The Homeric Answer:

How By-Ear Learning and Improvisation Enhance the Musicianship of Classical Performers

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Abstract

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Throughout the history of non-Western music-making, and common to most art music in cultures around the world, musicians have shared the fundamental practice of learning, transmitting, and composing their art by ear. For many centuries, Western European art music also took part in this practice. However, as a highly sophisticated notational system evolved, and through-composed music was prioritized, an emphasis in Western classical music on learning to play primarily by reading notation was established. Ironically, this has resulted in causing many classical performers today to find themselves with a limiting handicap: formally trained in an aural art, they often feel incapable of playing music unless they are provided with notation to read. They also have difficulty playing music of their own invention. In contrast, due to the different means by which the brain processes music learned by ear, musicians from oral or oral/written traditions simultaneously nurture their potential to create their own original music through embellishment, improvisation, and composition.

In this paper I shall examine the chronology of Western art music's progression from an oral to a written tradition, discuss shared characteristics between oral traditions of Homeric poetry and music, and propose a means for emphasis on oral learning

practices in classical music pedagogy. I shall consider the benefits of ear-based learning within a literate tradition, as well as a variety of thriving learning environments that nurture the original creativity of musicians.

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Introduction

Throughout the history of non-Western music-making, and common to most art music in cultures around the world, musicians have shared the fundamental practice of learning, transmitting, and composing their art by ear. For many centuries, Western European art music also took part in this practice. However, as a highly sophisticated notational system evolved, and through-composed music was prioritized, an emphasis in Western classical music on learning to play primarily by reading notation was established.[1] Ironically, this has resulted in causing many classical performers today to find themselves with a limiting handicap: formally trained in an aural art, they often feel incapable of playing music unless they are provided with notation to read. They also have difficulty playing music of their own invention. In contrast, due to the different means by which the brain processes music learned by ear, musicians from oral or oral/written traditions simultaneously nurture their potential to create their own original music through embellishment, improvisation, and composition. Defined by Robert Woody, "Playing by ear means that the notes they play—that is, the pitches and rhythms—are informed by an inner hearing. Skilled ear players do not require cues from notation (or another source) to know what notes to play, but instead are guided by an internal model of what the music should sound like."[2] Yet, performers who depend entirely on reading

[1]Michael Church, "Introduction," in *The Other Classical Musics: Fifteen Great Traditions,* ed. Michael Church (Woodbridge, UK: The Boydell Press, 2015), 10.

[2] Robert Woody, "Playing by Ear: Foundation or Frill?" *Music Educators Journal* 99, no. 2 (December 2012): 82, accessed August 3, 2016, http://www.jstor.org/stable/23364292.

notation to play and learn music rarely develop these generative tendencies. As a result, they have limited abilities to contribute original music to the evolution of their genre.

By what means might we be able to restore training for Western art musicians that nurtures the fruitful creativity that performers have expressed in centuries past, creativity that can both artistically interpret composed works and provide them the freedom to embellish, improvise, and compose?

In this paper I shall examine the chronology of Western art music's progression from an oral to a written tradition, discuss shared characteristics between oral traditions of Homeric poetry and music, and propose a means for emphasis on oral learning practices in classical music pedagogy. I shall consider the benefits of ear-based learning within a literate tradition, as well as a variety of thriving learning environments that nurture the original creativity of musicians.

Overview

From ancient civilizations to the present day, shared disciplines of diverse cultures have launched young artists into their lives' work and driven their motivation to learn and be challenged. Parallels can be drawn between the various means by which cultures have nurtured and trained their talented tradition-bearers of music. What are some of the common practices today that fill the many hours musicians are required to spend training for performance, for collaboration with others, and for preserving and/or evolving the genre they love and have committed to pursue? In various traditions of world art music—be they Western classical, North Indian Hindustani, or American jazz,

as well as highly developed vernacular musics, such as Brazilian choro, Irish celtic, and bluegrass—there are many common elements of an artist's training. Some of the most important elements include listening to music, acquiring technical skills, and gaining an understanding of music theory, grammar, and syntax. A notational system is usually learned as well in order to transmit and/or preserve their compositions. However, most of these musical traditions maintain a highly oral/aural means of communicating notes and rhythms. An ability to improvise and play by ear is the norm.[3]

While Western art music originally began as an oral tradition, our notational system steadily developed over time, and through-composed music grew in importance. As a result, Western art music gradually left behind these oral disciplines and qualities. Very few other musical cultures have grown to depend on notation to this degree.[4]

As our system of musical notation evolved over the past one thousand years, it became regarded as the most sophisticated, and "most efficient means of transcription, and thus of preservation."[5] By the mid-nineteenth century, printed music became more readily available, method books and treatises were published, and composers were inspired to design more detailed and large-scale works with specifications of how, and exactly what notes, to play. The efficiency of our notational system has made it possible for musicians to perform great masterpieces of composed music, and has preserved these works for future generations to perform.

[3] Woody, 82.

[4] Church, 10.

[5] Ibid.,12.

Over the short timespan between the early 1800's to the turn of the century, notation became the primary means by which Western art music was transmitted, and learning by ear, once common even to this tradition, was greatly de-emphasized.[6] Directly proportional to the increased use of notation, improvisation declined,[7] as did the number of performers who could compose as well as play. In the nineteenth century, an instrumentalist's skill-set required the abilities to embellish or improvise on a given score (such as for cadenzas). By the twentieth century, a performer's skill-set merely required the ability to interpret, albeit artistically, a specifically notated score. In his "The Decline of Improvisation In Western Art Music," Robin Moore states:

> Even well into the 19th century it is clear that improvisation remained an indispensable ability for most professional musicians. We know that Brahms, Paganini, Chopin, Clara and Robert Schumann, Mendelssohn, Hummel, Cramer, Ries, Spohr, Joachim, and Schubert, to cite a few familiar names, were all accomplished improvisers in addition to composers and/or performers of precomposed music.[8]

In a relatively short period of time, the roles of performer/improviser/composer, which most musicians had once embodied, were separated into the two positions of composer and interpreter. With some exceptions, such as in organ music,[9] the continued

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[6] Pierre Marie François de Sales Baillot, *The Art of the Violin* 1835*,* edited and translated by Louise Goldberg (Evanston, IL: Northwestern University Press, 1991), 278.

[7] Robin Stowell, *The Early Violin and Viola: A Practical Guide* (Cambridge: Cambridge University Press, 2001), 89.

[8] Robin Moore, "The Decline of Improvisation in Western Art Music: An Interpretation of Change," *International Review of the Aesthetics and Sociology of Music* 23, no. 1 (June 1992): 61-84, accessed March 9, 2014.

[9] Derek Bailey, *Improvisation: Its Nature and Practice in Music* (USA: Da Capo Press, 1993), 29.

maintenance of improvisation and composition in performance pedagogy was not encouraged, or, at times, even allowed.[10] By the 1960's, the gap between the two roles of composer and performer had grown so wide, that Aaron Copland maintained:

> Too often…the truth is that interpreters are not thinking about the composer at all—I mean the live composer. In the past it was different. There are numerous instances of a work being written simply because some outstanding instrumentalist inspired it. Paganini commissioning Berlioz, Joachim helping Brahms—instances such as these become more legendary as the years pass. Of course isolated examples still occur, but for the most part a regrettable gulf separates the interpreter and composer in present-day musical life. They are not interacting enough![11]

Thankfully, in the twentieth and twenty-first centuries, there remained a few individual performers and ensembles who either commissioned new works by composers they admired, or wrote their own original music. Recent evidence of this creative practice include examples such as violist/composer Atar Arad, who later established his respected career as a composer in addition to his world-renown reputation as a performer. Examples in chamber music include The Kronos Quartet's Fifty for the Future project,[12] as well as the Grammy-winning ensemble Eighth Blackbird and their vision "to move music forward through innovative performance, advocate for new music by living

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[10] Anna G. Piotrowska, "Expressing the Inexpressible: The Issue of Improvisation and the European Fascination with Gypsy Music in the 19th Century," *International Review of the Aesthetics and Sociology of Music* 43, no. 2 (December 2012): 326-327, accessed January 29, 2014, http://www.jstor.org/stable/23342825.

[11] Aaron Copland, *Music and Imagination: The Charles Eliot Norton Lectures* (Cambridge: Harvard University Press, 1980), 56-57.

[12] The Kronos Quartet has commissioned fifty composers of twenty-five women and twenty-five men, to write for emerging professional-level string quartets. At the University of Washington School of Music, I was fortunate to observe a collaborative rehearsal/discussion with the Kronos Quartet and Garth Knox on the piece he is writing for this project. http://kronosquartet.org/fifty-for-the-future/about

composers, and create a legacy of guiding an emerging generation of musicians."[13] Violist/composer Melia Watras has collaborated on new works with composers Garth Knox and Shulamit Ran, as has violinist Rachel Barton Pine with composers Augusta Read Thomas, John Corigliano, and Americana artist/composers David Wallace, Darol Anger, and Bruce Molsky. In addition, since the twentieth century, performers and composers have been writing works with directed improvisation, as well as contributing developments to the free improvisation movement. The thriving period performance-practice movement, revived over the past half-century, has contributed much to the revival of embellishment and improvisational techniques as applied to music of the nineteenth-century and earlier.

Unfortunately, classical performance majors in most United States music schools are still not required to take, or even offered, courses in improvisation or composition outside of the organ and jazz departments.[14] In organ music, the long established traditions of improvisation and composition have continued since the fourteenth-century. From the blind organist Franscesco Landini (1325-1397) to modern-day protégés of Olivier Messiaen and the Parisian school, organists have been required to hone improvisational skills for practical use in church service and in concert performance.[15]

In the case of jazz, it is interesting to note that at the same time the gulf between nineteenth- and twentieth-century classical composers and performers was growing and

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[13] Here is a link to Eighth Blackbird's website, https://www.eighthblackbird.org/ensemble/.

[14] Matt Swanson and Patricia Shehan Campbell, "Informed by Children: Awakening Improvisatory Impulses in University Students," in *Improvisation and Music Education: Beyond the Classroom*, ed. Ajay Heble and Mark Laver (New York: Routledge, 2016), 203-204.

[15] Derek Bailey, *Improvisation: Its Nature and Practice in Music* (USA: Da Capo Press, 1993), 29-37.

improvisational skills were diminishing, a new musical art form was evolving from the rich influences of African-American oral traditions. Highly improvisational and sophisticated in rhythmic complexity, these African influences melded with Western musical forms and harmonic function and were played on Western musical instruments. Throughout every decade of the twentieth century, jazz revealed new innovations of form and improvisatory skills on composed forms, as well as new ensemble combinations of instruments and virtuosity of performance practices.

By the 1950's, jazz was being established in formal institutions.[16] By then, notational tools such as lead sheets and method books were being used, but a high priority on learning by ear has been maintained. Formally-trained classical students, however, usually enter college dependent on notated material with little to no experience with improvising or playing by ear. This lack of emphasis on ear-playing skills in classical pedagogy has resulted in measurable limitations on music students' musicianship. In a study by Robert Woody and Andreas Lehmann, formally-trained music students who also had experience with jazz or other ear-playing genres were shown to have strikingly better musical goal-imaging and motor production abilities than notation-based music students. The study compared the abilities of two groups of twelve university music students to learn two fairly simple melodies. Each student was to reproduce one melody by singing and one by playing on their instruments. The students with prior play-by-ear experience needed, on average, three (3.0) attempts to sing back one melody accurately and only 3.8 to play another melody on their instruments. The notation-based

[16] Paul Berliner, *Thinking In Jazz: The Infinite Art of Improvisation* (Chicago: University of Chicago Press, 1994), 55.

students required, on average, 6.4 attempts to sing back the first melody correctly, and 10.6 attempts to play the other melody on their instruments.[17]

Given my own notation-based background as a classical violist, I have experienced these deficits in skills as compared to musicians who are able to learn a melody quickly by ear and create their own original, improvised music. However, to my surprise and delight, these past nine years, I have acquired some of the benefits of learning by ear by immersing myself in three musical environments outside of Western art music—jazz, Brazilian choro, and traditional fiddle tunes. It has been fascinating for me to discover that the oral/aural practices of learning from these other traditions have also benefitted my ability to learn, memorize, and perform Western art music. I have found great creative satisfaction, as well as immeasurable amounts of fun, throughout this pursuit of learning how to play by ear, and to improvise. These skills reclaim for me some of the original freedoms classical musicians had before our tradition became so dependent upon notation. In his *Improvisation in Nine Centuries of Western Music,* Ernest Ferand states:

> This joy in improvising while singing and playing is evident in almost all phases of music history. It was always a powerful force in the creation of new forms and every historical study that confines itself to the practical or theoretical sources that have come down to us in writing or in print, without taking into account the improvisational element in living musical practice, must of necessity present an incomplete, indeed a distorted picture. For there is scarcely a single field in music that has remained unaffected by improvisation, scarcely a single musical technique or form of composition that did not originate in improvisatory practice or was not essentially influenced by it. The whole history of the development of music is accompanied by manifestations of the drive to improvise, though the element of improvisation retreats

[17] Robert Woody, “Playing by Ear: Foundation or Frill?” *Music Educators Journal* 99, no. 2 (December 2012): 84-85, accessed August 3, 2016, http://www.jstor.org/stable/23364292.

> to the background in some phases, while in others it reveals a strikingly rich flowering.[18]

Without the tools and skills necessary to create their own original music, modern-day classical performers are not as well equipped as in the past for contributing to the evolution of their art form. Without permission to experiment, push boundaries, and innovate, they are denied the joy that Ferand describes. The preservation of past masterpieces is of great importance, of course, and can provide significant rewards to a performer as well. Gaining the ear-based skills for improvisation, skills once possessed by many of the composers of those masterpieces, can actually enhance today's musicians' abilities to interpret and perform music from the past.[19]

A graduate of the Yale School of Music and four-time Grammy-winning cellist in world and improvised music, Eugene Friesen is a professor at the Berklee College of Music. In his book, *Improvisation for Classical Musicians,* he states that:

> For too long the realm of classical music has fostered a divide between the creative giants—composers and performers. While there is plenty of creativity that goes into either of these roles, it's the composers who have the exclusive ability to create and alter forms, shape notes into expression and inspiration, and sequence harmonies and melodies to dramatic effect. We players have largely forfeited that incredible elation, the self-discovery, the flat-out fun of making our own music, and making our own music with friends.[20]

In the first chapter of this paper, I shall explore facets of the history of Western European classical music, including ongoing influences from ancient Greek civilization,

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[18] Ernest Ferand, *Improvisation in Nine Centuries of Western Music: An Anthology with a Historical Introduction* (Köln: Arno Volk Verlag, 1961), 5.

[19] Woody, p. 84-85.

[20] Eugene Friesen, *Improvisation for Classical Musicians: Strategies for Creativity and Expression* (Boston: Berklee Press, 2012), vi-vii.

the origins of our classical music as an oral tradition, the gradual development of our notational system, and our system's fairly rapid transition from a balanced oral and improvisational tradition, to one quite dependent on notation. In the second chapter I shall discuss characteristics of several oral traditions such as Homeric poetry and Brazilian choro, in comparison with jazz. As oral/aural art forms, these traditions shared learning processes that can now be understood through discussion of brain studies on memory and creativity. In conclusion, I shall briefly consider contexts within which ear-based learning and improvisation have provided me with beneficial experiences. Appendix A is a complete interview with Dudu Maia that I refer to in Chapter Two, and Appendix B provides a list of specific opportunities and resources available for further applications.

By examining the pedagogical practices of various oral traditions of music, past and present, as well as illuminating parallels to the tradition of epic poetry, we can discover how powerful the discipline of learning by ear is for inspiring the musical creativity of aspiring young artists. I would like to demonstrate how experiences in ear-based musical practices can benefit today's college students playing instrumental classical music for strings by providing pathways to students' growth as fine performers, improvisers, and composers.

Chapter One

Western European Art Music: From an Oral to Literate Tradition

Centuries ago, Western European art music was founded on oral/aural practices of performance, transmission, and pedagogy,[21] practices shared with other art musics around the world since ancient times. As we research the genealogy of Western European art music, we can trace its departure from the commonly held priority of learning and playing by ear. By reviewing the development of the Western notational system, and our increased dependence on it for preservation and pedagogy, we see a directly proportional decrease in performing musicians' abilities to improvise and create original music. Not only did classical European music evolve away from its own original priorities of listening to learn and transmit, it also left behind practices shared by other art musics that have, over time, maintained a performer's freedom, even expectation, to invent, create, and contribute originality to their art forms.

From Ancient Times Through Ancient Greece and the Roman Empire

Musical culture in ancient civilizations of India, China, and the Near and Middle East left us with evidence of how their music was performed through images in their art and their writings about music. They did not, however, leave any traces of corresponding notational systems, so we may conclude that their musical practices were maintained as

[21] Peter Burkholder, Donald Jay Grout, and Claude V. Palisca, *A History of Western Music* (New York, London: W.W. Norton & Company, 2010), 32.

oral traditions.[22] Concurrent to these ancient civilizations, around 1800 B.C.E the Babylonians also left us evidence about how their music was performed in their writings on their culture. In these writings they discussed various aspects of their music, such as tuning, intervals, improvisation, and performance techniques, and provide the earliest known means for notating music. The evidence indicates, however, that their practice in performance was not to use the notated music but to play by memory or to improvise.[23]

In Greek civilization around 800 B.C. the important role music played in their culture is represented by many images preserved in art pieces, writings about music, and poetry. Competitions at festivals were important and scenes painted on vases depict musicians as they stand in turn to mount a podium before a seated judge.[24]

By the fifth century B.C., instrumental music had become so complex and virtuosic that audiences of thousands of people would come to hear performances by famous musicians.[25] Consistent with Greek ideals of education, young scholar-artists learned by private instruction from a master musician by imitation and repetition. Starting from childhood, they received their instruction in singing and/or perform on such instruments as the *kithara*, *lyre*, and *aulos*.[26] Epic poets from 800-550 B.C.E., such as Homer, often accompanied themselves on the *lyre*, while singing their heroic tales. To the Greeks, the two traditions of poetry and music were so closely related that they considered them

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[22] Burkholder, Grout, and Palisca, 9.

[23] Ibid., 8-9.

[24] M.L. West, *Ancient Greek Music* (Oxford: Oxford University Press, 1992), 19.

[25] Burkholder, Grout, Palisca, 12.

[26] Patricia Shehan Campbell, *Lessons from the World: A Cross-Cultural Guide to Music Teaching and Learning* (New York: Schirmer Books, 1991), 24.

almost synonymous.[27] The Greeks did have a system of musical notation until the third century B.C. It remained in use until the late third century A.D. and has been preserved in a number of examples written on papyrus or inscribed in stone.[28] Similar to developments in later centuries of Western European medieval music, instrumental notation differed from vocal notation. Rarely, however, are musicians painted in illustrations reading from scrolls or tablets. Melodies were usually learned by ear and committed to memory. Melodies for popular plays would very likely be preserved orally for decades before being written down.[29] Given the Greeks' musical representations in art and in their writing about musical performance practice, scholars have concluded that they "primarily learned music by ear; they played and sang from memory or improvised using conventions and formulas."[30] During the Hellenistic age (323 B.C. to 32 A.D.), learning to read musical notation was included along with other general elements of Greek education, but the practice, physics, and theory of music were emphasized as higher priorities. The Greek writer on music Aristoxenus (a student of Aristotle) did not regard notation as very important, and stated:

> Given that the man who can notate the iambic meter does not necessarily know what the iambic is, and likewise with melody, the man who writes out the notes of the Phrygian melody does not necessarily know what the Phrygian melody is, obviously notation cannot be the goal of the science in question.[31]

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[27] Burkholder, Grout, Palisca, 13.

[28] West, 254.

[29] Ibid., 270.

[30] Burkholder, Grout, Palisca, 11.

[31] West, 271.

Throughout the many centuries of classical Greek culture, and continuing in the Roman Republic, music was considered to be a reflection of the order of the universe. They saw music as intricately woven into how the universe worked as a whole. As stated in *A History of Western Music:*

> Because musical sounds and rhythms were ordered by numbers, they were thought to exemplify the general concept of *harmonia*, the unification of parts in an orderly whole. Through this flexible concept—which could encompass mathematical proportions, philosophical ideas, or the structure of society as well as a particular musical interval, scale type, or style of melody—Greek writers perceived music as a reflection of the order of the universe.[32]

This pervasive significance of music continued through the first two centuries of the first millennium. Roman musical culture rose to produce great virtuosity of individual performers and grand festivals with large orchestral ensembles and vocal choirs, but few traces remain of the culture of the Romans before its decline in the third and fourth centuries. The notation system that had developed in earlier centuries declined in use to a point that by the fourth century A.D., Gaudentius speaks of it as being something once used by the ancients.[33] Yet even without notation, the powerful influence of music on their culture, established by the great Greek philosophers Plato, Aristotle, Pythagoras, and their followers, did continue throughout the Middle Ages and beyond.

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[32] Burkholder, Grout, Palisca, 13.

[33] West, 272.

The Development of Western European Musical Notation

As the Christian church grew throughout the first seven centuries A.D., and aristocratic society supported artistic endeavors, music was formally taught in monasteries, singing schools, or royal courts. The musical notation used in ancient Greece had long been forgotten so music was transmitted by ear.[34] The lyrics to songs, and liturgy of the church were preserved because the words were written down but the corresponding music, vocal or instrumental, is lost to us. Without musical notation, Isidore of Seville (ca. 560-636) declared that "Unless sounds are remembered by man, they perish, for they can not be written down."[35] Singers trained to perform in church were required to retain hundreds of chants learned by rote. Parallel to other oral traditions throughout history, these chants were composed, improvised, and transmitted by ear, based on the formulas and conventions of the genre, and maintained in the musicians' minds by repetition. Ernest Ferand maintains that improvisation and composition were one and the same until notation was invented.[36]

By the late seventh century, the Schola Cantorum was established in Rome to provide formal training for performing church musicians and became a model from which curriculum for singing developed and was later used throughout Europe. This school trained the choir that sang for services that the pope officiated. At this point in time, choirboys were still trained to sing psalms and hymns by ear yet were also

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[34] West, 254, 269-273.

[35] Burkholder, Grout, Palisca, 32.

[36] Ernest Ferand, *Improvisation in Nine Centuries of Western Music: An Anthology with A Historical Introduction* (Köln: A. Volk Verlag, 1961), 5.

learning to read and write neumes; here enters the earliest means of notation from which our system evolved.[37] Neumes were signs placed above the words of a chant to indicate melodic direction or gesture for each syllable. One sign may represent one to four notes but not the specific pitches. Neumes provided a visual cue for a singer who had already learned the melody by ear, but they were not explicit enough for sight reading.[38] The ambiguity with which the melodies were written is evidence of the freedom musicians still had in performance. Ernest Ferand states that, "The deciphering and transcribing of the earliest neumes often present insuperable difficulties, owing to the circumstance that the songs so notated were themselves not really fixed configurations but merely melodic outlines which were to be filled in by singers in always new ways according to the impulse of the moment or the demands of the liturgy."[39]

During the eighth century, neumatic notation evolved as efforts were made towards standardization of church music. Eventually, the repertory of Gregorian chant was taught and likely established at the Schola Cantorum in the early eighth century.[40] Shared power-seeking goals of Charlemagne and the church to unify Europe in the early ninth century created an increased need for notation in order to not only standardize chants with fixed melodies, but provide a "memory aid" for church musicians and to disseminate liturgical music throughout Charlemagne's domain.[41]

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[37] Campbell, 25.

[38] Burkholder, Grout, Palisca, 33.

[39] Ferand, 7.

[40] Burkholder, Grout, Palisca, 29-30.

[41] Campbell, 26.

Throughout the three hundred years between the eighth and tenth centuries, the progression of notation's evolution began with *neumes,* developed to the use of graphs denoting more complete shapes of melody, then progressed with the many contributions of Guido d'Arezzo (ca. 991—after 1033). With his innovations of a four-lined staff and solemnization, Guido boasted that he could "produce a perfect singer in the space of one year, or two at most," which previously would have required ten or more years of training by ear.[42] The Western church also adopted the eight church modes based on the Byzantine echoi, which helped classify and organize the vast number of chants required in a medieval chorister's repertoire.[43] Notation was used as a reference to learn the chants but choristers were still required to memorize them. As Guido recommended:

> if, therefore, you wish to commit any note or neume to memory so that it will promptly recur to you…you must mark that note or neume at the beginning of some especially familiar melody; and to retain each and every note in your memory, you must have at ready command a melody of this description which begins with that note…To sing an unknown melody competently as soon as you see it written down, or, hearing an unwritten melody, to see quickly how to write it down well, this rule will be of greatest use to you.[44]

Guido's treatise, *Micrologus*, provided practical instruction for singers on neume reading, intervals, modes, scales, melodic composition, and improvised polyphony, necessary tools for idiomatic embellishment within the aesthetic of a genre. This treatise, written circa 1030, was directed to boys learning basic elements of music and ear-training. It did not contain his two famous proposals on staff notation or sight-singing

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[42] Burkholder, Grout, Palisca, 46.

[43] Ibid., 28.

[44] Campbell, 28-29.

syllables which were intended for accomplished professional singers.[45] The contents of *Micrologus* and his other writings imply that a student of music needed to have ear-based compositional skills. Knowledge of intervalic relationships between notes, recognition of the eight church modes, a refined sense for "grateful" melodic lines—all these skills had to be internalized by ear for a singer to not only perform composed chant, but to also embellish or improvise in a polyphonic context.[46] In his chapter on Early Western polyphony, Hendrik van der Werf states that, "There is no question in my mind that in addition to producing successively composed pieces, such as the *Victime paschali laudes* (Wipo of Burgundy), medieval singers were perfectly capable of inventing two voices simultaneously.[47]

Micrologus is significant both as a means for understanding the beginnings of Western music theory, and as a template from which other treatises for many centuries would relate, whether or not their authors were familiar with *Micrologus*. From Medieval to Renaissance times, through the Baroque to early Romantic, musicians needed to have internalized compositional skills. I will discuss several such treatises later in this chapter.

As church musicians were allowed the freedom to experiment, chants became more embellished and improvised-upon with expansions called tropes, sequences, and melismas. Tropes were especially prevalent in the tenth and eleventh centuries, but

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[45] Claude V. Palisca, ed. *Hucbald, Guido and John on Music: Three Medieval Treatises,* trans. Warren Babb (New York, London: Yale University Press, 1978): 50, 55.

[46] Guido in *Hucbald, Guido and John on Music: Three Medieval Treatises,* trans. Warren Babb, 70.

[47] Hendrik van der Werf, "Early Western polyphony," in *Companion to Medieval and Renaissance Music*, ed. Tess Knighton and David Fallows (London: J. M. Dent & Sons Ltd, 1992), 109.

declined in use by the twelfth century until they were finally banned in the mid-1500's at the Council of Trent.[48] The development of polyphony upon the foundation of chant became the next medium through which church musicians would generate new innovations.

Secular medieval European society also supported a rich musical culture. Minstrel instrumentalists traveled to perform but were commonly employed by courts to provide specialized music for the aristocracy. Celtic bards and epic poets often accompanied themselves singing their performances of heroic tales, a means of preserving past history in an illiterate society. Both the music and poetry were from long-standing oral traditions, of which the poems were eventually written down, such as *Beowulf*.[49]

As economic conditions improved with agricultural advances and greater food supply, trade increased, and the population grew by three times between 1000 and 1300. A growing middle class, mostly illiterate, was beginning to be provided with opportunities for education and arts. With this increase in culture, artists such as minnesingers, troubadours and lyric singers were trained usually by learning through a seven-year long apprenticeship.[50] Their art was transmitted by means of experience with master minstrels and through immersion in the idiom as they traveled throughout their respective areas of Europe. They often were accompanied by instruments either playing the single, notated melodic line, or, more likely, embellishing and improvising off of the given melody.

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[48] Burkholder, Grout, Palisca, 62.

[49] Albert B. Lord, *The Singer of Tales*, 2nd ed. (Cambridge, London: Harvard University Press, 2000), 198.

[50] Campbell, 30.

The earliest instrumental music preserved in notation is that of about fifty European dance tunes from the thirteenth and fourteenth centuries. Medieval dance music was most commonly practiced as a *primary orality*, a performance completely relying on oral tradition. These particular dances were written down, likely because they were especially popular. According to Thomas Binkley, their performance would be considered that of a *secondary orality,* having been based on a written score for reference but otherwise informed by orally transmitted practices.[51] Depending on the context of a performance, such as a more formal circumstance versus an informal one, or, the given available musicians at a particular gathering, any performance from the same score could vary considerably. Mostly monophonic, the notation of these instrumental dance tunes resembles vocal music from that period. Other examples, however, use different types of scoring or tablature for two or more parts to be played by one person on a keyboard.[52] Even as abundant as dance music was, there are almost no extant arrangements of these tunes for multiple instruments, yet pictures and archival documents attest to ensemble settings.[53] Musicians that performed in dance ensembles would commit the melody to memory and improvise an accompaniment. A delightful vignette describing a Medieval dance is preserved in the narrative poem, *Romance of the Rose*:

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[51] Thomas Binkley, “The work is not the performance,” in *Companion to Medieval and Renaissance Music*, ed. Tess Knighton and David Fallows (London: J.M. Dent & Sons Ltd, 1992), 40.

[52] Lewis Jones, “Genres: Instrumental, Fourteenth- and Fifteenth-Century Keyboard Music,” in *Companion to Medieval and Renaissance Music,* ed.’s Tess Knighton and David Fallows (Berkeley and Los Angeles: University of California Press, 1992), 131.

[53] Lorenz Welker, “Wind ensembles in the Renaissance,” in *Companion to Medieval and Renaissance Music,* ed.’s Tess Knighton and David Fallows (Berkeley and Los Angeles: University of California Press, 1992), 151.

Now see the carol go! Each man and maid
Most daintily steps out with many a turn
And arabesque upon the tender grass.
See there the flutists and the minstrel men,
Performers on the fiddle! Now they sing
A retrouenge, a tune from old Lorraine;
For it has better songs than other lands.
A troop of skillful jongleurs thereabout
Well played their parts, and girls with tambourines
Danced jollily, and, finishing each tune,
threw high their instruments, and as thee fell
Caught each on finger tip, and never failed.[54]

Such jovial scenes of live, acoustic music accompanying dance continue to be played out at countless vernacular music establishments throughout contemporary Western culture. For the past several years, I have participated in both the provision of live music, and the dancing, and have witnessed all the above elements in this poem, though the instruments lifted high may not have been thrown. No printed music in sight, and arrangements improvised, the musicians are able to provide hours of accompaniment for the dancers.

Renaissance Lutenists

The Renaissance centuries saw great expansion in education, literacy and musical innovation. Further developments in composition increased the range and number of voices in imitative counterpoint by adding a bass line below the tenor to the former three-voiced texture of the Middle Ages.[55] By the mid-sixteenth century, printed music had become available to common households for the first time, and composers began

[54] Burkholder, Grout, Palisca, 82.

[55] Ibid., 157.

writing down instrumental music that was not only independent from dance or vocal melodies, but worthy of performance on its own. Inspired by improvisational practices on polyphonic instruments such as the lute, new musical inventions evolved such as *variation form*, *prelude*, *fantasia*, and *ricercare*.[56] One of the most renowned lutenists was composer/improvisor, Fransesco da Milano (1497-1543). An account of a French traveler in Milan, recorded by Pontus de Tyard in 1555, bares witness to the magnetism with which Fransesco captured his audiences:

> Among other pleasures and rare things assembled for the satisfaction of these select people was Fransesco da Milano, a man considered to have attained the goal (if it is possible) of perfection in playing the lute. The tables having been cleared, he took up a lute and as though testing the tuning of his strings, sitting near one end of the table, began to search out a fantasia. He had only moved the air with three plucked sounds when his music interrupted the conversations that had begun between the guests. And having compelled them to turn their faces to him, in whole or part, he continued with such ravishing zeal, making the strings faint under his fingers through his divine manner of playing, that little by little he transported all those who listened…as if we had been picked up by an ecstatic transport of some divine frenzy.[57]

Lutenists were trained mostly by ear, duplicating their master's process of layering one, two or three-voiced passages with appropriate embellishments of the genre. According to Hopkinson Smith:

> Instrumental technique, contrapuntal practice, and intuition for improvisation were learnt and developed simultaneously. Eventually, even the most sophisticated part-writing existed not only on paper, but also resided in the capabilities of the hands of a skilled improvising lutenist.[58]

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[56] Grout, 164, 274, 276-78.

[57] Ibid., 277.

[58] Hopkinson Smith, "Plucked instruments: silver tones of a golden age," in *Companion to Medieval and Renaissance Music*, ed. Tess Knighton and David Fallows (London: J.M. Dent & Sons Ltd, 1992), 136.

The Baroque and Classical Musician's Skill-Set

As musical literacy increased through the seventeenth and eighteenth century, so did the complexity and variety of musical forms, and yet performers were still required to ornament their parts. "To decorate, to supplement, to vary, to embellish, to *improve*, as it was often called, was an accepted part of being a performing musician."[59] Johann Sebastian Bach is often credited for having brought the tradition of Baroque music to its highest level, both in composed and improvised music. In William Mitchell's introduction to C.P.E. Bach's treatise on keyboard playing, he quotes Johann Friedrich Daube describing a performance of J.S. Bach in 1756:

> The excellent Bach possessed this third species (of thorough bass) in the highest degree: When he played, the principle part had to shine. By his exceedingly adroit accompaniment he gave it life when it had none. He knew how to imitate it so cleverly with either the right hand or the left, and how to introduce an unexpected counter-theme against it, that the listener would have sworn that everything had been conscientiously written out. At the same time, the regular accompaniment was very little curtailed. In general his accompanying was like a *concertante* part most carefully constructed and added as a companion to the principle part so that at the appropriate time the upper voice would shine…Suffice it to say that anyone who missed hearing him missed a great deal.[60]

As a soloist, J.S. Bach also possessed great powers of composition and improvisation. For job acquisition, prestige, royal entertainment, or all the above, soloists renowned as highly skilled, expressive improvisers were sought after. A long established tradition of contests between great performers and their extemporary

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[59] Derek Bailey, Improvisation: Its Nature and Practice in Music (USA: Da Capo Press, 1993), 21.

[60] Carl Phillip Emanuel Bach, Essay on the *True Art of Playing Keyboard Instruments*, translated and edited by William J. Mitchell (New York: W.W. Norton & Company, 1949), 20.

powers was at play when, in 1717, Johann Sebastian Bach was invited to challenge the great French organist, Jean Louis Marchand in Dresden at the house of Count Flemming. Both men agreed to the terms but Bach's reputation alone defeated Marchand who left town before the appointed hour of the contest.[61] Other contests between performers are documented such as a competition between Scarlatti and Handel in 1707, Mozart and Clementi in 1781, and between Mozart and Hässler in Dresden, 1789. Mozart's fame as a child prodigy was fueled not only by his virtuosity on the clavier and violin but also as an improviser and composer. Mozart describes the event in Dresden with Hässler:

> (Hässler) was a pupil of a pupil of Bach's. His forte is the organ and the piano. Now people here think that because I come from Vienna, I am quite unacquainted with this style and mode of playing. Well, I sat down at the organ and played. Prince Lichnowsky, who knows
> Hässler very well, after some difficulty persuaded him to play also. This Hässler's chief excellence on the organ consists in his foot-work, which, since the pedals are scale-side here, is not so very wonderful. Moreover, he has done no more than commit to memory the harmony and modulations of old Sebastian Bach and is not capable of executing a fugue properly; and his playing is not thorough.[62]

Extemporaneous playing was also considered to be an important qualification of a fine composer. In C.P.E. Bach's *Versuch über die wahre Art das Clavier zu spielen (An Essay on the True Art of Playing Keyboard Instruments)*, he begins a chapter on improvisation as applied to the fantasy and composition in general.

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[61] Eric Blom, "Johann Sebastian Bach," *Grove's Dictionary of Music and Musicians*, vol. 1 (New York: St. Martin's Press, 1954), 296.

[62] Alfred Einstein, *Mozart: His Character, His Work*, translated by Arthur Mendel and Nathan Broder (New York: Oxford University Press, 1945), 131.

> A fantasia is said to be free when it is unmeasured and moves through more keys than is customary in other pieces, which are composed or improvised in meter. These latter require a comprehensive knowledge of composition, whereas the former requires only a through understanding of harmony and acquaintance with a few rules of construction. Both call for natural talent, especially the ability to improvise. It is quite possible for a person to have studied composition with good success and to have turned his pen to fine ends without his having any gift for improvisation. But, on the other hand, a good future in composition can be assuredly predicted for anyone who can improvise, provided that he writes profusely and does not start too late.[63]

C.P.E. Bach was employed by Fredrick the Great as a member of the court orchestra in 1740, alternating court duties monthly with another harpsichordist. This allowed him time to teach and compose, as well as to write the seminal *Versuch,* which has been considered to be the most important treatise on the subject of eighteenth-century, German keyboard playing.[64] His treatise covers much of the aspects of keyboard technique as well as some remarkable chapters on embellishment, cadenzas, and variations. Bach includes a quote by Martin Agricola, a German composer and theorist of Renaissance music, which is quoted in Pier Francesco Tosi's treatise, *Anleitung zur Singkunst*, of 1757:

> Whoever has carefully thought over what has already been said will see that it is hardly possible to prescribe good cadenzas that can be generally applied, as little as it is possible to teach someone to memorize flashes of wit beforehand. For the former and the latter are partly inspired and partly determined by circumstances and occasion. Through diligent reading and observation of the flashes of wit of others, however, one can awaken and sharpen one's own wit, just as one can keep it in order through the directions of reason.[65]

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[63] Carl Philipp Emanuel Bach, *Versuch über die wahre Art das Clavier zu spielen (An Essay on the True Art of Playing Keyboard Instruments)* 1787, translated and edited by William J. Mitchell (New York: W.W. Norton & Company, 1949), 430.

[64] Stanley Sadie, "Carl Philipp Emanuel Bach," *The New Grove Dictionary of Music and Musicians*, vol. 2 (London, New York: Macmillan Publishers Limited, 2001), 388.

[65] C.P.E. Bach, 302.

It is important to note that all three of these teaching artists, C.P.E. Bach quoting Tosi quoting Agricola, stress the importance of listening to the improvisatory skills of others, or, “flashes of wit,” that can only be absorbed by ear. As in so many other traditions where oral learning occurs, the brain is required to develop the neuronal connections necessary to retain information that’s not written down. Anne Dhu McLucas discusses in her book, *The Musical Ear: Oral Tradition in the USA,* some of the latest research we have about how the brain takes in aural information:

> If the way music is processed in the brain—in multiple and parallel ways—utilizes the plasticity of the brain to adapt, this in turn facilitates the multiple uses of music and levels of meaning that we attach to it…In other words, the taking in of music, like other activities of the brain itself, is an ever-changing and adaptive capacity of humans. Written music utilizes in part the same “left-brain” capacities for rational thinking, linearity, and logic that are utilized by language. Music taken in orally activates other parts of the brain (mostly in the right hemisphere, although some functions…may share left-brain functions), and can bring into play new kinds of ideas.[66]

The rich musical culture of eighteenth-century court life was, in addition to the church, one such context within which this kind of listening and learning occurred. A transitional culture, which combined both oral and notated transmission practices, and daily interaction between master musicians and their younger protégés, created an immersive learning environment. Frequent exposure to new works and old, learning the language by means of implicit absorption, the observation of other musicians’ improvisational ideas or “flashes of wit,” and the study of exemplary compositions were some of the many ways court musicians were inspired in their work.

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[66] Anne Dhu McLucas, *The Musical Ear: Oral Tradition in the USA* (Farnham, England; Burlington, VT: Ashgate Publishing Company, 2010), 158-159.

Friedrich Dülon and More Treatises

Just outside the court culture, yet influenced by it through his father, is the remarkable story of Friedrich Dülon. A blind flute virtuoso, his success as a performer bears witness to how a talented young artist can absorb the music of a literate tradition entirely by ear. Dülon was born in 1769 near Berlin and became blind soon after birth due to the maltreatment of an eye infection. At the age of nine he heard a performance by the blind flutist Joseph Winter that inspired him to learn to play flute. Dülon's father, also a flute player, gave him lessons and taught him concerto solos by Johann Quantz by ear. His father was a municipal official. With Berlin's lively musical culture nearby, Dülon benefitted from valuable exposure to musical culture in both the public and court context.[67] In an article by Leta E. Miller, a detailed account of the meeting between C.P.E. Bach and the thirteen-year-old flute virtuoso Dülon, reveals much about Bach's approach to teaching composition and his high priority on improvisation. In 1783, Dülon and his father were on a concert tour to promote the young prodigy and visited Hamburg. They were able to meet with Bach. Dülon had an impressive audition prepared which included a flute solo by their host, interspersed with preludes for each movement improvised by Dülon. The practice of improvising preludes on solo instruments such as flute, violin, or keyboard was still a common practice at the time. Bach was so impressed with the young man's talent that several more meetings took place. Bach put Dülon through several other drills. He provided Friedrick with an entirely new theme, which was rather complex, not short, and in A major. Dülon was to provide a

[67] John A. Rice, "The Blind Dülon and His Magic Flute," *Music and Letters* 71, no. 1 (February 1990), 26-27, accessed April 21, 2016, http://www.jstor.org/stable/735766.

second section to the theme and improvise a set of variations. He was able to complete the task with such skill and accuracy, dictating the theme with its bass, that Bach was convinced of Dülon's potential for a successful future in composition and agreed to teach the young man for several weeks. C.P.E. Bach saw the ability to improvise as a way to test the imagination and, as he described his father's approach to pedagogy, to discover a student's talent for the "invention of ideas."[68] According to Miller, "in this era in which new works were always in demand, there was clearly a fascination with the compositional process as a product of extemporized invention. The public was not only tolerant of impromptu composition, but, judging from the publicity given to such presentations as Dülon's fifteen-minute improvised fantasy and his variation set on a theme from the audience, it appears that the *Liebhaber* were eager to be entertained by spontaneous creation."[69]

Dülon's father would undoubtedly have included the *Essay of a Method for Playing the Tranverse Flute* by Johann Joachim Quantz, published in 1752, in his son's training. Quantz's treatise includes a chapter on "Appogiaturas and the Little Essential Graces Related to Them," a chapter on "Shakes (trills), and a chapter on "Extempore Variations on Simple Intervals." In a chapter on playing cadenzas, he writes a fascinating paragraph that echoes that which C.P.E. Bach quoted Tosi, quoting Agricola:

> But since it is impossible to write cadenzas as they must be played, any examples of finished cadenzas would still be insufficient to provide a genuine understanding ofthem. Thus, to learn how to make good cadenzas, you must try to hear many able people. And if you have some prior knowledge of the characteristics of cadenzas,

[68] Leta E. Miller, "C.P.E. Bach and Friedrich Ludwig Dülon: Composition and Improvisation in Late 18th-Century Germany," *Early Music* 23, no.1 (February 1995): 73, accessed March 15, 2014, http://www.jstor.org/stable/3137804.

[69] Miller, 75.

> such as that which I am trying to impart here, you will be better qualified to test what you hear from others, so as to be able to turn what is good to your own profit, and to shun what is bad.[70]

Another important treatise on eighteenth-century performance practice was by Leopold Mozart, his *Treatise on the Fundamental Principles of Violin Playing*, published in 1756. He includes chapters on "Appoggiature and Embellishments," "The Trill, Vibrato, Mordents and other improvised Embellishments." He goes into great detail to describe the various kinds of *Schläge* and an example below shows the progression from how the phrase is notated, through the various levels of embellishment: [71]

§ 19

To the passing appoggiature belong also those improvised ornamentations which I will call 'uebersteigende and untersteigende Zwischen-Schläge'[1] They occur between the appoggiatura and the principal note, descending quite smoothly from the appoggiatura to the principal note. See here their form and origin. Here are those which descend:

The foundation thereof.

With the Appoggiatura written out.

Embellished with the Zwischenschlägen.

Thus must it be played.

[70] Johann Joachim Quantz, *Essay of a Method for Playing the Transverse Flute* 1752, translated by Edward R. Reilly (New York: Schemer Books, 1966), 178.

[71] Leopold Mozart, A Treatise on the Fundamental Principles of Violin Playing 1756, translated by Edith Knocker (Oxford: Oxford University Press, 1951), 178.

Beethoven and Baillot

Unlike Mozart, Beethoven did not have the in-house training from his father as a young boy, but did show early signs of his genius as an improviser of free fantasies on both the clavier and violin. When guests would come to the Beethoven home, young Louis would go to the piano and play without "notes." HIs father said, "What silly trash are you scraping away at now? You know that I can't bear that; scrape according to the notes; otherwise your scraping won't be of much use." Years later, Beethoven told Carl Czerny that through his childhood, he would practice late into the night to test and develop his improvisatory powers.[72]

In later years, as an accomplished composer, Beethoven was opposed to any extempore embellishments on his works beyond the concerto cadenzas. However, an exceptional circumstance is described in Robin Stowell's book, *The Early Violin and Viola: A Practical Guide*. Beethoven was performing the "Kreutzer" Sonata with violin virtuoso, George Bridgetower. At the repeat of the first part of the Presto, Bridgetower improvised an arpeggiated flourish which, as Bridgetower relates, "apparently so excited Beethoven that he jumped up, embraced me, saying, 'Noch eimal, mein lieber Bursch,' ('Once more, my dear fellow'). Then he held the open pedal during this flight, the chord of 6 as at the Ninth bar."[73]

A contemporary of Beethoven, Pierre Marie François Baillot (1771-1842), published his treatise, *The Art of the Violin*, in 1835. This work served as a transitional door from

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[72] Maynard Solomon, *Beethoven* (New York: Schemer Trade Books, 1998), 23.

[73] Robin Stowell, *The Early Violin and Viola: A Practical Guide* (Cambridge University Press, 2001), 151.

the past freedoms of performers had to embellish composed music, and to the new requirements of adhering to notation. He explains in his chapter on *Ornamentation*:

> Composers have notated their music in two different ways: although *Corelli* and *Tartini*, the first two who wrote music for the violin, wrote out their fugues and their fast movements as they should be performed (with the exception of nuances and *accents*), they wrote only the canvas for their Adagios; the proof can be seen in certain old editions of their sonatas, in which the ornamented melody can be found below the simple melody.
>
> But toward the end of the last century, *Haydn, Mozart*, and later *Beethoven* indicated their intentions by notating melodies as they wanted them played, at least with respect to the notes, and, in general, leaving almost nothing in this regard to the choice of the performer. Little by little, this usage has spread, and for the past few years, composers have sought to omit nothing that can render their thought more precisely. They have notated not only *ornamentation*, but *nuances*, *fingerings*, *bow strokes*, and character—all the principle elements of *accent*.[74]

At least until the 1840's, improvisation was an indispensable skill to have for most professional musicians. As I mentioned in my introduction, many esteemed composers of the nineteenth century improvised including Brahms, Paganini, Chopin, Clara and Robert Schumann, Mendelssohn, Hummel, Joachim, Schubert, and Liszt. Franz Liszt was especially fascinated with the virtuosic, improvisational practices of Hungarian Gypsy music. Violinists and pianists with "almost prestidigital skills" were stunning audiences with their sensational improvisatory abilities.[75] Unfortunately, Anna G. Piotrowska believes that the gypsies pushed the boundaries of good taste to a point where their virtuosic improvisations were frowned upon. She states that,

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[74] Pierre Marie François de Sales Baillot, *The Art of the Violin* 1835, edited and translated by Louise Goldberg (Evanston, IL: Northwestern University Press, 1991), 278.

[75] Anna G. Piotrowska, "Expressing the Inexpressible: The Issue of Improvisation and the European Fascination with Gypsy Music in the 19th Century," *International Review of the Aesthetics and Sociology of Music* 43, no. 2 (December 2012): 329, accessed January 29, 2014, http://www.jstor.org/stable/23342825.

> Gypsy musicians cultivated the tradition of improvisation which—by the time they entered European musical venues—was cherished less and less among professional musicians. In fact (as among others Joachim Ernst Brenda noted) the decline of improvisation practices started already in the early 19th century and was mostly connected with the slow process of eliminating virtuoso practices. With the vanishing popularity of virtuosity—which became near-extinct around 1840's—improvisation followed its fate.[76]

Fortunately, improvisation did continue in some veins of professional performance practice such as by the renowned pianist, Clara Schumann.

Clara Schumann

Throughout her remarkably long and successful career as a pianist, Clara Schumann was acclaimed as not only a champion performer of music by the great composers of the eighteenth and nineteenth centuries, but also as an improviser and composer of original music of her own.[77] She excelled at the still-current custom of improvising a prelude before larger composed works on her programs, a practice common with lute and harpsichord performers of the eighteenth century and continued by pianists even into the twentieth century.[78] A means with which to introduce the audience to a more serious work or a new composition, Schumann improvised with fluent scales and arpeggios in the key, and/or on the thematic material, of the upcoming piece. This practice, common and even expected of virtuosic performers, also served to help a

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[76] Anna G. Piotrowska, 328.

[77] Valerie Woodring Goertzen, "Setting the Stage: Clara Schumann's Preludes," in *In the Course of Performance: Studies in the World of Musical Improvisation,* ed. Bruno Nettl with Melinda Russell (Chicago and London: The University of Chicago Press, 1998), 237.

[78] Goertzen, 237.

performer warm up on an unfamiliar instrument, draw the audience's attention to their technical skill, or adapt a composed piece to the given circumstances.[79] Schumann's daughters encouraged her to write out some examples of her preludes, and a note by her daughter, Marie, is included in one of the autographs:

> In the last year of her life, our mother, at our request, wrote out the exercises she played before her scales, with which she began her practice daily, as well as a few preludes of the kind she was in the habit of improvising before the pieces, quite freely on the spur of the moment; she also did this publicly, and one could get an idea of her frame of mind from the way in which the harmonies flowed to her.
>
> Now, of course, she maintained that it was not possible for her to capture this type of free improvisation on paper, but she finally gave in to our requests, and these small preludes came into being.[80]

Clara's daughter Eugenie describes her mother's improvisational warm-up practice at home, "Her scales surged up and down like the waves of the sea, ebbing and flowing in magnificent harmonies as they moved from one key to another."[81]

The training to prepare Clara Wieck Schumann for a virtuosa's performance career began essentially at birth, her mother having been a concert singer and pianist, and her father an ambitious piano shop owner and music teacher. With her mother's many hours of practicing for performances, and the shop customers playing pianos throughout the day, young Clara was well immersed in the sound-world of piano music by the time her studies began with her father at age five. In her detailed account of the Wieck family, Nancy Reich describes Clara's father, Friedrich Wieck, as a well-respected piano teacher in Leipzig. His reputation continued to heighten especially as the success of his prodigious daughter grew. Having earned a degree in theology and gained experience

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[79] Goertzen, 238-239.

[80] Ibid., 237.

[81] Monica Steegmann, *Clara Schumann* (London: Haus Publishing, 2004), 6.

as a house tutor for wealthy families, Wieck kept himself informed on “the latest thought in educational psychology…and applied it successfully to his students. The young teacher speculated on such concepts as individualized learning and the critical role of motivation in teaching.”[82] Wieck’s piano students all learned to play by ear at first—Clara for her first year—concentrating on good tone production, an understanding of tempo and meter, and the ability to play scales and “cadential progressions of I, IV, and V chords in every key before they could read music. They were expected to find and practice triads and dominant seventh chords with inversions in all keys, and then to use what they had learned in new ways by improvising and composing their own little pieces.”[83] By the age of six, Wieck was taking Clara to hear every musical performance in Leipzig, and began her formal lessons in composition and counterpoint by age ten, including her own compositions even in her earliest programs.[84] Clara’s early training-by-immersion combined with her remarkable talent resulted in an exceptional career and a lifetime of creative activity. Her ability to create original music by both composing and improvising was deeply fulfilling to her. In 1853, after completing the six songs of her opus 23 she wrote that, “There is nothing that surpasses the joy of creative activity, even if only for those hours of self-forgetfulness in which one breathes solely in the realm of tones.”[85]

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[82] Nancy B. Reich, *Clara Schumann: The Artist and the Woman* (Ithaca and London: University Press, 1985), 5.

[83] Reich, 281.

[84] Ibid., 212.

[85] Ibid., 215.

In the next chapter we will consider various characteristics of oral traditions from the past and present, characteristics that were once also common to Western European art music.

Chapter Two

Compared Facets of Oral Traditions

Consider the following gatherings of artists and audience, from ancient times to recent: Homer, the renowned epic poet, performing his *Odyssey* for a festival in Athens, 800 B.C.; the *Schola Cantorum* singing Mass for Pope Gregory in 595 A.D.; the young jazz trumpeter Louis Armstrong performing on a riverboat in 1918[86]; and, a Brazilian choro band in Rio de Janeiro playing virtuosic rondo-form compositions, circa. 1930. In the previous chapter, I have discussed the *Schola Cantorum.* In this chapter, I will consider Homeric poetry, Brazilian choro and representative artists such as Heitor Villa-Lobos and Dudu Maia in detail, with special emphasis on illuminating parallels to jazz and Louis Armstrong's training. For the moment, however, let us discuss what all four of these oral traditions might have had in common. One parallel factor is that most of these artists were not able, nor was it necessary, for them to be able to read the notation that represented their craft. Either it did not exist yet or the notation that did exist was not sufficient to the task of transmitting enough detail. The means by which these languages were learned—their respective repertoire, theory, grammar, syntax, and structural forms—was by oral/aural transmission.

Another common denominator of these particular artists was virtuosity. The technical finesse they acquired to use the instruments of their work needed to be fluid. Verses of spoken word or sung melody, rhythmic complexities and/or melismatic detail could not

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[86] Laurence Gushee, "The Improvisation of Louis Armstrong," in *In the Course of Performance: Studies in the World of Musical Improv isation*, ed. Bruno Nettl with Melinda Russell (Chicago and London: The University of Chicago Press, 1998), 293.

be hampered by a lack of skill. Mentors and masters of each discipline would teach these skills to young protégés either in one-on-one apprentice relationships, or in groups, and by modeling in performance.

Perhaps the most important common characteristic of these traditions was improvisation. Virtuosity of skill and immersion by ear triggers each artist's creativity and originality within their musical culture. Working within the established, respective forms inherent to an oral tradition, these artists were encouraged, even expected, to embellish upon those forms, contributing new ideas to the established compositions. As more new ideas were generated, more original compositions were born out of the development of the new ideas. In his discussion of traditional genres of musical improvisation, Robin Moore states that, "Through a slow process of learning and adaptation to the aesthetic parameters of one tradition…the improviser eventually discovers a personal way to play within established musical norms, and thus creates a performance style at once communal and unique."[87] As long as there was a balance between the importance of preserving the idiomatic qualities of a tradition, and the freedom for the artists to contribute their unique voice, each genre was able to both persevere and evolve over time.

An exploration of two artistic traditions, Homeric poetry and Brazilian choro, will highlight common aspects of oral/aural learning and performance practice. Both of these art forms, for the most part, were learned and composed by ear, not dependent

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[87] Robin Moore, "The Decline of Improvisation in Western Art Music: An Interpretation of Change," *International Review of the Aesthetics and Sociology of Music* 23, no.1 (June 1992): 66, accessed March 9, 2014, http://www.jstor.org/stable/836956.

on notation—a common aspect once shared with Western art music. The first tradition we will explore its that of the epic poets.

Homer and the Tradition of Epic Poetry

From the courts of kings to gatherings of the common man, epic poets in Homer's day sang their tales, accompanied themselves with the lyre, and fulfilled several roles.[88] Their craft, having been established many centuries before, provided a means through which history was preserved, ethics and values were taught, and peoples' lives and imaginations were enriched with artistic expression.[89] Without a firmly established means of writing in ancient Greece, illiterate poets captured volumes of story in their heads and gave a unique rendition of their epic works for each performance.[90] This oral tradition valued embellishment with details and improvisation on themes, yet maintained all the important elements and events of a story in sequence. The progression of these events could not be altered; in fact, their fixity provided part of the form to this art that was astoundingly retained not by rote memory, but by re-creation in the gifted poet's mind.[91] Homer's performances of the *Iliad* and *Odyssey*—perhaps as equated with Bach's oeuvre in the Baroque era—brought this ancient art form to its highest level. Bach was a legendary improvisor, as was Homer, but Bach composed his works by

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88 M.L. West, *Ancient Greek Music* (Oxford: Oxford University Press, 1992), 24.

89 Albert Lord, *The Singer of Tales*, 2nd ed. (Cambridge, London: Harvard University Press, 2000), 151.

90 Ibid., 124.

91 Ibid., 26, 28.

writing them down in musical notation, removed from the exigencies of live performance.[92] Homer's tales of the Trojan war and Odysseus' return home, however, were composed in the act of performance. Much speculation among scholars has attempted to determine when and how the original texts were eventually written down.[93] The speed and flow of thought required to compose in this art form would prohibit a poet himself from the laborious act of primitive writing on papyrus or tablets. A likely circumstance often proposed is that they were dictated by Homer to a scribe.[94] I might even suggest a team of scribes assigned in turn to short, successive sections, allowing the poet to compose a larger section before having to stop for the scribes to catch up.

The Parry/Lord Research, and Formulaic Characteristics of Epic Poetry

In the early twentieth century, the research of Milman Parry led him to believe that the *Iliad* and *Odyssey* were masterpieces of an oral art.[95] By analyzing the formulaic characteristics of South Slavic heroic songs, a still-thriving oral tradition in the 1930's, Parry was able to differentiate oral composition from that of literate composition. In his pursuit of answering the famous "Homeric Question"— how Homer could compose such great works before writing was well established—Parry transformed our understanding

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[92] Peter Burkholder, Donald Jay Grout, and Claude V. Palisca, *A History of Western Music* (New York, London: W.W. Norton & Company, 2010), 442.

[93] Bernard Knox, introduction to *The Odyssey*, by Homer, trans. Robert Fagles (New York, NY: Viking Penguin, 1996), 22.

[94] Lord, 124, 148-149, 152.

[95] Milman Parry, "Ćor Huso: A Study of Southslavic Song," in *The Making of Homeric Verse: The Collected Papers of Milman Parry*, ed. Adam Parry (Oxford: Clarendon Press, 1971), 439-440.

of Greek epic poetry. His hypothesis was not only "that the *Iliad* and the *Odyssey* were originally the products of an oral tradition that was older than any written literature; it was also his formulation of a method for *testing* this hypothesis, a discovery procedure capable of moving the debate from the content of orally produced songs to the actual process through which such songs are produced in performance."[96] Milman Parry's assistant, Albert Lord, accompanied Parry while researching the means by which the illiterate, Serbian poets crafted their heroic tales. Lord states in his seminal work, *The Singer of Tales:*

> We realize that what is called oral tradition is as intricate and meaningful an art form as its derivative "literary tradition." In the extended sense of the word, oral tradition is as "literary" as literary tradition. It is not simply a less polished, more haphazard, or cruder second cousin twice removed, to literature. By the time the written techniques come onto the stage, the art forms have been long set and are already highly developed and ancient.[97]

Parry essentially "broke the code" of formulaically based verse by analyzing how the bards used their tradition's collected phrases and expressions—poetic building blocks of varying length—to compose rapidly in performance within the strict parameters of dactylic hexameter. A complex technique which evolved over many generations, Parry offers this explanation of how it works in his *The Study of Homeric Style*:

> To create a diction adapted to the needs of versification, the bards found and kept expressions which could be used in a variety of sentences, either as they stood or with slight modifications, and which occupied fixed places in the hexameter line. These expressions are of different metrical length according to the ideas they are made to express; that is, according to the nature of the words necessary for the expression of these ideas….The ways in which these expressions are joined to each

[96] Stephen Mitchell and Gregory Nagy, introduction to the second edition of *Singer of Tales,* by Albert B. Lord (Cambridge, London: Harvard University Press, 2000), viii.

[97] Lord, 141.

> other so as both to make a sentence and to fill out the hexameter, are many and vary in accordance with each type of expression.[98]

Parry uses the word *formula* to designate this traditional element in orally composed poetry:

> In the diction of bardic poetry, the formula can be defined as an expression regularly used, under the same metrical conditions, to express an essential idea.[99]

These expressions also served as mnemonic devices to mark key points in the form which may begin one theme, transition to another, or end a section. Phrases such as, "After they had set aside desire for food and drink," or, "As soon as young Dawn with her rose-red fingers shone once more," were used often, and provided the poet with trajectory points to aim for in the story. These familiar phrases also provided the listener with cues as to where in the story the bard was heading. Repeats of several lines are also very common, even almost verbatim repeats of whole speeches or descriptive passages. In the *Odyssey*, one example of a repeated passage is the account of Penelope's scheme to deceive the burdensome suiters by weaving and unweaving her web, a plot to buy time for her Odysseus to return before she would be forced to marry a suitor. Three, almost-verbatim repeats of this passage are spoken by two different suitors, and Penelope herself. First in Book 2.101-22 by one of the suitors, then in Book 19.153-75 by Penelope herself, and then finally in Book 24.139-61 by another suitor

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[98] Milman Parry, *The Making of Homeric Verse: The Collected Papers of Milman Parry,* ed. Adam Parry (Oxford: Clarendon Press, 1971), 9.

[99] Parry, 13.

having arrived in the world of the dead after Odysseus's revenge.[100] The suitors' versions are identical, starting with, "*This* was her latest masterpiece of guile: she set up a great loom in the royal halls and she began to weave…" Penelope's version begins with:

> A god from the blue it was inspired me first
> to set up a great loom in our royal halls
> and I began to weave, and the weaving finespun,
> the yarns endless, and I would lead them on: 'Young men,
> my suitors, now that King Odysseus is no more,
> go slowly, keen as you are to marry me, until
> I can finish off this web…

Framed in different contexts, these rote-memorized lines or passages gave the poet time from rapid composing to assess how his audience was tracking, and determine how much or little embellishment he could add as he continued with the story.[101] The reuse of a familiar passage has many parallels in music, such as the leitmotif in opera, or a classic tune in fiddle traditions. Creative variation on the familiar is part and parcel of music that is not through-composed. For example during a jazz performance, a standard tune that the audience recognizes is typically performed with the melody fairly unaltered the first time through. Then the band's arrangement of the tune proceeds with improvisation. The audience first relates with the familiar, and then takes delight in its variation. In his book, *This Is Your Brain on Music*, Daniel Levitin explains that, "Music works because we remember the tones we have just heard and are relating them to the ones that are just now being played. Those groups of tones—phrases—might come up

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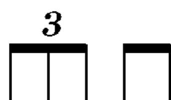
[100] Robert Fagles, translator's postscript of *The Odyssey,* by Homer (New York, NY: Viking Penguin, 1996), 491.

[101] Lord, 16-17.

later in the piece in a variation or transposition that tickles our memory system at the same time as it activates our emotional centers."[102] In his article comparing the formulaic qualities of epic poetry and jazz, Luke Gillespie states that, "As in many oral traditions, the jazz improvisor reworks and 'translates' previously used material, evolving musical ideas through the passage of time and during performances.[103]

Another formulaic technique of epic poetry with comparative techniques in music is that of the epithet. Descriptive words of various lengths were placed in front of proper names to fill in a space left before the end of the hexameter line. The length of the space, and rhythm of the meter would determine these adjectives, not necessarily the context of the story line.[104] For example, if two feet of the hexameter line needed to be filled before it closed with a proper name, and the emphasis desired is / x x I / / (strong, weak, weak I strong, strong), these epithetic expressions might be used:



dios Odysseus (brilliant Odysseus),
phaidimos Hektor (glorious Hektor),
metieta Zeus (Zeus of the counsels),
euryopa Zeus (Zeus of the wide brows)

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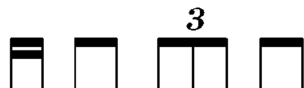
[102] Daniel J. Levitin, *This Is Your Brain on Music* (New York: Dutton, 2006), 163.

[103] Luke O. Gillespie, "Literacy, Orality, and the Parry-Lord 'Formula': Improvisation and the Afro-American Jazz Tradition," *International Review of the Aesthetics and Sociology of Music* 22, no. 2 (December 1991): 147-164, accessed March 5, 2016, http://www.jstor.org/stable/836922.

[104] Knox, 15.

Or, if three feet need to be filled and the syllables desired are x x l / / l / x x l / / , we may read:



korythaiolos Hektor (Hektor of the shining helm),
nephelegerata Zeus (Zeus the cloud-gatherer)[105]

The use of these idiomatic phrases, measured out in various lengths of time, with rhythmic emphasis' in both patterns and variation, rings familiar to me in so many musical contexts. In her book, *Rules of the Dance: A Handbook for Writing and Reading Metrical Verse*, Mary Oliver likens the rhythmic patterns of emphasis and the division of lines into feet to similar qualities found in music:

> The process of their construction is not unlike the division of music into units called measures or bars—units that contain both a repetition of rhythm and, if the composer wishes, a certain allowable amount and kind of variation upon that rhythm.
> In the metrical poem as in music, such varieties and variations do not violate the established pattern, but give it added excitement and interest. They are the gestures and flourishes that compound the ongoing drama of sound, the sound of the music or the poem: steady beat *and* counterpoint…It is fair to say that the metrical poem has a quality that is unbreakably and reliably musical.[106]

There are many other likenesses to music such as rhythm and pattern. The use of epithets by an epic bard can be likened to a seasoned jazz musician or Brazilian choro player with a vast repertoire of riffs and turnaround licks of various lengths.[107] The

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[105] Homer, *The Iliad of Homer*, trans. Richard Lattimore (Chicago: University of Chicago Press, 1951), 40.

[106] Mary Oliver, *Rules for the Dance: A Handbook for Writing and Reading Metrical Verse* (Boston, New York: Houghton Mifflin Company, 1998), 7.

[107] Gillespie, 151.

length of a two-bar phrase is as ingrained in an improvising musician's mind as a six-foot line of poetry was in an epic poet's mind. Both would be able to spontaneously call up the needed material to complete a line based on its length, character, and desired rhythmic emphasis.

Drawing more parallels between epic poetry and jazz, Gillespie quotes Albert Lord, and then discusses some of the two traditions' similarities:

> "Even in pre-singing years (of a young bard's training) rhythm and thought are one, and the singer's concept of the formula is shaped though not explicit. He is aware of the successive beats and the varying lengths of repeated thoughts, and these might be said to be his formulas. Basic patterns of meter, word boundary, melody have become his possession, and in him the tradition begins to reproduce itself." (LORD, 32)
>
> The Parry-Lord "formula" can be applied to the jazz tradition on a number of levels. The jazz musician encounters "restrictive" elements and metrical formulas similar to those mentioned above. Although the jazz and epic traditions are primarily transmitted orally though listening and performing (with little, if any strict notation), there are rules and musical-linguistic formulas which govern the realization and creation of both jazz and the epic.[108]

Epic Poetry in Context

A "singer of tales" in Homer's time sang his poetic verse, and usually accompanied himself by playing a lyre. As I mentioned in the previous chapter, the Greeks so closely related music and poetic language that the melodic line would likely mirror some of the rhythmic characteristics of the poem's lyrics.[109] He might also insert an instrumental interlude for them to rest or think. A gifted bard was fully capable of entraining his audience with the rhythmic pulse of his song-spinning and lyre. Having this melodic aspect to a bard's performance of poetry adds another memory aid towards re-creating

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[108] Gillespie, 149.

[109] Peter Burkholder, Donald Jay Grout, and Claude V. Palisca, *A History of Western Music* (New York, London: W.W. Norton & Company, 2010), 13.

an epic-scale work. In brain studies on memory and oral traditions, it has been shown that rhythm, combined with other constraints such as melodic contour and lyrics, create a "cuing function" that helps activate associations in the brain between neurons.[110] Anne Dhu McLucas discusses theories of cognitive psychology, stating that it is "the combination of cues and constraints that leads to the stability that is inherent in oral transmission. Thus it is the combination of several factors overlapping that helps people remember. Put in terms of neuroscience, it is the activation of the connections between neurons that constitutes memory; anything activating one of the associated memories in a neural connection may also activate the other memory."[111] By adding the kinesthetic involvement of playing an instrument, other cues and constraints related to muscle-memory point all the more clearly to one solution which stabilizes a particular passage. McLucas continues: "Recall in oral tradition may therefore involve much less conscious thought process and much more pattern-recognition, clearly a necessity if one is to 'fill in' the memory blanks during a performance."[112]

The Learning Process of Oral Epic Poetry

Having explored some of the necessary skills to perform in this genre, we may ask how an aspiring young bard trained to become a professional epic storyteller? Thanks to the extensive research of Milman Parry and Albert Lord on how South Serbian epic

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[110]Anne Dhu McLucas, *The Musical Ear: Oral Tradition in the USA* (Farnham Surrey, UK: Ashgate Publishing Limited, 2010), 43.

[111] Ibid., 44.

[112] Ibid.

poets learned their tradition, we have a window from which to see how this tradition may also have evolved in different cultures around the world. According to the Parry/Lord observations, participation was not limited to either upper class or peasant, the only requirements to become a singer of tales were illiteracy and eagerness to learn. Not unlike the inspiration that might trigger a young person to pursue music, a young bard's journey began with listening. The established master poets that Parry and Lord interviewed remembered being especially captured as young boys by the storytelling of elder bards in their community—this tradition carried on only by men. A boy may either decide then and there to pursue the craft or decide later, but his intense listening at this beginning stage built a foundation upon which more applied learning was layered. By the time he was thirteen or fourteen, he became familiar with the themes, names of heroes, characteristic history preserved in song, and the repeated phrases of formula. He also would notice how different sung verse was from his spoken language, and was impressed by the special effect it had.[113] Lord states:

> In these pre-singing years, together with a sense of new arrangements of ideas and the words which express them the boy's ear records the repetition of the sounds of the words. His instinctive grasp of alliterations and assonances is sharpened. One word begins to suggest another by its very sound; one phrase suggests another not only by reason of idea or by a special ordering of ideas, but also by acoustic value.[114]

Without any means for writing down the words, a singer's ear was forced to capture every sonic characteristic he could absorb. He was dependent on consistent listening to more stories, more formula, more improvisation on themes, and other performance

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[113] Albert Lord, *The Singer of Tales,* 2nd ed. (Cambridge, London: Harvard University Press, 2000), 32.

[114] Ibid., 32-33.

practices in order to immerse himself in the tradition. He eventually chose one or several master singers to learn his initial repertoire of songs. It is fascinating to note at this point that in the 1930's, when Milman Parry and Albert Lord were researching the established Serbian poets, the younger generation of boys was learning to read and write. Written transcriptions of the songs and stories by oral poets were being published, and boys that wanted to participate in the tradition began to depend more and more on memorizing the fixed version. "The set, 'correct' text had arrived, and the death knell of the oral process had been sounded."[115] In their forward to the second edition of *The Singer of Tales*, Steven Mitchell and Gregory Nagy clarify that Parry and Lord did not blame the printed word itself for the destabilization of oral tradition, but rather the ideology of the printed word—that now there was an authentic, fixed version to maintain.[116] As I have discussed in earlier chapters, this ideology of preserving the authentic score has been prevalent in Western classical music, and has similarly caused musicians to abandon the practices of learning by ear and improvising. This is usually not the case with jazz, however. In 1922, Louis Armstrong was twenty-one years old and had established himself as one of the finest improvising, jazz trumpet players in New Orleans but he could not sight-read music.[117] Like many jazz players who establish their training on a foundation of by-ear playing, Armstrong wanted to expand his skills by learning to read music. Armstrong writes in his autobiography:

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[115] Lord, 137.

[116] Stephen Mitchell and Gregory Nagy, introduction to the second edition of *Singer of Tales,* by Albert B. Lord (Cambridge, London: Harvard University Press, 2000), viii.

[117] Laurence Gushee, "The Improvisation of Louis Armstrong," in *In the Course of Performance: Studies in the World of Musical Improv isation*, ed. Bruno Nettl with Melinda Russell (Chicago and London: The University of Chicago Press, 1998), 293.

> Kid Ory's band could catch on to a tune quickly, and once they had it no one could outplay them. But I wanted to do more than fake the music all the time because there is more to music than just playing one style. I lost no time in joining the orchestra on the *Sydney*. David Jones played the melophone. He had joined us from a road show that came to New Orleans, a fine musician with a soft mellow tone and a great ability to improvise. I mentioned him particularly because he took the trouble between trips to teach me to read music. I learned very quickly.[118]

By 1924, Armstrong had married Lil Hardin, a jazz and classical pianist who also belonged to Joe Oliver's band. Lil taught Louis music theory and harmony, and was instrumental in helping him write out and/or transcribe his original tunes. Louis later writes that "as a kid it just came natural. I never was one for going on and on about the changes of a tune, if I've got my horn in my hand then let's go, all I want to do is hear that chord. I started to go through all that business of studying them big chords and harmonies way back, but then I found out I'd been playing them all the time."[119] Armstrong's literacy in music certainly did not hamper his abilities to improvise, play by ear, or become one of the most celebrated jazz legends. I would maintain that the crucial difference between his training, and that of modern-day classical musicians, or Serbian boys in the 1930's learning to read, was his foundational learning by ear and improvising from the start.

As Parry and Lord continued to interview the established poets in Serbia, they found out that the second stage of development a young bard pursued was to learn how to sing while playing the *gusle,* a one-string, bowed instrument. The singer figured out how to apply the rhythmic impressions he absorbed from listening to the traditional melodic

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[118] Louis Armstrong, *Satchmo: My Life in New Orleans,* (New York: Prentice-Hall, Inc., 1954), 182.

[119] Gushee, 295, 297.

line into his playing. He also learned to fit his thoughts, and how he wanted to express them, into the rigid form of the ten-syllable line of Serbian verse. This "process of imitation and of assimilation through listening and much practice on one's own" finally ends when a singer is able to successfully perform one, evening-length song before a critical audience.[120]

The third, and last stage towards becoming "an accomplished practitioner of the art" was a continuous pursuit of more repertoire, greater confidence in front of an audience, and skills in ornamentation and expansion of songs. Not all singers moved beyond this stage, but the talented ones became proficient at formula-making, thematic structure development, and the artistic composition of a song.[121] They each would develop a unique style within the tradition, and their reward was in having captured the attention of an audience absorbed in sung story, as was Homer's unsurpassable claim to fame some 2,700 years before.

During his career as an epic poet, Homer performed the *Iliad* and *Odyssey* many times, and he may have divided them into shorter segments given the length of each story.[122] Depending on how captivated Homer's audience was during a given performance, he could be inspired to improvise on the given form of a poem or embellish it with more detail. The following scene from the *Odyssey* is one such example and illustrates beautifully both the importance of his own role as bard and provides us with a glimpse into ancient Greek life. At this point in the story, King

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[120] Lord, 24.

[121] Ibid., 25.

[122] Ibid., 151.

Alcinous has prepared a grand feast to welcome his guest, the mysterious stranger, Odysseus, who has not yet disclosed his identity:

> "For the rest, you sceptered princes here,
> you come to my royal halls so we can give
> this stranger a hero's welcome in our palace—
> no one here refuse. Call in the inspired bard
> Demodocus. God has given the man the gift of song,
> to him beyond all others, the power to please,
> however the spirit stirs him on to sing."
>
> …In came the herald now,
> leading along the faithful bard the Muse adored
> above all others, true, but her gifts were mixed
> with good and evil both: she stripped him of sight
> but gave the man the power of stirring, rapturous song.
> Pontonous brought the bard a silver-studded chair,
> Right amid the feasters, lining it up against
> a central column—hung his high clear lyre
> on a peg above his head and showed him how
> to reach up with his hands and lift it down.
> And the herald placed a table by his side
> with a basket full of bread and cup of wine
> for him to sip when his spirit craved refreshment.
> All reached out for the good things that lay at hand
> and when they'd put aside desire for food and drink,
> the Muse inspired the bard
> to sing the famous deeds of fighting heroes—
> the song whose fame had reached the skies those days:
> The strife Between Odysseus and Achilles, Peleus' Son…[123]

Demonstrating his ability to lure us into a story, Homer privileges his audience, both past and present, with inside knowledge. The audience knows that the stranger is Odysseus, the famed but lost hero of the Trojan War. However, the other characters in the story do not. His contemporary audience would know that he was casting himself into this story from centuries before, a cameo appearance as King Alcinous' blind bard. Even this far back in time, we find a creative practice used ever since by artists such as

[123] Homer, *The Odyssey,* trans. Robert Fagles (New York, NY: Viking Penguin, 1996), 192-194.

Rembrandt painting himself into biblical scenes, and setting their context in Baroque times. Homer took similar creative license, thus providing for us a glimpse into the practice of his art, and the courtly life of his time.

Moving forward in time more than two millennia, we shall now consider what an oral/literate tradition in Brazil has in common with the past art of Homeric poetry.

Brazilian Choro: the "Sweet Lament" of a Peoples' Music

My first exposure to live Brazilian choro was at a large, Seattle-area music festival called Wintergrass. Originally a bluegrass-centric gathering, Wintergrass enriches their music menu each year by also featuring a few alien supergroups of vernacular music. Some examples of the diverse variety range from Swedish or Irish string ensembles, to French gypsy-jazz bands. This particular year that I attended Wintergrass, a Brazilian mandolin virtuoso, Danilo Brito, was invited to join Choro Famouso, a California-based band. Their concert astounded even the most facile of the bluegrass players, and immediately created a fan base that wanted more hands-on experience with choro. In a spacious conference room of the hotel from midnight till past 2am, about fifty people circled up to play in a *choro roda,* either with the provided lead sheets to sight-read, or to play by ear.[124] Musicians ranging from precocious kids to professional players, and from hobbyists to music educators with doctorates, all wanted to participate in this music which had so enchanted them by Danilo Brito and Choro Famouso. Violin in hand, I joined the other fiddlers, mandolinists, guitarists, clarinetists, an accordion

[124]A video of the Wintergrass *choro roda* can be found at this Youtube link: https://www.youtube.com/watch?v=WBYEs7Uk6BA).

player, cellist, bassist, and *pandeiro* player. With some coaching through chord changes for the by-ear players, and some difficulty for the rest of us to sight-read the tricky melodies, we all began to capture some of the charm and groove of this Latin music.

The Roots of Choro

Brazilian choro is a potentially fertile common ground for classical players who like beautifully sculpted melodies, and folk or jazz musicians who like the freedom to improvise on those melodies and their accompaniments. Originally, this music evolved from a combination of both Afro-Brazilian, and Portuguese late-Baroque influences.[125] During the early years of the colonial period, before the turn of the nineteenth century, Jesuits had established music schools in Brazil for teaching both the indigenous peoples and African slaves to perform European music. By the early nineteenth century, several Brazilian composers of symphonies, chamber music, and other Classical-era forms provided music for the elite culture of Rio.[126] In 1808, the Portuguese royal family moved their entire court to Rio de Janeiro, in order to escape from Napoleon's invading armies.[127] Court musicians, artists, artisans, and all that sustained royal high culture were brought to Rio as the king established the new capital of the Portuguese Empire in Brazil.

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[125] Thomas George Caracas Garcia, "The Brazilian Choro: Music, Politics and Performance" (PhD diss., Duke University, 1997), 6, 8, 30, 88, 98.

[126] Garcia, 15.

[127] Ibid., 14.

Concurrent to the establishment of Western classical music traditions in Brazil, a vast influx of African slaves and working-class immigrants from Europe, arriving through Rio de Janeiro, brought vernacular influences of oral traditional musics with them. The combination of many elements from African dance forms such as the *lundu* and *maxixe*, with European dance forms such as the polka, waltz, and quadrille, which were popular in both court life and with the common people, became the fertile common ground from which choro would emerge.

Of all the colonial countries, Brazil was the largest participant in the slave trade, and the last country to finally ban it in 1888.[128] At its highest proportion in 1810, Brazil's population was 30 percent slaves, and interracial marriages and/or procreation was common. The powerful rhythmic element of African music, so deeply woven into African dance, rituals, and lifestyle, was pervasive. Garcia states that:

> While the European musical tradition predominated to some extent—harmonic vocabulary, melodic style, forms and melodic/harmonic instruments—the music of Africa lent to Brazilian popular music its most recognizable trait: rhythmic complexity, undeniably the most important single factor in the development of a distinctly Brazilian popular music.[129]

Throughout the nineteenth century, choro evolved to become a nationalistic movement of the common people against the predominance of European influences on their music. Choro grew from a common-peoples' manner of playing European music, to a genre with its own distinct performance style.

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[128] Garcia, 19.

[129] Ibid.,17.

Instrumentation

The original choro ensemble instrumentation was representative of instruments brought from Portugal in the early days of the colony. Flute, guitar, and *cavaquinho* (related to the Hawaiian *ukulele*, also of Portuguese origin), comprised a typical combination of melodic and accompaniment roles. In some cases, the flute or wind player would be conservatory trained, as were two of the first great performers and composers of choro music, flutists Joaquim Calado (1848-1880), and Pattápio Silva (1880-1907). For the most part, however, the early choro musicians were musically illiterate. The guitar and *cavaquinho* accompanists, playing by ear, were often known to earn special distinction for their abilities to keep up with turns and modulations of the soloist.[130] Their specialization then being a sophisticated understanding of music theory and voice leading which enabled them to respond spontaneously to changes led by the soloist. By the early twentieth century, the *pandeiro* (Brazilian tambourine) was added to the standard ensemble mix and has since then provided an indispensable rhythmic component. The *bandolim—a* Brazilian variation of the mandolin—was also included as an important voice in the melodic role.

Formulaic Characteristics

While the most common choro structure is modeled on both European dance forms and standard harmonic progressions, this predictability lends itself to more freedom to

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[130] Tamara Elena Livingston, "Choro and Music Revivalism in Rio de Janeiro, Brazil: 1973-1995" (University of Illinois at Urbana-Champaign, 1999), 126.

improvise on those forms, and independence from the printed page for musicians playing by ear. The most common structure is of sixteen-bar sections in ABA, or ABACA rondo form with the A section in the tonic, and the B section in either the parallel or relative minor, or in the dominant. The C section in a major-keyed piece is typically in the subdominant or dominant key, while a choro in a minor key contrasts the C section in the parallel or relative major. Each section has an identifying lead-in figure which serves to designate the "road map" of the choro for by-ear players in case there are spontaneous changes or extra repeats in the form. Other formulaic elements include characteristic rhythmic figures in the melody which are used in sequence through a chord progression, or rhythmic pulses in the accompaniment that compliment the melody.

Soloists and accompanists learning the language of choro accumulate a large repertoire of pieces mostly by ear, thereby simultaneously building up their fluency for improvisation. The many hours spent playing in *rodas de choro* (jam sessions that can last all night) hone their sensitivity to the nuanced etiquette of collaboration within a choro ensemble.

As the sophistication of choro players rose to professional levels by the 1920's and 1930's, the harmonic vocabulary grew to include more dissonance and extended chords. The *conjunto regionais,* or "regional ensembles," were established as this nationalistic voice of music was featured more frequently on the radio throughout Brazil[131]. Both literate and non-reading musicians were able to quickly learn choros that

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[131] Tamara Elena Livingston-Isenhour and Thomas George Caracas Garcia, *Choro: A Social History of a Brazilian Popular Music* (Bloomington and Indianapolis, IN: Indiana University Press, 2005), 89.

featured either their own soloists or touring soloists that came into the studio for a broadcast.[132]

Two especially prolific composers and performers of choro were the bandolinist, Jacob Pick Bittencourt (1918-1969), better known as Jacó do Bandolim, and flutist, Alfredo da Rocha Vianna, Jr. (1897-1973), better known as Pixinguinha. Both young prodigies of their instruments, neither of these musicians had conservatory training but Pixinguinha studied composition with Irineu de Almeida, who belonged to a *roda de choro* with Heitor Villa-Lobos.[133]

Heitor Villa-Lobos

Born into a middle-class family in 1897, Villa-Lobos showed early interest in the popular music of his country by picking up tunes the *carioca* musicians would play in the streets of Rio. At age six, he would learn these tunes by ear on a viola his father had set up for him to play like a cello.[134] His father, an amateur musician, also taught him to play the clarinet, and exposed him to classical music by frequently taking him to rehearsals and concerts. In a 1957 interview, Villa-Lobos recalls his father's strict musical training, "…and I was required to identify the genre, style, character and origin of compositions,

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[132] From author's notes on a choro history lecture by Dudu Maia and Douglas Lora; Centrum at Port Townsend, April 2016.

[133] Tamara Elena Livingston-Isenhour and Thomas George Caracas Garcia, *Choro: A Social History of a Brazilian Popular Music* (Bloomington and Indianapolis, IN: Indiana University Press, 2005), 91, 121.

[134] Eric Blom, ed., "Villa-Lobos, Heitor," *Grove's Dictionary of Music and Musicians* (New York: St. Martin's Press Inc., 1954), 792.

in addition to recognizing quickly the name of a note, of sounds or noises…Watch out, when I didn't get it right."[135] Villa-Lobos was only twelve when his father died, and from then on he took his musical training into his own hands by acquiring a guitar and sneaking out to play at night with the local *choròes.* As a teenager he played cello in theaters and hotels to earn a living, meeting many celebrated composers of the choro tradition such as Ernesto Nazareth and Anacleto de Medeiros.[136] As a young adult, Villa-Lobos focused his performance skills on the guitar, mastering guitar technique in both the classical repertoire and the improvisational style of choro, by observing and listening to the most accomplished choro players of the time. He later describes music of choro as the "integral translation of the Brazilian soul in the form of music."[137] This early fascination with the vernacular music of his country would become "the foundation of his art" as he built his career and was established as a renowned composer of twentieth-century art music, and certainly the most significant Brazilian composer of his time. Furthermore, his far-reaching contributions to music education in Brazil would help establish a foundation from which gifted musicians such as Dudu Maia would emerge.

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[135] Gerard Béhague, "Villa-Lobos, Heitor." *Grove Music Online, Oxford Music Online.* (Oxford University Press, accessed February 21, 2017, http://www.oxfordmusiconline.com.offcampus.lib.washington.edu/subscriber/article/grove/music/29373), 1.

[136] Béhague, 1.

[137] Tamara Elena Livingston-Isenhour and Thomas George Caracas Garcia, *Choro: A Social History of a Brazilian Popular Music* (Bloomington and Indianapolis, IN: Indiana University Press, 2005), 186.

Dudu Maia: An Oral Tradition-Bearer

Considered to be one of Brazil's finest mandolin players, and renowned performer of Brazilian choro, Dudu Maia was on faculty when I met him at the 2009 Mandolin Symposium hosted by David Grisman and Mike Marshall in Santa Cruz, CA. A week long event on the University of California at Santa Cruz campus, the Mandolin Symposium attracted musicians from many different cultures of music which involve the mandolin. Blues, classical, blue-grass, old-time, and Brazilian choro were some of the represented traditions. Master teaching-artists performed faculty concerts at night, and taught classes or coached ensembles, during the day. Dudu was scheduled to teach a two-segment harmony and theory class which drew a large group of about forty mandolinists and guitarists. I brought my mandola to this class hoping to gain better understanding of how to use functional harmony in the role of creating an improvised accompaniment. My classical training in viola was mostly a linear approach to through-composed melodic lines so I lacked the ability to think and play spontaneously with a vertical understanding of a chord progression. My training in classical music did require that I be able to analyze composed music, arrange composed music, and write a four-part harmony choral. However, this knowledge was never applied to the grid of my instrument's fingerboard, or trained into my fingers by ear to form chord shapes spontaneously as a progression unfolded. Dudu's approach to teaching theory and harmony was to first illustrate how to move through the finger patterns of a progression with two-note chords that contain guide tones. Then, on the classroom whiteboard, he drew a diamond shape on its side with the tonic and dominant chords at either end

(either in roman numerals, or the designated key), and the sub-dominant and minor-two chords at the top and bottom points of the diamond respectively. Other dominants of dominants or of subdominants were added to the diagram at various points to designate different routes through which one could travel between the tonic and dominant, depending on subtle twists, turns or accidentals in the melody. He pointed to each chord as Danilo Brito played through sections of a choro. We were encouraged to hear the chord changes as we watched the diagram, and then to apply our simple two-note chords to our instruments as we accompanied Danilo through the choro. With no sheet music in sight, we were fully engaged with our ears listening to the melody and taking visual cues from Dudu for which chords to play. The class concluded with cheers and applause of appreciation for Dudu's clarity and guidance of our hands-on learning.

Since 2009, I have been able to attend six yearly choro workshops taught by Dudu, joined by other world-class teaching-artists such as Douglas Lora, Alexandre Lora, Anat Cohen, and Jovino Santos Neto.[138] Hosted by Centrum in Port Townsend, Washington, the four-day intensive provides an immersion experience into the repertoire, rhythmic qualities, history, and ensemble dynamics of Brazilian choro. Most of these teaching-artists have either formal classical or jazz training, and read music well. Dudu, however, finds it more efficient to learn new music by ear. He uses notation for transcription, arranging, and sharing his own compositions but his creative work is done aurally. Every year that I attend this workshop I am amazed by the volumes of intricately detailed music these musicians are able to perform without sheet music. I asked Dudu if I might interview him about his musical background and training. We set up a Skype call in

[138] Here is a Youtube video link for Dudu Maia performing with Trio Brazileiro: https://www.youtube.com/watch?v=RWXqlJ0Zydc.

August 2016 with Dudu at home in Brazília, Brazil, and me in Bellows Falls, Vermont. I sent him questions asking about how he had been drawn to play music and his instrument, what his method was for learning, and if he had had teachers or mentors. Our conversation is provided in full in Appendix A of this paper.

In my interview with Dudu, he explained how his creative process of composition is both a physical phenomenon and an expression of musical ideas in his head. The hands-on interaction he has with his instrument is as intimately connected to inspiration as his auditory imagination.

> …for a long time all I played was the tunes I would write, and (that was) the way I would develop my playing. This is really a point that I think might make a difference for our talk. From (age) fourteen to twenty-one, I was writing music and that would make me learn how to play. Learning through writing, I would have a musical idea, even if it was just a chord progression, whatever, that I would play finger-style, so that would challenge me technically…how fast I could change chords, or how my fingering with the right hand would go…trying to figure out cool shapes on the guitar, and how to chain them with the next chord, and maybe even the guitar would tell what the next note would be as long as it sounded acceptable. It was very physical too, it's not a matter of just being so inspired and having all this beautiful music in your head and trying to make it come through. I think it's very physical to just have the guitar and have chord changes that make sense, and of course sometimes I'll feel like the next chord should be that one or the next note, or whatever. But I think it is very physical.[139]

The progress of Dudu's musical development can be paralleled with stages outlined in this chapter for young epic bards learning to sing heroic tales—from the first stage as a child listening to master performers in their community, to the dedicated practice and absorption of the language, to being mentored and deciding to excel at performing and improvising on both the traditional repertoire and their own original material. From an early age of six, Dudu was listening to his father's collection of classic jazz and rock

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[139] Appendix, 8.

recordings every morning, playing the instruments they had around their house, and listening when his father had friends that came over to play music. By the time he was eleven, Dudu had several friends that he played with frequently who all, like him, ended up with professional music careers. Practicing alone, practicing on a drum set at school, or rehearsing together, they learned an intermediate level of rock language, and composed their own tunes. As a teenager living in another neighborhood back with his mother, he and his childhood friends created a heavy metal band. He learned more about chords, singing, and went to a private music school for lessons. A unique characteristic he appreciates about Brazilian neighborhoods is that the apartment buildings have outdoor, open community space on the ground beneath the upper floors so he and his friends could spend the days playing guitar together. "…it was really common to hang…underneath the buildings, you know. And I'd be playing guitar all day, and so that's the experience that really started the exchange of ideas, and learning new tricks and new tunes, that's really how it went."[140]

After living in the United States for several years, and finding a social niche in music there with other teenagers, Dudu moved back to Brazil and entered a university as a Fine Arts major. He was first introduced to choro when his mother took him to a backyard *roda de choro* (an informal choro concert) where Hamilton de Holanda (now a renowned Brazilian mandolinist) and Alencar Corades (a revered choro guitarist) were performing. Dudu was immediately impressed with how beautiful, and how technically difficult the music was. As soon as he received his next paycheck for tutoring English, he went out and bought a mandolin. He pursued both Holanda and Corades for lessons.

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[140] Dudu Maia, interview by author, August 10, 2016, Appendix p. 2.

Both of these mentors taught aurally by having Dudu mirror them playing a tune or difficult passage note by note. They also taught scales, theory, and how to improvise within the choro tradition. Any new tune Dudu wanted to learn he painstakingly worked out by listening to sections of tape recordings over and over again, learning note by note, passage by passage. The process eventually got much easier.

As evidenced by other artists of oral traditions discussed in this paper, from the Serbian poets to Clara Schumann or Heitor Villa-Lobos, this process of listening, absorbing, and applying music directly to one's instrument is a common practice. Data which is learned in this manner can be stored indefinitely in long-term memory if the material is reviewed periodically. In her illuminating "interlude" chapter on The Brain, Memory, and Oral Tradition, Anne Dhu McLucas discusses the human brain's ability to absorb aural information and store it as "working memory." The process starts with "echoic memory," which retains a sound in the mind for a few seconds, long enough to process some of its features. "Echoic memory is mainly concerned with processing auditory information around what we, after processing, would call a 'single event,' such as a pitch. We perceive a pitch only after the brain has done its preliminary feature extraction and 'fusing' of all the signals coming in (including overtones, timbral qualities, etc.) that go into that pitch."[141] Short-term memory is a process which is able to handle a group of single events, acquired by echoic memory, such as a few single pitches grouped together to form part of a phrase. Those pitches are then organized into one

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[141] Anne Dhu McLucas, *The Musical Ear: Oral Tradition in the USA* (Farnham, England; Burlington, VT: Ashgate Publishing Company, 2010), 38-39.

single event, or "chunked" into one pitch-grouping, which can then be strung together with other pitch-groupings to complete a whole phrase.[142]

As this material is repeated in practice, it is joined with long-term memory. McLucas continues:

> …it is clear that long-term memory contains the 'bank' of previously heard material with which all incoming sounds are compared in working memory. This happens at both a conscious and an unconscious level. On the unconscious level, as sounds in the short-term memory activate neurons that have previously processed similar information, there is recognition, even without deliberate effort. On the other hand, there can also be an attempt at deliberate recollection, and information from long-term memory will be brought to the conscious mind. These differences, which are particularly important in the processing of music, are categorized as implicit and explicit memory.[143]

McLucas continues by pointing out that the most common forms of implicit memory are motor skills that we have learned well enough to not have to think about in the act, such as riding a bike or playing an instrument. The oral-traditional practice of learning a passage of music which is absorbed by ear and simultaneously stored as motor-skill memory, creates an intricate web of neural connections in the brain. It enables a musician to take in aural information and apply it directly to his/her instrument—a means of developing musical ear-hand coordination.[144] This begins to explain some of the results of the Woody/Lehmann study on musical imagery abilities of by-ear learners versus notation-only learners discussed in my introduction. It also helps us to understand how musicians accustomed to reproducing music they have learned by ear

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[142] McLucas, 39.

[143] Ibid., 40.

[144] Woody, 85.

can also improvise original music they hear in their minds by the means of an aural skill called Inner Hearing, or audiation.[145]

McLucas also considers oral learning as being connected to creativity, evidenced by the fast evolution, and prolific creativity of jazz and popular music:

> Both in orally transmitted jazz and in popular music the changes in style and the accompanying kinds of creativity have arguably proceeded even faster than in the world of art music or of earlier popular music, both of which depended upon written forms for their transmission. For example it has been said that the history of recorded jazz in the twentieth century to some extent recapitulates the textural and even harmonic progression that art music took two centuries to accomplish. If this is true, it may also be in part because the examples created by the history of art music were there to inform that progression. Regardless of the reason, the pace of stylistic change has been extraordinary.[146]

Given this perspective we have of being able to look back on the development of Western European art music, jazz, and other world musics, we can see how they have evolved. In addition, with the research capabilities now available in neuroscience on brain activity, it is fascinating to develop an understanding of how the human brain, even since Homer's time, has been able to store, re-create, and create orally/aurally-transmitted data.

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[145] Warren Brodsky, Avishai Henik, Bat-sheva Rubinstein, & Moshe Zorman, "Inner Hearing among Symphony Orchestra Musicians: Intersectional Differences of string-Players versus Wind-Players," *Music, Mind, and Science* (1999): 375-376.

[146] McLucas., 159.

Conclusion

The driving motivation throughout any period of innovation and discovery has been a desire to experiment and improvise. The great discoveries in science, medicine, and technology have all required the freedom of trial and error, the courage to push boundaries and open new pathways. The school of visual art trains their future artists with the foundational techniques of past masters as well as arming them with generative skills that launch them into careers that express our contemporary culture with their unique perspectives. Within the Western classical music tradition, how can we both preserve the masterpieces of the past, and yet also encourage the unique creativity of young musicians to grow? By arming them, and ourselves, with the skills and freedom to experiment and improvise, we can unleash the creative potential of today's musicians to not only be more informed interpreters of composed music, but creators of their own music and innovators for the future.

However, our challenge is that for many classically-trained musicians today, the mere thought of getting up in front of people to improvise music is frightening.[147] Thankfully, by-ear learning environments that nurture such creativity are designed to dispel stifling fears and provide motivating inspiration. My own experience with workshops and music camps of oral traditions has enabled me to discover the rewards of experimenting and improvising, trial and error, and adapting to unfamiliar musical cultures. As I conclude this paper, select examples of opportunities for by-ear learning that I have experienced will be discussed.

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[147] Derek Bailey, *Improvisation: Its Nature and Practice in Music* (United States of America: Da Capo Press, 1993), 66.

Listening to the "Flashes of Wit of Others"—My Own Transformative Experience with By-Ear Learning and Improvisation

Until I was forty-seven years old, a professional violist with many years of orchestral, chamber music, and solo performance experience, I had never dared to improvise music. I then found myself working in a non-classical trio with a flutist who was a master improvisor. His ability to reach down within himself and create new music in response to what others were playing inspired me to learn this skill. As frightening and intimidating as the prospect seemed, I wanted to be able to participate in the joyful spontaneity of this kind of conversation.

As I journeyed through my trial-and-error process of learning how to improvise, I was often advised to play along freely with recordings that I liked, to transcribe solos of improvisers by writing them down as I listened, or to learn to play them as I listened. This was to help me understand the grammar, vocabulary, and syntax of improvised solos. From an analytical standpoint, writing down the solo did help to de-mystify how elements of an improvisation may be put together over chord changes, with thematic material, and with rhythmic variety. Consistent with the advice from several treatises discussed in this paper, my own experience has shown that listening versus reading in order to replicate music has resulted in further training of my ear.[148] [149] However, the

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[148] Carl Philipp Emanuel Bach, *Versuch über die wahre Art das Clavier zu spielen (An Essay on the True Art of Playing Keyboard Instruments)* 1787, translated and edited by William J. Mitchell (New York: W.W. Norton & Company, 1949), 302.

[149] Johann Joachim Quantz, *Essay of a Method for Playing the Transverse Flute* 1752, translated by Edward R. Reilly (New York: Schemer Books, 1966), 178.

only aural data I am able to improvise on or re-create without the written transcriptions are those that were also absorbed kinesthetically in order to sing or play them on my viola. Similarly, Dudu Maia, the Brazilian mandolinist I interviewed for this paper, attributes his creativity for composition and improvisation to his deliberate, hands-on process of learning new music.

An Introduction to Free-Improvisation

An especially encouraging circumstance for me that opened up the rich possibilities of free improvisation happened, interestingly enough, at a fiddle camp in Mt. Shasta, CA. Award-winning jazz violinist and Scottish fiddler, Jeremy Kittell, had scheduled an atonal jam session at midnight in one of the lean-to tents outside. Being a new-comer to the vernacular world of bluegrass, jazz, and old-time fiddling, I had felt like a rank beginner in those contexts, but in the atonal language, I did know how to communicate, and was excited to participate. Our ensemble, comprised of banjo, fiddle, cello, and viola, improvised a fantastic piece with elements such as twenty-first-century extended techniques, Hindustani rhythmic patterns, atonal melodic development with complimentary accompaniments, form, climax, and resolve. All of us contributed and listened respectfully for what our collective imaginations were inspired to play. It was liberating to get to improvise freely without having to follow a tonal chord progression, and very satisfying to create a piece with modern aesthetics, yet without the potential headaches of reading a modern, unidiomatic score. In an interview with Derek Bailey, saxophonist/improviser Evan Parker suggests:

> …that if anyone in the production of a music event is dispensable, it is the score-maker, or the "composer" as he (or she) is often called. My "ideal music" is played by groups of musicians who choose one another's company and who improvise freely in relation to the precise emotional, acoustic, psychological and other less tangible atmospheric conditions in effect at the time the music is played.[150]

Free improvisation can be an ideal means for weaning classical musicians away from the printed page. It's primary requirement is permission to use one's imagination while playing with the sonic possibilities of one's instrument. Listening to contemporary music for ideas, and collecting material as one practices their instrument, prepares an improvisor to contribute to a free-improvising ensemble. In Professor Melia Watras' viola studio class at the University of Washington, free improvisation performances are frequent events. Students either choose an improvising partner or play solo, and perform their unique inspirations in class and sometimes in their degree recitals. Encouraging this kind of collaboration in school settings could potentially restore to otherwise notation-dependent musicians "that incredible elation, the self-discovery, the flat-out fun of making our own music, and making our own music with friends" which Eugene Friesen, quoted in my introduction, posed as missing from many classical performers' musicianship.[151]

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[150] Bailey, 81.

[151] Eugene Friesen, *Improvisation for Classical Musicians: Strategies for Creativity and Expression* (Boston: Berklee Press, 2012), vi-vii.

The Disarming Fun and Intense Ear-Training of Fiddle Camp

Fiddle camps all across the country provide week-long immersion experiences for a culture of people who enjoy a wholistic approach to music-making, close community-living, and inter-generational sharing of vernacular musics. Whether in a rural or urban setting, the daily schedule is consistently made up of meals together, morning and afternoon classes learning tunes from master artists, evening concerts by faculty members or participants, and jam sessions that can last late into the night. In an hour long fiddle class, a faculty member will typically teach one or two sixteen-bar tunes by ear, with the chord changes, to participants anywhere between the ages of about nine to seventy-nine. These tunes become the rich, creative fodder at night for jamming, a fun communal activity which then fixes these tunes in the participants re-creative memories for years to come.

It is not an easy adjustment, learning these short pieces by ear, with no sheet music provided, although it is very helpful to make an audio recording of the class, and write the tunes down for later reference.[152] The more experience one has with aural learning, the easier it gets as the neurological connections are built between the brain's aural receptors and the motor functions of responsive fingers. These neural connections do not favor one tradition of music over another; the more experience I had learning fiddle tunes by ear, the easier it became to learn and memorize solo Bach, play Beethoven string quartets, sight-read orchestra repertoire, and improvise tonal or atonal music.

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[152] Patricia Shehan Campbell, *Lessons from the World: A Cross-Cultural Guide to Music Teaching and Learning* (New York: Schirmer Books, 1991), 28-29.

These discoveries from my own experience are consistent with empirical research discussed by Robert Woody in his article, “Playing by Ear: Foundation or Frill?” This research provided evidence that “ear-based musicianship is a facilitator—and not an obstacle—to other performance skills” required for otherwise traditional classical performers. A three-year longitudinal study by music education researcher Gary McPherson was able to ultimately identify which skills contribute to others. The five skills considered were improvising, performing rehearsed music, playing by ear, playing from memory, and sight-reading. The only one of these five skills that contributed to all the other four was playing by ear.[153]

The Benefits and Balancing Act of Musical Cross-training

In an interview with violist, David Wallace, String Department Chair at Berklee College of Music, he credited his involvement with Texas fiddle music as not only what saved him from attrition that had defeated other solely classical players he knew from high school, but also as what sharpened his ear-training and left-hand technique. After his Juilliard doctoral lecture performance on Texas-style contest fiddling, Jane Gottlieb, the chair of the doctoral committee encouraged him to make it the subject of his doctoral thesis. The pedagogy chapter noted three primary trends in the field at the time: aural learning through master-apprentice relationships, adaptation of Suzuki & classical models, and autodidactic approaches of learning the repertoire from field recordings and records.

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[153] Robert Woody, “Playing by Ear: Foundation or Frill?” *Music Educators Journal* 99, no. 2 (December 2012): 84-85, accessed August 3, 2016, http://www.jstor.org/stable/23364292.

Although the Berklee String Department certainly has “more pedagogical backbone than fiddle camp,” Doc Wallace encourages the multi-generational, multi-genre “learning in community” between faculty and students that is commonly enjoyed in vernacular learning environments.[154]

Counter to long-held prejudices against mixing a young musician’s exposure to both classical and vernacular musics, this cross-training should not be corrosive to either tradition if astute aural learning is maintained. When learning a Brahms violin sonata, one should listen to Isabelle Faust and other such masters; when learning Irish fiddle tunes, it is important to listen to Kevin Burke and equivalent masters. It is also wise to listen objectively to recordings of one’s own playing from practice sessions in order to discover inadvertent performance-practice slips. Private lessons from teaching artists of the particular genre one wants to pursue are incredibly helpful, especially for the explicating of idiomatic characteristics of that genre. In a private fiddle lesson I had with Darol Anger some years ago, he very tactfully mentioned that, “Gwen, you play with beautiful clarity, but in this music we *want* to hear the busy-buzzy stuff between the notes!”

If the masterpieces and creative powers of Homer, Bach, Beethoven, Clara Schumann, Louis Armstrong, Villa-Lobos, and others were born out of oral and oral/literate circumstances, then by-ear learning can only serve to benefit today’s musicians in creating tomorrow’s masterpieces. The more I have experienced, observed, and researched the benefits of by-ear learning, improvisation, and the joyful collaborative outcomes of both practices between musicians, the more I am motivated to share these

[154] David Wallace, interview by author, February 10, 2016.

experiences with my colleagues and students in classical music. My hope is that musicians with formal classical training, especially those in teaching environments that are looking for new sources of inspiration, might allow themselves the permission to go on this adventure, even alongside their students—a journey "off the page" to discover their unique creativity. Ideally, these disciplines would then be included in the curriculum and performance practices of all music students.[155]

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[155]In addition to the learning environments I have mentioned in this conclusion, I have also listed in Appendix B a few of the resources and organizations that provide various means for either/both students and professional players to embark on their adventures.

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Appendix A

Interview with Dudu Maia
August 10, 2016

DM: My home was really musical, there was a room in the apartment, the sound room, where I would go about every evening, and listen to some records, you know. Like George Benson, Pink Floyd, Jobim, stuff like that. So it was really musical, my dad used to have the guitar, quite often would play tunes and sing. This was before my parents were divorced when I was seven. I went to live with my dad by age of ten or eleven, and he used to have guitars, electric guitars, the pedals, amps, bass guitar, he used to play around with some friends every once in a while. And then I remember that he would go to work in the morning and then I would pick up instruments and mess around with it for a while, and listen to records every morning. That's what I would mostly do. I was really with the instruments and trying them out. And I would put them all back to place before he would get back home! And then it's cool it happened that I moved to a new school because I was living with him. I only stayed there for six months but there were three kids in my classroom and we became friends with me real quick, and they already played, we were eleven, one of them played the keyboards, one played guitar, and the other one the drum set. And it turned out that the three of them these days still work with music. And kind of big, they became producers, this came up to me as I read your question that you emailed me because I never really thought of that…three of us became music producers, you know? Two aren't even in town anymore, they're doing like pop music, movies, stuff like that. And the other one made a website, a site with all kinds of information about music, curiosities called Musicoteca, like bibliotheca, like library? A library for music, all kinds of content there. So it's funny, you know, in a classroom of about 20 kids, like, 4 of them ended up working with music, it's not that common, right.
GF: You guys inspired each other right off the bat.
DM: It's like these kids were already playing so for me I remember at this time we got a little tape recorder at home, me and my sister, and I used to mess around with that a lot and record all kind of stuff, even for schoolwork, I'd record a little jingle…I don't know, stuff like that. I'd sing and play along with tunes. It's funny cause now I realize how it got me into things like being able to record stuff. It's really something, you know. My dad gave my sister a keyboard with all those sounds and effects like that. She never really got to play but I remember that I used to spend a lot of time with it and do all kinds of crazy… like just having so many instruments, by having them around, at least try them out. I spent a lot of time with that and I tape recorded stuff, it was fun.
GF: When you were playing with your three friends, what were you playing?

DM: At first I would sing, and then I was really caught by the drum thing. It was a really improvised set, like with the little drum pieces we had in the music room at school, and he would cover it with a sheet, and he would make it work. He's became a really great drummer, top notch, plays mainstream gigs. And produces now, and his studio produces big stuff, too. And then in spare time at school I would go to this music room, this music classroom, and I'd set up the drums just like he did, and I be trying out for a long time, as much time as I could. And I asked my mom for a drum set but she's like, no way! And only now, I just got my own drum set, just six months ago, and I'm learning how to play it. It feels like I'm making an old dream come true, you know, it's fun.
GF: Our oldest son wanted a drum set so he did get one but we had in put it in the garage. The neighbors complained if he went passed ten at night.
DM: Yeah, of course.
GF: So when did you start playing the mandolin?
DM: Oh, that was way, way after, I started playing the mandolin at 21. So then what happens was I went back to my mom's place and the kids in the neighborhood, like old friends since childhood, they started playing their guitars, and that's how I started learning the first chords. On guitar. And we made a band, heavy metal band, really heavy like death metal. I would sing, like RAWWWHH!! That's how it really started and then I started to go to guitar lessons at this music school whatever, a private music school, little bit you know. And pretty much, we learned from each other, the kids. Playing guitar in the neighborhood. The architecture in Brazil is really favorable for kids to hang, in the neighborhood, you know. Buildings are always…they never touch the ground, they're all suspended so you can walk through the buildings, so it was common for kids, teenagers to sit under the buildings. It's kind of hard to explain to you because it's different architecture. Buildings here are not vertical, they're horizontal, at least the residential ones. They're very wide horizontally, and only six floors tall, so you keep the sky, you keep the horizon. The skyline doesn't keep you from seeing the sunset. (In Portugese, talking to friends briefly) Sorry, man. You don't ever have to walk around them, walk around the block, you can just pass through them because they are suspended by columns, all the buildings.
GF: That's really interesting, it would be better for community building, I would think.
DM: Right, totally, so it was really common to hang, just hang underneath the buildings, you know. And I'd be playing guitar all day, and so that's the experience that really started the exchange of ideas, and learning new tricks and new tunes, that's really how it went. And then I went to the US to live with my dad, at the age of 16, and all the kids in the condo, we used to live in Florida, in those condos, you know? The music thing was what really made an approach, socially with the other kids. So I started playing with them, and jamming every day, just jamming guitar, jamming the whole time. Make a little band, a little jam thing, so that's pretty much the experience. And then I go back to Brazil by 17 or 18, get into the university, get to meet these old friends again, and got back to playing and make another band, and get gigs. So only at the age of 21 I went to this party with my mom, a backyard party, you know. There was a *roda de choro* happening.
GF: Oh!

DM: Mom was aware of it, she had already been going there for a little while. She's like, oh, my son is a musician, he'd love to see that, and she keeps telling me about that and that I'd love to go there and see. So I go there one of these weekends, whatever, and then I see this amazing music and so difficult, you know it felt so far away from my universe. Technically-wise, you know? And there was Hamilton, and Alencar Corades, that one teacher that I've always mentioned with the harmony diagrams.
GF: Right, the same teacher that Eduardo studied with?
DM: You mean Eduardo the flute player or guitar?
GF: Guitar.
DM: I'm not really sure if he did study with Alencar but I guess it's really likely because we lived in the same town. Even though he passed away, the knowledge he left just came through. Just like I took it to the (Mandolin) Symposium, everyone would be thinking of it that way, the way he presented, you know. The kind of language would speak at an ensemble later on, the way we'd call the chords or progressions, or certain section we'd use the same terminology as he would as a common vocabulary.
GF: He said that even with just one note in the melody you could tell where the harmony was going to go…
DM: At that point I couldn't really read chords, I guess, but I couldn't read music notation at all. And then when I saw that choro jam that happened that afternoon, so beautiful, I used to teach english back in the day, so I got my next payment and I bought a mando, that's how it happened! I was 21, I was studying painting at university, Fine Arts, you know, but I bought a mando and went after Hamilton (de Holanda, now quite famous in Brazil) to give me lessons. Hamilton was a kid, we were kids, he's my age, like 21. He used to rent a little office, studio, he used to teach mostly *cavaquinho* students for samba and…choro wasn't really on those days, you know, it was like a old guys thing. Like for old people. It's funny how it changed cause there's so many young people enjoying it right now and playing it.
GF: Yeah, it goes away for a little while and then it sounds fresh to the next generation.
DM: Yeah, it was really and old people thing, it really was. So he didn't have many mandolin students for choro and all, so he was excited about having me interested in that, you know. And then explained to me the first parts, like music notation, a little bit of everything, but at that point I was really interested, I had already decided that music would be my thing maybe, at that point, in '98. That's cause, do you know Danilo Santiago? He played with Emil——-'s quintet for awhile? He was a friend from my teens, he was already a way, way better musician than everyone else and on my 21st birthday, they made a surprise party for me, and they had all the instruments there and amps and all that and I saw that kid playing, you know, and I used to see him play but that time I saw him playing, I'm telling my mom, 'Hey Mom, like this kid's going to be great one day, and I'm going to say I got to jam with him and all that' And then it clicked for me, like, no I'm not going to say that, I'm going to be playing along, you know? That's how I felt at that point. So that's when it clicked for me, my 21st birthday.
GF: That you too were going to run for it as far as you could.

DM: Yeah, so I started going for the guitar real bad, but ——(short interruption) Sorry, Gwen.
GF: Oh, that's okay, so this is your apartment on the ground floor?
DM: No, actually I moved to a house, it's been eight months, let me show you. I moved to a beautiful place with my family, and I rebuilt the studio…at my house, yes, I kind of preserved that vibe (from the apartment studio), so the control room here, right, and then an isolated room for drums. Check out what I just got, a Wurlitzer keyboard, 1974!
GF: So cool!
DM: This is it, yeah, a dream come true.
GF: No, kidding!
DM: It's attached to the house but it's out. So just for you to have an idea.
GF: It's so fun to see where you are.
DM: I have a dream come true, Gwen, my life is, so here's the house. And then the view, you know. (He shows me the front yard with a stage set up for outdoor house concerts)
GF: Wow.
DM: I'm so glad, I'm so lucky. Anyway, keeping with the idea…
GF: Well, maybe a couple questions, when you were taking lessons from Hamilton, and/or Alencar, were they having you do scales, or mainly just learning choros or…?
DM: Ok, at this point, right before I reached Hamilton, I was studying with this old guru, you know? I had just started with him, Gamela, who's taught many amazing Brazilian musicians, that came from Brazilia, you know like, I don't know if you've heard of Marco Padero, Nelson Faria, many of the guys. And the thing back in the day was to leave Brazilia for Rio or San Paulo, at that time, there was the thing for musician, not to stay here. So many of these guys he taught went away into the world. So Gamela, he was older, he's passed away already, too. He used to teach me the tunes. like step by step, mirroring him, very difficult stuff like chord, melody bass nova stuff, and jazz, on acoustic guitar.
GF: So note by note, one little phrase, and you repeat it, and he plays it, and you repeat it…
DM: Like that, yeah. Very aurally. And with him, he would give me whatever information I was aiming for, if I asked him about chords or scales or whatever, he would try to help, or theory. That was the point when I decided I wanted to know some theory, I couldn't really tell, like the beats, at that point, like one and two, the measure, the tempo, I couldn't really tell, 2/4 or 3/4 or whatever. I couldn't really say, it was confusing for me. It was really hard, like the rhythm thing, where the one is, or two, whatever, cause I'd hear a rock tune, I'll hear the snare, for instance, that feels strong to me, I'd think that will be the one, but it's actually the offbeat, (laughs)
GF: Right!
DM: It was really funny for me, I couldn't really understand it that well.
GF: There's something really magical about the connection between you guys and the audience.The feedback from the audience, how does that affect you?
DM: There's a really personal connection for each one. How you feel about each one.
GF: And are the rodas still taking place in the bars or cafes?
DM: Quite often, yeah. It's been changing, though, very noticeable. the environment of a roda is a backyard, people sitting around a table, a lot of alcohol, BBQ, a meal, people have this time

together, but it's become more and more professional, so mostly these days you might see people, reserved place for the musicians, on a stage, whatever, but I did present a lot in bars and stuff like that, an actual gig, where we would sit at the table with beer, whatever, and play, and the audience would interact, like just stand around this table. There's been memorable happenings, (laughs) that way, you know. It would just be in a very cheap bar. And actually we were doing a gig, getting paid, people just hanging around. It happened a lot but is not as common. It still happens but not as common. These days if you go to Rio or San Paulo, to the venues, I think mostly people are now separate, on stage, where people can see, right? But of course there's still many rodas, yeah…?

GF: In Rio, or anywhere?

DM: Anywhere, yeah. But as you're saying, how people would interact?

GF: Well, that if you can see that people are really enjoying something, we could roll with this longer…

DM: I don't know, I don't think so, maybe, if we're having such a good time, if we feel like we have a nice hook from a musical concern, the music I guess. For me, one thing that I realize is after a while is that the thing with the audience, it really does work if you're having a very good time yourself, and then, people start having a good time watching you have a good time, and then the interaction begins, maybe. And then of course there's lots of exchange, right, of emotion and vibration, whatever. Happy.

GF: Totally, I can see that when you play, Dudu.

DM: I find at this point that it's really hard to have an audience with you if you're not having a good time. If you're not enjoying the ones you're playing with, or, not enjoying the sound you're hearing cause sometimes it sounds not good, many times.

GF: So you just make the best of it, I guess.

DM: Yeah, it took me awhile to realize it, at this point I really must be…it's a matter of presence, does it make any sense to you, like being up at that moment, for real, really being there, having the best time you can have. Everything else is just a consequence of that, yes.

GF: There was another thing in this book on choro called *malícia*? Is that what it's called?[156] Just kidding around and trying to fool each other. They talked about how it even came from as far back as the slave trade, some connections with how you were supposed to get some blessing from your master. You could be rebellious and ask for it but then kick him in the foot or something…

DM: Yeah, that's very cultural, right? It's very good in many ways, and *really* bad in many other ways. It's very deep you know, if we start to really understand this whole cultural thing. The cultural thing here is that nobody's ever been watching for you. You've always had to make it through your own, if you don't take the chance, you might get screwed, or if you don't screw someone else, someone else might screw you. The latest people, this country, to get rid of slavery. It was 1888. It's still not too long ago, if you think, you know. The social dynamics still

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[156] Tamara Elena Livingston-Isenhour and Thomas George Caracas Garcia, *Choro: A Social History of a Brazilian Popular Music* (Bloomington and Indianapolis, IN: Indiana University Press, 2005), 10.

reflect this thing that went on for hundreds and hundreds of years. And there's many things like what we mention in the workshops that the court came down, which is a very particular case, and how this interaction and social relationship took place along with what was already there,

the enslavement culture and how the social dynamics happen.[157] Just think of the working class which were the slaves, how they would never be able to accomplish anything, never grow in what they were doing, and how they have to find ways around to survive or to prevail in a way, you know… So it's really long, cultural here. but actually we were talking about the *malícia* in the music, right? It has a lot to do with the rhythmic, the way to express is *malícia*, right? It has a lot to do with the rhythm, your approach to the phrasing, or to the groove your doing, or even trying to play it in a way that's more sloppy or laid-back on purpose.
GF: Something witty at the moment?
DM: You can play tricks on the ones that are playing with you, you change some notes, rhythm or anticipate the harmony or the little things, of course there is a dynamic of directioning with *malícia*, right, like trying to be slick, or tricky.
GF: It can add to the fun…
DM: So yeah, this very cultural trait, that we have that reflects in the music. Back in the day it used to be very competitive, like pulling up tunes that the guys who are accompanying don't really know how to play. So you're trying to knock them down. A rough translation of how it's said here, or change the rhythm that can make them confused if they're not aware or skilled enough to keep up with you. Let's say an example here, have you heard of the very famous performance of Hermeto Pascoal, and Elis Regina at the Montreux Jazz Festival a long time ago?
GF: I've heard of Hermeto Pascoal but who was the other person?
DM: Elis, e-l-i-s Regina, I think she's like the greatest singer we've had here in Brazil. She's passed away already. They were both performing at the Montreux Jazz Fest and this backstage thing happened with the producer or whatever and they ended up having them come back to stage only the two of them because Elis was playing her gig and Hermeto was playing his own. Jovino (Santos Neto) knows well that story, 'cause Jovino was there. It's a very famous moment in Brazilian music cause it was really amazing music that they did but what happened was they weren't really comfortable to go on stage together from what I heard, it was some pressure from the producers whatever, so they go on stage and they didn't even know what they would play together because their music was really distinct, really different. And then they decided to sing some standards like *Desafinado* or some other thing, I think maybe Girl From Ipanema, some very, very known standards. And he goes off and crazy, with harmony and rhythm, like very hard to keep up with, but like she was really badass, like she survived, she did it!
GF: Oh, my gosh, I'll have to look that up!

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[157] The workshops Dudu mentions are hosted by Centrum in Port Townsend, Washington every year in April. The faculty always includes a class about the history of choro. http://centrum.org/centrum-choro-workshop/.

DM: I don't know how musicians in the West work but that's something that's ah, true here, it could really happen, to really test someone else limits to keep up with you.
GF: It seems like there's a good challenge about it, like a sport!
DM: (He laughs, yet says) I don't really appreciate it when that kind of vibe is happening in a roda or jam I usually don't play. I'm more the kind of very mellow guy and loving person…
GF: Yes, you are, that's true!
DM: …to take that kind of thing, and that you asked about interacting with the audience and the way people react to others' playing I think there's many different ways that that takes place here if your concern is how it happens here in my culture, you know. But I'm mostly sticking with the guys that I'm really feeling good with, and good friends and feeling like really celebrating something together. Common purpose—and the music you know, not about me, and about how good I am and how fast I can play that tune or that phrase, or whatever, it's more about the whole thing happening, a flowing vibe. And it scares me a bit about the attitude of some of the young musicians here. Like the choro thing really pulls up some virtuosic vibe, right? So it almost feels like a race in certain environments, actually it does feel like a race, or a fight. So there's a lot of that thing. That concerns me a little bit the way we're forming the audience, like the audience is there to see blood…
GF: Wow, I think this really covers a lot of things that I can talk about in my paper. There are these several things, the acquisition of the skills, and then having done that, you get to express this thing that's been deep down ever since you were a kid.
DM: Yeah, and there's one thing that's really important that I forgot to mention, okay is the way I learned the music, the way I learned it, was from playing back records and tapes, not these days it's really easy, right? We have iTunes or Quick Time or whatever, and then I just put it in the right spot of the little section that I want to learn, or play even slower which I never did but kids do, played slower and tried to figure that out, cause I used to play with the tape deck like the first things I learned on the mando was the *Vibraçoes* thing, and all that just from this little tape that I recorded from Hamiton's CD in his little studio on a cassette tape.[158] And then I'd bring it home, rewind it stop, play, it's like CRRRshshsh, you know that,
GF: Yeah, exactly!
DM: That thing and I'll check note by note, it was such hard work, like very hard. But after awhile of course I'd be able to figure out whole phrases and sections, right?
GF: So it gets easier.
DM: But in the very first beginning it was really an effort to figure out note by note, for instance, *Vibraçoes*, like I learned it, every single note, and I'd double check it with the tape recorder like I'd play it right on top with the recording just to make sure if it should sound right just the one note, you know, every single note. That's how I learned it. Of course I learned (laughing) a couple pieces from the sheet, I figured out how to read music but mostly it was, my whole

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[158] A video with the "thing" (introduction) to *Vibraçoes* that Dudu is referring to can be found here: https://www.youtube.com/watch?v=RWXqlJ0Zydc.

experience was by ear. If I want to learn a tune, I'll just get the record and learn from it, you know.
GF: That's really an important point, the patience you had to go through and just learn note by note, wow.
DM: And one thing, if you asked me to do a recording, like you have the simplest melody for me to read, I will have a hard time. If you have a very simple score for me to read, and whatever, it wouldn't be comfortable.
GF: Well, you don't really need it.
DM: But it would take me a little while to figure that out and then learn how to hear it and how it should sound, and then I'll reproduce it. But I did write Hamilton a songbook awhile ago, I think in 2002 or 3, he put out a songbook, and I did transcribe the whole thing. It was like 20 tunes, I don't remember right now, but it was not hard for me to understand the logic of it and since I was so experienced with learning from the tape decks it was easy to know what note he was playing and then transcribe. But for me to read it's hard. At this point, I just want to play music of my own, be lazy to learn new tunes. I'd rather spend that time writing new music for me to play.
GF: That's part of the whole process that's so exciting about learning by ear, then learn the standard tunes, and improvise on them and make them your own, and then the next step is making your own tunes.
DM: Yeah, and another thing that's important that I forgot to mention, was that in my teens, the tunes we would play, of course we learned a couple riffs, like Metallic or Mega Death riffs, but actually for a long time all I played was the tunes I would write. And the way I would develop my playing, this is really a point that I think might make a difference for our talk, is say from 14 to 21, it was writing music and that would make me learn how to play. Learning through writing, I would have a musical idea, even if it was just a chord progression, whatever, that I would play like finger style, so that would challenge me technically. That's my technical challenge, you know, like to improve, like how fast I could change chords, or how my fingering with the right hand would go, so even the bands we had, they were all originals. And probably just because we're not skilled enough to play anyone else's music.
GF: Well, but you had to gain the skill you needed to play what you heard in your head happen.
DM: Yep, maybe not even, Gwen, trying to figure out cool shapes on the guitar, and how to chain them with the next chord, and maybe even the guitar would tell what the next note would be as long as it sounded acceptable. You know, just trying to change positions, it was very physical too, it's not a matter of just being so inspired and having all this beautiful music in your head and trying to make it come through. I think it's very physical to just have the guitar and have chord changes that make sense, and of course sometimes I'll feel like the next chord should be that one or the next note or whatever. But I think it is very physical. And I think at the age of 21 when I decided to learn music for real, then that's when I started learning the choros, and the bossa's. That kind of stuff. And I took the effort to learn other peoples music, and now it's the other way around, again.

Appendix B

Resources and Environments for By-Ear and Improvisational Learning

Alasdair Fraser's Valley of the Moon Scottish Fiddle Camp
http://valleyofthemoon.org

Brockmann, Nicole M. *From Sight to Sound: Improvisational Games for Classical Musicians*. Bloominton & Indianapolis: Indiana University Press, 2009.

Centrum: Creativity in Community
http://centrum.org
https://vimeo.com/89275044

Friesen, Eugene. *Improvisation for Classical Musicians: Strategies for Creativity and Expression.* Boston: Berklee Press, 2012.

Global Musician Workshop, DePauw University
http://www.silkroadproject.org/posts/gmw-2017

Improvise for Real
https://improviseforreal.com

Improvised Music Project
https://music.washington.edu/projects/improvised-music-project

Steve Treseler, Saxophonist | Teaching Artist | Author
http://creativitytriggers.com/