>20</sup> Members of the F-based set constitute a  $1+2+2$  binomial. Schillinger shows this binomial in the first volume of SSMC ([1946] 1978, 78), and it also constitutes the second, third, and fourth members of a  $4\div 3$  resultant.<sup>21</sup> He states in his chapter “Evolution of Rhythm Styles (Families)” that phrases with a duration of five represent and untapped resources for contemporary composers ([1946] 1978, 85).<sup>22</sup> I suggest that Abrams’s thirteen-note bassline, with its Fibonacci-derived subsets of eight and five, resonates with this claim.

Abrams’s bassline and chords proceed in rhythmic unison in this passage. The rhythm for Abrams’s parts aligns with a monomial with a periodicity of three that begins at the beginning of the section, with the exception of mm. 6–9 (beginning at 0:45), where it temporarily aligns with a monomial of five. The onset of this five-monomial coincides with the eighth pulsation in the three-monomial. Abrams’s chordal and bass parts align with the five-monomial for three iterations, the middle duration of which is subdivided into durations of two and three quarter notes. Abrams’s parts return to the three-monomial at the beginning of m. 10 (0:52), precisely where the polyrhythmic interference between the three- and five-monomials resolve.

Schillinger’s initial presentation of the concept of resultant rhythm in SSMC

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<sup>20</sup> The complete fractional  $9\div 5$  resultant is  $5+4+1+4+1+3+1+1+3+1+1+2+1+1+1+2+1+1+1+2+1+1+1+2+1+1+3+1+1+3+1+4+1+4+5$ .

<sup>21</sup> The complete  $4\div 3$  resultant is  $3+1+2+2+1+3$ .

<sup>22</sup> Schillinger also describes rhythmic phrases with a duration of 5 (or 7) as “Oriental.” This claim is based on a Eurocentric point of view that regards Western music theory as the ultimate explanation of all music of the world.

includes a discussion of what he calls “grouping,” which equates to the interaction that results between his rhythms and various metrical settings (Schillinger [1946] 1978, 19). Figure 5.8 shows Schillinger’s example, where he groups the same  $4\div 3$  fractional resultant rhythm,  $3+1+2+1+1+1+1+2+1+3$ , first in  $4/4$  (what he designates “grouping by a”) and then in  $3/4$  (“grouping by b”). His second example also shows the syncopations that emerge from the mismatch between the length of the fractional resultant (sixteen quarter notes) and the triple meter. Abrams’s bass/chord part adopts this principle by placing monomials of three and five in common time to generate the rhythmic profile of this part.

Importantly, not every attack in the monomials receives an articulation in Abrams’s bass/chord part. The omission of some of these attacks generates three phrases with a comparable number of attacks. The first phrase, in mm. 2–5, consists of four evenly-spaced attacks. The second phrase, mm. 6–10 also contains four evenly spaced attacks (that correspond to the 5 monomial), but also rhythmically embellishes the second group of five quarter notes (discussed above). The final phrase, mm. 11–14, reiterates the first phrases’ four evenly spaced attacks. These phrases therefore express an ABA structure.

FIGURE 5.8: SCHILLINGER'S EXAMPLES OF "GROUPING" IN 4 AND 3

*Grouping by a*

$\frac{16}{4} = 4 \text{ T}; \quad \frac{1}{16} = \text{♪}$

*Figure 35.*

*Grouping by b*

$\frac{16}{3} = 5\frac{1}{3} \quad \frac{1}{3} = \text{♪} \quad 3(5\frac{1}{3}) = 16$

$3(5\frac{1}{3})$

Finally, I offer some comments on the harmonic relationships between the four parts. These relationships are less systematic than those that I discuss above, but

nonetheless help articulate the harmonic cohesion of this passage. The harmonic relationship between bass notes and brass (0, 3, 4, 7) chords alternate between i3, i6, and i9; that is, the bass pitch is always three, six, or nine half steps above whatever the root is of the major/minor triad played by the brass. Intervals i3 and i6 both occur six times in the progression and i9 occurs just once. These intervals represent three of the four equal divisions of an octave, Schillinger's "four-tonic" system. Perhaps Abrams eschewed i0 as it would reinforce the root of the set, which corresponds to the shared root of its imbricated major and minor triads.

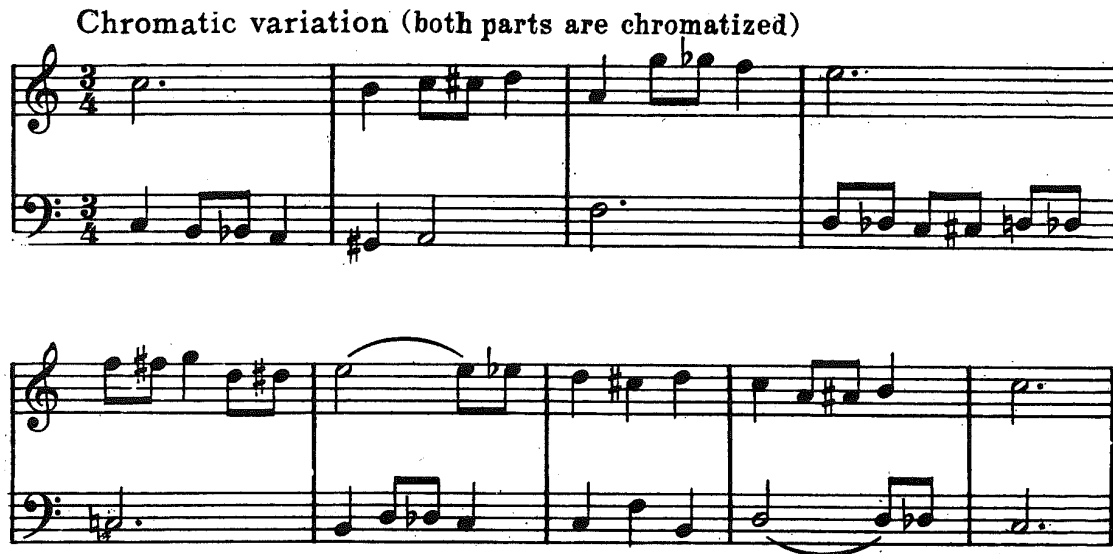
Instances of i3 result in a doubling of a member of the set class, and i6 and i9 both increase the cardinality of the complete set by one. The single instance of i9 corresponds to the last attack in m. 8, which represents the last of the attacks that derives from the five-monomial. It is interesting that Abrams deviates from the swath of i3 and i6 relations between bass and chords on the last attack of his excursion away from the three-monomial and to the five-monomial. Arguably more remarkable is the fact that the passage combines the horizontal cohesion of both lines—the transpositional symmetry of the chords *and* the imbrication of two whole-tone sets—with restricted set of harmonic relationships (i3, i6, or i9).

Abrams's melody and countermelody exhibit a number of consonant relationships both between them and in relation to the chords and bass line. I suggest that this plethora of consonant relationships emerge out of the more systematic organization of each of the textural layers. The harmonic richness of each layer facilitates multiple consonant relationships between the parts in any given measure; that is, consonant harmonic relations emerge from each part's chromaticism and oblique references to conventional harmonic materials. Nonetheless, one of the most

striking harmonic aspects of this passage concerns the multiple simultaneous unisons/octaves and thirds/sixths (or their enharmonic equivalents) between the melody and the lower parts. The opening C<sub>4</sub> in the countermelody, for example, forms a minor third with the E<sub>b</sub><sub>4</sub> in the melody in m. 1. The third and fourth downbeats in m. 2 contain major sixths between the melody and countermelody. The B<sub>b</sub><sub>4</sub> in the melody of m. 3 is doubled at the octave by the chord. Skipping forward a little, the A<sub>4</sub> on beat two of m. 6 forms a major sixth with the C<sub>4</sub> in the countermelody, which doubles the C<sub>4</sub> in the trombone chord. Similar relationships, often sixths and unisons, occur throughout the passage.

The restricted set of consonances in this passage also suggests some of Schillinger's contrapuntal principles. Schillinger's chapter on counterpoint begins with conventional guidelines: he states that composers should use perfect and imperfect consonances on strong beats, resolve dissonances via passing motion, avoid parallel perfect intervals, attend to harmonic variety, and employ a cadential gesture at the end of the passage. Schillinger augments these traditional, tonal principles later in his chapter, where he explores chromatic counterpoint. He preserves many of the basic contrapuntal principles in these examples but relaxes his stipulations regarding the treatment of dissonance. His final example of the chapter, shown in Figure 5.9, presents a highly chromaticized version of a diatonic contrapuntal passage (Schillinger [1946] 1978, 740–1). This chromaticized version resembles Abrams's passage in that it makes liberal use of chromatic tones but largely contains consonances on metrically strong beats, or their delayed resolution (such as in mm. 7–8, where downbeat dissonances resolve later in the measure).

FIGURE 5.9: SCHILLINGER'S CHROMATIC COUNTERPOINT



Both of my analyses of the melody from “Hearinga” emphasize important principles from SSMC. My first analysis leverages auxiliary tones, prolongation, and tonicization to suggest that the melody is based on a  $i-V-i$  progression in C minor, and my second analysis takes its cue from the opening five beats of the melody to suggest a set of symmetric harmonies. My subsequent analyses of the countermelody, chords, and bassline during this section also suggest principles derived from SSMC. My goal with these analyses is to suggest that the influence of SSMC is clearly detectable in Abrams’s music, rather than recreate Abrams’s compositional process.

Abrams’s composed works take many forms. The analyses in the first part of this chapter examine some of his compositions for improvisers. Abrams also composed fully notated concert works, some of which are presented on *The Visibility of Thought* (2001). In the second part of this chapter I offer an analysis of what I regard as one his richest and most complex fully notated works, *Piano Duet #1* (1987), for two pianos.



# The Dis/abled and Raced Body in Abrams's Piano

## Duet #1

Abrams offers the following arresting comments on Piano Duet #1 following a performance of the piece on July 7, 1989 at the Banff Center by Canadian pianists George Brough and Barbara Pritchard:<sup>23</sup>

When I composed [the piece] I had several things in mind, but it finally ended up to be...an addressing of the left and right side of the brain...In the sense that the dexterity that's called for to play the piano I think causes the player to have to address the left and right side of the brain, an even-handedness and sure-footedness of course. If you observe, as I'm sure you did, sometimes one performer is playing with the left hand and the other performer is playing with the right hand, and then two hands...one person playing with just one hand, so it was like a movement from one side of the brain to the other...and [an]other things [sic] I tried to address in the piece was a feeling of improvisation. I asked the performers to approach the piece in a *rubato* manner, just as they felt. I think they felt it quite beautifully.<sup>24</sup>

This rich excerpt suggests multiple interpretive avenues for Abrams's piece. His reference to the "left and right side of the brain" could allude to Roger Sperry's work, cited in his 1981 Nobel Prize in Physiology or Medicine "for his discoveries concerning the functional specialization of the cerebral hemispheres."<sup>25</sup> Sperry's research spawned

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<sup>23</sup> Abrams also states in his post-concert talk that Piano Duet #1 was commissioned by the Philip Morris Company for their "Crossroads" concert series at the Whitney Museum in New York City and premiered by Ursula Oppens and Frederic Rzewski. The archives at the Whitney Museum contain no mention of the Crossroads series. More work is thus required to excavate the order of events surrounding the piece. In a 1983 article in the *New York Times*, George Weissman, chairman of Philip Morris at the time, states that "we've been involved with the Whitney and committed to the arts in New York City for a long time. We wanted to enhance our building and to enhance the community. We're very grateful [sic] to the Whitney for agreeing to put its art works here" (Brenson 1983). Despite some reservations regarding corporate meddling in the work of "non-profit making institutions," this collaboration appears to have generated a concert series.

<sup>24</sup> This recording and the score for Piano Duet #1 are housed at the Paul D. Fleck Library & Archives at Banff Centre for Arts and Creativity in Banff, Canada. My analysis refers to this score.

<sup>25</sup> <https://www.nobelprize.org/prizes/medicine/1981/summary/> (accessed March 18, 2019).

a plethora of work on handedness and its connection to brain hemispheres, as well as promoted the notion that more- and less-creative tasks can be mapped on to the right and left hemispheres, respectively. Irrespective of the facticity of this latter claim, Abrams's comments nominate leftness and rightness as important themes in his work.

Importantly, however, Abrams also links the play between left and right to the visual domain: the pianists employ various configurations of their four hands during the work, and these configurations are visually evident to the audience (“If you observe, as I’m sure you did”). Abrams also equates the themes of left and right with an “even-handedness” and “sure-footedness,” invoking bodily balance as another important component.<sup>26</sup> Thus although Abrams's comments begin with a reference to the brain, I argue that they also suggest the performing body as a central analytical constituent of the piece: Abrams's scored configurations of the pianists' hands—when and how they are to use them—invoke the theme of bodily restriction and hence disability.

The field of disability studies seeks to interrogate and undermine implicit normative modes of embodiment and cognition through various historical, analytical, and critical theoretical methodologies and their combinations. Music scholars have recently engaged with disability to critically examine how so-called normal, “abled” bodies latently undergird listening, performance, and music theory and analysis. A crucial insight from this work is that the category of disability—what counts as a “normal” body—is a fungible social, cultural, and political designation. Thus like other categories of identity such as ethnicity, gender, and sexuality, denominations of

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<sup>26</sup> Michèle Duguay presents a compelling analytical model based on bodily balance in “A Model for Measuring Physical Balance in Contemporary Piano Works” (paper presented at the annual meeting of the Music Theory Society of New York State, The College of Saint Rose, Albany, NY, April 6–7).

disability interweave with complex questions regarding who is granted personhood, who is not, and how those in the latter category are treated, both medically and socially.

Scholars in music have adopted various approaches to intersections between music and disability. One method is to foreground interactions between the body and instruments as a means to music making. Jonathan De Souza's first chapter in his book *Music at Hand*, "Beethoven's Prosthesis," as well as Blake Howe's article on pianist Paul Wittgenstein (discussed further below) characterize this perspective (De Souza 2017, Howe 2010). Another strategy is to regard a piece of music as a metaphorical body and consider its pitch, rhythmic, and formal content as significations on disability. Joseph Straus's recent books *Extraordinary Measures* and *Broken Beauty* both exemplify this position (Straus 2011, 2018). Finally, theorists also employ disability as a philosophical rubric for listening, one that foregrounds permeable, imbricated, and porous boundaries in terms of bodies and/or musical content (Iverson 2015, Kielian-Gilbert 2015).

I pivot from the topic of bodily restriction in Abrams's comments and score to offer an analysis of Piano Duet #1 in terms of disability and its intersection with race. The score strictly regulates which hand(s) the pianists use in order to realize the work's complex musical surface, resulting in what Straus calls "extraordinary" bodily contortions (Straus 2011). Abrams's directions mean that the performers must wrangle their respective bodies in order to cover large intervallic leaps over disparate registers and disentangle polyphonic textures. These extraordinary bodily contortions become the site for the composition, performance, and observation of "shocking deviations from normative embodiment" (2011, 125).

Additionally, Abrams's request for bodily contortions signifies on a long and terrible history of American slavery and its constraint, policing, and control over the

black body (Hartman 1997). I thus augment my interpretation of Piano Duet #1 with work in critical race studies and recent intersectional research on race and disability. Drawing on Daphne Brooks's influential *Bodies in Dissent*, I argue that Abrams's invocation of restricted embodiment in his piece signifies on the shifting social, political, and cultural constructions of race and gender to highlight and critique "conventional social and political ideologies" (Brooks 2006, 3–4).

Abrams's post-concert comments also mention improvisation: he states that the work "addresses a feeling of improvisation." This comment could be interpreted as an allusion to Western art music genres that invoke improvisation, such as the fantasia, toccata, or impromptu. I suggest that the piece's many fluctuations between combinations of the four hands represent this "feeling of improvisation." Put another way, the various forms of embodied dis/ability in the piece intimates improvisation as a process of bodily calibration and recalibration in relation to changing designations regarding dis/ability and their attendant restrictions on the body.

Piano Duet #1 unfolds in three parts.<sup>27</sup> Part I presents the pianists in a variety of hand configurations. Its musical surface contains knotty polyrhythms, dense polyphonic textures, and angular melodies. In Part II the pianists mostly play with both of their hands, often in question-and-answer phrasing with one another.<sup>28</sup> This section contains more rhapsodic material than the preceding one, although the complex angularity and polyrhythms remain. Part III draws inspiration from the final movement of Chopin's second piano concerto, according to Abrams's post-concert comments. It

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<sup>27</sup> Abrams's *The Visibility of Thought* contains the one commercially available recording of the piece. The Banff Centre library houses the only other recording of the piece that I know of.

<sup>28</sup> I use "their" as a gender-neutral pronoun for both singular and plural cases.

begins with each of the pianists using their two hands in rhythmic unison, doubled in octaves. Both pianists begin by alternating between driving eighth notes, marked quarter notes, before turning to triplets (Pianist 1 uses half-note triplets and Pianist 2 uses quarter-note triplets). The piece ends with more driving eighth notes, a few accented chords, and three final, dramatic descending gestures that conclude on low Ebs.

Table 5.2 presents a graph that tracks which of the pianists' hands are active on a measure-by-measure basis in Part I. Measure numbers are indicated across the top row, and activity by each of the four hands is indicated a different shade of grey. This visualization quantizes the activity of the pianists' hands to the nearest measure.

TABLE 5.2: HAND-USE IN PART I OF PIANO DUET #1

Measure	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
P1 RH																		
P1 LH																		
P2 RH																		
P2 LH																		

Measure	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34
P1 RH																
P1 LH																
P2 RH																
P2 LH																

Measure	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50
P1 RH																
P1 LH																
P2 RH																
P2 LH																

Measure	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66
P1 RH																
P1 LH																
P2 RH																
P2 LH																

Measure	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82
P1 RH																
P1 LH																
P2 RH																
P2 LH																

Measure	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98
P1 RH																
P1 LH																
P2 RH																
P2 LH																

Measure	99	100	101	102	103	104	105	106	107	108	109	110	111
P1 RH													
P1 LH													
P2 RH													
P2 LH													

Measure	112	113	114	115	116	117	118	119	120	121	122
P1 RH											
P1 LH											
P2 RH											
P2 LH											

Abrams utilizes ten out of the possible fifteen configurations of the pianists' four hands in the piece (not counting the instance where no hands are used). All ten of these configurations occur in Part I of the piece. Table 5.2 shows that the piece begins with fourteen measures where Pianist 2 uses only their left hand. At m. 15 Pianist 1 joins

using only their right hand. In mm. 32–45 all four of the pianists’ hands are active, but in m. 46 Abrams returns to the reduced texture of the right hand of Pianist 1 coupled with the left hand of Pianist 2. All four hands return in mm. 58–62, but give way to some brief alternations between both of Pianist 2’s hands and the right hand of Pianist 1. Measures 71–75 employ the right hands of both pianists. During mm. 76–100 Pianist 1’s left hand plays constantly, but is occasionally augmented by either Pianist 2’s left hand or both of their hands. In the concluding measures of Part I all four hands alternate with small pockets of various configurations of the four streams. Table 5.3 reveals that Parts II and III of the piece present more homogenous configurations of the pianists’ four hands: the vast majority of mm. 123–200 contain all four hands playing simultaneously.<sup>29</sup> Part III begins in m. 153, which is marked in Table 5.3 with a bold line.

TABLE 5.3: HAND-USE IN PARTS II AND III OF PIANO DUET #1

Measure	123	124	125	126	127	128	129	130	131	132	133	134	135
P1 RH													
P1 LH													
P2 RH													
P2 LH													

Measure	136	137	138	139	140	141	142	143	144	145	146	147	148
P1 RH													
P1 LH													
P2 RH													
P2 LH													

<sup>29</sup> I do not mean to imply that the musical surface sounds homogenous during these measures.

Measure	149	150	151	152	153	154	155	156	157	158	159	160	161
P1 RH													
P1 LH													
P2 RH													
P2 LH													

Measure	162	164	165	166	167	168	169	170	171	172	173	174	175
P1 RH													
P1 LH													
P2 RH													
P2 LH													

Measure	176	177	178	179	180	181	182	183	184	185	186	187	188
P1 RH													
P1 LH													
P2 RH													
P2 LH													

Measure	189	190	191	192	193	194	195	196	197	198	199	200
P1 RH												
P1 LH												
P2 RH												
P2 LH												

The piece's connection to the theme of disability surfaces through the combination of these hand-configurations and the musical content.<sup>30</sup> Abrams's score is saturated with angular and polyrhythmic phrases, which would be difficult to play with two hands, let alone with one. Furthermore, the pianists must also often disentangle polyphonic textures using a single hand. The opening six measures of the work command Pianist 2 to articulate and differentiate both a low stream of sustained chords

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<sup>30</sup> My analysis of Piano Duet #1 references the score housed at the Paul D. Fleck Library at the Banff Centre for Arts and Creativity. My time stamps in analysis refer to the recording of the piece on *The Visibility of Thought*.



and an incredibly angular middle-register melody.

Drawing on recent scholarships on embodied music performance, I offer an analysis of these measures in terms of my body at the piano. My analysis draws on similar, piano- and body-centric analyses such as Eugene Montague's analysis of Chopin's *Étude* in A-flat major, Op. 25, No. 1 (Montague 2012), David Code's work on Debussy's *Voiles* (Code 2007), and Andrew Mead's discussion of Webern's *Variations for Piano*, Op. 27 (Mead 1999), as well as other analyses that take the performer's body as a constitutive element, such as Joti Rockwell (2006), Jonathan De Souza (2017), Suzanne Cusick (1994), Kate Heidemann (2014, 2016), and George Fischer and Judy Lochhead (2002). My analysis of these opening six measures also pivots toward a discussion of disability and its intersection with race.

Restricted to using their left hand only, Pianist 2 must move their hand rapidly across the keyboard, leap to black notes using unintuitive fingerings, and try and play chords that fit awkwardly under the hand (or not at all). The tempo marking for this portion of the piece—one hundred quarter notes per minute—affords very little time for these extraordinary physical movements. I suggest fingering for the left hand that the pianist might use for these measures. In m. 1 the pianist uses their first and fifth fingers for the lower, accompaniment layer and the upper melodic one. In m. 2 they stretch their hand to use their second finger on C<sub>4</sub> and thumb on C<sub>5</sub> (0:05). This dramatic ascending leap is quickly reversed with the fifth finger on D<sub>4</sub>. This i11 interval reoccurs between A<sub>4</sub> and A<sub>3</sub>, which transports the hand back down so as to use the first and fifth fingers once again.

The thumb on F<sub>4</sub> subsequently descends first to the fifth finger on G<sub>3</sub> at the end of m. 2 (0:08) and then the first and fifth fingers on B<sub>1</sub> and B<sub>2</sub>, respectively (at the

beginning of m. 3, 0:09). This B/Bb dyad requires the hand to leap across the keyboard. The dramatic, slurred, ascending i19 at the end of m. 3 calls for a very fast movement by the left arm up the keyboard (0:10), with an added difficulty of landing the thumb on a black note. In m. 4 the pianist must stretch their hand across Ab1, Dd2, and C3 (0:13), a requirement that requires almost Liszt-ean hand proportions.

The phrase in the middle of m. 5 requires the pianist to quickly zigzag across the keyboard—from the fifth finger on Ab3, to the thumb on A4, to the fourth finger on F3 (0:15). This three note sequence is particular difficult because the hand must move up “into” the keyboard (away from the pianist’s body) for the Ab3, but then quickly back out (toward the pianist’s body) for the following A4 and F3—keeping the hand among the black notes creates difficulties for accurately playing the F3 with the fourth finger. The held F3 then gives way to a swift ascending leap of i15 between the fifth and first fingers (0:16). Abrams’s dynamic markings add a further challenge: the lowest chords are to remain *pianissimo* while the upper melodic part fluctuates between dynamic levels. The pianist must therefore navigate the required “weight” of the arm, hand, and fingers during these transitions between upper and lower parts and dynamic markings.

Finally, m. 6 requires that the pianist perform two difficult leaps across the keyboard (0:19). First, the Eb3, E2, C#1 near the beginning of the measure requires the pianist to travel from their third finger to land on the low black note with their fifth finger. This extreme i15 leap, concluding with a fifth finger on a black note, poses a significant physical challenge that would be significantly easier using two hands. At the end of this measure the pianist must ricochet between their first and fifth fingers before playing C#3 with their fourth finger and quickly landing on C#1 with their fifth (0:21). These angular melodic shifts challenge the pianist to accurately land on distant keys

over short durations using their left hand only.

My point with this brief analysis is not to suggest that this excerpt is unplayable or merely difficult. Rather, the polyphony in this passage, the upper voice's melodic angularity and rhythmic complexity, and the dynamic stratification of the voices suggest that it would be much easier to perform using both hands. Such a configuration would allow the pianist to split the angular upper voice between two hands. Abrams deliberately forecloses this possibility and thus forces the pianist into an uncomfortable and challenging series of bodily movements.<sup>31</sup> I argue that Abrams's bodily restriction resonates with recent work on music and disability.

Blake Howe's insightful article on Paul Wittgenstein, a two-handed pianist who lost his right arm due to a bullet wound sustained during World War I, provides valuable insight into the combination of Abrams's complex musical surface and his hand restrictions. Howe's detailed examination of the historical reception of Wittgenstein in terms of disability and performance, as well as some of the ways in which the pianist navigated complex repertoire using one hand, generates what Howe calls an "aesthetics of disabled performance": "The performer's body must negotiate the dialectic between corporeal finitude and the complex demands of the musical score, between the deficiencies of the body and the weighty burden of flawless performance. At the center between these two poles lies the bodily limit, the line between capacity and impossibility with which performers must constantly contend. An aesthetics of disabled performance presents this narrative in heightened microcosm" (Howe 2010, 143).

Howe's aesthetics of disability underlines that disability is not a fixed bodily state

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<sup>31</sup> For further discussion on pain and piano performance, see Chapter 3 of Maria Cizmic's *Performing Pain: Music and Trauma in Eastern Europe*, "Hammering Hands" (2011).

that exists alongside and outside of “normal” bodies. Rather, it highlights contingent bodily limits, their relation to socio-culturally conditioned notions of bodily normativity, musical instruments and their configurations of the body, and the normative frame of musical performance. Thus a musical performer’s dis/ability is conditioned by what kinds of bodily engagements they have with their instrument and repertoire, which are largely given by normative and fungible assumptions regarding both musical performance (the way one “normally” performs) and a larger societal context (the kinds of bodies that are considered “normal” in day-to-day life).

Thus, and as Howe and many other disability scholars point out, disability “is not a fixed, biological state but a cultural script emerging from the social negotiation of diverse bodies with codes of conformity...Just as architectural features of society have the potential to exclude and stigmatize bodily difference, so too do the conventions of music performance frame certain actions, behaviors, and appearances as disabling” (Howe 2015, 191).<sup>32</sup> The interaction between Abrams’s hand restrictions and his complex musical surface therefore critique onto-epistemological “truths” that condition bodily normativity in musical performance. Put another way, by forcing two two-handed pianists to realize his complex musical surface via non-normative embodiments, Abrams’s piece points to the relative arbitrariness of disability as a fixed category. If running up against bodily limits constitutes a central component of disability, then Piano Duet #1 pushes up against this threshold at its outset in deliberate ways.

The work that scholars in disability studies have done to undermine the notion of

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<sup>32</sup> Straus outlines four models of disability: as punishment from a higher power, a mark of divine power, a personal defect in mind or body that must be overcome, and as a socio-cultural construction (Straus 2011, 2–4). My discussion employs the last of these models.

disability as a fixed state and interrogate its changing and various instantiations parallels similar arguments in studies of race, gender, and sexuality. Marianne Kielian-Gilbert suggests that this “un-fixing” of the category of disability facilitates a shift from listening for fixed categories to “musical structural-expressive processes that complexify and disturb identity by alternating (oscillating between or dwelling in) contradictory and/or overlapping conditions of musical difference” (Kielian-Gilbert 2015, 381). These “disabled moves” reach across boundaries that appear to separate identity categories and thus smear and critique them. Kielian-Gilbert’s analyses of Ethyl Smyth’s *Concerto for Violin, Horn, and Orchestra* (1926–1928), and Marta Ptaszyńska’s *Thorn Trees*, from the third movement of her *Concerto for Marimba and Orchestra* (1985–1986) offer provocative intersections between disability and gender.

As Chris Bell indicates, however, “too much critical work in Disability Studies is concerned with white bodies” (Bell 2011b, 3). I suggest that, in addition to Bell’s explicit critique, disability studies in music risks reinscribing whiteness as a default and invisible category by largely omitting discussions of race. Notable exceptions to this tendency in music studies include Stephanie Jensen-Moulton’s work on “Blind Tom” Wiggins (2006, 2011), Sean Murray’s discussion of “Jump Jim Crow” (2015), and Will Fulton’s analyses of Stevie Wonder’s “black key” keyboard playing (Fulton 2015). My analysis in this chapter builds on this work by also connecting disability and race.

Piano Duet #1 presents an opportunity to consider intersections between disability and blackness. My discussion of this intersection invokes music scholars that tackle both disability and race as well as work in critical theory, philosophy, history, and identity studies (Bell 2011a, Davis 2006, Goodley, Hughes, and Davis 2012). In contrasting yet related ways, these scholars suggest and explore the overlapping

interplay of race and disability studies.

Michelle Jarman (2011) notes the historical connection between disability and slavery's history of violence, oppression, and cruelty, which ascribes disability as a form of dehumanization, or what Orlando Patterson calls "social death" (Patterson 1982). In this paradigm the ascription of disability marks the black body as non-normative and sub-human. As Patterson's states, "The slave is violently uprooted from his milieu...He is desocialized and depersonalized...[this process] involves the paradox of introducing him as a nonbeing" (1982, 38). Disability thus marks the black body as a "nonbeing," an ontological shift that paves the way for slavery.

I argue that Abrams's Piano Duet #1 signifies on the intersection of disability and blackness via what Daphne Brooks calls "performance strategies...to counterintuitively articulate and redeploy the discourse of socio-political alienation" (Brooks 2006, 3). Like the perceptive work of Saidiya Hartman (1997), Brooks highlights and insightfully examines modes of performance that resist rigid categories of identity related to race, gender, sexuality, and their intersection.

Brooks's extended, illustrative discussion of the first major theatre adaptation of *Dr. Jekyll and Mr. Hyde* in 1887 suggests that the production—Richard Mansfield's portrayal of the play's namesakes in particular—expresses a post-Reconstruction anxiety regarding miscegenation by situating the two, racially-coded figures of Jekyll and Hyde within a single body (2006, 63). Mansfield's portrayal of Hyde signifies blackness through "signs of corporeal deviance" (61). Although Brooks points to these "grotesque bodily distortions" as encodings of blackness, I suggest that they also invoke the twin association of blackness and disability—Mansfield codes Hyde as black through a performance of the non-normative, extraordinary body.

Brooks's "strategies of performance" critique categories of identity and rigid boundaries between them, and integrate issues of race, disability, and performance in a way that offers an interpretive inroad to Abrams's piece. The restrictions that Abrams places on the pianists' bodies both signify on a tradition of slavery and its disabling of the body as a means to social alienation and "nonbeing-ness," as well as sets the stage for the subsequent musical developments, which afford complex meditations on these themes.

In m. 15 (0:50) Pianist 1 enters with their right hand to create a texture that sonically resembles a single two-handed pianist—Pianist 1's right hand plays in the piano's upper register and Pianist 2's left hand plays below it. Yet Abrams distributes this single sonic body between two physical bodies, thus dramatizing the sonic emergence of a single "complete" body by assembling it from "component parts." I interpret this moment as a comment on the myth of bodily "wholeness." As Andy Clark describes in *Supersizing the Mind: Embodiment, Action, and Cognitive Extension*, people augment their embodied relation to their environment through various aids and devices (cf. "World, Incorporated," and "Mind Re-Bound?" in Clark 2008), and Jonathan De Souza offers some striking applications of this idea to music (De Souza 2017). This work implies that bodies are diversely dis/abled; that is, our use of aids and devices that extend our minds and bodies testifies to the incompleteness of the body in itself, what I call the "myth of wholeness." The sonic manifestation of a single body that nonetheless inheres in two performing bodies in Abrams's piece represents this pretense in musical form.

Abrams actually increases the difficulty of temporally coordinating the two streams of music in mm. 15–30 by distributing them across two bodies. This passage

only seldom contains moments where the two pianists could potentially coordinate their playing using simultaneous attacks. The pianists play independent polyrhythms that never coincide or utilize the same subdivision of the pulse: the second beat of m. 21 requires Pianist 1 to divide the pulse into septuplets and Pianist 2 to utilize sixteenth notes, the last beat of the same measure requires Pianist 1 to divide the pulse into sextuplets and Pianist 2 divide it into quintuplets, and in m. 22 Pianist 1 utilizes a quarter-note triplet pulse while Pianist 2 utilizes sixteenth notes.<sup>33</sup>

These conflicting polyrhythmic relationships would be more easily managed if played by one pianist, who could embody the rhythmic relations between attacks in the respective streams. Pianist 2's F4 on the last sixteenth of the second beat of m. 21, for example, arrives *just* after Pianist 1's A3, which occurs on the sixth sixteenth-note septuplet of the same beat. The slowest subdivision that accounts for both of these attacks is one twenty-eighth of the quarter-note pulse: too fast for calculated performance at this tempo. Rather, a single pianist would be able to realize this rhythm by positioning the left hand's sixteenth note F4 in relation to the septuplets in their right hand. In this sense these very difficult rhythms become manageable when a single body performs them. By splitting a single "sonorous body" across two performing bodies, I suggest that Abrams's piece invokes the myth of bodily wholeness as a mode of navigating its rhythmically complex surface.

Furthermore, Abrams duplicates and magnifies the trope of performing a single, angular and polyrhythmic stream of music using only one hand. During this passage both pianists must perform the kind of physical gymnastics that Pianist 2 encounters in

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<sup>33</sup> Joseph Kubera, one of the pianists on the commercial recording of the piece, notes that he and Philip Bush used head nods to help coordinate their playing, as well as marked places in the score where they knew that they should coordinate their parts (email to the author, March 25, 2019).



the opening fifteen measures. In m. 21, for example, Pianist 1 must travel from F5 to A3 in the space of a single septuplet (the tempo for this passage remains at one hundred quarter-note beats per minute), and then from Ab3 up to a three-note chord that spans i15–F4, C#5, Ab5 (beginning at 1:05). The chords in the middle of m. 22 require Pianist 1 to adopt a series of awkward hand shapes (1:08): the G4–B5 dyad requires a large stretch over i16 between two white notes, which is followed by i15 with the thumb on a black note, which is then followed by an unwieldy position whereby their first and second group together to play F4 and G4 respectively while the fifth finger must reach up to E5. Pianist 2 continues their stream of inter-register leaps using only their left hand.

This “two-handed” passage therefore does not rehabilitate the one-handed, “disabled” pianist presented in the first fifteen measures—what Joseph Straus refers to as a narrative of “overcoming” (Straus 2011, 2–3) and Howe highlights in critical receptions of Wittgenstein that equate his virtuosic performances with “normal” bodies (Howe 2010, 141)—rather, mm. 15–30 problematize the notion that “two-handedness” necessarily results in “an even-handedness and sure-footedness” and therefore undermines normative categorizations of one-handed piano performances as “disabled” and two-handed performances as “normal.” Put differently, this two-handed excerpt continues to signify on disability through its performance of the myth of bodily wholeness.

A viewing and listening audience (“If you observe, as I’m sure you did”) must reconcile a musical texture that sonically signifies a single two-handed pianist with the fact that it emerges from two bodies: two “disabled” pianists appear to combine to form a single “abled” pianist. In contrast, an audience that cannot see the performance

(because they are listening to a recording, for example) receives a payoff in the next section, where the entrance of additional musical layers further complicates the notion of the dis/abled body in performance.

In mm. 32–45 (beginning at 1:31) both pianists play with both of their hands. This textural explosion and its attending aural complexity makes it very difficult to determine which pianist plays what and with which hand. This section also proceeds at more than double the original tempo. Pianist 1’s right hand plays in the upper-most register while Pianist 2’s left hand plays in the lower-most register. In mm. 32–33 Pianist 1’s left hand and Pianist 2’s right overlap, creating a murky middle register. In m. 34 (1:37) Pianist 1’s left hand drops into the bass register to overlap with Pianist 2’s left hand: the middle-register murkiness of the preceding measures now drops into the lower register of piano.

This explosion of activity and the way it muddies the sonic/textural waters obscures the preceding sonic presentation of a two-handed pianist. What emerges from this section is a sonic articulation of the intersection of disability and blackness that foregrounds the monstrous.<sup>34</sup> Measures 32–45 of Piano Duet #1 represent a shift in the piece’s manifestation of the intersection between sound and body, *from* an ambiguity of assigning clearly discernible layers of the musical texture to bodies and hands *to* one that pervades the entire texture. Put differently, if what confronted listeners in mm. 1–30 was a difficulty of assigning body parts and musical layers, then in mm. 32–45 the musical texture becomes largely inscrutable, thereby frustrating and

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<sup>34</sup> The implicit association between the black performing body and the monstrous is apparent in Howard Mandel’s review of a 1977 performance by Abrams, Anthony Braxton, Malachi Favors, and Don Moye: “Muhäl’s hands are spiderly. Right and left interlock to string out long chords...or his fingers fly away from each other’s intentions in wild counterpoint” (Mandel 1977).

resisting aural segmentation in terms of bodies, arms, or hands.

I suggest that mm. 32–45 sonically invoke a monstrous performing body that signifies on both disability and race. The very impossibility of assigning notes, rhythms, or phrases to either pianist in this passage critiques modes of listening that reduce disability to this simple process of bodily correlation. Rather, Abrams’s piece suggests an uncanny conglomeration of multiple bodies, arms, and hands that emerges from the bodily restrictions in the previous sections of the piece and the two-handed/two-bodied pianist in mm. 15–30.

Its musical surface points to blackness and monstrosity because it exceeds simplistic descriptions in terms of “normal” performing bodies (Bey 2016, Dain 2002, Winters 2017). Abrams’s sounding score conjures an image of an “excessive” pianist, one with multiple bodies, as well as multiple arms and hands that cross and re-cross as the musical notation pushes and pulls them around the keyboard. This monstrous pianist manifests from the raced categorization of bodies.<sup>35</sup> Given the horrific history of slavery’s restriction and subjugation of the black body, the sonic and embodied excess that emerges from modes of performance that overrun these restrictions critiques racist disabled designations.

My reading/hearing of Abrams’s score affiliates with Fred Moten’s repeated return to the “excess” embedded in Aunt Hester’s scream, which “cannot be emptied of the content it pours out in excess and disruption of meaning, of the modality of subjectivity or subjective embodiment that makes and interprets meaning, and of the sense of world or spatiotemporal coherence or global positioning or proprioceptive

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<sup>35</sup> The multi-armed, monstrous, unruly, black pianist that I invoke here generates parallels with Julius Eastman. For further discussion see Dohoney (2014), Hisama (2015), and Renée Levine Packer and Mary Jane Leach’s recent edited collection (2015).

coordination that constitutes what Amiri Baraka might call the ‘place/meant’ of possessed and/or possessive individuation” (Moten 2017, ix). Like Hester’s scream, Abrams’s monstrous pianist exceeds simplistic reductions to the body in terms of both singular subjectivity and phenomenological, proprioceptive position and coordination: Abrams’s “even-handedness and sure-footedness” melts away with the emergence of multiple hands and feet, providing a “contingent figuration of the human” that Alexander Weheliye links to monstrosity (Weheliye 2014, 136). Weheliye’s and Moten’s insightful theoretical formulations resonate with Abrams’s piece via the issues of embodied performance, race, and disability.

Measures 46–122 (that is, up until the end of Part I) of Piano Duet #1 present multiple configurations of the pianists’ four hands that continue to signify on embodiment, disability, and race in striking ways. Although a more detailed examination of the piece will appear in future research, in the remainder of this section I provide an overview of the remainder of Part I of the piece, as well as suggest ways in which Parts II and III complement my analysis.

Measures 46–57 (beginning at 2:00) require both pianists to play with their right hand only. Similarly to the preceding sections, using two hands for each stream would make performing this passage easier, which thus returns to the trope of bodily restriction. The similar register and character of the two streams in this passage continues the ambiguity between bodies and sound. The monstrous pianist returns in mm. 58–62 (beginning at 2:31) with increased rhythmic complexity: this section contains moments where the pianists must coordinate simultaneous subdivisions of the quarter-note pulse in the order of three, four, five, and seven. The two pianists alternate in mm. 63–70 (beginning at 2:46) before they return to using each of their right hands

in mm. 71–75 (beginning at 3:10). This temporally compressed series of alternations—the pianists change their mode of embodied performance more frequently than the piece’s first 58 measures—expresses an increasingly fragmented view of the performing body. Put differently, the rapidity of Abrams’s alternations between various bodily configurations destabilizes categories of dis/ability.

Pianist 1 begins a left-hand solo in m. 77 (3:26) and is joined by Pianist 2 in m. 82 (3:37). Pianist 2 enters with chords, suggesting an accompanimental role in relation to Pianist 1’s angular and lyrical part. In m. 85 (3:46), however, Pianist 2 joins Pianist 1 in the tenor/bass register. Their streams also converge in terms of character, which recalls the muddiness of the four-handed, monstrous pianist in mm. 32–45. For the listener, the twin soloistic left hands in mm. 85–100 restricts the excessive embodiment of the early passage to lower register of the piano. In this sense the monstrous pianist partially reappears in this section, reminding listeners that the disability appears in multifarious guises.

Measures 101–122 (beginning at 4:24) present numerous rapid shifts between various combinations of the pianists’ four hands that both extend Abrams’s fragmentation of the body in mm. 63–75 and drive toward Parts II and III of the piece. As in previous sections, the four musical layers often overlap and cross registers such that it is extremely difficult to follow which pianist plays what and with which hand, either visually or aurally. Abrams’s instructions restricting which hand(s) the pianists must deploy also continue in this section and thus continue to signify on disability by forcing them to play passages that would be easier if played with both hands.

Parts II and III predominantly comprise both pianists performing with both hands (see Table 5.3, above). The musical characteristics of these sections contrast with

Part I. Part II comprises largely of the two pianists swapping between sustained chords and short, angular, polyrhythmic melodies. Much of this section of Abrams's piece recalls Elliott Carter's *Night Fantasies* for solo piano (1980). Pianist Ursula Oppens premiered Abrams's piece in New York, and has also performed and recorded Carter's piano and chamber music. Oppens therefore generates a provocative connection between Abrams and a tradition of American modernist composition that is normally racially coded as white. I would suggest that Abrams's piece, with its spiky, complex musical surface and multifaceted signification on the body and race, participates in this tradition without relinquishing its explicit connection to improvisation, the body, and race. Whereas many white American modernist composers ignore race (and thus also ignore intersections race and musical genre) and downplay the importance of improvisation for their work, Piano Duet #1 signifies on both the arbitrariness of such binaries and an underrepresented tradition of black composition that includes people like Florence Price and Olly Wilson, who largely remain at the periphery of histories of concert music despite their signal contributions to it.

In terms of embodied music performance and disability, Part II combines the two pianists' music in a way as yet unseen/heard in the piece. In mm. 123–136 (beginning at 5:36) the pianists alternate in clear question-and-answer phrasing that oscillates approximately every two measures. This clearly demarcated phrase structure and the textual clarity that it generates contrasts with the previous opaque, murky texture. This passage therefore sonically implies two, relatively clearly delineated pianists that mimic one another's phrase structure. This bodily doubling both represents a clarification of the identificatory ambiguity that characterizes most of the piece up until this point—via the clear melodic and accompaniment roles of their right and left hands, respectively,

and the question-and-answer phrasing—and an uncanny duplication of the previous disabled invocation. Put differently, I hear the textural clarity and question and answer phrasing in this section as a representation of two contingently dis/abled bodies, rather than simply the resolution of disability into two normative ones.

The remainder of Part II returns to the theme of textural and bodily ambiguity. The music becomes increasingly polyphonic and polyrhythmic as the pianists progress. Their clear phrase structure dissolves by m. 142 (7:32) and gives way to a musical texture that once again obscures both textural layers and performing bodies. I interpret this return to sonic ambiguity as a clarification that the preceding musical texture only magnified disability through its doubling, rather than resolved it.

Part III begins at 9:07 and proceeds with rhythmic and textural clarity that is gradually undone as the pianists dart toward the piece's final measures. Both pianists begin with their hands in rhythmic lockstep and doubled at the octave (thus exhibiting the influence that Abrams mentions in his concert talk from the final movement of Chopin's second piano concerto, which proceeds in the same manner), although their respective layers differ. Both pianists alternate between eighth notes and quarter notes, which situates them on a common rhythmic grid, but subsequently introduce triplets in m. 178 (9:29): Pianist 1's right hand utilizes half-note triplets and Pianist 2's left hand utilizes quarter-note triplets. Pianist 1 also plays a constant stream of eighth notes in their left hand and Pianist 2 employs a constant stream of quarter notes in their right hand. This pairing between hands and polyrhythmic material unravels the relative homogeneity of the first twenty-four measures of Part III. In a similar fashion to the Part II, Part III initially suggests unity and thus appears to reconcile the fragmented, disabled body that concluded the preceding section before undoing that homogeneity. I

interpret both progressions as a process of performing the contingency of dis/ability. Put another way, if disability is contingent on changing social, cultural, and political designations as well as on aspects of identity such as race, gender, and age, then the performative moves from relative homogeneity to heterogeneity in Parts II and III of Piano Duet #1 express this contingency in sonic form by regularly undermining its own suggestions of a sonically unified body.

The pianists repeat Part III in both the commercially released recording and an archival recording from the 1987 live performance at the Banff Centre. Although this repeat is not marked in the score, it balances the section's relative brevity, which partially results from Abrams's shift to a faster tempo for this section—half notes at 152 beats per minute. The piece finishes with three measures that contain identical rhythmic content and where all four hands play in rhythmic unison. The pitch content of these final measures undermines any reading of this rhythmic unity as a restoration of disability to “normality.” All three measures contain awkward melodic leaps—the pianists must traverse large spans of the keyboard in short spans of time in a way that recalls many of the difficult hand and arm movements that arose from Abrams's stipulations regarding the pianists' hands in Part I. I interpret Abrams's coda as a final signification on disability: these extreme traversals across the piano undermine any sense of “even-handedness” that emerges from rhythmic unison. Rather, disability remains inherently tied to embodied performance.

## **Conclusion**

This chapter focused on Abrams's work as a composer of both works for improvisers and concert works. My analyses of “Inner Lights,” “Charlie in the Parker,” and “Hearinga”



suggest the influence of Schillinger's SSMC, and I frame Piano Duet #1 in terms of the intersection of disability, race, and embodied musical performance. My analyses speak back to generalizations that racially code modernist composition as white and improvisation as black by analytically supporting what George Lewis calls "a postmodern multidominance of consciousness that is emblematic of the hybrid practice of composers from the Association for the Advancement of Creative Musicians."<sup>36</sup> Abrams's richly multilayered compositions testify to a musical "double consciousness" that speaks to both jazz and modernist composition traditions.

My analyses in this chapter thus follow Ellie Hisama's example of relating aspects of music and identity so as to diversify our view of twentieth-century composition (Hisama 2001, 2). Hisama's book constitutes a model of the "fundamental entwinement" of "musical analysis and social critique" (2001, 181). Although I contextualize my analyses in this chapter in relation to race and disability rather than gender, they sustain her overarching point that such readings are not only possible, they are compelling and intervene in the discipline of music theory, which remains largely concerned with music made by white people (also mostly men) and clings to analytical methodologies that cleave identity from the "music itself." My chapter thus both attests to Abrams's work as a composer and offers new avenues for scholarship in music theory and analysis. In the remainder of this conclusion I review a small sample of Abrams's scores that I have accumulated to suggest avenues for future work.

Duet for Piano and Violin (1996) opens with a quiet meditation on the lowest register of the piano that slowly spirals out into a post-tonal harmonic language,

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<sup>36</sup> Lewis, liner notes to *Spectrum* (2009), an album that contains both large-scale compositions and improvisations by both Abrams and Roscoe Mitchell.

suggesting both Schillinger's preference for symmetrical harmonies and Schoenbergian motivic saturation. Like Piano Duet #1, there are two recordings of Duet for Piano and Violin: one on *The Visibility of Thought* (performed by Joseph Kubera and violinist Mark Feldman), and another housed in the Library of Congress. The latter recording features a live performance by Anthony Davis and Regina Carter (during the second half of the concert), as well as number of pieces by "the Muhal Richard Abrams Orchestra" during the first half, including pieces available on commercial recordings—"Hearinga" and "Aura of Thought-Things" from *The Hearinga Suite*, and "Bloodline" from *Blu Blu Blu*—and a number of unrecorded compositions. Interestingly, Carter takes Abrams's series of high tremolos beginning in m. 57 of the score as an opportunity for a virtuosic, improvised cadenza that invokes the blues, quarter-tones, and glissandi (Abrams does not invoke improvisation in his score). The audience responds to her brilliant improvisation with multiple supportive shouts. Feldman, in contrast, does not include a cadenza in his studio recording of the piece. A comparison between these two performances would thus also invoke themes of liveness and improvisation in what is ostensibly a fully composed concert work.

A score for Abrams's Saxophone Quartet No. 1 also resides in the Library of Congress. Its only recording consists the Rova saxophone quartet's *Works, Vol. 3* (1999). Orchestrated for various saxophones ranging from soprano to baritone, the piece calls for performers who are both able to realize the kind of polyrhythmic and melodic complexity in Piano Duet #1 and improvise in both solo and ensemble formations. Improvisation in this piece either transpires simultaneously with written material or constitutes a section in itself, and is framed and/or accompanied by particularly arresting composed passages that range from overlapping, sustained trills,

polyrhythmic polyphony, and homophony between a walking bass part and *tutti* saxophones.

Saxophone Quartet No. 1, along with the unrecorded Variations for Solo Saxophone and Chamber Orchestra, represents a subset of Abrams's oeuvre that deserves closer historical and analytical scrutiny: concert pieces that contain improvisation. These pieces speak to a musical tradition that lies at the so-called divide between experimental improvisation and modernist composition. My future research will therefore explore Abrams's concert works and their interaction with improvisation, their interactions with the various new music ensembles that performed them, and the attendant community of musicians.

Finally, I intend to also examine Abrams's orchestral work, *Mergertone* (2007). This fully notated piece appears on *Spectrum*, an album that features the Janáček Philharmonic with Petr Kotik as conductor (Roscoe Mitchell also appears on this recording, but does not play in *Mergertone*). A piece that contains multiple stunning textural and harmonic shifts, *Mergertone* offers a number of challenges for music theory and analysis, and, similarly to pieces such as Saxophone Quartet No. 1 and Variations for Solo Saxophone and Chamber Orchestra, also intervenes in histories of twentieth-century music that segregate composition and improvisation and some of their attendant musical forms.

Abrams's notated pieces (both those that contain improvisation and those that do not) offer at least two important interventions in scholarship on twentieth- and twenty-first century music.<sup>37</sup> First, his music provokes reevaluations of analytical

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<sup>37</sup> Other fully notated pieces that I would like to discuss in future work include Etudes Op. 1 No. 1, a recording of which was recently recorded by pianist Rory Cowal on his *Clusters: American Piano Explorations* (2018), and "Strings and Things," which was recorded by the String Trio of New York on

methodologies. My analysis of Piano Duet #1 represents one manifestation of this possibility: it interprets recent work that links music and disability studies through critical race studies and thus suggests that the piece signifies on the raced and dis/abled body through embodied performance. Second, beginning in the 1990s Abrams often composed music for Kotik's S.E.M. ensemble or musicians in or adjacent to it.<sup>38</sup> Kotik and his ensemble appear to operate as an important node in a larger network of modern and experimental composers and performers that includes John Cage, Morton Feldman, Pauline Oliveros, Thomas Buckner, and Julius Eastman, as well as other AACM members such as Roscoe Mitchell, Joseph Jarman, and George Lewis. One might also suggest that recently formed "new music" ensembles such as ICE and Wet Ink amplify some of these various amalgams of composition, experimentalism, and improvisation. My study of Abrams's work therefore proposes further examination of this music scene's heterogeneous collection of actors, materials, funding sources, technologies, performance spaces, and audiences, the topography of which is modulated by issues related to race, gender, and musical genre, among others.

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their *Octagon* (1992).

<sup>38</sup> Petr Kotik, email to the author, March 25, 2019.

## 6—Epilogue: The Music’s Still Happenin’

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### A Personal Reflection on Method and Limits

My proposal for this dissertation optimistically suggests that I would include a detailed historical account of Abrams’s life and practice as well as interventions into issues in music theory and analysis. In its final form this study focuses largely on the latter part of this forecast. Thus although this project does not provide the detailed history of Abrams and his work that I anticipated at its outset, the resulting discussion provides important insights into both Abrams’s practice and the field of music theory and analysis, and provocatively suggests multiple avenues for future research. This redirection away from the biographical and historical and toward the music-theoretical was impacted by my conversation with Abrams, in which he largely foreclosed the possibility of participating in the project as an interlocutor.<sup>1</sup> Abrams’s multi-functioning remark both encouraged me to realize this project according to my own outlook (“I would trust your integrity as a scholar to make an intelligent point of view”) and appeared to deny the possibility that it could follow the models presented by Lewis and Steinbeck, in which ethnography forms a key component. I am reminded of Abrams’s statement regarding Lewis’s then book-in-progress that Lewis includes in his introduction, which speaks to the interplay between representation and authorship in writing about the AACM:

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<sup>1</sup> Conversation with the author, January 30, 2017.

If it's going to be a musicology thing, or a thing that includes the AACM and talks about all this other stuff, I'm not going to participate. I'll just cut right out right now. We've waited too long to put out a document. I don't want to be part of that...I didn't spend all these years to be put in a situation that didn't have nothing to do with what I did.

(Abrams, quoted in Lewis 2008, xxiv–xxv)

Abrams is wary of work on the AACM that submerges musicians' narratives. He states that he will not participate if the project is “going to be a musicology thing” or includes “other stuff.” I interpret “other stuff” as an allusion to stylized, theory-heavy academic language that obscures the AACM's history and erects discursive barriers around its work. Abrams, like many AACM members, seems particularly wary of outsiders writing about their work, understandably so. Lewis, in contrast, deftly balances biography, critical history, and personal narrative in his book, a poise that emerges in part from his position as an AACM member.

Abrams's remark to me that he would not participate as an interlocutor in my research signaled that I would have to change the focus of my project. Although I nonetheless remained hopeful that I would have further opportunities to talk to Abrams's about his work, his passing in 2017 prevented this prospect. I am fortunate that some musicians and collaborators have talked with me about working with Abrams, although in other cases I received little response (or none at all) to my requests. These refusals—always polite—forced me to confront my position as an outsider to the AACM and the difficulty of writing historically and ethnographically about Abrams and his creative practice from this vantage point. One might also consider these refusals in terms offered by Audra Simpson, who suggests that “ethnographic refusal” might provide an opportunity to reconsider the kinds of knowledge that are both recognized and ignored by academic epistemological frames (Simpson 2014, 113). My research

nonetheless reflects a deep love and respect for Abrams and his work, and I remain hopeful that they will receive the kind of detailed, book-length study that they deserve.

## **Threads, Lines, and Thresholds**

There are many threads in this dissertation that potentially constitute foundational elements of future research projects, in addition to the aforementioned book project on Abrams and his practice. My affordance-based analytical framework suggests elaboration in both scientific and music-theoretical domains. I thus intend to operationalize this analytical framework experimentally. This project, which would involve collaboration with experimentalists working in music cognition, would hypothesize that improvisers use prominent aspects of precursive composed material to structure their free improvisation and that this relation can be analyzed in terms of affordances. Although the design of this experiment requires further consideration, I propose asking participants to play various short, randomly generated pieces of music and then immediately, freely improvise. I will utilize transcription, music analysis, and participant interviews to argue that performers use prominent characteristics of the composition to structure the beginning of their improvisation. In ecological terms, these sonic characteristics afford improvised continuation. This experiment would suggest that improvisers quickly recognize and utilize sonic characteristics, even in randomly generated pieces of music, and that the concept of affordances provides a conceptual foundation for understanding cognition on the threshold between composition and improvisation.

Abrams's discography contains countless other performances that would help nuanced my framework from the perspective of music theory and analysis. My future

work will augment my observations by examining compositions that position free improvisation between contrasting sets of composed materials, such as in “Inner Lights.” I will also survey performances by other musicians who similarly combine complex notated material with free improvisation, such as Tim Berne, Nicole Mitchell, Ingrid Laubrock, and Darius Jones.<sup>2</sup>

Abrams’s engagement with SSMC, I argue, undermines simplistic descriptions of black music in terms that ignore the intensive intellectual activity that undergirds it. I theorize this engagement as “fugitive music theory” and suggest multiple other nodes in a genealogy that I will trace in future work. My re/conception of music theory and its link to a black radical tradition suggests pedagogical applications. What, I wonder, would undergraduate and early-graduate theory curricula and courses look like if they were constructed around fugitive music theory, rather than Schenker, Schoenberg, and Babbitt, and how might such a disciplinary reorientation address the need to decolonize our discipline and university?

Sara Ahmed writes that part of defining a discipline as such involves drawing lines that separate it from other disciplines (Ahmed 2006). These lines, however, interact with people, not just disembodied knowledge: “Such lines mark out the edges of disciplinary homes,” notes Ahmed, but also “mark out those who are ‘out of line’” (2006, 22). Karen Barad states that “discursive practices are also boundary-making practices”: who we discuss in our discipline reflects our vision for the demographic of its membership (Barad 2003, 821). If defining a discipline involves making/marking its borders and thus denoting the work that does and does not “fit in,” then that delineation

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<sup>2</sup> The aforementioned copyright issues would need to be resolved for future work that included scores and/or transcriptions.



also extends to people, those who “fit in” as well as those who do not.

The Society for Music Theory’s (SMT) 2018 report on membership demographics suggests that the lines around the discipline largely exclude those who are not white and male.<sup>3</sup> These delineations are mirrored in SMT’s publication awards, which overwhelmingly feature work on white male theorists, composers, and musicians.<sup>4</sup> Research by and on people that do not fit within these narrow lines are thus pushed to the periphery of our discipline. Thus what I call fugitive music theory risks being subsumed under the heading of “jazz” in both professional conferences and syllabi and allotted undesirable times during conference schedules and/or tokenized. Tamara Levitz notes that decolonizing the university and our disciplines are not straightforward processes (Levitz 2018). Yet I would argue that “fugitive music theory” represents an opportunity to revise which theorists we include as such in both research and pedagogical contexts. To reiterate my question above, what would undergraduate and early-graduate theory curricula or courses look like if it were constructed around fugitive music theory?

George Russell’s Lydian Chromatic Concept could provide a theory of harmonic dissonance, Fred Anderson’s and Eddie Harris’s writings could produce a theory of scale formation, and Yusef Lateef’s method on “Autopsiopsychic music” could generate theories of form and melody, for example. Alice Coltrane’s music (along with Franya Berkman’s book) could introduce and serve as a case study for theories of embodiment, timbre, and orchestration. Amina Claudine Myers’s recent recording *Sama Rou* (2016) presents multiple, complex text settings that could supplant traditional *lieder*.

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<sup>3</sup> See <https://societymusictheory.org/administration/demographics> (accessed April 21, 2019).

<sup>4</sup> See <https://societymusictheory.org/archive/publications> (accessed April 21, 2019).

Coltrane's and Myers's music both connect to religion and spirituality, which along with Braxton D. Shelley's recent work on gospel could furnish a module (or more) on sacred text settings (Shelley 2017, 2019).

Furthermore, these pedagogical applications need not be limited to theories and analyses of jazz, improvisation, or other musical genres that are deemed "other than," our disciplinary orientation towards concert music. Just as music theorists such as Steven Block and Steven Larson have employed set-theory and Schenkerian analysis for examinations of jazz, one might provocatively deploy fugitive music theory for analyses of repertoire by Bach, Mozart, Wieck-Schumann, Brahms, Beach, Schoenberg, or Bauer, among others (Block 1990, 1997, Larson 1998). William Robin—in addition to Levitz—notes that efforts to decolonize the university also intersect with issues such as class, neoliberalism, and capitalism and may thus require sweeping, systemic institutional changes (Robin 2018). I nonetheless offer fugitive music theory as a contribution to SMT's idealistic but yet-unrealized mission statement, which proclaims, "We construe this discipline broadly as embracing all approaches, from conceptual to practical, and all perspectives, including those of the scholar, listener, composer, performer, teacher, and student. The Society is committed to fostering diversity, inclusivity, and gender equity in the field."<sup>5</sup>

Finally, my research on Abrams's compositions suggests a network revolving around the indistinct threshold between experimental improvisation and composition, which includes composers, musicians, ensembles, audiences, funding bodies, and other actors. Benjamin Piekut's four snapshots of New York's experimental music scene in

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<sup>5</sup> See <https://societymusictheory.org/about> (accessed April 21, 2019).

1964 (Piekut 2011), as well as Brigid Cohen’s recent article on workshop sessions between Edgard Varèse and Charles Mingus’s ensemble represent important touchstones for this project (Cohen 2018).

## **One Line/Many Views**

My first encounter with Abrams’s music was *One Line/Two Views* (1995), a recording that embodies many of the issues in this dissertation. Its title resonates with my outlook as both a scholar and performer of experimental improvised music. Abrams represents the through-line in this project, which generates “multiple views” that encompass issues related to jazz, experimental music, genre, improvisation, composition, race, disability, and music theory and analysis. At the same time, however, writing about music reflects the writer as much as it does the music. These multiplicities are captured by Jayne Cortez’s poem “All Day in the Abstractions,” which appears in the liner notes for *One Line/Two Views*. For me, the concluding lines of the poem embody Abrams’s multifariousness, the irreducibility of his creative output, and the generative challenges that his work offers:

the music crossing rhythms in praise  
of rhythms  
outside of  
telescopes  
the music discovering itself in  
transitional site  
of the target where  
I sing the collective views  
the collaborated lines  
the unmathematical perceptions  
& the ramification of consequences into  
the textures the prisms  
the tributes the hydepth

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