PATHWAYS TO THE PRACTICE OF FREE IMPROVISATION

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ABSTRACT

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Improvisation offers unique opportunities in musical creativity and development, though incorporation of the teaching of improvisation into American higher education curricula has been uneven. While there is a growing interest in teaching improvisation, most improvisation instruction can be found in early childhood music education and in high school and college-level jazz instruction, creating an accessibility gap for individuals who wish to improvise or teach improvisation but have no experience improvising, in a jazz context or otherwise. The purpose of this document is to examine current instructional methods of teaching free improvisation in higher education, and to develop a series of musical prompts designed to develop spontaneous musical creative ability in an individual and group setting. In doing so, this document aims to reduce the accessibility gap and to help bring the culture of creative improvising further into collegiate-level musical instruction.

To my life coaches, Kevin and Eric

ACKNOWLEDGMENTS

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CHAPTER 1. INTRODUCTION AND REVIEW OF LITERATURE

In 2014, the College Music Society released a manifesto titled "Transforming Music Study from its Foundations: A Manifesto for Progressive Change in the Undergraduate Preparation of Music Majors." The product of a task force chaired by David Myers and lead authored by Ed Sarath, this manifesto asks what it means to be an educated musician in the 21st century. Between the title and this central question lies the charge that undergraduate music curricula have left students unprepared for the realities of the music profession as it currently stands. Specifically, the Task Force on the Undergraduate Music Major (TFUMM) "identifies three core deficiencies in the conventional model of music study, in response to which emerge three core pillars for an entirely new framework. The first core deficiency is subordination of the creation of new work to the interpretive performance of older work; the second is ethnocentrism; and the third is fragmentation of subjects and skills. When these tendencies are reversed, the three core pillars of a transformed model—creativity, diversity, and integration—come into view."[1] TFUMM views improvisation and composition as essential creative acts.[2] While it follows that music curricula would be strengthened by the incorporation of improvisation, research suggests that many teachers may not feel adequately prepared to teach improvisation. The aim of this document is to address this issue.

It is important to become familiar with the various academic discourses surrounding improvisation. Since 1950, researchers from a wide array of fields have taken note of how little understood improvised music is. Music historians and cultural theorists have sought to contextualize improvisative music styles within broader social trends. Cognitive researchers have

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[1] Ed Sarath, "Transforming Music Study from its Foundations: A Manifesto for Progressive Change in the Undergraduate Preparation of Music Majors," College Music Society, November 2014, https://www.music.org/pdf/pubs/tfumm/TFUMM.pdf.
[2] Ibid, 17.

increased our understanding of how the brain functions when a person is improvising. Research in creativity has also helped to clarify our understanding of improvisation. By studying these discourses, musicians and teachers can begin to lay the groundwork for developing their own pedagogy as well as broaden their understanding of the various sociocultural issues inherent in the various practices of improvisation they may encounter.

Cognitive Research of Improvisation and Creativity

Instead of asking what creativity is, Mikhaly Csikszentmihaly, one of the foremost creativity researchers, asks "where is creativity?" He suggests a systems model wherein creativity is located across three interrelated components: an individual *person*; a *domain*, consisting of a set of symbolic rules and procedures; and a *field*, which is made up of individuals who act as gatekeepers to a domain.[3] Under this framework, Csikszentmihaly argues that "creativity is any act, idea, or product that changes an existing domain, or that transforms an existing domain into a new one" and a creative person is "someone whose thoughts or actions change a domain, or establish a new domain."[4] This definition, while useful in a broad context, places creativity in a lofty position, seemingly unattainable but to a privileged few who have the right "stuff." Essentially, it is as much an endorsement of the "great man/woman" theory as it is a definition of creativity. Furthermore, as music education researcher Bennett Reimer has pointed out, this model of creativity only describes the "consequences" of being creative: "being able to solve problems, fashion products, define new questions that achieve breakthroughs, change the domain."[5] Reimer has argued that a better question to ask might be "when" creativity

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[3] Mikhaly Csikszentmihaly, *Creativity: Flow and the Psychology of Discovery and Invention* (New York: HarperCollins, 1996), 27–28.
[4] Ibid, 28.
[5] Bennett Reimer, *A Philosophy of Music Education: Advancing the Vision*, *3rd Ed.* (Upper Saddle River, New Jersey: Pearson Education, 2003), 104.

occurs. This locates the site of inquiry on the behaviors and cognitive processes that occur rather than on the results of those cognitive processes and behaviors. By better understanding the underlying way creative processes occur, researchers in education can design more effective methods and resources to enable creative thinking.

Evidence for the unique contribution of improvisation-based activities to neural development can be found in neurocognitive studies. There have been several neuroimaging studies of improvising musicians carried out in the past decade.[6] Arne Dietrich suggests that in a "flow" experience such as might occur in an advanced improviser, the dorsolateral prefrontal cortex (DLPFC) is involved in regulating and recalling implicit motor control functions.[7] Bengtsson & Csikszentmihalyi found that the dorsolateral prefrontal cortex (DLPFC) is involved in the generation of musical structures during improvisation.[8] Flow is defined by Csikszentmihalyi as occurring when an individual is operating in a situation of high opportunities for action and a high capacity to act.[9]

The findings of Bengtsson & Csikszentmihalyi run counter, however, to Limb & Braun. They identified a deactivation of the DLPFC during complex spontaneous musical creativity and

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[6] Siyuan Liu, Ho Ming Chow, Yisheng Xu, Michael G. Erkkinen, Katherine E. Sweet, Michael W. Eagle, Daniel A. Rizik-Baer, and Allen R. Braun, "Neural Correlates of Lyrical Improvisation: An fMRI Study of Freestyle Rap" in *Scientific Reports* 2, 834 (November 2012), DOI: 10.1038/srep00834;
Aaron L. Berkowitz and Daniel Ansari, "Generation of novel motor sequences: The neural correlates of musical improvisation" in *NeuroImage* 41 (2008), DOI:10.1016/j.neuroimage.2008.02.028;
Charles J. Limb and Allen R. Braun, "Neural Substrates of Spontaneous Musical Performance: An fMRI Study of Jazz Improvisation" in *PLoSone* 3, No. 2 (February 2008);
Sara L. Bengtsson, Mihály Csíkszentmihályi, and Fredrik Ullén, "Cortical Regions Involved in the Generation of Musical Structures during Improvisation in Pianists" in *Journal of Cognitive Neuroscience* 9, No. 5 (2007): 830-842.
[7] Arne Dietrich, "Neurocognitive mechanisms underlying the experience of flow" *Consciousness and Cognition* 13 (2004): 746–761.
[8] Bengtsson, Csíkszentmihályi, and Ullén, "Cortical Regions Involved in the Generation of Musical Structures during Improvisation in Pianists" *Journal of Cognitive Neuroscience* 9, no. 5 (2007): 830–842.
[9] Mihaly Csikszentmihalyi and Rustin Wolfe, "New Conceptions and Research Approaches to Creativity: Implications of a Systems Perspective for Creativity in Education," *The Systems Model of Creativity: The Collected Works of Mihaly Csikszentmihalyi* (New York: Springer, 2014): 173.

activation of the medial prefrontal cortex, and activation of the DLPFC during overlearned (written) musical activity which suggests that at a neurological level, spontaneous musical activity is fundamentally different from learned musical activity. Liu et al. were able to replicate the findings of Limb & Braun in their neuroimaging study of freestyle rap improvisation. The authors suggest that implementing other extra-improvisational parameters can lead to activation of the DLPFC, which would account for differences in neuroimaging results. For example, Bengtsson asked subjects to memorize their improvisations as one of the test parameters.

Martin Norgaard has been investigating the question of how musicians improvise for years. In his study "Descriptions of Improvisational Thinking by Artist-Level Jazz Musicians," he recorded seven professional jazz musicians in individual sessions.[10] In these sessions, the musicians were instructed to "Play a blues in F major in a medium-up tempo. Play a melody you are very familiar followed by an improvisation on the blues form. Play long enough that you feel the performance has a formal sense to it. In other words, go until you feel like you can finish. You don't have to decide the exact length beforehand." Norgaard generated a backing track for the musicians to play to consisting of a looped 2-bar swing drum track from an existing recording. Norgaard then converted the recorded audio into a MIDI file and fed that file into notation software to obtain a transcription of the recorded solo. Following the recording session, he interviewed the musician wherein he shared the recording and transcription and asked the musician to reflect on their thought process. Norgaard identified six conceptual categories consisting of two ongoing processes: sketch planning and evaluative monitoring; and four generative strategies: drawing from an idea bank, harmonic priority, melodic priority, and repetition. In another series of studies, Norgaard analyzed 48 improvised solos by Charlie Parker

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[10] Martin Norgaard, "Descriptions of Improvisational Thinking by Artist-Level Jazz Musicians" *Journal of Research in Music Education* 59, no. 2 (2011): 109–127.

and then, along with Jonathan Spencer and Mariana Montiel "modeled musical improvisation in a parsimonious way that mirrors the cognitive principles used by human improvisers" by analyzing the Parker dataset using a Matlab algorithm.[11]

Throughout his research, Norgaard is engaging primarily with cognitive models of improvisation that have been put forth by Jeff Pressing and P.N. Johnson-Laird. Pressing developed a model of improvisation in which improvisations unfold as a chain of interconnected events.[12] In this model, musical decisions are made by either continuing or interrupting some aspect of the event, called arrays, with input taken from the sounds of other players, a referent, goals, or from the performer's memory. Johnson-Laird approaches the question of how jazz musicians improvise with the presupposition that creativity is algorithmic.[13] Under this framework, Johnson-Laird investigates the rulesets, or algorithms, that govern how improvisations unfold. One such algorithm "makes multiple iterations of a stage in which criteria are used to generate ideas and a stage in which other criteria are used to evaluate them."[14] Contained within this ruleset are both implicit and explicit cognitive functions.

Several things are suggested by this body of research that will have implications in the following chapters. The conclusion that a flow state is achieved at the intersection of skill and opportunity demonstrates the need for a ready vocabulary of musical ideas. In other words, improvisers rely on implicitly understood motor patterns and algorithms, thus shifting motor patterns from explicit cognitive functioning to implicit cognitive functioning should be a key aspect of developing improvisation skills.

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[11] Norgaard, "Testing Cognitive Theories by Creating a Pattern-Based Probabilistic Algorithm for Melody and Rhythm in Jazz Improvisation" in *Psychomusicology: Music, Mind, and Brain* 23, no. 4 (2013): 243–254.

[12] Jeff Pressing, "Improvisation: Methods and Models," in *Generative Process in Music: The Psychology of Performance, Improvisation, and Composition*, ed. J.A. Sloboda (New York: Oxford University Press, 1988).

[13] P.N. Johnson-Laird, "How Jazz Musicians Improvise," In *Music Perception: An Interdisciplinary Journal*, Vol. 19, no. 3 (2002), 415–442.

[14] Ibid, 439.

Cultural and Critical Theory of Improvisation

Improvisation has been said to be notoriously difficult to define. In his seminal work

Improvisation, Derek Bailey writes of an encounter between Frederic Rzewski and Steve Lacy,

in which Rzewski asks Lacy to describe in fifteen seconds the difference between improvisation

and composition.[15] Lacy replies, "In fifteen seconds the difference between composition and

improvisation is that in composition you have all the time you want to decide what to say in

fifteen seconds, while in improvisation you have fifteen seconds." Lacy's response was exactly

fifteen seconds long. Such a cryptic response to the question of the nature of improvisation is a

deliberate approach on Bailey's part. In his introduction he describes the difficulty of directly

defining improvisation. He lampoons the phrases "instant composition" and "making it up as one

goes along." Instead, Bailey posits that since improvisation is the most widely practiced yet least

acknowledged musical activity, it would best be defined indirectly by interviewing improvising

musicians of a wide variety of styles and cultures. Flamenco, Hindustani, baroque, jazz, rock,

free, and more, are all improvisational styles surveyed by Bailey through his interview process.

Despite his aversion to a single definition, Bailey does make a distinction between two different

types of improvisation:

> Idiomatic improvisation, much the most widely used, is mainly concerned with the
> expression of an idiom—such as jazz, flamenco, or baroque—and takes its identity and
> motivation from that idiom. Non-idiomatic improvisation has other concerns and is most
> usually found in so-called 'free' improvisation and, while it can be highly stylized, is not
> usually tied to representing an idiomatic identity.[16]

Michael Bullock, while in agreement with Bailey's distinction, prefers the term 'self-idiomatic'

music to 'non-idiomatic.'[17] For Bullock, 'self-idiom' as a term views free improvisational

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[15] Derek Bailey, *Improvisation* (Boston: Da Capo Press, 1992): 141.
[16] Ibid, xi-xii.
[17]Michael T. Bullock, "'The Kind of Music We Play': A Study of Self-Idiomatic Improvised Music and Musicians"
in Boston, Ph.D diss., Rensselaer Polytechnic Institute, 2010.

practices through an ethnographic lens. Whereas Bailey's term seeks to mystify free improvisation and its inspirations, Bullock's term recognizes the presence of personal narrative in the development of an original musical style. He applies the term to his own community of musicians, noting that in his own journey, he has found it productive "to think about improvised music as a meeting place for sets of processes enacted through the use of instruments and sound palettes, and through the interactions of individuals."[18] In essence, Bullock's contention is that improvised music is innately tied to the identity of the person doing the improvising. To understand the music, one must understand the conditions under which the music was made.

Both terms are ultimately inward looking and downplay the role of that which came before, though each term aligns with broader cultural trends as identified by George E. Lewis. In "Improvised Music after 1950: Afrological and Eurological Perspectives," George E. Lewis identifies a dichotomy, defined along dominant- and sub-cultural boundaries, between pan-European-derived musical traditions, dubbed Eurological music, and African-derived musical traditions, dubbed Afrological music. An important distinction of Afrological improvisation, according to Lewis, "is the notion of the importance of personal narrative, of 'telling your own story'. . . Notions of personhood are transmitted via sounds, and sounds become signs for deeper levels of meaning beyond pitches and intervals."[19] Consider Bullock's "self-idiom" in this context, and how it stands in contrast to Eurological notions of improvisation: "Eurological improvisers have tended to look askance on the admission of personal narrative into improvisative activity."[20] Lewis casts this view as "[updating] the concept of a post-Kantian

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[18] Ibid, 8.
[19] George E. Lewis, "Improvised Music after 1950: Afrological and Eurological Perspectives," *Black Music Research Journal,* 16, no. 1. (Spring 1996): 117.
[20] Ibid, 118.

'autonomous significant structure' identified by [Rose] Subotnik in her essays on contemporary Eurological music."[21] Bailey's "non-idiom" follows this rejection of personal narrative.

These discourses demonstrate how various groups of people have sought to understand and contextualize their creative activities within larger sociocultural currents. Some have used improvisation as a means to connect to their communities while others have used to create their own communities. In all of these cases however, improvisation is imprinted by one's personal narrative, be it acceptance or rejection thereof.

This document will focus on practices and pedagogies of improvisation as viewed through Bullock's self-idiomatic lens with respect to Lewis: "Structure, meaning, and context in musical improvisation arise from the domain-specific analysis, generation, manipulation, and transformation of sonic symbols."[22] In this context, "free improvisation" can be viewed as a sandbox to be shaped by the personal narratives of the person engaged in it.

Improvisation in Education

Much of music education in the United States is about learning how to avoid having to improvise. A bold statement to be sure, but the weight of music educational standards has forced improvisation-based activities into specialized arenas. The large ensemble, typically a band and sometimes an orchestra, with its wide ranging and ever-growing repertoire dominates the cultural landscape of K-12 education. While the performance of composed music is valuable, learning an essential creative act like improvisation has unique benefits to neurocognitive development, as previously demonstrated. As it stands, the act of learning how to improvise music can be found in early childhood music education and, in later years of primary education for those music programs with available funding, the jazz ensemble. At the secondary education level, the

[21] Ibid, 118.
[22] Ibid, 94.

undergraduate music major suffers from complete lack of opportunity to improvise unless they are in a jazz ensemble.

There have been numerous studies on the developmental ability of children to improvise. Gabriella Baldi et al., as well as Timothy S. Brophy performed longitudinal studies which found that children's ability to create structure in improvisations increased from age 7 to 10, and age 7 to 9 respectively.[23] In multiple studies, Mark T. Kiehn also found that improvisational skill increased dramatically from grade 2 to 4, but plateaued from grade 4 to grade 6.[24] In contrast, Denise Marie Guilbault studied the effect of harmonic accompaniment on children's tonal improvisations and found that age was not a factor in the children's ability to vocally improvise.[25]

Despite these and many other studies showing the ability of children to improvise, music education in the United States focuses on notated music.[26] Lisa M. Gruenhagen and Rachel Whitcomb surveyed elementary music teachers on their inclusion and the nature of improvisation in the classroom.[27] 53 of 92 respondents stated improvisation accounted for 0% to 10% of class time; 24 teachers stated improvisation accounted for 11% to 20% of class time; 15 teachers stated improvisation accounted for 21% or more of instructional time. At higher grade levels,

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[23] Gabriella Baldi, Johannella Tafuri, and Roberto Caterina, "The Ability of Children Aged 7-10 to Structure Musical Improvisations," *Bulletin of the Council for Research in Music Education,* no. 153/154 (Summer-Fall, 2002): 135-141.
Timothy S. Brophy, "A Longitudinal Study of Selected Characteristics of Children's Melodic Improvisations" in *Journal of Research in Music Education* 53, no. 2 (Summer, 2005): 120-133.
[24] Mark T. Kiehn, "Creative Thinking: Music Improvisational Skills Development among Elementary School Students," *Journal of Education and Human Development* 1, no. 2 (2007);
Kiehn, "Development of Music Creativity among Elementary School Students," *Journal of Research in Music Education* 51, no. 4 (Winter 2003).
[25] Denise Marie Guilbault, "The Effects of Harmonic Accompaniment on the Tonal Improvisations of Students in First through Sixth Grade," *Journal of Research in Music Education* 57, No. 2 (July 2009): 81–91.
[26] Bailey, *Improvisation*;
R. Keith Sawyer, "Improvised Conversations: Music, Collaboration, and Development," *Psychology of Music* 27 (1999): 192–216.
[27] Lisa M. Gruenhagen and Rachel Whitcomb, "Improvisational Practices in Elementary General Music Classrooms," *Journal of Research in Music Education* 61, no. 4 (November 2013): 379–395.

inclusion of improvisation drops off significantly, from a mean percentage time of 13.60% in 1st grade to 2.57% in 2nd grade, and 0% in 4th grade and beyond.[28]

Just as improvisation inclusion drops as grade level increases, so does instructor confidence in teaching improvisation decrease as grade level increases according to NAfME K-12 Achievement Standards. Patrice Madura Ward-Steinman surveyed participants and undergraduates at a vocal jazz workshop to determine confidence in teaching improvisation.[29] Highest means occurred for K-4 achievement standards (3.61-3.22) and lowest for 9-12 achievement standards (2.84-2.40). Using the same methodology, H. Christian Bernhard II surveyed undergraduates and achieved similar results, with the highest means occurring for K-4 achievement standards (3.94) and the lowest for 9-12 achievement standards (3.27).[30] Currently, a vicious cycle exists wherein a majority of current teachers grew up in a culture of non-improvisation and thus have low confidence in teaching improvisation and improvising themselves, which has an adverse effect on the next generation of musicians. Raising confidence in teaching improvisation is a complex problem made more difficult by rigorous achievement standards. The resources investigated in the second and third chapters of this document offer some avenues for educators.

Some empirical research has been conducted on the use of free improvisation in the classroom. Panagiotis A. Kanellopoulos conducted an ethnographic study of eight 10-year-olds with no musical training who engaged in undirected group improvisation. He found that the children objectified the act of improvisation, engaged in thoughtful discussion, and shared

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[28] Evelyn K. Orman, "Comparison of Standards for Music Education and Elementary Music Specialists' Use of Class Time," *Journal of Research in Music Education* 50, no. 2 (Summer 2002): 155–164.

[29] Patrice Madura Ward-Steinman, "Confidence in Teaching Improvisation According to the K-12 Achievement Standards: Surveys of Vocal Jazz Workshop Participants and Undergraduates" in *Bulletin of the Council for Research in Music Education* No. 172 (Spring 2007): 25-40.

[30] H. Christian Bernhard, "Music Education Majors' Confidence in Teaching Improvisation," *Journal of Music Teacher Education* 22, No. 2 (2012): 65–72.

intentionality.[31] Pamela Burnard investigated children's meaning-making and musical interaction in the informal group improvisations of 18 children. She found that they had dynamic interactions by cooperating over group decision-making and shifting roles between leader and follower.[32] Finally, Theano Koutsoupidou and David J. Hargreaves, using Webster's Measure of Creative Thinking in Music II, found in a quasi-experimental study that including improvisation as an independent variable produced a higher mean score of creative thinking in children.[33] Taken together, these results of these studies demonstrate the value of a free improvisational space in the classroom. They offer some practical implications for educators as well. Burnard suggests to "Approach improvisation as a process of musical interaction. . . assist children to be musically inclusive. . . exploit musical difference in musical ways. . . [and] use children's talk to reconstruct their experience."[34]

Maud Hickey has also written extensively on free improvisation pedagogy and has long been a proponent of its inclusion into music curricula at the primary and second level. In 2015 she "observed and interviewed four expert improvisation pedagogues as they directed free-improvisation ensembles in university settings."[35] Guiding her approach were four research questions. With the first question she identified strategies and approaches. Each pedagogue had their own set of tools comprised of a "repertoire of techniques" that could guide improvisations; used a unique vocabulary distinct from traditional music vocabulary and included terms like

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[31] Panagiotis A. Kanellopoulos, "Children's Conception and Practice of Musical Improvisation," *Psychology of Music* 27 (1999): 175–191.

[32] Pamela Burnard, "Investigating Children's Meaning-Making and the Emergence of Musical Interaction in Group Improvisation, *British Journal of Music Education* 19, no. 2 (2002): 157–172.

[33] Theano Koutsoupidou and David J. Hargreaves, "An Experimental Study of the Effects of Improvisation on the Development of Children's Creative Thinking in Music," *Psychology of Music* 37, no. 3 (2009): 251–278.

[34] Burnard, "Investigating Children's Meaning-Making and the Emergence of Musical Interaction in Group Improvisation, *British Journal of Music Education* 19, no. 2 (2002): 169.

[35] Maud Hickey, "Learning From the Experts: A Study of Free-Improvisation Pedagogues in University Settings," *Journal of Research in Music Education* 62, no. 4 (2015): 430–445.

"*fabric, sonority, intensity, wave,* and *rumble*;" and offered feedback to their students.[36] Her other research questions focused on the role of the pedagogue, their dispositions, and other attributes. In general, Hickey found that pedagogues viewed their roles as facilitators more than directors, that they did not plan rehearsals and instead valued spontaneity, and that they placed importance upon creating a safe and comfortable psychological space.

The goal of this document is to provide greater understanding of improvisation in theory and in practice such that others of college age or older may discover their own personal practice of improvisation, to learn for themselves what a practice of improvisation might be and to develop the tools necessary to bring this knowledge to others. In this chapter I have outlined some of the primary discourses concerning improvisation relating to its definition, theoretical frameworks, and pervasiveness (or lack thereof) in American education. In Chapter 2, I will explore four resources that are available to both educators and self-motivated musicians seeking to learn how to improvise. These resources will differ in terms of their intent and pedagogical focus. Some were developed with pedagogy in mind, and some are performative in scope. Some will emphasize pattern recognition and development while others teach structural forms. Chapter 3 will consist of discussion of these explorations, contrast in their approaches, and analysis of what each can provide for musicians. The conclusion of chapter 3 will establish a framework for a personal practice of improvisation. Finally, Chapter 4 will concern of a series prompts designed to encourage improvisation. The development of these prompts was informed by my own experiences in learning how to improvise, as well as what I have learned in the course of researching and writing this document.

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[36] Ibid, 434–437.

CHAPTER 2. INSTRUCTIONAL METHODS OF IMPROVISATION

Growing up, I watched my brother learn how to play guitar, drums, and keyboard all by ear. His ability to figure out chord progressions to his favorite songs on the piano, to harmonize a melody he was listening to, was an amazing skill to me, and one that I had never developed in the same way. I myself learned to read music notation and learned to play the clarinet, but without sheet music in front of me or my instrument in my hands, I felt creatively helpless. Advancing through my first graduate degree at Southern Illinois University led me to feel this even more keenly as I watched my close friends and mentors create amazing music through composition and improvisation. I wanted to expand my musical skills beyond performative interpretation, so I thought I would learn how to compose. Going to my teacher, Eric Mandat, I asked for some lessons, but instead of obliging me, he told me to join the free improvisation ensemble. Next semester, I did. The first day was terrifying, yet freeing. Rules went out the window and we could play whatever we wanted. We threw whatever we wanted at the wall, recorded it, and then discussed it, deciding for ourselves what worked and what did not, what we liked and what we did not like, what we noticed. Over time we reintroduced some boundaries and refined our ideas of when to play and when to remain silent, but those first experiences stuck with me and I continued to freely improvise. Three years later, at Bowling Green State University in the first year of my doctorate, I was improvising alone at night and happened upon a lick that I enjoyed. It was a simple motion, just the successive lifting and lowering of my index fingers, but the sound stayed in my head for weeks until I realized that I needed to develop it, and I began composing. The fruits of this labor, my First and Second Meditations, I performed on my first doctoral recital.

The greatest lesson that I learned through this journey was that creativity can be learned. Much of the research presented in the previous chapter supports this conclusion, yet often the barrier between interpretation and creation that I experienced can seem impassible. If the school a person attended growing up did not have a jazz program or if they thought they were unable to learn by ear, then that person may never improvise, and yet improvisation is fast being recognized as a crucial component of building musicianship. Teachers are increasingly being asked to incorporate improvisation into their instructional toolkit, regardless of their own background in improvisation.

In this chapter, I will examine some instructional methods that are available for teachers to use as they seek to build a sense of creativity in themselves or in their students. Some of these methods are based in textbooks, some are based on musical compositions and some are approaches that have been notated in non-standard ways. There are all kinds of ways to hone one's sense of creativity.

These resources exist across a spectrum of intention. That is to say that some resources were produced with the express intention of teaching improvisation skills while others are musical compositions intended for performative interpretation. My reasoning for this is to showcase the potential for multiple approaches to learning how to improvise and to developing creativity through improvisation. Furthermore, following my examination of these approaches, comparisons between resources can be made and a synthetic approach to developing one's own creative sense becomes possible.

The four resources that will be examined in this chapter are *Developing Musicianship Through Improvisation* by Christopher Azzara and Richard Grunow, *Search & Reflect* by John Stevens, *Cobra* by John Zorn, and Anthony Braxton's Language Types. Azzara and Grunow's

three volume T*eaching Musicianship Through Improvisation* is written in a thoroughly textbook-style, meant for inclusion in a classroom curriculum. It provides a good basis for teaching stylistic improvisations, and its use of folk melodies creates potential for a shared sense of music, but it risks limiting a musician's understanding of improvisation due to its reliance on basic tonal structures. *Search & Reflect* is a collection of compositions or "structures" for group improvisation. These structures allow musicians to explore basic concepts of group free improvisation, but their reliance on group settings means that it is difficult to practice the concepts alone. In a similar vein, John Zorn's *Cobra* is a game piece in the improvising world with a complex rule set which is intended to work as a structure for a group improvisation. Its complicated structure, however, requires a group setting as well as careful sequencing from the leader. Anthony Braxton's Language Types are an iconic vocabulary of musical intention that he has developed for his own music, but which can be put to use on their own as guides for creative musicmaking. His complex vocabulary, however, can make the context surrounding his musical ideas difficult to understand.

I have chosen these texts because they are all resources I have personally used to learn how to improvise, with the exception of *Developing Musicianship Through Improvisation*. I was introduced to Azzara and Grunow's textbook in the first year of my doctorate by one of my professors as a resource for learning how to improvise. I was intrigued by it for several reasons, including its carefully researched approach and its visual "classroom appeal." It takes the place of a mainstream representative in my choices, but without the overt adherence to a jazz idiom that can be commonplace in mainstream improvisation textbooks.

I have established a series of questions, outlined below, that will guide my analysis of each of these resources. These questions were conceived with the intention of providing the

reader with a summary of each resource's pedagogical implications as they pertain to developing an improvisative sense, as well as to give the reader a sense of the range and depth of improvisation development one can achieve through that resource. In practice, one can grow their own creative sense the most through a varied application of multiple resources, and as such, I would recommend any or all of these resources to serve as initiations into improvisation, to be followed by the budding improviser setting out on a path of their own choosing. Chapters 3 and 4 of this document will trace my own such path and provide others a roadmap for themselves to develop their own practice of improvisation.

What musical concepts does this text emphasize? Does the text explicitly define any improvisative concepts? Here, I define musical concepts as those elements essential to the human process of creating and understanding music. This ranges from the commonly attributed fundamentals of music such as rhythm, melody, harmony, timbre, and texture to neurocognitive aspects such as listening to or producing sound. I define improvisative concepts as ideas, approaches, and methods that encourage in-the-moment production of sound with musical intent. There exists some intersection between musical concepts and improvisative concepts. For example, listening is an integral component of both musicmaking in general and improvising music specifically. This intersection becomes more complicated when considering cultural or stylistic definitions of improvisation.

In what settings might this text be used? Is there an expectation of a specific setting implied in the text? I will be analyzing a varied array of resources that present themselves through English, Western music notation, combinations thereof, and graphic notations. In many of these cases, the resource, whether through its presentation or via the text itself, may suggest an ideal setting in which it can be most valuable. *Is there a sequence from one exercise to the next?*

Are the exercises themselves strongly sequential? As stated previously, some resources have a clearly referenced audience or setting, while others are compositions that make excellent pedagogical tools for learning how to improvise. *Does the text build in a way for musicians to assess their progress?* Benchmarks are helpful for several reasons. Sometimes it can be unclear to an individual if progress is being made while learning on their own, or if an instructor unfamiliar with improvisation skills development is looking to develop this skill in their students, having assistance from the text in assessing progress can be helpful. *Are the concepts transferrable across styles?* This may be a difficult question to answer, as there exists a broad range of music styles that incorporate improvisation to varying degrees. In general, the answer will be yes, conditionally, as most efforts to learn how to improvise will emphasize listening to harmonic patterns or melodic formings.

Christopher Azzara and Richard F. Grunow, *Developing Musicianship Through Improvisation*

This three-volume set of textbooks takes a progressive skills-building approach to teaching improvisation and uses folk songs as a musical vehicle. To illustrate the general structure of these texts, the first book is divided into five Units, each oriented around a different familiar tune, each Unit being further divided into six Parts: Repertoire, Patterns and Progressions, Improvising Melodic Phrases, Learning to Improvise – Seven Skills, Reading and Writing, and Learning Solos. The authors also include a rating scale for assessing one's improvisation, rhythm, expressivity, harmonic progressions consisting of tonic and dominant chords, and harmonic progressions that include the subdominant. The textbook includes two CDs which provide musical examples and accompanimental figures for individual exercises.

This text emphasizes listening, particularly as an initial approach to each exercise. In the introduction, the authors compare learning music to learning a first language:

Think for a moment about how you learned language. First, you listened to language. From birth and even before, you were surrounded by the sound of language and conversation. You absorbed these sounds and became acculturated to the language. Soon you began to imitate the words and phrases you heard spoken by your parents and siblings. Before you were successful at imitating, you were praised for your efforts and encouraged to 'babble' even when the sounds you were making did not make complete sense to others. Eventually you began to associate words (names) with people, things, feelings, desires, etc., and you began to make statements and ask questions that were your own.[37]

Here, the authors lay out their argument for organizing their text as they do. They identify several key similarities between the process of learning music and the process of learning a language. Listening to music allows one to internalize music. The more internalized the music becomes, the more one can imitate it in their own practice. Over time, the improvising musician begins to be able to play in the style that they are imitating. This is akin to moving beyond "babbling" to stringing together vocabulary in a way that others familiar with the style can understand. Each unit has exercises dedicated to teaching the tonal harmonic progressions and melodic gestures that make up the associated tune. These are the analogous grammar exercises and word lists. While each exercise includes instructions to *listen* (to the audio CD), the fact remains that every tune which provides the material for the unit in addition to a majority of the exercises are notated, which allows for the possibility of the reader to "peek" and defeat the purpose of the exercise. Readers must remain dedicated to the honor system.

Grunow and Azzara identify "personalization, spontaneity, anticipation, prediction, interaction, and being in the moment" as key elements of improvisation.[38] The exercises in each part gradually introduce these concepts to the musician. Each exercise begins by asking the musician to listen to examples on the included audio CD. The first exercises follow up by asking

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[37] Christopher Azzara, Richard F. Grunow, *Developing Musicianship Through Improvisation*, Introduction (GIA Publications: Chicago, 2006): iv.
[38] Azzara and Grunow, *Developing Musicianship Through Improvisation*, Introduction: iv.

the musician to echo (imitate) what they hear, while later exercises ask them to improvise. Part 2 – Patterns and Progressions breaks down the basic rhythmic, tonal, and harmonic patterns that make up the tune. These beginning exercises reinforce tonic and dominant functions. The subdominant function is introduced and incorporated into exercises in Unit 4 of volume 1.

In Part 3 – Improvising Melodic Phrases the authors break down the folk melodies into antecedent and consequent phrases. The first exercise asks the musician to listen to the audio CD wherein the performer sings the original antecedent phrases of the folk tune and then improvises a consequent phrase over the original harmonic progression. The second exercise asks the musician to do the same, and the third shifts the exercise from the musician's voice to the musician's instrument. The final exercise in this Part asks the musician to improvise both antecedent and consequent phrases. Part 4 – Learning to Improvise reviews and combines the skills that were taught in the previous parts through seven skill building exercises. As in the earlier Parts, the musician separately listens to the performer on the audio CD and then performs the same task. The first series of exercises ask the musician to improvise rhythm patterns to the bassline of the folk melody, to establish tonality by breaking the harmony into 4 parts and singing each line with solfege, and to sing and play the harmonic rhythm of the folk melody on each of the 4 parts with solfege and on a neutral syllable. The fifth exercise introduces tonal patterns in macrobeats, the sixth introduces improvised rhythmic patterns to the tonal patterns, and the final exercise incorporates decoration and embellishment in the form of nonharmonic tones.

Musicians using this text to learn how to improve their creative sense must have at least some familiarity with Western-style music notation systems and tonal harmony. There is a brief overview of rhythm syllables and solfege in the introductory material where the authors preview the basic rhythmic and solfege structures that will constitute the makeup of each unit, shown in Figure 1. "Long, Long Ago," the Unit 1 melody, is the simplest song. It is in duple meter with unsyncopated combinations of quarter notes and eighth notes. Its harmonic content consists only of tonic and dominant chords and two- or three-note melodic motives outlining the underlying triadic harmony. The melody of Unit 3, "Joshua," is the first introduction to minor harmonies and minor solfege. Here, the authors have decided to use La-based minor as opposed to Do-based minor. This will be a boon to musicians who are already versed in La-based minor as well as an opportunity for those who learned Do-based minor to become familiar with a new system. La-based minor can be advantageous for listening-based learning because it grounds the musician in relative key areas. If readers do not have a firm grasp of these rhythmic, harmonic, and melodic concepts, the authors make note of a reference for further reading, the Teacher's Guide for *Jump Right in: The Instrumental Series* by Grunow, Gordon, and Azzara. If this is the case, however, it may be advisable to seek alternative improvisation learning resources.
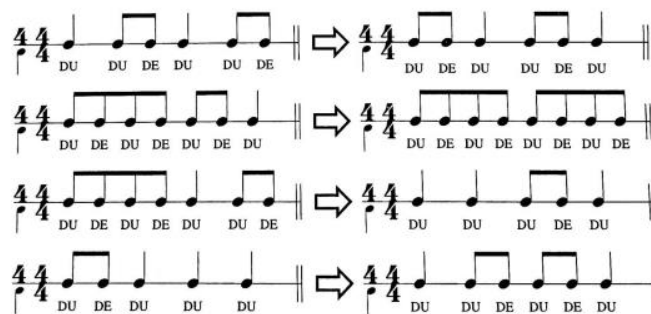

Figure 1. Preview of basic rhythmic structures for Unit 1 of *Developing Musicianship Through Improvisation* by Christopher Azzara and Richard Grunow

Can musicians using this textbook for their own personal progress or as teaching tools measure their or their students' progress? And can they have a reasonable expectation that the concepts they learn through using *Developing Musicianship Through Improvisation* are generalizable? In general, yes. The authors sample from a broad range of genres in which tonal improvisation is commonly found. These genres include folk, Latin, spirituals, blues, and jazz, as well as original music written by Azzara. After completing the sequence of three books, a musician could expect to have established a foundation in tonal improvisation with an emphasis in jazz-related styles. Books 2 and 3 include a short list of suggested repertoire the musician can use to expand on the included melodies. The only limitation in the repertoire presented by the text and suggested repertoire is that it draws only from tonal music with a European/American understanding of harmonic progression and tonality. This limitation is easily circumvented with other educational avenues, some of which will be addressed by the other texts in this chapter.

John Stevens, *Search & Reflect*

John Stevens was a London-based drummer and trumpeter, and the focal point of the Spontaneous Music Ensemble. SME began in the mid- to late-1960s as a group with fluctuating membership playing in the Little Theatre Club in London. While Stevens himself was the only core member, Trevor Watts, Kenny Wheeler, Evan Parker, Derek Bailey, and many others served as primary members until the dissolution of SME with Stevens' death in 1994.[39] From its inception, Stevens maintained a fascination with group improvisation dynamics and sought at all times a fully cohesive group sound where no individual player would stand out. He would share his many ideas surrounding this topic as well as his own theories of music with other

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[39]Martin Davidson, "John Stevens: an appreciation," European Free Improvisation Pages, http://www.efi.group.shef.ac.uk/mstevens.html (Accessed September 5, 2019).

professional and aspiring musicians through workshops. *Search & Reflect* is a collection of these

ideas.

This book is organized into front matter which contains several memoirs and a foreword

by individuals indebted to Stevens' teaching, as well as an introduction by Stevens himself,

"Preliminaries," and "Fundamental Elements of Music;" a Rhythm Section divided into 12

pieces; an Improvisation Section with 16 pieces; an Appendix with suggestions on how to vary

some of the pieces; and a notated composition by Stevens titled "Humble Seaman Hayes."[40]

Many of the pieces are further broken down into 'Stages' of increasing complexity.

The foremost element of music emphasized by Stevens in his handbook is *rhythm*. In

support of his decision to devote an entire section to teaching rhythmic concepts, he writes in the

introduction:

> [Rhythm] skills are as central to improvisation as those looked at in the improvisation
> section itself, because rhythm is fundamental to the language of music. For instance,
> when two people converse while walking down the street, both must move at the same
> pace in order to communicate. Even if the people use different step-lengths, these steps
> must be synchronized rhythmically in order to converse. In music, the best conversations
> are those where the participants are saying what they want to say, at the same time paying
> full attention to what the other person is saying. Rhythmic awareness allows an individual
> to be dynamically creative.[41]

The analogy between having a conversation while walking and improvising together carries

through to the pieces in the Rhythm section. If this analogy is further analyzed, it could be said

that, for Stevens, players' individual subdivisions do not need to align, but there does need to

exist an agreement on the overall pace of the piece, whether it be at the measure or a macrobeat.

The first piece in the Rhythm section demonstrates this idea. Called "One Two," Stage 1 of this

piece asks for the group of musicians to be organized into a circle. One player says "One," then

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[40] *Search & Reflect* is dedicated to the memory of Derek Humble, Phil Seamen, and Tubby Hayes
[41] John Stevens, "Introduction," *Search & Reflect* (Community Music, Ltd, London: 1985; Republished by
Rockschool, 2007): 2.

the player to their left says "Two." The length of space between "One" and "Two" determines

the tempo of the piece. The first player restates "One" simultaneously with the entrance of the

third person, who also says "One." The fourth person subsequently enters, speaking "Two" in

time with the second player. This continues until all players are speaking either "One" or "Two."

Stage 2 is, as Stevens puts it, the crux of the piece. The players "[explore] rhythmic permutations

that arise from jumping from one beat to another."[42] By way of example, a player may say, "One

. . . One, Two . . . Two . . . One . . .etc." They must stay on the beat they are counting for at least

one repetition before jumping to the other beat, but Stevens encourages them to stay on the beat

"for a while in order to see what it feels like."[43] Stage 3 introduces hand claps in between the

beats. Players say their respective beat and then clap after it, but they do not clap after a beat on

which they do not speak, so including jumps, a player may perform, "One *clap* . . . One *clap*

Two *clap* . . . Two *clap* . . . One *clap* . . .etc." Stage 4 has the players "Putting One Two on

Instruments." Stevens suggests that each person choose a low note, a high note, and a note in

between. These become, respectively, beats One, Two, and in-between.

Following these stages are some extensions and variations on "One Two." "One Two

Three" and "One Two Three Four" are introduced in a similar albeit accelerated manner as "One

Two." "Mixed Doubles" is for two pairs of players using hand drums. In this version, each

player's left hand is "One" and their right hand is "Two." The final variation of "One Two" is

called "Flower." This is the version of the piece of most value for those who wish to use "One

Two" as a vehicle for teaching or learning improvisation. The general structure and pulse-

keeping nature of the piece is retained, but instead of hand claps, players may embellish the open

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[42] Stevens, *Search & Reflect*, 10.
[43] Stevens, *Search & Reflect,* 11.

space between beats with improvisations. The question of what to play is open ended, with the only constraint being that the length of the improvisation cannot overlap the beats.

While great attention is given to the process of starting and developing "One Two," the question of an ending for "One Two," the reader may notice, is never addressed until the final instruction for "Flower." Here, Stevens writes, "To finish the piece you can go back to your original rhythmic place (which is either the One or the Two). Alternatively, you could treat it as an open-ended piece, and go into a free group improvisation, which will have a conversational quality because of the discipline preceding it. This should naturally resolve itself."[44] In general, "One Two" and its extensions are tools for teaching a group sense of pulse more than musically performative works, and so it is implied that the person teaching the piece would generally be the one to start and stop the group. "Flower" by contrast has a stronger performative angle, with the opportunity for solos, duos, trios, or more to develop between numbers, which in turn gives the players the chance to introduce their own musical thoughts into the structure. In the second of Stevens' suggested endings, he mentions how the group free improvisation would "naturally resolve itself." In my own learning in group free improvisation settings, this was referred to as "finding an ending." The nature of the ending changes with the content of the improvisation, but in general musicians searching for an ending should listen for gestures like long, tapered sustains or short, strongly punctuated sounds followed by extended silence. These and similar gestures are common signs of structural closure.

The "Rhythm" section explores various ways of measuring sound in a group context. "Improvisation" on the other hand, explores sound production in a group context. The difference lies in how each musician relates to the other over time. The structure of this relationship is

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[44] Stevens, *Search & Reflect*, 22.

provided in the first section whereas in "Improvisation" the relationship emerges from how the

sounds produced by the musicians interact. The first two pieces in this section, "Click Piece" and

"Sustain," can demonstrate this contrast. In "Click," each individual musician attempts on their

own to produce the shortest sound that they can. It should be "short, punchy or 'weighty.'"

While the click should not change in any way, the challenge, Stevens goes on to say, "is to be

able to reproduce the *physical process* that produces the sound."[45] This direction encourages the

musician to turn their focus on the action rather than the product. A singer or wind player would

be noticing and replicating how their body feels as they inhale, the muscularity of engaging the

body to exhale; a drummer would consider how their arm moves and where they are striking

their instrument. "Sustain," in obvious contrast to "Click," asks musicians to produce sounds and

sustain them for as long as an exhaled breath. Each individual sits in a relaxed manner and

slowly inhales and exhales several times, eventually singing or playing a single note or sound in

a comfortable register on the exhale, and which lasts the length of the exhale. Stevens asks the

musicians to "sustain the note to as near the end of [their] breath length as possible."[46] In "Click"

and "Sustain" balance within the group sound is an important consideration. People playing

naturally soft instruments should project as much as they are able while people playing naturally

loud instruments should take care not to dominate the group texture. Singing should be done

confidently and with projection in mind.

Search & Reflect exhibits some sequencing between pieces. The book's progression

generally flows from Stevens's considerations of the fundamentals of music, shown in Figure 2.

He defines these broadly in such a way as to describe fundamentals common to all cultures:

> If sound is taken as a starting point, this immediately implies its opposite: the absence of
> sound, which is silence. When we are making music the aim is to be aware of silence as a

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[45] Stevens, *Search & Reflect*, 63.
[46] Stevens, *Search & Reflect*, 65.

positive musical ingredient existing alongside sound. . . Both of these elements {SOUND and SILENCE) have various properties and usages, one of which is DURATION.[47]

A binary relationship exists in the possibilities of sound itself. For Stevens, this relationship manifests as clicks (described above as the shortest possible sounds) and sustains (the longest possible sounds). Stevens then extrapolates his definition of rhythm from these binary conceptions of sound and silence: "Silence also has the property of duration. As soon as we choose the length of the silence that separates the click and sustain, we are making a RHYTHMIC choice. Through the combination of sounds of different lengths and silences of different lengths, RHYTHM becomes manifest as the next fundamental in music."[48]
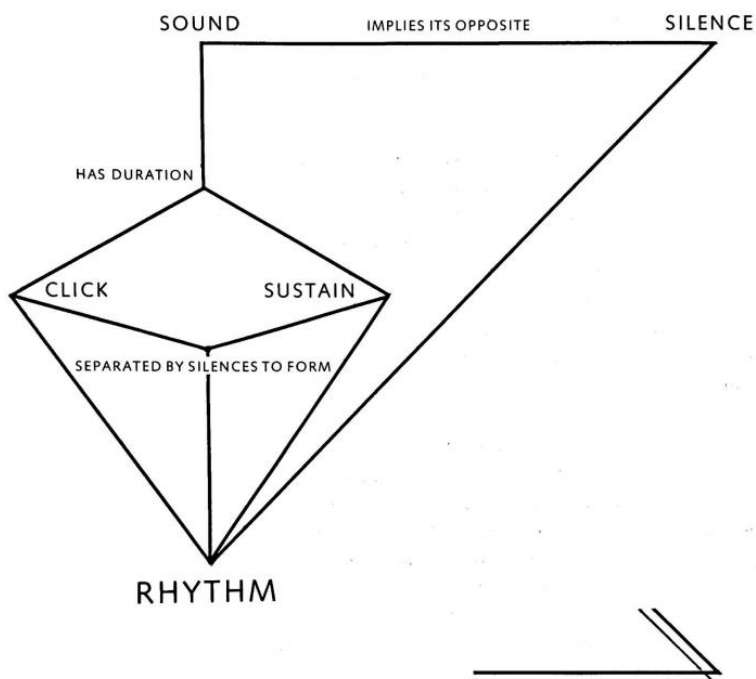

Figure 2. A visual representation of the fundamental elements of music in *Search & Reflect* by John Stevens.

The "Rhythm" section of *Search & Reflect* is largely built on the first piece, "One Two" and its variations. Several pieces that follow have a note to not attempt the piece until players are

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[47] Stevens, *Search & Reflect*, 5.
[48] Stevens, *Search & Reflect*, 5.

comfortable with "One Two." The book moves beyond the "beat space beat" structure of "One Two" with "Rhythm Tree." In this piece, musicians explore rhythms in relation to each other, beginning with 4/4 and 3/4 meter and its basic subdivisions and moving through 2:3 and 3:4 cross rhythms. The "Improvisation" similarly begins from the most basic concepts Stevens has introduced: clicking sounds and sustaining sounds. From here, musicians are offered two variations on "Sustain:" "Happy Birthday" and "2 Albert." In "Happy Birthday," the group chooses a familiar tune and, similarly to "Sustain," each musician sustains each syllable for an entire breath. "2 Albert," an homage to Albert Ayler, replaces the long sustained single pitch with singing or playing as fast as possible for the length of the breath.

"Search and Reflect," the title piece of Stevens' text, "develops our skills at being able to listen to others while playing at the same time."[49] In the first stage of the piece, Stevens combines the ordered entrances of "One Two" with "Click." Stages 2 through 5 ask each musician to, on their instrument, copy as best as they can the sound that the previous musician made, which would include a 'whiffed' click and later any rhythmic mistakes that may occur. These stages emphasize listening to the group and identifying dominant clicks. Stage 6 is subtitled "Search." Here, musicians play their clicks in their own time during which, with eyes closed, they are to listen to and identify every other instrument, continuing until everyone has identified each other. Stage 7, subtitled "Reflect" incorporates the copying of earlier stages into the texture of Stage 6. Musicians copy every other instrument in the group as rapidly as possible, and after having done so, continue to reflect the dominant click in the texture until everyone has finished their own reflections. Stage 8 replaces the clicks with 'flurries,' which Stevens defines as "short smears of notes lasting no more than a beat."[50] This Stage asks the group to repeat

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[49] Stevens, *Search & Reflect*, 69.
[50] Stevens, *Search & Reflect,* 74.

Stages 1 through 6 using flurries instead of clicks. Stage 9 is subtitled "Search and Reflect."

Here, musicians enter together in a flurry. Immediately upon completing their flurry, each

musician then reflects another flurry that they heard in the group texture. This rapid movement

continues until everyone has reflected everyone else. Finally, in a note for "Search and Reflect"

as a performance piece, Stevens suggests that "Your attention should be directed away from your

own sound. While retaining the sound balance and general activity which went before, each

person is listening to the *overall group sound*, (excluding themselves), and reflecting it in an ad

hoc, subconscious way."[51] Gradually, each musician can bring their awareness back to their own

playing and adjust it according to the group sound. If everything goes as Stevens hopes, then

what should arise is a "meaningful free group improvisation."

This text provides no assessment rubric or any other standardized way to assess your

progress or your student's progress. The majority of pieces, however, do include one or more

"Checks" or "Points to Watch" in which Stevens emphasizes certain concepts or instructions

within the piece. For example, "Ghost" is a piece with two objectives: "One is to provide the

opportunity for a soloist to play completely freely" and, more importantly, "for the rest of the

group to 'ghost' the soloist, imitating as closely as possible the rhythms and pitches of the solo,

as it is being played, until the soloist has finished."[52] Musicians should "Check" that their

dynamics allow for the soloist to be heard by everyone at all times, and they should feel

comfortable stopping the piece at any time if they feel an imbalance between soloist and

ghosters. Stevens also reminds musicians to be hyper-aware of and responsive to the soloist. If

the soloist pauses, the ghosters also pause.

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[51] Stevens, *Search & Reflect*, 76.
[52] Stevens, *Search & Reflect*, 88.

Search & Reflect teaches from the perspective of free group improvisation. The group of British improvisers surrounding and including Stevens developed this style of group play in an effort to make music that was uniquely their own and not identifiably related to any other style. Derek Bailey called it "non-idiomatic."[53] Even so, the influence of African American avant-garde music can be felt in the text. One of the pieces in the Improvisation section is called "2 Albert" in homage to Albert Ayler, a prominent black avant-garde jazz saxophonist and composer. So-called non-idiomatic free improvisation has its roots in the free jazz movement, as developed in the music of Charlie Parker, Ornette Coleman, and Ayler.[54] Despite the largely unacknowledged influence of African American musicians, Stevens espouses a universal approach to understanding music much in keeping with Cage-ian views. He speaks of music in terms of durations, sounds and silences. The content of these sounds is secondary, concepts of harmony and melody tertiary.

If *Search & Reflect* is meant to be a teaching tool, then this implies that the musician who has thoroughly learned every piece in *Search & Reflect* has also internalized a universal approach to understanding music. Would this work in practice? In other words, are these concepts transferrable across styles? I would argue that they are, to an extent. The major concepts that Stevens emphasizes in all his works are important to making music with others, and these concepts are sometimes overlooked in other resources. The idea in the titular work "Search and Reflect" of producing sound without thinking about the sound subordinates explicit neurocognitive functions and exercises implicit neurocognitive functions. This same idea is at

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[53] Derek Bailey, *Improvisation: Its Nature and Practice in Music*, (Cambridge, MA: Daco Press, 1993): xi-xii.
[54] George E. Lewis, "Improvised Music After 1950: Afrological and Eurological Concepts," *Black Music Research Journal* 16, no. 1 (1996): 91-122.

the center of the work "Triangle." Research by P.N. Johnson-Laird and Martin Norgaard[55]
investigating how musicians improvise supports the necessity of implicit cognitive functioning in
improvisation. However, Norgaard's research also demonstrates the importance of a memory
bank of ideas with which to support implicit cognition. In his experiment wherein he asked artist-
level musicians to improvise and then to verbally respond to recordings of these improvisations,
he noted that "in most instances. . . ideas were not inserted note for note but were adapted in
accordance with the harmonic, melodic, and stylistic contexts in which they were applied."[56]
Search & Reflect, while providing pieces that work well as structures for developing a creative
approach to improvisation, does not teach style or genre to any great extent. There are pieces
within that provide the opportunity to develop one's listening as it relates to tuning or chord
structure, but they eschew any mention of functional tonal harmonic progressions in favor of
developing sensitivity to microtonal variations of pitch or exploring "the harmonic permutations
available from a simple [C major] scale."[57]

  Search & Reflect is not a workbook for individual study and practice. Its value lies in
focusing group interaction through improvisation. As such, this resource can be utilized in studio
or ensemble settings as group exercises. The way the pieces are structured allow for progression
to take place over several meetings. Furthermore, as musicians get comfortable with the
parameters of a certain piece, they can direct their attention away from "performing" and more
towards "interacting." This can also be done by recording performances, then playing them back
and discussing as a group.

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[55] P.N. Johnson-Laird, "How Jazz Musicians Improvise" *Music Perception: An Interdisciplinary Journal* 19, no. 3 (Spring 2002): 415-442; Martin Norgaard, "Descriptions of Improvisational Thinking by Artist-Level Jazz Musicians" in *Journal of Research in Music Education* 59, no. 2, 109-127.

[56] Martin Norgaard, "Descriptions of Improvisational Thinking by Artist-Level Jazz Musicians" *Journal of Research in Music Education* 59, no. 2, (2011): 122.

[57] Stevens, *Search & Reflect*, 51.

John Zorn, *Cobra*

In the 1970s, the composer and saxophonist John Zorn "began to work out complex systems harnessing improvisers in flexible formats."[58] These complex systems, often existing in written form only on chalkboards, were created to be played by musicians that Zorn knew and worked with on the East Side of Lower Manhattan. Through oral transmission, these works with names like *Lacrosse* (1976), *Pool* (1979), and *Track and Field* (1981) became widely disseminated and performed by musicians in professional settings and workshops all over the world. They came to be known as game pieces and have grown into Zorn's most performed body of work. The best-known of these game pieces is *Cobra* (1984).

The text instructions for *Cobra*, being in essence a guide for how to perform the piece, do not explicitly define any musical concepts like the first two resources do. Rather *Cobra* is an elaborate structure for realizing various performative ideas. The basis for the structure lies in the relationship between the prompter and the musicians. Ideally, for Zorn, at least 10 players should be present.[59] Considering the potential for complexity within the ruleset of *Cobra*, this implies that not only is communication between the group and the prompter important, but communication between players within the group is also necessary for a meaningful performance.

In practice, this means that musicians must direct their focus on several structural layers simultaneously. Cues from the prompter decide what players play and how they relate to each other. The "Pool" cue, for example, signals for musicians not already playing to begin playing while those who are playing must either stop or radically change what they are playing.

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[58] John Zorn, "The Game Pieces," *Audio Culture: Readings in Modern Music*, eds. Christoph Cox and Daniel Warner (New York: Continuum, 2006): 196.

[59] Kevin Whitehead, "A Field Guide to *Cobra*," in *Pulse!*, 112; quoted in John Brackett, "Some Notes on John Zorn's *Cobra*," *American Music* 28, no. 1 (2010): 70-71.

"Substitute" exchanges those musicians who are playing with those who are not playing. A "Trade" cues a series of solos that chain off each other. Prompters can also cue three different "Sound memories" which can be thought of as snapshots of whatever the musicians are playing at the time. Later, when one of these "Sound memories" is cued, musicians must reproduce as closely as possible the content of that snapshot. Even these basic rules require a lot of concentration on the part of the musicians, especially if they have not improvised before. More likely than not, beginning improvisers will not have much opportunity to consider what they are playing in response to cues from the prompter.

While Zorn considers it to be a performative work, as a teaching tool, *Cobra* is valuable as a group improvisation laboratory in a class or ensemble setting where there is a teacher who can act as the prompter and multiple students. Careful sequencing by the prompter and the use of recording devices can increase the pedagogical value. Beginning improvisers will, because of the attentional complexity, benefit from recording their *Cobra* sessions so that they have a chance to evaluate their own creative offerings.

Sequencing *Cobra* is aided somewhat by the layout of the score. Arranged in two columns, the left column provides text-based (rather than notation-based) directions for the prompter, while the right column details "guerilla systems." A guerilla system is a special case where a musician assumes command of a "squad" of two other musicians and operate independently of the prompter. This system is generally more advanced but could be of value after the group has gained a thorough understanding of the operations in the left column. A more advanced improviser can serve as squad leader, taking two less experienced improvisers under their wing.

The left column is divided into six groups called "mouth," "nose," "eye," "ear," "head," and "palm." These indicate how the prompter is to signal to the group which direction to take, pointing to the specific body part as indicated. Mouth cues are the most basic. Pool and Substitute, described above, are included in this set, as is "Runner" where the prompter chooses two players to come in at a downbeat, and "Sub crossfade" which a crossfaded version of Substitute. Nose cues include solo and duo events such as "Trades" described above; "Duos" and "Buddies," which are alike except that Duos may occur any number of times while Buddies occurs only once; and "Events 1, 2 or 3" which are individual sounds that occur up to three times. Eye cues are two different types of "Cartoon Trades." Similar to the nose cue "Trade," a Cartoon Trade is passed between players by making eye contact, but very quickly. An Ordered Cartoon Trade is where the trade occurs between adjacent musicians. Ear cues consist of three symbols: $M\Delta$, $G\Delta$, and V. "M" stands for music, "G" stands for group, and "V" stands for volume. Δ symbol indicates change, therefore $M\Delta$ indicates to the group currently playing that it immediately changes to a contrasting style of music; $G\Delta$ indicates that the group currently playing stops while another group not currently playing immediately begins playing, mimicking the style of the first group. If the prompter indicates the third Ear cue, V, then musicians will either crescendo or decrescendo at a rate determined by the prompter. Head cues are Sound Memories, described above, and palm cues consist of three different "cadential" cues to end the piece. The prompter can "Cut" which calls for immediate cessation of sound, forming an abrupt end; "Coda" which asks for up to ten more seconds of music, allowing musicians to produce a "closing phrase; or "Hold and Fade" which, when cued, asks musicians to sustain the sound they are producing and then to diminuendo into silence. Overall, these basic cues amount to 19 total

cues, spread across the six groups. It will take several sessions for a group to learn all these cues and be able to move fluidly between them.

The efficacy of *Cobra* as a teaching device is contingent upon the prompter's engagement with the group. Since it is a performative work, *Cobra* contains no clear sequencing or progression, nor does it provide a rubric or instructions for progress assessment. Some good beginning cues, particularly for musicians in the *Cobra* group who do not have improvising experience, are cues that encourage listening, mimicking, or that have a clear musical instruction. Nose cue 3, "Event 1, 2, or 3" is one such cue with a clear instruction, but still with some room for interpretation. Ear cues are excellent for developing a sense of contrasting music if the prompter works from a basic dichotomic approach to musical contrast: short as opposed to long, quiet as opposed to loud, slow as opposed to fast.

Advanced improvisers or even those beginning or intermediate improvisers with a willingness to take charge can provide the group with an opportunity to engage in the second column of the score, which describes "guerrilla systems." This system offers a substructure with the potential for musicians to develop various attentional skills related to improvising. Any musician becomes a "Guerrilla" by donning a headband and being acknowledged by the prompter. The Guerrilla is essentially in charge of the piece and can ignore any cues from the prompter. As a solo Guerrilla they can interact with other musicians by engaging in a series of "Tactics," indicated with hand gestures. They may imitate another musician, trade, hold a drone, cut off another musician, or switch and crossfade with another. A Guerrilla can also form a squad which consists of the "Squad Leader" (the original Guerrilla) and two "Spotters." If the Guerrilla has formed a Squad, they have at their disposal an additional series of cues called "Operations." Operations are indicated by holding up a fist and a number, and consist of (1) "Divisi;" (2)

"Intercut;" and (3) "Fencing." Under the Divisi operation, the Squad Leader takes over the role of prompter, having at their disposal all cues from the left-hand column as well as the Tactics described above. An "Intercut" allows the Squad to perform as an unaccompanied trio, and upon completion the group resumes the music they were playing before. In a "Fencing" Operation, the Squad Leader asks anyone in the group to play a solo in a recognizable style. Another soloist enters when cued in a contrasting recognizable style. The Spotters, in addition to responding to cues from the Squad Leader, watch out for a "Spy." A Spy can end the guerrilla operations with a "throat cut" hand signal to the prompter at any time, but only if they have not been identified by the Spotters.

For more advanced musicians, a discussion and exploration of contrasting musical style through certain prompts and through the guerrilla system can contribute to creative development. These operations provide the opportunity for musicians to engage with musical styles that they already know but in a new context. This approach is similar to that taken by Azzara and Grunow in their *Developing Musicianship Through Improvisation*. In that text, the authors primarily use folk tunes as foundational structures for teaching harmonization, melodic formation and embellishment, and ultimately improvisation. *Cobra*, however, is more like *Search & Reflect* in that any musical familiarity is generated by the musicians themselves rather than by the text that the musicians are using. Such an approach is useful for working with musicians with a variety of backgrounds. Not every musician has grown up listening to "Long, Long Ago" and so to one who has not heard the song, the effect of its use as foundational material may be less pronounced.

Cobra is limited by its primary function of being a performative work first and a pedagogical tool second. It is best utilized in a medium to large group setting where an

experienced teacher can carefully control the bounds of the piece. They will need to structure a curriculum that familiarizes the musicians with the cues such that their reactions to said cues becomes implicit. Listening to their recorded *Cobra* sessions and having group discussions can serve as assessments and progress checks. Generally, these discussions should focus on two topics after listening to their recording. Musicians should communicate their emotional reactions to what they are hearing, but not to what they or others did in the course of the performance. In other words, they should listen to the recording as though it were made by someone other than themselves. The second topic of discussion is "choice." This is where individual musicians can reflect on why they chose a particular sound at a particular time.

Anthony Braxton, Language Types

Anthony Braxton is many things: a philosopher, a chess hustler, and, relevantly, a creative musician. I use the term "creative musician" in this case for a number of reasons. It is first a nod to his membership in the Chicago-based Association for the Advancement of Creative Musicians, or AACM. This group, begun in 1965, is dedicated to "nurturing, performing, and recording serious, original music."[60] His compositions number in the hundreds. In his five-volume *Composition Notes* Braxton details the compositional process and evolution of the first hundred or so of his works. To understand his music in the fullest terms, a reader may have to wade into his *Tri-Axium Writings*, a massive three-volume work which, in George E. Lewis's words, "while in dialogue with such texts as LeRoi Jones' *Blues People* (1963), John Cage's *Silence* (1961), and Karlheinz Stockhausen's *Texte* (1971), extends considerably beyond these texts, both in length and in range of inquiry."[61] In *Tri-Axium Writings*, Braxton builds a

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[60] "About AACM," Association for the Advancement of Creative Musicians, http://www.aacmchicago.org/about (Accessed November 4, 2019)

[61] George E. Lewis, "*Gittin' To Know Y'all:* Improvised Music, Interculturalism, and the Racial Imagination," *Critical Studies in Improvisation* 1, no. 1 (2004): 1.

philosophical structure that offers a unique epistemology through engagement with Western epistemology and trans-African spiritualism and filtered through Braxton's own unique cognition. The strength of Braxton's thinking is in developing a way to view the connectedness of concepts at multiple contextual levels simultaneously. It is a stance that is uniquely his and has concrete implications for his approach to his improvisations.

While a full examination of *Tri-Axium Writings* is beyond the scope of this document, it would be helpful to illuminate some of Braxton's thinking around improvisation. He defines improvisation as follows:

> (1) a discipline that involves the science of creative *postulation* as it unfolds in '*actual* time; (2) a discipline that utilizes the dynamics of postulation and its related *affinity-dynamics*, as well as *cultural vibrational transference*; (3) the science and multi-discipline of existing – having to do with the appearance of 'moments' and making life choices (either with respect to 'particulars' or spiritual growth) and the gradual awareness of how best to proceed with that information in 'rapid-moment-decision contexts'[62]

Some other key terms in this definition need some unraveling in order to fully grasp Braxton's idea of improvisation. When Braxton uses the signifier "actual" he refers to how a given concept has concrete or measurable effects in the world, so actual time could be considered one's perception of the flow of time, or the natural unfolding of events separate from any metaphysical energies. "Postulation" he defines as "the act of bringing something forth as in expressing an idea or a feeling."[63] Improvisation can therefore first be defined as a discipline involving bringing forth an idea or feeling in real time. The second definition is a more active one wherein Braxton focuses upon the utilization of "affinity dynamics" of postulation and "cultural vibrational transference." Affinity dynamics, Braxton defines as

> (1) vibrational diversity or the spectrum of possibilities related to a given vibrational position; (2) the related vibrational spectrum of a given phenomenon – that being areas that are related to the vibrational particulars of a given phenomenon; (3) the scope of a

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[62] Anthony Braxton, *Tri-Axium Writings* (Frog Peak Music, Lebanon, NH: 1985), 511.
[63] Ibid, 522.

person's life options, as related to vibrational attraction and what this phenomenon means with respect to that person's vibrational make-up.[64]

He defines cultural transfer shifts as

(1) those cycles in time which underline the phenomenon of different cultures changing or exchanging information and/or information dynamics; (2) the phenomenon of a given culture coming to an end while at the same moment another culture is emerging based on the same information or information dynamics – and what this inter-relationship means.[65]

One term that Braxton does not explicitly define is "vibrational," though this term is critical to understanding his thinking. I understand it by relating it to the idea of potential energy. Potential energy is "the energy possessed by a body by virtue of its position relative to others, stresses within itself, electric charge, and other factors."[66] Similarly, Braxton uses the term "vibrational" to impart a sense of potential influence or change that can travel upon many simultaneous vectors. These vectors can be along physical or, as Braxton terms it, actual axes, but they can also be along metaphysical lines of a spiritual or cosmic sort. Therefore, the second definition of improvisation emphasizes the "doing" of culture and how culture is expanded and evolved by the realized possibilities inherent within the individual creative acts that make up a discipline of improvisation. The third and final definition focuses upon the individual. Braxton speaks of the "appearance of 'moments'" and "life choices," as well as the expanded awareness that comes from recognizing these points in time and learning from them. Each of Braxton's definitions focus on improvisation viewed at a different level. The first is a generalized definition, the second views improvisation at the inter- and intra-cultural level, while the third zooms in upon individual will and agency which drives the evolution of culture.

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[64] Ibid, 497.
[65] Ibid, 505.
[66] "potential energy, n." *OED Online*. September 2020. Oxford University Press. https://www.oed.com/view/Entry/266425?redirectedFrom=potential+energy (accessed October 26, 2020).

Braxton's view of music, like his view of improvisation, is multilayered and three-dimensional. Graham Lock, who has written extensively about Braxton's life and work, interviewed him in 2003 and asked whether his multidimensional perspective on music was influenced by synesthesia. Braxton does not discount the possibility, replying that "there is a ring-post notch past which I don't try to analyse. But I would say this—there has never been an inherent separation in perception dynamics between the actual sound and the image internal reality connected to the sound, including colour, including vibrational spectra, i.e. radiance, timbre logics . . . I kind of see all of that as one thing."[67] Lock connects Braxton's unique perspective to beliefs found in 19th and early 20th-century Europe that center on ideas of spirituality, mysticism, and "the quest for a universal language of color, shape, and sound." In particular, Braxton cites Wagner, Schoenberg, and Kandinsky as major influences.[68]

Braxton's synesthetic ideal can be seen in his solution to the problem he identified with open improvisation. In a story he has recounted in lectures, he was going on stage for his first solo concert as a saxophonist.[69] Expecting to fill an hour with totally improvised music, he realized he went through all his ideas in only twenty minutes. This experience set him on a mission to break down music into various sound classifications. Classifying these components became "'the science' of his music"[70] and served as compositional material.

Braxton's sound classifications or Language Types can serve as a structure for improvising. A full list of nearly one hundred Language Types can be found in his *Composition Notes*.[71] Figure 3, a chart which can also be found online, shows ten of these Language Types.

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[67] Anthony Braxton, quoted in Graham Lock, "'What I Call a Sound': Anthony Braxton's Synaesthetic ideal and Notations for Improvisers," in *Critical Studies in Improvisation*, Vol. 4, No. 1 (2008), 4.
[68] Ibid, 6.
[69] Graham Lock, *Forces in Motion: The Music and Thoughts of Anthony Braxton* (New York: Da Capo Press, 1988), p. 27.
[70] Ibid, 27.
[71] Anthony Braxton, *Composition Notes* (Lebanon, New Hampshire: Frog Peak Music, 1988).

Each of the ten shapes in Figure 3 corresponds to a specific kind of sound or generating structure. Some are plainly obvious, such as the first Language Type, long tones, which is represented by a straight horizontal line, or the fourth Language Type, staccato formings, which is represented by a dashed line. Others require some study and understanding of Braxton's own logical systems to comprehend.
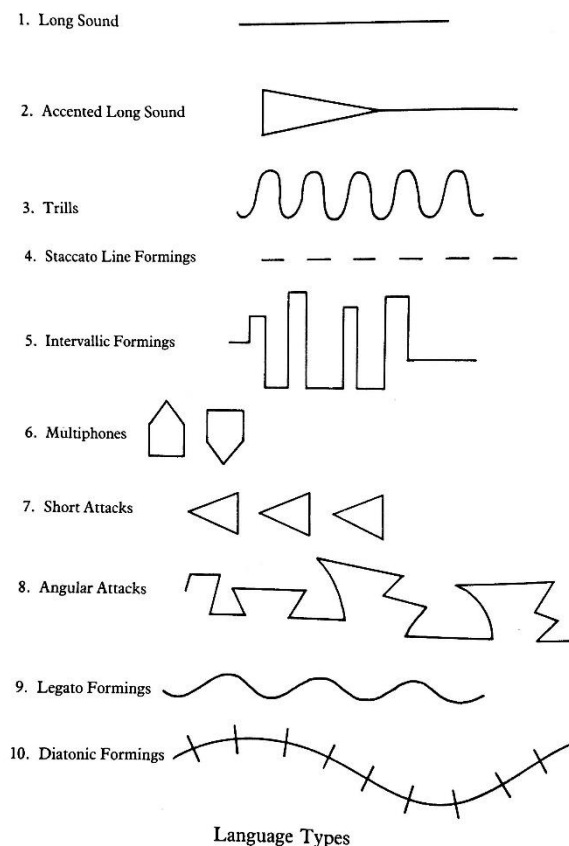
Figure 3. List of 10 Language Types developed by Anthony Braxton as printed in *Forces in Motion* by Graham Lock

These Language Types can be used in four distinct ways to generate form, as documented by Graham Lock's account of Braxton's Guildhall lecture in November of 1985. In this lecture, Braxton used the language type "staccato line formings" as an example:

> (a) As a language generating form (in the solo context); (b) as a material generating form (as notated material inserted into the co-ordinate music); (c) as a principle generating

form (as a given variable used to determine the nature of the music); (d) as a multiple generating form (inserted into a larger context).[72]

To understand (a) Lock uses the analogy of baking a cake, in which the staccato line is simply one ingredient amongst many. That is to say, there is no development or larger structural principle at work. Braxton's example of (b) comes from his *Composition 40B* wherein the opening and closing material is notated using staccato line formings. The third way (c) of using language types was demonstrated by Braxton using *Composition 23A* which is "a cell structure shape which integrates staccato line formings 'as a basis to establish territories for improvisation.'"[73] He uses *Composition 25* for the Creative Music Orchestra as an example for (d). In this piece, "each musician has twenty balloons to manipulate, the staccato line formings here being part of 'a multiple sound/fabric environment.'"[74]

Braxton developed his catalogue of sound classifications as a way to impose a structure on his own open saxophone improvisations that could extend and invigorate his own creativity, though he soon used them as compositional tools in his written works. As such, they make up a huge array of unique musical sounds and can be used in many different contexts that range from performance-oriented spaces to learning environments. In a learning environment, particularly a classroom or lab setting composed of a group of musicians and an instructor, they are valuable as abstract devices that can encourage the development of musical interpretation in solo and ensemble contexts.

Any curricular sequence utilizing Language Types must be imposed by the instructor. Unlike the clear curriculum provided by Azzara and Grunow in *Developing Musicianship Through Improvisation*, or even the concise list of operations provided by John Zorn in *Cobra*,

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[72] Ibid, 321.
[73] Ibid, 322.
[74] Ibid, 322.

Braxton's world presents a formidable and sprawling sandbox. However, lists such as the one found in Figure 3 can be found easily online and include some of the most basic Language Types. Instructors can build a sequence based on the ability of Language Types to serve not only as a visualization of a desired sound outcome at the surface level, but also as representations of macro-level form or structure.

There exists a multitude of possibilities for building Language Types into a sequence. With beginning improvisers, an instructor can draw Language Types on a board or pass them out on a sheet of paper and then ask the improvisers to interpret them as sound. They can create improvisations using only one Language Type, or they can do imitation-based exercises. This would relate to Braxton's analogy of learning the ingredients in a cake. At this level, musicians are learning to visualize the sounds they may want to produce as well as understanding how to fit into the fabric of a group improvisation made up of a particular Language Type.

For advancing improvisers, Language Types could also be used to visualize the form of an improvisation. For example, the Language Type representing an "Accented Long Sound" from Figure 3 can be broken into two distinct sections, a triangle on its side, and a straight line. A learning improviser could use these shapes to determine any number of form-defining variables in an improvisation, including volume, density of notes, pitch range, or timbre. Once the variable has been determined, an improvisation can commence with attention paid to that variable. Due to its structure, which is comprised of several actions (a loud entrance followed by a decay and then a sustain, each of variable lengths), the Accented Long Sound Language Type can also be used as an operator to mediate other Language Types. A group using Language Types to improvise can assign one or a few musicians to perform Accented Long Sounds. These can then be used to determine what the other musicians in the group can play. For example, the

other musicians can echo the sustains of the Accented Long Sounds they hear to produce a

constant fabric punctuated by accented entrances, or they can mimic the accented entrances.

These kinds of exercises bear some resemblance to what John Stevens achieves in *Search &*

Reflect, though whereas in that text structures for improvisation and careful instructions for

navigating those structures are provided, Braxton's Language Types serve only as building

blocks for structure. It is up to the improvisers using them to decide how to build a structure out

of them.

Being a classification system for categorizing sounds, there is no built-in assessment

method or rubric for measuring achievement. The best option for assessing progress towards

stated goals is to record the improvisations that you or your students create in the course of

applying Braxton's Language Types and then discussing their success in achieving any goals that

were outlined beforehand. Some relevant questions may be: Do the sounds on the recording

seem to correspond to the desired Language Type? Does the improvisation sound cohesive, i.e.,

does it have a unified idea and/or a sense of progression? These and other questions can serve as

checkpoints or springboards for further discussion.

Language Types can serve as a unique mediator between musical styles, particularly

those that exist on the fringe of classic harmony. Braxton's sound classifications are meant to

encompass a whole universe of sounds. Theoretically, every music ever written can be expressed

in terms of a Language Type, such is the scale of his thinking. A musician improvising a solo

over a series of harmonic changes can certainly take advantage of Angular Attacks, Intervallic

Formings, or Staccato Line Formings. Or an entire hour of totally improvised music can be built

out of structuring Language Types. Their value lies in their ability to be used to visualize

spontaneously created music at multiple levels, and in this way can be widely applicable.

Summary and Conclusions

Each of the resources covered in this chapter can offer much value to musicians seeking to expand their creative endeavors through improvisation. *Developing Musicianship* can help musicians begin to understand and internalize the music theoretical underpinnings of tonal improvisation and embellishment. It accomplishes this by breaking down representative melodies into their fundamental rhythmic, harmonic, and melodic building blocks, and then presenting sequences of exercises which demonstrate how those building blocks can be altered and reorganized. Its design is also its limitation, however, in that it does not offer many options to explore creativity beyond how it teaches it. While there is a list of suggested repertoire that pertains to the genre of each Unit's melody, this list is only included in the second and third volume. Furthermore, it is up to the musician to apply the careful 'building block' approach to this other music.

John Stevens' *Search & Reflect* and John Zorn's *Cobra*, in contrast to *Developing Musicianship through Improvisation*, offer a different sort of 'building block' approach. Instead of breaking down each representative melody into its fundamental pieces, *Search & Reflect* builds up structures for improvisation from their basic forms into concert ready pieces. *Cobra* is, conceptually speaking, a concert piece which can be used as a teaching device. The content of the structures found in these resources is largely improvised by the musicians, though the text will provide some boundaries to the types of improvisations that are allowed. The primary weaknesses of *Search & Reflect* and *Cobra* lie in the fact that the onus to improvise within tonal structures is placed primarily on the musicians. While this is partly due to the universalized definition of music offered in the beginning and which informs many of the themes found in the pieces of *Search & Reflect*, it is due more to the tradition of free improvisation of which Stevens

and Zorn were a part. Such a tradition is an important piece in the tapestry of improvised music that has developed over the past 100 years, but it also comes with its own problems, as suggested by the music and ideas of Braxton and Zorn.

The problem of free improvisation, as identified by Braxton and Zorn, is its lack of structure. Without formal structure, the development of improvised ideas can become critically limited. This problem has been answered in various ways by the texts presented in this chapter. *Search & Reflect* and *Cobra* offer some examples of structures, as noted above. *Developing Musicianship Through Improvisation* demonstrates the advantages that come with improvising within culturally shared harmonic structures. Anthony Braxton invented a vocabulary of iconic symbols to inspire self-imposed structures within free improvisations. This self-imposition is the advantage of his system of Language Types over *Search & Reflect* or *Cobra*.

Each of these resources differ from each other in terms of their approach, their emphasis on pedagogy or performance, and underlying philosophies. The next chapter will discuss commonalities that they share. Taken together, these commonalities could be understood as the fundamental concepts in improvisation teaching resources.

CHAPTER 3. TOWARD A GUIDE FOR DEVELOPING YOUR OWN PRACTICE OF

IMPROVISATION

The previous chapter was an investigation of four differing resources one can use to learn how to improvise. This chapter will consist of discussion of the findings of that investigation and their implications for building a personal practice of improvisation. It will be shaped by three major sections, the first two being driven by central questions and the final being a conclusion. The two central questions are as follows: (1) Considering the resources that were covered in the previous chapter, what are their conceptual commonalities? Furthermore, what unifiers exist in the expressed intent of their authors and how can these help musicians to shape their usefulness as tools for teaching improvisation? (2) What musical and improvisational concepts are taught by each resource, and which of these concepts does each resource emphasize? Establishing the strengths of each resource can help musicians to find the best starting point for learning how to improvise. The conclusion will discuss pedagogical commonalities across each resource from the perspective of establishing a foundation for a personal practice of improvisation.

Considering the resources that were covered in the previous chapter, what are their conceptual commonalities? The impetus for each resource has been described in the previous chapter. The texts by Azzara and Stevens are both pedagogical in their inception, whereas Zorn and Braxton's texts are performative. *Developing Musicianship* by Azzara and Grunow is informed by a body of academic research in creativity and improvisation, much of it conducted by the authors themselves. Christopher D. Azzara and Richard F. Grunow, both affiliated with University of Rochester's Eastman School of Music, are between the two of them the authors of numerous articles and books on improvisation and music education. In addition, Azzara is an active jazz pianist and arranger. Stevens's *Search & Reflect* is informed by a history of

workshopping and performing the works contained therein. Under his leadership, the Spontaneous Music Ensemble worked with countless groups of varying levels of musical proficiency. These activities fueled and informed these individuals' pedagogical aims.

Cobra was the culmination of a long evolution of game piece development by John Zorn. The rules of its predecessors, including works such as *Lacrosse* and *Hockey*, were incorporated into *Cobra.* Writings on *Cobra*, whether by Zorn himself or others, all treat the piece as performative and emphasize the importance of choosing the right players rather than suggesting its use as an improvisation teaching tool. Anthony Braxton's Language Types were developed to be used as performative devices, actuated through both improvisation and composition. His intention to catalogue every kind of sound gives his Language Types broad depth and variety.

These crucial differences demonstrate that a pedagogy of improvisation can be derived from a teaching perspective or from a performative perspective. The commonality across these two approaches is intent, even if the situation of that intent differs. While pedagogical intent is inherent to the texts *Developing Musicianship Through Improvisation* and *Search & Reflect*, pedagogical intent as it relates to *Cobra* and Braxton's Language Types must be situated in the musician. Using performative resources as opposed to pedagogical resources in pedagogical settings should be a familiar act to most music students, as a music student's repertoire often consists of scale patterns and etudes alongside concert works. What this means when developing a practice of improvisation to improve creativity is that many of the concepts when using performative texts must be explicitly and intentionally embodied by the user because the texts will not encourage them through careful preparation or sequencing.

What musical and improvisational concepts are taught by each resource, and which of these concepts does each resource emphasize? Looking to the pedagogical texts, important

musical and improvisational concepts come into view. Musically speaking, *Developing Musicianship* emphasizes traditional harmonic and melodic structures, metered rhythm, and symmetrical phrase structure, whereas *Search & Reflect* embodies a Cage-like perspective of music as sound organized by time. Triadic harmonic relationships are largely eschewed in favor of basic sound shapes and their relationships.

This contrast demonstrates the potential gulf that exists between different improvisative practices. It is the difference between idiomatic improvisation and non- or self-idiomatic improvisation. More than that, it speaks to the shared identity of the improviser. While Bailey suggested the dichotomy of idiom and non-idiom, Bullock coined the term self-idiomatic improvisation after studying the unique improvisative culture of Boston-area musicians. Even Bailey's adherence to non-idiom can be traced to his connection to the European avant-garde jazz movement which, as George E. Lewis details in *Gittin' to Know Y'all*, "at the end of the 1950s . . . was in the throes of an identity crisis."[75] In the 1960s, Derek Bailey and, relevantly, John Stevens, were part of the British contingent of European artists seeking to establish their identity through a "move toward aesthetic self-determination which took musical form as musicians combined extensions, ironic revisions and outright rejections of American jazz styles with a self-conscious articulation of historical and cultural difference." This mirrors the motivations and intentions of African American musicians who sought to define themselves against a backdrop of European American musical hegemony. Musicians such as Duke Ellington, Charlie Parker, John Coltrane, or Ornette Coleman, among others, of course, had to contend with racism in a way that the European improvisers did not. One of the lessons to be learned from these individuals is that the imposition of self is as important to a practice of

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[75] George E. Lewis, "Gittin to Know Y'all," in *Critical Studies in Improvisation* 1, no. 1 (2004): 3.

improvisation as the musical content produced therein, and that teaching how to impose oneself upon one's improvisation is an essential component of any tool of improvisation pedagogy.

Developing Musicianship and *Search & Reflect* both teach the importance of form in their own ways. *Developing Musicianship* emphasizes improvising in metered symmetrical phrase structures by preserving the length of example melody excerpts. Such a strict adherence to these might reinforce within the musician with a strong internalized sense of meter which can be invaluable to navigating harmonic changes such as a traditional 16- or 32-bar solo. Space is left for more open-ended improvisations at the end of each unit. *Search & Reflect* also concentrates on internalizing pulse and meter, though mostly abstracted from pre-written music, but it stops short of prescribing ideal phrase lengths, traditional formal ideas, or endings, leaving such deliberations up to the inner decision-making process of the improvisers.

Cobra offers a vastly different experience of learning form in improvisation in comparison with *Developing Musicianship* and *Search & Reflect*. Much of one's success in a *Cobra* learning space is, as mentioned previously, dependent upon the maneuvers of the leader, first, and the interactions of the players, second. In a beginner friendly version of *Cobra*, all formal decision making should be made by the leader, which gives the musicians an opportunity to improvise in a prescribed structure. As they familiarize themselves with what is being asked of them, they can begin to direct their attention to how the leader is causing the structure to unfold. Unlike the teaching of form in *Developing Musicianship* and *Search & Reflect*, *Cobra*'s structure emerges purely from the decision-making process of the participants.

The extent to which one can learn how to improvise melodic and harmonic ideas in *Cobra* is, again, dependent upon the actions of the leader. They can, by way of example, force a long string of imitations of a common musical style, which would reinforce listening and

matching among the players. The sound memory commands allow for repetition and reinforcement of a musical gesture. Cartoon trades are exaggerated gestures which can encourage musicians to play out. These commands, as with all the commands in *Cobra*, may still leave beginning improvisers asking *what* to play. This question can be a major hurdle for beginners, and so *Cobra* should be used with care when being used as an improvisation teaching tool. If the group has a vocabulary of musical ideas at their disposal and are willing to use them, however, it is an excellent structure-building device.

Braxton's Language Types, through their representational nature, embody musical traits such as contour, rhythm, and volume, as well as multiple sound timbres (not just conventional harmony, but also multiphonics and non-pitched sounds).[76] Using these Language Types as formal devices has been addressed in the previous chapter, though it is worth noting that, like with *Cobra*, their utility is largely dependent upon the decision-making process of the instructor or learner. As visualized representations of sound, Language Types offer a concrete artifact for musicians to respond to and interpret, which differs from the concrete artifacts (notated melodies) of *Developing Musicianship*. Of the four resources being examined in this document, the Language Types of Anthony Braxton are situated in a unique space which borders many cultural practices by being directly representational of musical sounds without adhering to traditional notational techniques.

Active listening is among the techniques and behaviors that are important to success in improvisation. Much of the act of improvising involves responding to an audio stimulus, particularly after the initial sound generation. In these kinds of responsive situations, active

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[76] In contrast to graphic scores as a genre of non-traditional notation, Braxton's representations, in semiotic terms, tend towards being iconic more than symbolic, meaning that they bear a physical resemblance to what they are meant to represent.

listening is an important behavioral component. A musician can actively listen while learning to improvise in order to imitate a sound; to determine a response to a sound in real time; to critically reflect on an improvisation.

Previously, intentionality on the part of the improviser was mentioned as a necessity. For beginners, this means some discomfort as they confront the personal question of precisely *what* to improvise. Maud Hickey of Northwestern University used a continuum of teaching to discuss approaches in teaching improvisation.[77] In this continuum, didactic or teacher directed learning is to the left of the spectrum, labeled "transmission," while learner directed learning is to the right of the spectrum, labeled "enculturation." She then superimposes Jeff Pressing's five stages of improvisation learning onto this spectrum, those stages being *embellishment*, *patterns and models*, *problem-solving*, *play-by-ear*, and *free improvisation*. This is shown in Figure 4. The improvisation learning resources presented in the previous chapter can be placed upon this spectrum as a way of illustrating the stages most emphasized in each particular resource. Additionally, a *y-axis* can be included which addresses whether each particular resource can be used alone or is more effective as a group activity. Figure 5 demonstrates this graph.

Stage 1 Embellishment	Stage 2 Patterns and models	Stage 3 Problem-solving	Stage 4 Play-by-ear	Stage 5 Free improvisation

Transmission
Didactic; Teacher directed

Enculturation
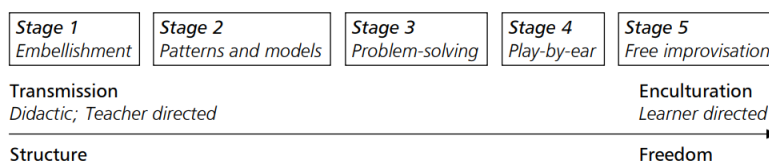*Learner directed*

Structure → Freedom

Figure 4. Jeff Pressing's stages of improvisation superimposed on to Maud Hickey's spectrum of improvisation pedagogy, from her article "Can Improvisation Be Taught?"

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[77] Maud Hickey, "Can Improvisation Be Taught?" in *International Journal of Music Education* Vol. 27, No. 4 (2009) 285-299.

Self Dependent

Azzara	Braxton

Didactic — Learner Directed
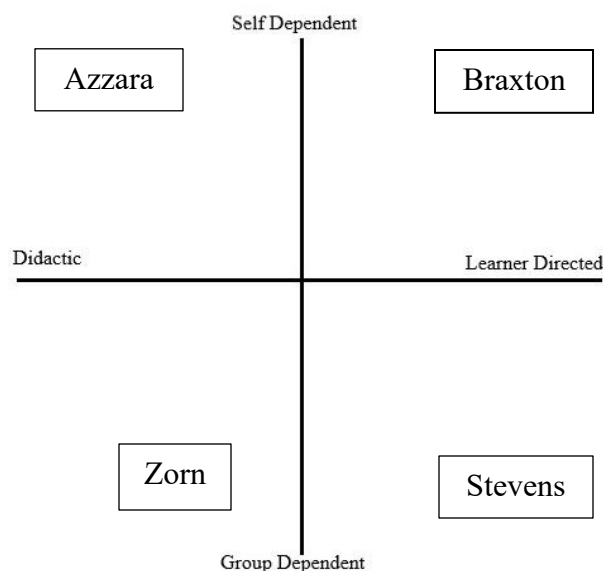
Zorn	Stevens

Group Dependent

Figure 5. Chart visualizing the pedagogical differences of the four resources analyzed in the previous chapter.

Resources that are more didactic and self-dependent can offer help to beginning improvisers who struggle with knowing what to play. A step-by-step, additive approach such as that presented in *Teaching Musicianship Through Improvisation*, which emphasizes embellishment, patterns and models, and playing by ear, may be better for such individuals. Those individuals who are interested in a "sandbox" approach may be more interested in starting with a system such as Braxton's Language Types. Whether "closed" or "open," the systems presented by these two resources both provide guidance on what to play. The resource which offers the least amount of guidance on what to play is *Cobra*, though it is didactic in its approach to form because there is always a leader driving the decision-making, particularly when it is used as teaching piece. *Search & Reflect* makes some suggestion about what to play in an improvisation. In many of the pieces, these suggestions are very basic sound concepts like "play as short a pitch as possible" or "play as long a pitch as possible." Musicians are also asked to "noodle," or to play as fast as possible with no thought or intention as to what is being played.

Establishing a Foundation for a Personal Practice of Improvisation

      A personal pedagogy of improvisation requires listening. Each resource at some level teaches the musician to listen to their sonic environment, internalize that information, and then replicate it or vary it. Additionally, recording one's own improvising provides valuable information. This follows with the generative model of improvisation theorized by Jeff Pressing as discussed in Chapter 1. After the initial event, all subsequent events are generated by human responses to various physical and psychological inputs. Listening also addresses the question of where, if at all, to focus one's attention. The fMRI neurological research of Limb and Braun suggests how focus or lack thereof can be beneficial in spontaneous creative settings.[78] In *Cobra*, a musician's focus can often be placed on what to play to the detriment of paying attention to the group sound. *Search & Reflect* solves this dilemma by asking the player to "noodle" or to play simple gestures such as long tones, and *Developing Musicianship* asks the musician to listen to progressively more complicated harmonic or melodic changes.

      Whether improvising alone or in a group, listening to recordings of one's own improvising allows one to critically engage with oneself separate from the act of improvising. Through this kind critical engagement borne out of listening to oneself, players can investigate a number of things: players can, as the musicians did in Norgaard's research, investigate why they played a certain note at a certain time; they can guide their aesthetic choices and interests more closely; and they can assess technical and expressive acuity.

      A personal pedagogy of improvisation requires structural definition. Each resource is concerned with structure and offers a variety of ways in which to approach it. Azzara and Grunow take advantage of novice improvisers' existing musical knowledge by using traditional

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[78] Charles J. Limb and Allen R. Braun, "Neurological Substrates of Spontaneous Musical Performance: An fMRI study of Jazz Improvisation," *PlosOne* 3, no. 2 (February 2008).

phrase structures. A desire for structure drove Braxton's development of Language Types, providing improvisers a window into a functional synesthetic perspective of music. Stevens showed how to build structures from abstracted definitions of sound, and Zorn showed how to build a practically infinitely malleable structure. These approaches can be used on their own or combined, which is especially useful in group improvisations. Free form group improvisations can often become directionless and suffer as a result, though free form solo improvising can be a useful explorative tool. Improvising without a goal in mind can sometimes lead to the "eureka" moment of creative insight.[79]

A personal pedagogy of improvisation involves the development of a "toolkit" of strategies and ideas that can be implemented to drive structural development. This toolkit consists of the improviser's musical vocabulary, which can be reproduced in a spontaneous fashion. Stored in the musician's long-term memory, toolkits have been acknowledged by researchers as essential to how musicians improvise.[80] Teachers of jazz emphasize the learning of scales and scale patterns, as well as the transcription of solos and licks to encourage in their students the development of such toolkits. Braxton's Language Music is itself an example of a toolkit. Whereas Braxton undertook a novel approach in the development of his toolkit, Azzara and Grunow encourage the development of a more traditional one through their deconstruction of tonal melodies. The resources by Stevens and Zorn, on the other hand, take a less hands-on approach in toolkit development, though they do enforce structural development.

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[79] Ibid, 4.

[80] Martin Norgaard, "Descriptions of Improvisational Thinking by Artist-Level Jazz Musicians," *Journal of Research in Music Education*, 59, No. 2 (2011); Arne Dietrich, "The Cognitive Neuroscience of Creativity," *Psychonomic Bulletin & Review* 11, no. 6 (2004): 1011–1026; Limb, P.N. Johnson-Laird, "How Jazz Musicians Improvise," *Music Perception: An Interdisciplinary Journal* 19, no. 3 (Spring 2002): 415–442.

As mentioned earlier, a personal pedagogy of improvisation is best served by engaging in group improvisations as well as solo improvising. This is analogous to the often-recommended diet of solo practice and chamber music in many college musicians' education, and so should not be much of a leap for these individuals. While improvising alone, structure can be free flowing, and the development of one's personal "toolkit" of motivic development strategies can be developed and expanded upon. In group settings, those strategies can be implemented and tested with other players, whose own strategies will then have their own effects upon one's development.

This chapter has examined the characteristics of a personal pedagogy of improvisation. These include musical characteristics and behavioral characteristics, and consist of listening, formal considerations, a ready vocabulary of musical ideas or a "toolkit," and a combination of solo and group improvising. By focusing one's advancement upon each of these four vectors, the pathway to one's own practice of improvisation can be revealed. The next chapter will concern a series of improvisation "prompts" or pieces that I have developed in an effort to advance my own improvisation practice. It is my hope that these prompts can serve as a valuable resource for music teachers and performers who are motivated to learn how to improvise, either to be used on their own, or in concert alongside the many valuable resources addressed in the previous chapter. Each resource that can be found in this chapter is not only a pedagogical tool, but a personal window into each author's own journey of improvisation learning and teaching.

CHAPTER 4. A GUIDE FOR DEVELOPING YOUR PRACTICE OF IMPROVISATION

This chapter refers to Appendix A which contains prompts or essays designed to encourage the development of improvisation skills in music. They are based on how I learned to improvise and how I exercise my improvisation skills, as well as what I have learned in the course of writing this document. It is my hope that they are useful as exercises themselves or as inspirational templates for others to develop their own ideas. Each prompt is grouped according by relatedness, will be titled and consist of steps or instructions. The groupings are as follows: meditation and concentration-related prompts, minimalism-related prompts, graphic-based prompts, text-based prompts, and ruleset-based prompts.

These prompts engage with each of the characteristics entailed in the previous chapter of a personal practice of improvisation. For example, the meditation and concentration related prompts focus primarily on listening and developing a toolkit in a solo context. In accordance with Hickey's findings, space is also an important consideration in these prompts.[81] The minimalism-related prompts build on ideas from music minimalist styles. Repetition and groove building have been integral methods for the development of my own toolkit. Hence, minimalism is a part of my personal narrative. The graphic- and text-based prompts address formal considerations. With these prompts, in particular the text-based prompts, I am also encouraging musicians to bypass their dorsolateral prefrontal cortex by presenting them with paradoxical statements. Finally, the ruleset-based prompts are the most complex. They address form and structure, encourage vocabulary, and require listening.

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[81] Hickey, "Learning From the Experts: A Study of Free-Improvisation Pedagogues in University Settings," *Journal of Research in Music Education* 62, no.4 (2015): 434.

Meditation- and Concentration-Related Prompts

The first few prompts have some basis in meditation or concentration. The first, "Focus Work" comes from my experiences with Michael Zerang, a Chicago-based improviser. During a workshop that he gave at Southern Illinois University, he asked us to do a similar exercise as groundwork for the rest of his workshop and for our improvising in general. The intention of this exercise is to develop one's capacity to hold multiple sound sources in one's attention simultaneously while in a group free improvisatory setting. He called this action "accessing a trance state," trance being defined as a state of hyper-focus. I have found exercises like this to be valuable in preparation for playing works such as *Cobra* that have many parameters and moving parts to which to attenuate oneself. Progression 3 is my own inclusion. A similar idea can be found in John Stevens' *Triangle* in which three players sit in a triangle, each facing the space between the other two. Each player disregards their own sounds and instead focuses on the sounds of the other two players.

The second prompt, "Intro-Spec-Sound" is something that I have done fairly regularly as a late-night exercise. I have found that improvising as a means to meditate is a rewarding experience. Allowing the music I improvise to flow from within after sitting in relaxed silence often removes mental blocks I am experiencing, and I find new creativity in the resultant spaces.

The last prompt in this series is "Listen, Rinse, Don't Repeat." A common piece of advice from teachers in my early free improvisation days was to "avoid sounding like anything else." This idea is echoed by some of the musicians that Derek Bailey interviewed in his book, *Improvisation* and gets at the heart of his definition of "non-idiomatic" improvisation. While I no longer identify this idea as a core tenet, it remains useful to continue to find ways to not sound like myself. Anthony Braxton encountered this problem and remains his primary criticism of free

improvisation. "Listen, Rinse, Don't Repeat" is a little exercise that can help one to expand their own creative toolbox.

Minimalism-Related Prompts

Following are a series of prompts that draw from minimalist techniques. In my own improvising, I have found that many of the compositional techniques employed by minimalist composers are well suited to improvisational spaces. The first two prompts, "Thanks for All the Minimalism" and "Thanks Again for All the Minimalism" give the musician a tightly controlled space to practice motivic development. Taking care to repeat motives exactly each time before adding complexity encourages the musician to pay attention to the basic mechanical process of playing their instrument, to produce successful repetitions of basic musical patterns (which forms the foundation of the most successful practice regimens), as well as giving the musician ample time to consider their next creative act and how it can relate to what is already occurring.

"Thanks Again" gives the musician a space to explore micro- and macro-pulses and how they are interrelated. Composers have explored these ideas by adding extra beats to traditional time signatures while others eschew meter entirely while favoring a constant tempo of some kind. In each case, pulse remains an important concept, and subdivided pulse even more so. This exercise accomplishes several things for me. Repeating increasingly complex beat patterns exercises my working memory and my focus, as well as my fine motor skills in spontaneous environments. The constant playing becomes both a physical and mental endurance test for me. This structure is good for practicing not only improvised motives, but also standard pitch patterns such as scales and arpeggios.

"Life with Drones" asks the musician to work specifically within the overtone series of a drone. Vocalists and instrumentalists able to make micro-adjustments to their tuning have the

added fun of tuning in just intonation by ear. Drone minimalism is not only useful as a listening

exercise but as a meditative exercise, too. I have spent hours at a time before improvising slowly

over drones. As I focus on the sounds, I not only hear how each pitch I play relates to the

fundamental frequency, I also feel it in a physiological sense. The micro-adjustments in pitch I

make become wide oscillations and the moments of perfectly tuned harmonies become vast

oases full of vibrancy and life.

"1-2-3-4" gets the musician thinking in meter, specifically common time. 4 beat meters

are one of the most commonly found meters in western civilization and thus is a good place to

start but the basic premise of this can be adapted to any beat organization structure, i.e. 1-2-3 or

1-2-3-4-5 in three-bar or five-bar phrases. Getting a feel for beat patterns is essential to

improvising in a group, especially when that group is practicing tonal improvisation. This

exercise is similar to One Two by John Stevens but differs in that it is meant to be done alone.

Finally, "Flow Chart" works within the bounds of repetitive motivic structures like the

first few prompts. This one externalizes some of the decision-making in a different way.

Musicians are asked to think of a simple repeatable motive and then are given the option of two

possible pathways for development. The musician follows the arrows, encountering some

divergence points where a choice has to be made in how to progress.

Graphic-Related Prompts

The imagistic representation of Anthony Braxton was a focus of the previous two

chapters. Rather than attempt to emulate his complex synaesthetic system, I offer some prompts

using more abstracted images. Abstract graphic scores have been popular interpretive tools for

composers in the twentieth century, including Earle Brown, Christian Wolff, John Cage, and

many more. I have performed countless graphic score pieces, including those created by

professional composers, peers in college, audience members of an art exhibit, and many others. It has always been a fruitful creative exercise. For the first prompt I was inspired while considering structures that appear naturally. The Milky Way galaxy is perhaps the largest structure in the observable universe that we can closely identify as "home." This got me thinking about galaxies in general, how they are born and how they evolve.

"Draw Play" places the onus of graphic creativity upon the musician, but with an extra interpretive step of abstracting graphics from existing music. I myself sat with pen and paper and the Introitus and Kyrie from Ligeti's Requiem. I moved my pen in ways that felt "right" as I listened to the music and ended up with a page full of scribbly lines. Reinterpreting these lines back into music then produced something entirely different from Ligeti's music.

Text-Based Prompts

French deconstructionist Jacques Derrida was fascinated with the idea of improvisation and the apparent paradox of such a thing. My favorite anecdote about him comes from a concert in Paris by the musician Ornette Coleman. They were friends, and Coleman invited Derrida on to the stage to participate in a free improvisation. Derrida took out a sheet with prepared remarks and began reading from it while Coleman responded on his saxophone. He was booed off the stage.

One of the fascinating aspects of interpreting abstract graphic scores is in how it forces the musician to associate musical expression with images that have no apparent or learned musical meaning. In other words, it places the full emphasis of interpretation upon the musician. A similar effect can be achieved through text. The two prompts below are Fluxus-like in their use of paradox or wordplay. What does it mean to draw a straight line and follow it? What does

it mean to make a sound so loud that no one hears you? Within the confusion these statements create lies a seedbed for creativity in the mind of the interpreter.

Ruleset-Based Prompts

The final series of prompts can all be considered game pieces, in that they place two or more players within a rules-based improvisatory setting with musical contribution being determined by predetermined roles or turn-taking. *Cobra* by John Zorn is one of the best-known game pieces and was a primary subject of the last two chapters. These prompts for two or more players explore a variety of rulesets and roles. The first, "Patty Cake" for two players emulates the children's game of the same name. In that game, two people initiate an increasingly complex set of coordinated hand gestures set to the rhythm of a poem. In this prompt, the players invent their own set of increasingly complex coordinated musical gestures. The goal is to play with each other and keep their sounds closely interlocked.

In contrast to "Patty Cake," "Improvise Ives" asks two musicians to emulate a compositional technique associated with Charles Ives. Ives, regarded as the first American modernist composer, often composed polytonal music or deliberately wrote two melodies to occur simultaneously in dissonant keys. This is a fruitful area for improvisers to investigate playing "with" one another, listening to one another, and remaining in sync with one another in a different way.

"Radioactive Potato" is a variation of a warmup/tuning game I have used in various clarinet groups that I refer to as 'Pass the Pitch.' It is a self-explanatory game wherein players take turns matching pitch with one another. Whereas the goal here is stability of pitch, the goal in "Radioactive Potato" is for the motive being passed around to get increasingly gnarly. It is for an

odd number of players so that as the motive that gets passed around, each player is able to have a chance imitating and developing it.

"Role Playing" is the closest that I have come in these prompts to encouraging a strictly tonal based improvisation. Even in this context, I am adhering to the decision not to suggest specific melodic, harmonic, or rhythmic ideas. The last prompt, "Role Playing Game, Tabletop Version," utilizes chance through dice rolling. Players are asked to roll for the length of time they must play and for what they must play. I chose a variety of motives with attention given to the odds of each number being rolled. Overall texture is thus determined by chance, but with certain textures having a higher likelihood. The specific pitch content of these motives is not predetermined, though a general contour is suggested. If using a non-pitched instrument, players can substitute timbral change for pitch change.

Final Thoughts

   The first chapter of this document introduced bodies of literature surrounding improvisation. It established a need for including greater improvisation in college curricula as well as the difficulties inherent in such integration, namely the low confidence in improvising and teaching improvisation at all levels of education. The first chapter also introduced the primary lines of theoretical discussion of improvisation in fields such as cultural and critical theory with the work of George E. Lewis, Derek Bailey, and Michael T. Bullock; cognitive neuroscience and systems theory with the work of Martin Norgaard, Charles Limb, Alan Braun, Arne Dietrich, Jeff Pressing; and creativity theory with the work of Mihaly Csikszentmihalyi and Bennett Reimer; and many more.

   The second chapter introduced four works by five authors: *Developing Musicianship Through Improvisation* by Christopher Azzara and Richard Grunow, *Search & Reflect* by John Stevens, *Cobra* by John Zorn, and Anthony Braxton's Language Types. Each of these resources was subjected to a series of questions: (1) What musical concepts does the text emphasize, and does it explicitly define any improvisative concepts? (2) In what settings might the text be used? Is there an expectation of a specific setting implied in the text? (3) Is there a sequence from one exercise to the next? Are the exercises themselves strongly sequential? (4) Is there a way for musicians to assess their progress that has been built into the text? (5) Are the concepts in the text transferrable across musical styles?

   The third chapter consisted of discussion analyzing the results of the answers to the questions from chapter 2. I used this analysis to qualify the musical and behavioral characteristics of a personal pedagogy of improvisation. These consist of listening, formal considerations, a ready vocabulary of musical ideas or a "toolkit," and a combination of solo and

group improvising. Developing one's skills along these vectors improves one's capacity to improvise and to teach improvisation.

This final chapter and related appendix represent the culmination of my document work. These prompts are intended to develop the characteristics that were established in the previous chapter. What I have learned as an improviser, teacher, and researcher has informed these prompts and charted the course of this project. Reading the College Music Society's TFUMM Report demonstrated the need for projects like mine. It is my hope that this document, or some portion therein, will assist the reader in finding a pathway on their own improvisation journey, and in so doing help others to realize their own creative potential.

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APPENDIX A. IMPROVISATION PROMPTS

Focus Work

For solo

Sit in silence in an environment of your choosing. Listen and consciously identify each sound you can hear. Focus your attention on each of these sounds and hold it in your thoughts. If a sound is not constant, keep its memory in your thoughts when it is absent. Hold your attention for several minutes on each sound. It is okay if your focus drifts, but always bring it back to the sound you are in the midst of focusing on.

Progression 1: Focus your attention equally on two sounds for several minutes.

Progression 2: Add a third sound and keep your focus on all three equally for several minutes. Reaching this level of balance may take several sessions if you are not used to such intensive concentration.

Progression 3: Do not progress until you are comfortable with Progressions 1 and 2. On your instrument of choice, produce sounds which blend with the surrounding acoustic environment and focus your attention equally on the aggregate. Take care not to overpower the ambient sounds with your own. Continue in this manner for several minutes.

Intro-spec-sound

For solo

Length: 5-10 minutes

Sit alone in a space with the lights off, instrument in hand or voice at the ready. Close your eyes and observe your inner monologue for some time, a few minutes perhaps. Eventually, using your instrument or voice, reflect your inner monologue. Avoid focusing on what you will play. If your mind does drift to what you are playing, allow it. Allow it to drift away again, however. The most important part is to never stop playing, except to take a breath if that is required to continue playing.

Listen, Rinse, Don't Repeat

For solo

Have with you a timer, a recording device, and your instrument of choice.

1. Using the timer to keep track, record yourself playing constantly for 1 minute. Play as fast as you can. Technique does not matter except that you do nothing that could injure yourself. Do not stop playing for the duration of the minute. If you need to breathe to continue playing, take as short a breath as possible.

2. Listen back to your recording.

3. Reset your timer, begin a new recording, and once again play as fast as you can. Do not repeat any ideas from the first recording.

4. Continue this process until you think you have run out of ideas.

Thanks for All the Minimalism

For solo

1. Establish a slow tempo, 60 beats per minute or slower, using a metronome. Place a sound on the downbeat and repeat this action. Your sound can be short or long, loud or soft, but at least some silence between each beat.

2. Once you are comfortable repeating your sound perfectly each time, add a second sound. Take care to differentiate this sound from the first through either pitch, timbre, volume, or some combination thereof. Place it rhythmically in relation to the first sound such that it is easy to duplicate.

3. Once you are comfortable repeating your sounds perfectly, add a third sound, once again differentiating in the same manner, again placing it rhythmically in relation to the first two sounds such that it is easy to duplicate.

4. Continue this process. See how many sounds you can add to your pattern while perfectly repeating each new iteration.

Thanks Again for All the Minimalism

For solo

This prompt explores the additive process along a different avenue.

1. Begin by repeating one note. Duration and pitch remain the same. If you play a quarter note followed by an eighth rest, play that each and every time. If you play an eighth note with no rest, play that each and every time. Make sure you are comfortable repeating this note perfectly before moving on to the next step.

2. The next note you play should be a different pitch, but it must be the same length as the first note. Return to the first pitch after the second and repeat, such that you are playing and repeating a two-note pattern. Make sure you are comfortable repeating this two-note pattern perfectly before moving on to the next step.

3. The next note you play should be different from the preceding pitch, but it must remain the same length. Return to the first pitch after the third and repeat the string such that you are playing and repeating a three-note pattern. Make sure you are comfortable repeating this three-note pattern perfectly before moving on to the next step.

4. Continue this process, creating and repeating a four-note pattern, then a five-note pattern, etc.

Life with Drones

For solo

This prompt focuses on harmonic relationships between you and a drone in consideration to the overtone series.

1. Using a just intonation drone generating tool, initiate a drone. Good drone generators include apps that can be downloaded on your phone, a website, a music program, a CD, a shruti box, or another person. To start, the drone should be near or below the bottom range of your instrument. For the purposes of tuning, the fundamental of the drone pitch will be considered the fundamental frequency around which all other pitches should be tuned.

2. Take some time to just listen to the drone. Is it a pure tone or is it a complex tone? If it is a complex tone, focus your attention on each overtone you can identify.

3. Match pitch with the drone. Become one with it. Play an octave above the drone, an octave and a fifth above the drone, two octaves above the drone, two octaves plus a third, two octaves plus a fifth, two octaves plus a seventh, and so on. For each pitch you play, if your instrument is capable of it, take the time to tune by ear as closely as possible.

4. Using only the notes you played in Step 3, create a melody. It must end on the fundamental pitch, octave equivalence allowing.

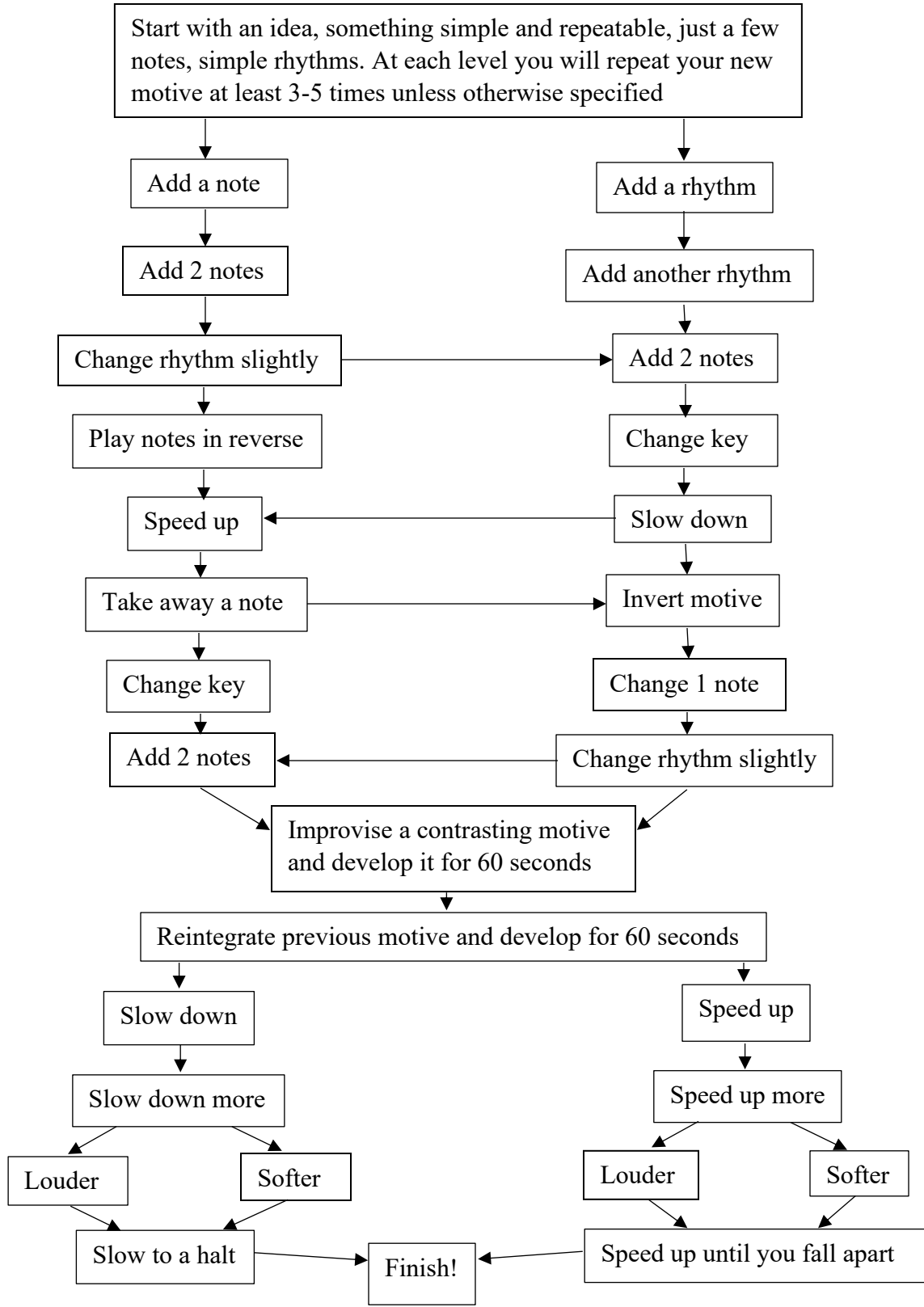<div align="center">

1   2   3   4

For solo

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1. Out loud in a monotone voice, count 1-2-3-4 in a regular, constant tempo that is comfortable and natural for you.

2. Assign pitches to the numbers, retaining each pitch to its number on each repetition. Continue in this manner until you are comfortable replicating each of the four numbers. You may use the same pitch for more than one number.

3. Expand the repetition cycle. One repetition encompasses two cycles of 1-2-3-4, so that a full repetition becomes 1-2-3-4-1-2-3-4. You may use the same pitch for more than one number, but the overall pattern must be preserved. You may rest for one beat per cycle, and it must be the same each cycle.

4. Repeat this process of expansion until you have a 4 cycle pattern, i.e., 1-2-3-4-1-2-3-4-1-2-3-4-1-2-3-4. You may rest on two separate beats per repetition.

1   2   3   4

On your instrument

Shift the counting to your head and play notes on each beat of the cycle. You may use the same pitch for more than one beat. Build the repetitions up from one cycle of 1-2-3-4 to four total cycles. If necessary, you may rest on one beat per 2-cycle repetition and two beats per 4-cycle repetition.

Flow Chart

Start with an idea, something simple and repeatable, just a few notes, simple rhythms. At each level you will repeat your new motive at least 3-5 times unless otherwise specified

Add a note

Add 2 notes

Change rhythm slightly

Play notes in reverse

Speed up

Take away a note

Change key

Add 2 notes

Add a rhythm

Add another rhythm

Add 2 notes

Change key

Slow down

Invert motive

Change 1 note

Change rhythm slightly

Improvise a contrasting motive and develop it for 60 seconds

Reintegrate previous motive and develop for 60 seconds

Slow down

Slow down more

Louder

Softer

Slow to a halt

Speed up

Speed up more

Louder

Softer

Speed up until you fall apart

Finish!

We're All Just Star Stuff, Man

For solo or group

Galaxies are some of the most massive structures in the universe. These beds of matter and light form out of gaseous nebulae, wander through space, cluster together, collide with each other and become something new and chaotic. Eventually, all the stars contained within will explode, shed their corona, collapse into black holes or get absorbed by another black hole until there is nothing left. For the following prompts, use the images from the next page as guides.

For Solo:

- Portray one of the three galaxy types on the next page from birth to death. A galaxy begins as a nebula, a cloud of dust that, drawn together through the force of gravity, slowly comes together into identifiable shapes—stars. The stars come together, orbiting around a central cluster with a supermassive black hole at the center and the galaxy is born. This galaxy shifts and drifts through the cosmos, its arms orbiting the central cluster. A galaxy never really dies, it only evolves. Perhaps in 10^{100} millennia, the final bits of matter will evaporate away into the void.

For Group:

- Each player chooses one of the three galaxy types shown on the next page. This galaxy will serve as your "character." Allow its shape to guide your improvisation. After some time has passed, such that you are confidently representing the shape of your galaxy, look for another galaxy to collide with. Communicate your intentions with each other, as each player involved in a collision must be committed to it.

- Merge your two galaxies and become a new shape, playing together and complementarily. Merged galaxies may then collide with other galaxies.

- Continue in this process until all galaxies are merged into one super galaxy.

- Ending possibilities:

    o Big Rip: The cosmological constant overpowers gravity, sending all matter flying away into distant oblivion.

    o Big Crunch: Gravity overwhelms everything as it all collides together, crushing everything into one single mass.

    o Fade to Black (hole): matter remains in balance, but everything gradually falls into supermassive black holes littering the galaxy
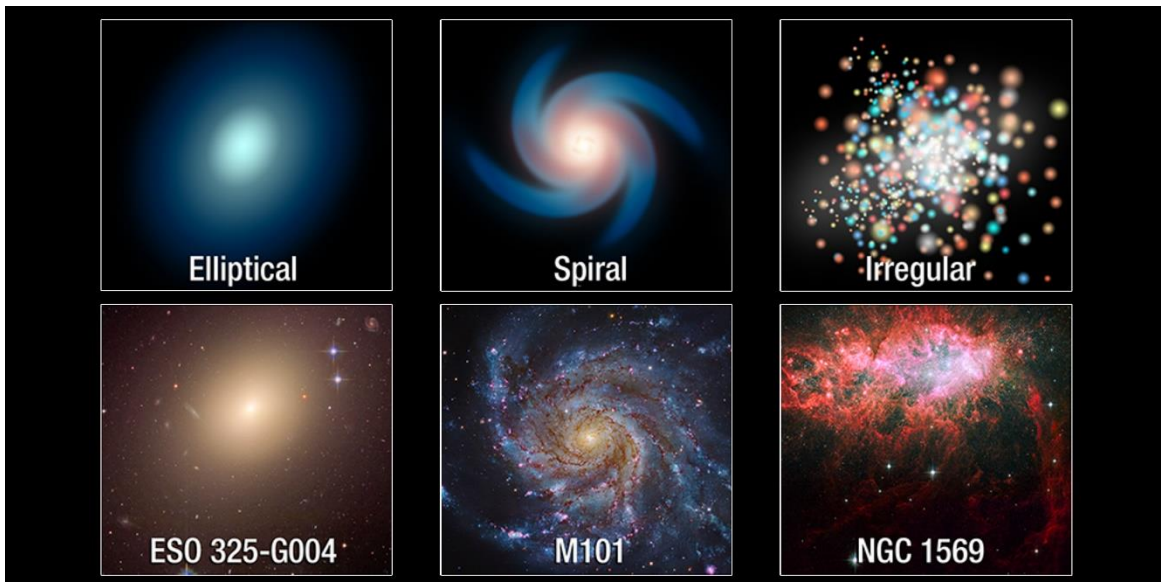
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[82]Hubblesite.org, "The Building Blocks of the Universe," Photo credit: A. Feild (STScI)
https://hubblesite.org/science/galaxies#section-9778b42a-d963-400b-b8c1-edd4e008c323 (Accessed October 4, 2020).

Draw Play

For solo

Sit with a blank sheet of paper and a drawing utensil. Choose a piece of music to listen to and while doing so interpret what you are hearing as a drawing. You may finish drawing when the music is finished playing. Now with your instrument of choice, interpret your drawing as a musical piece distinct from the music that initially inspired it.

Draw Play

For group

Sit in a circle, each person armed with a sheet of people and a drawing utensil. Collectively

decide on a piece of music to listen to and while doing so, interpret what are hearing as a

drawing. Continue drawing for as long as the music lasts.

Variations:

- Pass your completed drawing to the person on your left and accept the drawing from the

   person on your right. Using your instrument of choice, interpret this drawing as an

   improvisation distinct from the music that served as the initial inspiration. Everyone does

   so simultaneously.

- Everyone together chooses one person's drawing. Together, everyone improvises this

   drawing

Possible Impossibility

For any number of players

Compose a melody and improvise it

Fill a space with your sound by playing as quietly as possible

Play for twenty minutes in ten minutes

Play faster than you ever thought possible—slowly

Play loudly so that no one notices you.

Center

For any number of players

Find yourself in the center of the room

Show yourself in the center of the room

Leave yourself in the center of the room

Patty Cake

For two players

1. Set up facing each other. One player "leads," the other "follows."

2. The leader plays first, choosing tempo and rhythm.

3. The follower joins, matching tempo and rhythm. Pitches need not be matched.

4. After both players are stable and flowing nicely, the leader changes the rhythm slightly and the follower adjusts as quickly as possible.

5. After regaining stability, the follower increases the tempo, and the leader matches

6. Continue in this manner, with the leader and follower alternating changing rhythms and increasing speed until you fall apart. See how far you can go!

7. Advanced: both players lead, and both follow. The key is to give time after each change for stability to return.

Improvise Ives

For two players

1. Player 1 improvises a simple tune in a recognizable meter and key. Keep any

   development simple and easy to follow. Continue playing in this manner.

2. Player 2 improvises a contrasting simple tune in a different meter and a harmonically

   distant key. Keep any development simple and easy to follow.

3. Both players will "dance" around each other musically, playing in contrasting keys and

   meters.

Both players' attention should be kept on what the other is playing to ensure that rhythmic,

harmonic, or melodic alignment does not occur. It is okay if it does, but effort should be taken to

avoid it.

Radioactive Potato

For an odd number of players

Players arrange themselves in a circle so that they are all facing inward. The object of the game is to pass an increasingly complex motive from one player to another.

1. Choose a player to go first. Turns can either rotate around the group (clockwise or counterclockwise) or the next turn can be determined by the player whose turn it is currently.

2. Choose a "tempo," that is, the amount of time between turns. Slower tempo is easier, the faster you go the harder it gets.

3. The first sound to be made should be very simple, only one or two notes with little expression.

4. Cue the next player, who will imitate as exactly as possible the first player's motive.

5. Cue the third player, who will change the motive slightly by adding something to it.

6. Cue the next player, who will imitate the third player as exactly as possible.

7. Continue in this manner, alternating changing and imitating until someone is unable to take their turn.

Role Playing Game

For three or more players

Roles: Rhythm, in charge of tempo and meter

Harmony, in charge of key center and harmonic changes

Melody, in meter and key established by rhythm and harmony roles

1. Each player chooses a role to play and sticks to that role.

2. Rhythm starts to play first by establishing an identifiable and followable meter at a tempo of their choosing.

3. Harmony enters once they feel the meter and tempo has been established. Harmony's job is to provide a key center. This can be in the form of a bassline, chord progression, or emphasizing certain pitches through repetition. Any rhythms used by Harmony should reinforce rhythmic or metric ideas that were established by Rhythm.

4. Melody enters once they feel a key center has been established. The melody must make sense in terms of the established key area and meter. Typically, this would mean cadences involve returning to the tonic or primary pitch.

5. Melody may develop as they wish as long as they remain in the key area established by harmony. Harmony and rhythm may change, but the players must signal their intentions via audio cues. That means making a noticeable change in what they are doing without being destructive to the group cohesion.

Role Playing Game, Tabletop Version

For 2 or more players

Required materials: Pair of 6-sided dice, flat surface, musical instruments

Each player rolls twice, once with 1 die, once with 2 dice
Rolling 1 die determines how long you play
Rolling 2 dice determines what rhythm and approximate pitch or timbre contour you play
Roll as soon as you are able
Begin playing after your roll without delay
Choose your own pitches and volume unless specifically indicated
Rhythms indicate approximate speed; players' tempos need not align with each other

1 die, rolling a:
1 = 10 seconds
2 = 20 seconds
3 = 30 seconds
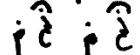4 = 40 seconds
5 = 50 seconds
6 = 60 seconds
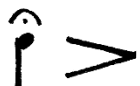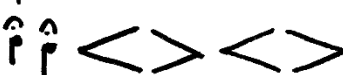
2 dice, rolling a:

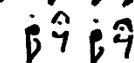2 =   a niente
3 =   forte
4 =
5 =
6 =
7 =   forte
8 =   piano
9 =   piano
10 =
11 =   tr
12 =

How to end:

1. Everyone's timing ends simultaneously

2. Everyone has taken 10 turns