

UC San Diego

UC San Diego Electronic Theses and Dissertations

Title

Hearing connections : an actor-network study of online guitar activities

Permalink

<https://escholarship.org/uc/item/5gh341tw>

Author

Bigham, David Joseph

Publication Date

2013

Peer reviewed|Thesis/dissertation

UNIVERSITY OF CALIFORNIA, SAN DIEGO

**Hearing Connections: An Actor-Network Study of
Online Guitar Activities**

A dissertation submitted in partial satisfaction of the requirements for the

Degree Doctor of Philosophy

in

Music

by

David Joseph Bigham II

Committee in charge:

Professor David Borgo, Chair
Professor Nancy Guy, Co-Chair
Professor Anthony Burr
Professor James Fowler
Professor David Kirsh

2013

Copyright

David Joseph Bigham II, 2013

All Rights Reserved

The Dissertation of David Joseph Bigham II is approved, and it is acceptable in quality and form for publication on microfilm and electronically:

Co-Chair

Chair

University of California, San Diego

2013

Dedication

I dedicate this doctoral dissertation to my parents, Dr. Ngoc Thuy Bigham and David J. Bigham. You taught me to work towards my very best, embrace knowledge, and be firm in my convictions while remaining humble. Your love of learning and discovery continues to inspire me.

Table of Contents

Signature Page.....	iii
Dedication.....	iv
Table of Contents.....	v
List of Figures.....	vii
List of Tables.....	ix
Acknowledgements.....	x
Vita.....	xi
Abstract.....	xii
Introduction: Assembling a Rig of Connections.....	1
Actor Network Theory and its Application to Guitar Music Studies.....	10
1.1 A Brief History of Actor-Network Theory.....	14
1.2 Analytical Focus: ANT Localities.....	17
1.3 Methodological Details: Locating and Linking “Uncertainties”.....	24
1.3a Uncertainty: Agency and Translation of Agencies.....	24
1.3b Uncertainty: Objects and Technology in the Network.....	35
1.3c Uncertainty: Accounts and Documentation of the Network.....	40
1.3d Uncertainty: Matters of Concern/Matters of Fact.....	43
1.3e Uncertainty: Actors and Groups.....	46
1.4 Critiques of ANT.....	49
1.5 ANT Applied to Music Studies.....	53
Conclusion.....	57
YouTube Guitar Lessons: The “Gravity” of Network Connections.....	59
2.1 Video Comparison: Songs as Actants.....	63
2.2 Video Comparison: YouTube Videos as Black Boxes and Actors.....	76
2.3 Flattening Pedagogical Interactions.....	86
2.4 Extending Networks through Online Lessons.....	90
Conclusion.....	96
Guitar Gear Demonstrations: Matters of Concern and Mythic “Tone”.....	98
3.1 Tone as a Matter of Concern/Fact.....	101
3.2 Boutique Gear History and the Klon Centaur.....	105
3.3 Gear Demonstrations as Technological Black Boxes.....	116
3.4 Klon Comparison Videos as Networked Documents.....	126

3.4a Video – <i>Klon Centaur vs Bad Monkey: Sadie presents</i>	130
3.4b Video – <i>KLON Centaur overdrive guitar effects pedal shootout against a KLONE</i>	133
3.4c Video – <i>PGS Smackdown - Klon Centaur Vs. Lovepedal Kalamazoo Overdrive</i>	136
3.5: The Klon KTR and the Evolution of Boutique Gear.....	140
Conclusion.....	145
Appendix 3.A.....	147
Gathering Communities: Guitar-Vloggers and YouTube Heroes.....	149
4.1 The Guitar Hero in Popular Media and Academic Literature	151
4.2 Media Methodology and Theories of Viewership: Building a Whirlpool..	161
4.3 Repertoire and Lineage: Rocking the Canon.....	172
4.4 YouTube Heroes and Equipment: Design My “Signature” Guitar.....	179
4.5 Stage Presence and YouTube Aesthetics: Mediated “Live-ness”.....	185
Conclusion.....	188
Conclusion: Taking the Rig Apart in Search of Musical Possibilities.....	190
Bibliography.....	198

List of Figures

Figure 1.1: Instruments Sales by category and year, dollar figures in millions. (Data from Music Trades 2012: 51).....	26
Figure 1.2: A diagram of an Actor-Network based on the Instrument Manufacturer as “Translator Spokesman.”	31
Figure 1.3: Scale pattern as displayed by a fretboard diagram.....	36
Figure 1.4: The notes F, G, and A played on a guitar (photo by author).....	38
Figure 1.5: The notes F, G, and A played on a keyboard (photo by author).....	38
Figure 1.6: Keiran Foster’s “Glitch” software (Illformed.org, accessed May 2012)	54
Figure 2.1 Harmonic progression for verses in John Mayer’s “Gravity”.....	68
Figure 2.2a: Open G chord (photo by author).....	69
Figure 2.2b: “Bar” G chord (photo by author).....	69
Figure 2.2c: “Thumb-over” G chord (photo by author)	69
Figure 2.3: Mutually constrained relationships in song demonstrations.....	70
Figure 2.4 Different interpretations of the last four measures of “Gravity”	72
Figure 2.5: Different interpretations of “Gravity” strumming rhythms.....	74
Figure 2.6: Network diagram of “Gravity” lessons on YouTube	77
Figure 2.7: Comparison of time allocated in “Gravity” lessons.....	80
Figure 2.8: Copyright claims as a form of interessement.....	92
Figure 3.1: Image from Jaffe’s video <i>Tone is a Lie – a Calm, Reasoned Discussion with Just Nick</i> (Jaffe 2012b, screen capture by author)	103
Figure 3.2 The Boston Guitar Center’s “Wall of Guitars” (http://www .berklee.edu/news/4620/guitar-center-is-coming-to-the-berklee-neighborh , accessed August 5, 2012).....	109

Figure 3.3: Chicago Music Exchange (http://www1.chicagoreader.com/best_of_chicago_09/music/guitar_shop/ , accessed December 30, 2012).....	111
Figure 3.4: Guitar Sanctuary in Austin Texas (http://www.Guitarsanctuary.com , accessed December 30, 2012).....	112
Figure 3.5: The first version of the Klon Centaur overdrive pedal (http://www.dirtbox.net/news/klon-centaur-is-no-more/ , accessed December 30, 2012).....	114
Figure 3.6: The “gooped” circuit of a Klon Centaur (http://www.diystompboxes.com/smfforum/index.php?topic=1139.0 , accessed December 30, 2012).....	115
Figure 3.7: Technological “black boxes” mediating gear demonstrations.....	120
Figure 3.8: Citations between Klon comparison videos and TGP discussion threads. Circles represent TGP discussion threads and decagons represent YouTube demonstration videos. See Appendix 3.A for specific viewership and forum post data.....	129
Figure 3.9: Brett Kingman’s Klon Centaur/Digitech Bad Monkey comparison video (Kingman 2009, screen capture by author).....	131
Figure 3.10: Gear Mann Dude’s Klon/Klone comparison video (2009c, screen capture by author).....	134
Figure 3.11: Pro Guitar Shop’s Klon/Kalamazoo “Smackdown” (ProGuitarShopDemos 2010a, screen capture by author).....	137
Figure 3.12: Barefoot and Fisher’s new Klon premier (2011a, screen capture by author).....	142
Figure 3.13: Klon KTR Prototype and Development Board w/ Bill Finnegan (Finnegan, Barefoot, and Fisher 2012b, screen capture by author)	143
Figure 4.1: It Might Get Loud publicity photo featuring Jack White, David “The Edge” Evans, and Jimmy Page (Eric Lee/Sony Pictures).....	154
Figure 4.2: GuitarTV’s “Periodic Table of Guitarists” (http://guitartv.com/artists/ , accessed November 5, 2012, screen capture by author)	159
Figure 4.3: Marty Schwartz’ home studio (photo by author).....	165

Figure 4.4: Martyzsongs viewership statistics(2011g, accessed January 18, 2013, screen capture by author)167

Figure 4.5: Funtwo performing “Canon Rock” (2006, screen capture by author)..174

Figure 4.6: Guitarist Phil X (Fretted Americana 2009, screen capture by author).177

Figure 4.7: Rob Chapman discussing endorsements (Chapman 2008, screen capture by author)183

Figure 4.7: Phil X at the NAMM trade show (Fretted Americana 2011, screen capture by author)188

.....

List of Tables

Table 2.2: Listing of “Gravity” videos compared.....83

Table 3.A.1: TheGearPage.net discussion threads referencing Klon videos.....147

Acknowledgements

A whole ensemble of people devoted a lot of time and effort for my sake, and for that I am grateful. First, thank you Professor David Borgo for seven years of guidance, and Professor Nancy Guy for encouraging me to write about the things I care for deeply. I would also like to thank Professor Anthony Burr and Professor David Kirsh for broadening my perspectives and walking me through complex ideas, and Professor James Fowler for providing an outside perspective of my work.

Thanks to my friends who followed me along the writing and proof-reading processes: Shelley Burns, Jeff Kaiser, Laura Mauler, Sara McConnell, Aviva McPheron, Jonathan Piper, Ben Powers, and Andy Zahurak. Their enthusiasm and support helped make the writing process more enjoyable

And my deepest thanks to my wife, Anne Mauler, who stuck by me and helped me through the toughest intellectual challenges and doubts. This work is nothing without her belief in me.

Lastly, this work is a testament to the many connections I made through online guitar sites. In particular, thanks to Ken Rosser, Andre La Fosse, Marty Schwartz, David Taub, and Adam Grimm for their time, experiences, and perspective. You made this study a great journey into the world of guitar practices.

Vita

David Joseph Bigham II

- 1997 Bachelor of Music, Washington University, St. Louis
- 2005-2006 Teaching Assistant, Eleanor Roosevelt College, University of California,
San Diego
- 2006-2011 Teaching Assistant, Department of Music, University of California, San
Diego
- 2007 Masters of Arts, University of California, San Diego
- 2011-2012 Associate-in-Music, Department of Music, University of California, San
Diego
- 2012 Associate-in Culture, Art and Technology, Sixth College, University of
California, San Diego
- 2013 Doctor of Philosophy, University of California, San Diego

Fields of Study

Major Field: Music (Critical Studies, Experimental Practices)

Studies in Improvisation

Professors David Borgo, Anthony Davis, and Mark Dresser

Studies in Popular Music

Professors Nancy Guy and Anthony Burr

Studies in Hindustani Music and Sitar

Kartik Seshadri, and Ustad Imrat Khan

ABSTRACT OF THE DISSERTATION

Hearing Connections: An Actor-Network Study of Online Guitar Activities

by

David Joseph Bigham II

Doctor of Philosophy in Music

University of California, San Diego, 2013

Professor David Borgo, Chair

Professor Nancy Guy, Co-Chair

The electric guitar held an elevated position within western popular music during the second half of the twentieth century. The instrument's most well-known practitioners were referred to as "heroes" and "gods," and broadcast their performances through recordings, radio, television, and press. Inter-personal and technological associations coalesced into an instrument-specific, socio-musical practice distributed

through broadcast media. Since the 1990s, multiple technologies have disrupted these existing associations. Online media's wide-spread adoption offers alternative conduits for inter-personal relationships and upsets pre-existing flows of media production and consumption. Recent guitar and recording technologies offer new modes of agency for hobbyists, professionals, performers, retailers, and manufacturers. This project investigates how guitarists adapt to online exchange.

I apply Actor-Network-Theory's methodological and ontological perspectives to communities constituted from social and technological associations. Three years of interviews with amateur and professional guitarists, participation in online discussions, and analyses of streaming videos provide an account of shared practices in flux.

Developing genres of guitar media publicize formerly private interactions. Analyses of online discourse and streaming videos trace changes occurring in guitar pedagogy, epistemic belief, and the evolution of the "hero" persona. Cross-sectional comparisons of guitar-based videos demonstrate how negotiations with the instrument and streaming video technologies produce ontological transformations of musical material.

Explorations of inter-media networks uncover the dissemination and interpretation of subjective belief, and its transformation into episteme. The complex interactions between people, musical materials, electric guitar technologies, and internet technologies reconstruct social relationships and the means through which these new associations are maintained. This study characterizes musical communities as dynamic and contingent assemblages of people and technology.

Introduction: Assembling a Rig of Connections

The guitar rig starts with fingers touching strings. In the matter of a few milliseconds, a sound is produced that has the capability to energize a crowd or draw in a sympathetic ear. A vast world of connections lies between the gesture and the sound. The “unplugged” acoustic guitar consists of mechanical connections: string vibrations transfer through multiple layers of wood, nickel, and bone. My electric guitar rig, evolving on a nearly monthly basis, consists of a complex array of electronic connections utilizing vacuum tubes, solid state circuits, and wirelessly-transmitted digital technology. Each part of my rig has a particular function and role. A network of audio and control pathways connect each element, leading to often complex relationships between me and multiple types of technology. If I substitute a device or rearrange the physical placement of any aspect of my rig (e.g., relocating a wah-wah pedal, tilting my amplifier upward by 10 degrees, raising my guitar strap by 3 inches, etc.) the effect on my rig and performance can be profound. Whether fingers to strings or cables between effects, these technological connections invariably shape what I play and what comes out of my speakers. Any change in my rig demands my adaption to the reconstituted system. Each combination of guitar technology leads to different musical potentials, and the ability to engage an audience through sound.

The rig consists of more than mechanical and electronic links; my sound has been shaped by inter-personal connections that define how I arrange and use my equipment. My equipment and technique document my history of guitar playing. I recognize my teenage years spent reading magazines, listening to recordings and

watching interviews on MTV, emulating my heroes' experiments with electronics, techniques and musical materials. From my years in retail comparing and demonstrating guitars for customers, I hear finer nuances between settings and devices. I observe the stompboxes and settings I culled from hours spent reading online guitar forums, connecting with other "gearheads," and watching YouTube guitar videos. Social connections help me develop my rig and suggest how I should employ it.

The guitar rig is also a conduit for personal friendships, business relationships, and scholarly exchange. Regardless of whether the guitarists I meet consider themselves professionals, amateurs, rock "shredders," hammer-fisted punks, or experimentalists, we find a common interest in guitar-based music making and equipment. We share tips about the gear we use and how it functions. We compare the local and online sites where we shop and browse for gear. We tell "war-stories" about venues, and whether or not we can "crank up" our amplifiers in these places. We share our own personal narratives about how we started to play the guitar, and why we continue to love the instrument. These interactions can be just as enjoyable as playing music. Brought together by the instrument, other guitarists have known me as a guitar technician, a salesman, a performer, a teacher, and most recently as a scholar of the guitar. Guitarists share their practices through different networks. Each site involves its own particular ways of knowing the instrument and music.

This work grew from interactions with friends, fellow musicians, scholarly peers, and random interlocutors questioning the cultural relevance of the electric guitar. Despite frequent claims of the instrument's insignificance in twenty-first century music, I continue to find myself engaging with guitar-focused practices, now located online

and not intended for broadcast media. Online media has become a vital space for guitar practice, producing new genres of publicly-shared activities. On a daily basis, I observe discussion distributed amongst numerous countries, ages, and races, and as well as across genders. I can watch hours of videos featuring skilled amateurs, well-known celebrities, and beginning hobbyists. The guitar proves to be important to many, so perhaps the notion of “culture” is the changing element in these exchanges.

The position I adopt replaces concepts like “culture” and “social,” often considered fixed entities, with dynamic collections of associations defined as networks. The “network” concept appeals to my sensibilities as a guitarist; like my guitar rig, socio-musical connections are multifaceted, complex, and produce their own unique effects. Connections between guitarists, gear, and online technologies are often contingent. Network relationships reconfigure like a guitarist’s rig. My scholarly networks can be quite distinct from my retail networks, which in turn may only be loosely connected to my performance networks. Even amongst the groups of performing musicians I work with professionally, a number of different perspectives and attitudes about music making challenge the notion of a unified “musician’s culture.” Amidst these different groups, I must work to fit within networks of activity. My ability to fluidly adapt to a new inter-personal network often parallels my abilities to adapt to a new piece of music or technology. Current perspectives on networks also consider their effects as emergent properties, rather than neatly predictable outcomes.

A study of dynamic networks and their emergent effects produces specific questions. What processes bring people together? How are information and ideas distributed and maintained by this collective? How are members of the community

differentiated from each other? What forces have changed the community and where do these forces come from? Lastly, what is the role of technology amongst these connections? The answers to my questions must ultimately pay respect to the guitarists' experiences while critiquing assumptions about socio-musical activities. A snapshot of current internet-based guitar activities requires a methodology that integrates interpersonal associations, new media, and musical technology into a unified framework. In this way, "network" summarizes the continued evolution of socio-musical activities seen in online guitar practices.

I first propose that a thorough description of the connections amongst guitarists focuses on action. Even though my study uncovers numerous types of important concepts (the ontology of a song, shared values, guitar expertise, etc.), I argue that such abstractions within guitar communities develop out of socio-musical activity. Whether a guitarist performs in front of others, builds and sells instruments out of a garage-workshop, or listens to a string of YouTube videos in search of guitar music, action creates the potential for community. The contingent communities of guitarists exist because of both coordinating *and* contradictory activities. These activities are spurred by specific network configurations involving people and technology. The guitar leads to action, and the action links people. An emphasis on the activities of musicians brings their sounds and performances to the fore.

As an important aspect of my musicological investigation, this analysis focuses on the nature of media's effects on guitar-based connections. The last decade of "Web 2.0" media produced hundreds-of-thousands of videos demonstrating guitar activities. Internet sites make many once-private musical activities visible in a public arena.

YouTube videos present individuals casually and formally interacting with pieces of guitar technology. Musicians praise and criticize famous guitarists through discussion forums. Instrument manufacturers develop and refine their products through online interactions with their customers. For many of the guitarists in this study, internet-based activities are as meaningful as playing the guitar, taking a private guitar lesson, attending a concert, or browsing at a local guitar store. While the three musical domains I describe - education, instrument technologies, and performance and celebrity - have constituted socio-musical communities and circulated between guitar-focused settings prior to the internet, I contend that they are transformed by internet media. Additionally, new modes of interconnectivity continue to develop through internet sites. On one hand, user-created hyperlinks point to relevant sources and trace pathways that have already been traveled. On the other, a host of automated scripts and software, in the form of search engines and “big-data” processing, automatically generate links and associations previously unconsidered, unexpected, or unwanted. Changing internet technologies reveal old connections and create new associations. Extending the rig metaphor into online communications, the whole technological system has changed and produced new types of music.

Online communication technologies reveal communities of guitarists constituted across previously assumed boundaries. This ethnography includes guitarists from the United States (many from Southern California), South Korea, Australia, Taiwan, and Germany among other nations. Their socio-musical connections exist through participation in internet discussion forums and streaming media websites such as YouTube. Similarly, women actively participate in online communities, challenging

the guitar's gendered associations. Female guitarists like Noveller, Marnie Stern, and Fuzz Box Girl have built followings for their playing and frequent video uploads. This broad sense of community differs from pre-internet notions of guitar culture that were largely defined by corporately owned media. Male and female guitarists from all over the globe and claiming every type of racial identity populate internet forums. Internet technologies allow a vast number of connections to be made over long distances. It is just as easy to build friendships with someone half-way across the globe as it is to meet someone who lives a block away. At this moment in history, online technologies have reconfigured assumed notions of community.

I present examples of modern, online guitar culture in the hopes of describing people, technology, media, and music all on equal terms. My work can be categorized in a number of different ways: popular music study, new media study, or an ethnomethodological study of music technology. Subtle changes in technology produce dramatic shifts in music making. Existing social practices continue despite drastic changes to media distribution methods. Often, a common ontological perspective of popular music attributes cultural and inter-cultural forces as the primary cause of musical practices. Studies in this vein have questioned the nature of gendered power structures within music retail (Sargant 2009), the relationship between music genres' ideologies (e.g., heavy metal vs. punk) and figurations of guitar technology (Waksman 2004), and ethnographic studies of guitar communities around the world (Bennett and Dawe 2001). The emphasis of dynamic networks shaped by agencies differentiates my work from existing literature about modern guitar practices. Turning back to activity brings the sounds of the rig and the voices of guitarists to the fore.

With each chapter, I hope to bring the reader further into the guitarist's world to hear the sound of network connections in action. I present examples of educational practices, discussions between guitarists with many years of experience, and individuals who work to make a lasting impact on guitar practice. In each example, guitar technologies feature prominently in interactions, and with it a world of guitar activities. More than a symbol or empty vessel to be filled with social meaning, the guitar enables the creation of social context. To understand the assembly and dynamic nature of guitarists' communities, I locate the agencies and mediational effects by examining technological and inter-personal associations. I then move outward to see how these details link ever-growing numbers of people.

To traverse this interior pathway of fine description leading outwards to collectivities of people and technology, I adopt the concepts of Actor-Network Theory (ANT) as described by sociologists Michel Callon, John Law, Bruno Latour, and Antoine Hennion. The first chapter explores ANT as a methodological framework addressing the nature of social connections. The theory treats social changes and the dissemination of ideas as emergent network effects. I outline ANT's terminology (e.g., actors, translation, and matters of concern) as the methodology used to observe and account for network associations. The theory provides the ontological basis as well, considering the fine details of action and interaction as the basis for society and culture. ANT also allows me to examine the role of technologies in socio-musical activities. Originally focused on scientific and technological change, the theory treats technologies as agents within network activities. From this perspective, musical and internet

technologies have significant effects that shape inter-personal relationships and reconfigure the concept of community.

I then turn to the genre of online lessons in the second chapter. Agency translations between technologies, music, and inter-personal relationships produce lesson videos. Online videos make pedagogical processes public. Many guitarists learn how to play the instrument exclusively through songs instead of established and linear methods. Through the lesson creator's negotiations with the guitar and streaming video technology, the constituting elements of the song are reordered, reprioritized, and linked to a larger canon of modern rock guitar music. I compare six different treatments of one song, which reveals the "translations" occurring between actors. In this chapter, online pedagogy also attracts more than just interested guitarists. Online instructors engage in legal conflicts and partnerships with "outside" organizations like record companies and instrument manufacturers. The intercessions of these groups suggest that online pedagogy is still in a state of development.

Addressing the concepts of shared values and epistemic belief, the third chapter analyzes the use of gear demonstrations in debates about technology and its dissemination. Gear demonstrations emerge as a new genre that consists of specific modes of musical performance. Demonstrators and viewers build inter-personal associations through subjective listening experiences and objective details of circuitry. Online media serves as the evidence and the location of community discourse regarding "tone," an epistemically contested notion of sound. A much-vaunted effects pedal provides the example of technology dissemination: demonstrations of the Klon Centaur show how qualities of "boutique" guitar gear have evolved over the last twenty years.

Comparison videos are used by guitarists to debate the pedal's worth and the specific tonal properties of circuitry.

The fourth chapter examines how a shared sense of community is built through online activities. I theorize the notion of the "guitar hero" and how popular and academic literature often used it to circumscribe shared practice. The constituting elements of the guitar hero persona are used by gear demonstrations and online teachers to build audiences and position themselves as the next generation of YouTube guitar heroes. The work of these online guitar celebrities provides the clearest evidence of the guitar's vitality in the twenty-first century. These activities emerge as the effects of guitar technologies, internet media, and music networked together.

Often, guitarists question whether or not "their instrument" and "their music" holds any relevance in a media world also inhabited by samplers, keyboards, and computer-based instruments. By listening to their world, this study aims to demonstrate how guitarists' communities are changing. My response to those who ask whether or not guitar-based music is thriving is simple: it continues to develop in unexpected ways and still engages audiences through its unique properties. The "reassembled" social life of guitarists bears less resemblance to the heyday of shredder guitarists in the 1980s, the aggressive bashing of late 1970s punk, or the English blues explosion of the 1960s. The connections between ourselves and our gear have grown more complex and more elaborate. We may still hear echoes of the past, but they now emerge from digital technologies that constitute modern guitar rigs.

Actor Network Theory and its Application to Guitar Music Studies

My study of shared online practices amongst guitarists involves a host of equally vital questions. How does one relate musical practice to media practices? What is the role of technology in these activities? What economic forces push and pull the flow of material goods, whether they are musical instruments or media technologies? How is the notion of community formulated amongst practitioners? Where can a community of practice be found? Can any of these elements be qualified as evidence of a unifying “guitar culture,” or are such practices fragmented and distributed across the globe? These rather large questions are but starting points to deeper investigations that characterize popular music studies in the twenty first century.

Previous accounts of guitar-based practices primarily owe to “new musicology” (Huron 1999) and ethnomusicological methods.¹ Noted guitar scholar Steve Waksman adopts the former, utilizing theories and analytical viewpoints adopted from gender and racial studies. For each chapter of *Instruments of Desire*, Waksman frames a well-known guitar personality within critical theory; the guitar is a conduit for expressions of race, sexuality, and political resistance (1999). The chapter devoted to Les Paul historicizes his role in the development of a guitar mediated by electricity and studio techniques in relationship to mid-twentieth century gender roles and behaviors (ibid.: 36-74). Waksman’s often-cited notion of Jimi Hendrix’s electric guitar as a “technophalus” centers on Hendrix’s virtuosic performance and stage

¹ David Huron writes, “The new musicology is loosely guided by a recognition of the limits of human understanding, an awareness of the social milieu in which scholarship is pursued, and a realization of the political arena in which the fruits of scholarship are used and abused” (1999).

presence as a reinforcement of assumptions about race (ibid.: 188). He hopes to problematize the positivist narratives deeply ingrained into guitar practices, stating that *Instruments of Desire*, “does not present a progressive narrative of musical and political achievement with regard to the electric guitar” (ibid.: 13). Waksman’s work simultaneously gives voice to guitar practices while critiquing its cultural underpinnings.

Addressing guitar practices from an ethnomusicological perspective, Kevin Dawe considers a plurality of guitar cultures across the globe. Dawe combines elements of ethnographic research, including interviews and field work, with the same type of textual analysis used by Waksman. Recordings, videos, and popular media provide the data from which he draws. Adopting Arjun Appadurai’s concept of –scapes (e.g., mediascape, technoscape, ideoscape, finanscape, and ethnoscape), Dawe describes these musical practices as a “guitarscape:” a field of activity in which the guitar affects cultural practice and is also representative of beliefs amongst practitioners (2010). These descriptions of the guitarscape also echo Appadurai’s examination of material culture, in which objects and cultural artifacts may have a “life” that varies depending on who is using the object (Appadurai 1988). Appadurai’s analytical structure addresses the multivalent aspects of social, including musical, practices; economics, media, technology, ethnicity, and nationality affect individual locales in different, overlapping ways.

Like Waksman and Dawe, I’ve chosen the guitar community as my scholarly focus to answer my own questions as a guitarist and because of the deep access afforded to me. Ethnomusicologist Marcia Herndon questions who is “inside” the

musical tradition (long believed to be the analytical subject) and who is “outside” of the tradition (assumed to be the analyst) (Herndon 1993). No longer sent “out into the field,” contemporary ethnomusicologists often consider their own musical worlds as living practices worth analyzing and critiquing as both insider and outsider. Such a position often grants deep access to communal practices, while prompting the musicologist to ask questions unconsidered (and sometimes unwanted) by subjects. Like Herndon, my “insider” access to my subjects owes to having worked in musical retail and played guitar for most of my life. Yet the questions I ask my informants and the analytical tools I use seem foreign to guitarists and have occasionally been met with derision. The analytical tools I use are musicological (considering the exact musical materials played and the aesthetics of musical performance), sociological (examining the notion of community and its interpersonal connections), and ethnomethodological (describing the act of performance). The concepts I reference owe to cognitive science, political science, theater performance studies, and new media studies.

I utilize Actor Network Theory (ANT) for my study into current internet-based guitar practices. Developing out of the works of Michel Callon, John Law and Bruno Latour in the 1980s, ANT suggests an ontology of culture based on ever-evolving, localized practices. According to ANT, culture and context emerge from complex network effects and interactions, rather than defining activities. ANT has largely focused on the evolution of scientific practice, and has since been applied to developments in legal, economic, and artistic practices. Specifically focusing on electric guitar practice seen through YouTube, I identify developments in instrument

and technology use, which in turn leads to a restructuring of social relationships and shared ways of knowing. The categories of “social” and “cultural” are not inherently stable (though their evolutions may be slow). While Waksman and Dawe utilize critical theories to summarize pre-existing social and culture forces, I search for guitarist-specific ways of knowing and behaving demonstrated by online activities. In particular, the examples I draw upon show the changes that have most recently occurred in shared guitar practice.

Further separating this work from Waksman’s and Dawe’s, ANT relates the local to the regional or global through a drastically different perspective of collectivity: the connections that bind locales to each other produce the sense of a guitar culture or community. The redirection of ontology considers an “inward/outward” approach instead of a “top-down” perspective. The implications of this perspective directly address the notion of community and challenge prevalent thought regarding social power. Every locale offers the possibility of its own assembly of relationships, behaviors, and constituents. Heterogeneous elements beget heterogeneous networks. The differences between locales, whether of musicians bound by geography or guitarists bound by similar technique, are bridged through specific means that cannot be categorized or summarized into singular forces. Relationships are “flattened;” ANT explains power through the observable links that exist between locales.

Lastly, I argue that technology and its use need to be situated alongside interpersonal interactions. The perspective of technology I adopt from ANT strikes a balance between technology’s effect on our behavior (including social practices) and

shared practices of technology use. In this study, both guitar technology and internet technology shape and are shaped by modern guitar community practice. Technology proves to be one of the most important causes of social and cultural evolution, sometimes to the dismay of its creators and users. Technology also serves as the means through which locales are constituted and bridged. Nearly all of the individuals I describe interact through internet technologies. Media is more than the conduit through which communication flows; it transforms social relationships and practices. As these technologies continue to develop, countless sites and online documents materialize to bridge new connections while older social links dissolve and technologies become obsolete. Social and technological connections evolve in unforeseen ways. What follows in this chapter is an overview of ANT, including its origins and methodological frameworks as proposed by its leading proponents, common critiques of the theory, and its application to music studies.

1.1 A Brief History of Actor-Network Theory

The earliest articulations of Actor-Network Theory emerged from the field of science and technology studies (STS). Latour, Callon, and Law's cumulative work at the Centre de Sociologie de l'Innovation (located in Paris, France) focused on the diffusion of technology and scientific thought. They endeavored to trace and describe all of the influencing factors revealed in laboratories, ranging from the interpersonal connections between laboratory technicians and principle investigators to the vast amounts of journal articles produced by scientific sites. They questioned how measurement apparatus were used in the structuring of a scientific argument, and then further traced back the development of those apparatus (Latour 1987: 1-17). They

examined how different, and often distant, communities were brought together for specific technological projects (Callon 1986b: 19-34). And most frequently, they analyzed the documents produced by scientific and technological development through quasi-quantitative analysis of word relationships and citations linking studies together (Callon, Law, and Rip 1986a; Latour, Mauguin, and Teil 1992). These early works in ANT repeated the same refrain: science and technology owe to social interaction and context as much as to controlled investigations, and were neither wholly predictable nor completely objective. Their conclusions echoed other theories from STS: science and technology were thoroughly entwined with the “subjective” social world. The environments described by early ANT scholars were not independent worlds of scientific reasoning, but instead were composed of networks of people (as individuals and as groups) and technologies (affected by and affecting people).

Because ANT gave no special place of privilege to scientific laboratories, the concept of socio-technological networks was expanded to other sociological inquiries. ANT-related studies have explored the associations between human and non-human actors in fisheries (Callon 1986c), naval navigation (Law 1986), public health practice (Singleton 2000), and educational technologies (Ma and Rada 2008).² Latour’s and Callon’s recent works move beyond the disciplinary boundaries of science and technology studies to address political and social sciences, and economics (Latour and Lépinay 2009; Callon 1999). For example, Latour suggests an alternative to post-

² An annotated bibliography of works employing ANT methodology by Law provides a broad view of ANT studies through 2004 (Law 2004).

Marxian economics in his introduction to the work of Gabriel Tarde (Latour and Lépinay 2009). Instead of attributing the world of economics to unseen market forces, enactments of power structures, rational actors, and capital, Latour argues that economics are a network created from interactions of “passionate interests.” ANT as a whole asks us to reverse causality within social science. The specific figurations of social networks create social forces. Economic and political forces are the effects, and not the cause. ANT may therefore account for phenomena identified by science, technology, money, politics, behavior, and art as network effects. Following the logic applied to the analysis of laboratory environments, the theories and terminology developed by disciplines in the “hard” sciences and humanities are also the products of network activities found in academia, and distributed through numerous books, journals, and conferences.

1.2 Analytical Focus: ANT Localities

Latour’s 2005 work *Reassembling the Social: an Introduction to Actor-Network-Theory* summarizes the main themes and methodologies of previous ANT studies. An ideal ANT study identifies the constituents of a locale and the interactions that bind these constituents without prescribing macro-level forces that guide the system. The network described is a “flat cartography” of associations between individuals, in which the analyst assumes no pre-existing power differentials or prescribed roles that actors inhabit (Latour 2005: 16).³ An attempt to apply this same map to another locale may identify some similar features and contours, but will

³ Latour frequently substitutes the terms “sociology of associations” and “sociology of translations” in place of ANT (Latour 2005: 9).

ultimately be an imprecise fit. Viewed across scholarly endeavors, an ANT analysis of musical culture distinguishes music from other artistic expressions (e.g., visual arts or literature). Concentrating on the details of musical practice, “guitar culture” as it exists in the year 2012 is differentiated from “synthesizer culture,” “dj culture,” or guitar culture in 1960. ANT provides us with the means to define localized practices of musicking without reducing them to other substitutable entities. It is precisely this sense of domain-specificity that grounds my study in the materials, sounds, and actions of guitar music and performance.

The scope of an ANT study focuses on local interactions. The focus on localities is a methodological consideration and an ontological perspective of cultural interaction. As a methodology, ANT studies require direct observation, rather than inference based on theory. Perhaps owing to its origins in science and technology studies, ANT resists charges of solipsism and subjectivity, a common critique of the “soft” social sciences, by basing its evidence on the people, objects, and activities found in the sites studied. ANT disputes the strength of unseen hegemonic power structures. Latour writes, “If action is dislocal, it does not pertain to any specific site; it is distributed, variegated, multiple, dislocated and remains a puzzle for the analyst as well as for the actors” (Latour 2005: 60). Locales overflow with people, technologies, and activities; the work lies in accounting for the different types of connections present. As an ontology, an emphasis on locality suggests that our day-to-day lives are structured primarily by our immediate surroundings and through media technologies that overcome distances and time. This perspective respects differences between individual sites of activity, and emphasizes the strength and number of immediate

connections that bind people. ANT treats the ontologies of other sociological methods as quasi-religious philosophies: dependent on an “invisible hand” that motivates social, political and economic exchange (Latour 2005: 239).⁴ For Latour and other ANT theorists, the only possible activity that exists between people is purely constructed of interactions which are localized, visible and accountable.

The analytical detail applied to localities produces *thick descriptions* as conceived by anthropologist Clifford Geertz (1973). He seeks to untangle the web of culture through descriptions that align with the practitioners’ experiences. Examinations of localities provide a thorough account for what happens in a locality, and how informants interpret their own activities, beliefs, and interactions. Like Geertz’s thick descriptions, ANT’s foci on localized activities interpret action, but does not supplant or disregard such meanings. Seeing interpretation as a necessary component of ethnography, Geertz was quick to distinguish interpretation from prediction (ibid.: 20). Like ANT scholars, Geertz believed anthropology’s role was “not to generalize across cases but to generalize within them” (ibid.: 26).

ANT’s focus on local interactions and rejection of global or political forces still requires a consideration of the nature of larger groups, whether regional, national or global. The focus on the local over global is less radical for the social sciences than it initially appears, for Latour accepts the interaction of multiple localities on each other. Dispensing with the term global, Latour argues for a “panorama of localities” (Latour 2005: 183-189). A panorama consists of localities connected by observable actions and exchanges involving people and technologies. Such a move avoids

⁴ In regards to economics as quasi-religion, see also Latour and Lépenay 2009: 4-5.

disjunctions between experiences at local and global levels, in which each frame of reference carries its own set of rules, activities, and roles that are often contradictory or incompatible. Even large, multi-national organizations (which may also be analyzed as a self-contained locality) are grouped together by observable connections, activities, and agents. Within the last century, the ties between localities largely comprise of different forms of media. In the case of international trade, these connections may be through the exchange of goods and finance. Regional and global connections do not absorb the locale, but instead are loosely comprised of localities of varying sizes. Power does not travel “down” from global levels, but instead “across” sites, often through tangible means.

ANT’s relationship between localized activity and global scales differs significantly from other social theory. Consider Appadurai’s theory of “-scapes,” previously mentioned in relation to Dawe’s most recent study of guitar culture (2010).⁵ Appadurai considers localities to be the products of different configurations of overlapping “flows,” including (but not limited to) economics, technology and media (1990). He chooses the term “flows” over “fields” to denote the ways in which ideas, materials, and people are moved in multiple directions and made to act in a variety of ways. Applied to the realm of music making, such flows transport the music of Michael Jackson across the globe, while “J-pop” music artists are largely confined to Asian markets. Appadurai sites Benedict Anderson’s notion of “imagined communities” as the basis of affiliation, transported by media (ibid.: 2). While

⁵ Mark Slobin’s concept of “micromusics” also employs Appadurai’s social theories, differentiating localized music practice from a global “superculture,” and mediated by an “inter-culture” (1992).

Appadurai and ANT identify the role of media in connecting people, the two differ dramatically in the employment and application of power through media. The former embraces the “top-down” perspective that has long defined social theory, while the latter flattens social structure into “inwards-outwards” flows.

From the “thick descriptions” of local connections to the panorama of localities that ultimately construct our sense of the global, Latour conceptualizes “the social” as emergent phenomena instead of a fixed structure. He argues that the term “social” is frequently deployed as either a quality of being or as the very material from which something is made, and is often deployed as the de-facto explanation for transformation or force between people (Latour 2005: 3-4). Like a software program or piece of lab equipment, an input “X” is transformed by social forces to produce output “Y.” For ANT scholars, these “black boxes” need to be opened up and examined for what really happens inside. The term “black box” is frequently employed in science and technology studies as gathered technologies functioning as a unified whole. Latour’s metaphysics present a world in which all of these social boxes are opened up and their connections made bare. However, to achieve this perspective, Latour entreats the ANT scholar to examine moments where black boxes “malfunction,” or the social has not “solidified” into a fixed form. Thus, the formative moments of collective action (including initial encounters with old systems and technology), innovations in practice, and tragic events displaying the unraveling of this action uncover the stabilized associations between actors. These moments provide opportunities for the actors to assemble and negotiate their relationships ad hoc: a “reassembling” of social and technological interactions.

A most striking example of the panorama of guitar-related localities received national attention in September 2011. Federal marshals, acting on the behest of the Environmental Investigation Agency (EIA), raided the Gibson Guitar Corporation's manufacturing facilities in Tennessee, searching for wood that was in violation of the Lacey Act (Havigurst 2011). The incident quickly mobilized a range of actors, including U.S. politicians, political pundits, the international lumber industry, guitar makers, and consumers. The conditions that led to the raid did not emerge from any singular social or economic force, nor were the responses by these actors necessarily predictable according to regulatory politics. The incident is best understood by unpacking the various black boxes and locales networked together. The Lacey Act, initially established in 1900 to restrict the importation of endangered animal species, was expanded to include plants and plant material in 2008 for the purposes of curbing illegal wood harvesting of endangered plants (United States Department of Agriculture 2012). In addition to environmentalist groups, the logging industry of the United States supported and lobbied for this change, hoping to mitigate the rising importation of foreign woods. The law not only established regulations within the U.S., but included the laws of foreign countries regarding standards to which imported materials must meet.

The guitar industry has long been aware of issues of wood supply sustainability. For instance, the limitations on Brazilian rosewood (*Dalbergia Nigra*) importation led to a shift in rosewood types used during the mid-1970s, while many builders have marketed guitars certified by the Forest Stewardship Council as

environmentally friendly (including the Gibson “Smartwood Les Paul”).⁶ Most manufacturers partner with U.S.-based wood suppliers to import any foreign-harvested woods, ostensibly farmed through legal methods. According to the EIA, the imported Indian woods in question at Gibson factories may have violated the Lacey Act by exceeding allowed thicknesses as determined by Indian law.⁷ Whether this was due to illegal farming activities in India, the attempt to circumvent importation laws in the U.S., or poor paperwork by Gibson and its importers, the connections between actors became visible to the public. In this example, the localities of Indian wood harvesting, U.S. conservation law and its enforcement, and instrument building were already networked to each other for economic, political, and practical (construction materials) reasons.

Once the “black box” of guitar construction was opened up by the raid, actors old and new forged new relationships. It was at this moment that the network of activity began to reassemble. Another evolution in the relationship between the nation-state, politics, wood harvesters and importers, guitar manufacturers, and guitarists emerged. The Gibson/Lacey Act story quickly became a rallying point for conservative politicians, political commentators and news media outlets that portrayed the event as the Obama administration’s efforts to further limit civil liberties.⁸ Gibson

⁶ Brazilian Rosewood was one of the primary woods used in guitar construction during the early twentieth century, based largely on its color and figuration. Ironically the wood is notoriously difficult to use in construction, and its particular timbral characteristics not necessarily ideal for every guitar type. For more on the history of Brazilian Rosewood in guitar construction and the CITES agreement which limited its importation, see Simmons 2008.

⁷ Many within the guitar community have suggested that these thicknesses were also incorrectly documented in shipping documents to avoid confiscation. As of this writing, no charges have been filed against the Gibson Guitar Corporation, and the seized woods remain in the possession of the EIA.

⁸ Representative Paul Braun (R – GA) introduced an amendment to the Lacey Act (National Resources Committee 2012). In support of the amendment, Senator Rand Paul (R – KY) would invoke the Gibson

responded through multiple media outlets. The company's CEO Henry Juskiewicz testified before Congress and appeared on numerous radio shows, criticizing the government. Gibson's response to guitarists was quite different however, addressing the nature of guitar construction. In the months since the raid, Gibson has adopted the use of laminated wood and phenolic composite materials in place of the solid woods that were seized.⁹ With the adoption of these laminated and composite materials in 2012, Gibson quickly began a campaign aimed at customers stating how these new materials are supposedly superior to their predecessors (Gibson Guitar 2012). The most interesting response came from a different guitar manufacturer, Taylor Guitars. Through a video posted to YouTube (<http://www.youtube.com/watch?v=anCGvfsBoFY>, accessed December 10, 2012), CEO Bob Taylor announced his purchase of lumber facilities in Cameroon to ensure legal supplies of wood for guitar construction. The pre-existing arrangement between wood suppliers and guitar makers was eliminated by Taylor, one of the largest manufacturers in the United States. A number of different messages emerged afterward, each addressing different audiences and revealing new connections forged within a panorama of localities. Most importantly, the Gibson/Lacey Act incident reminds us that cultural, economic, and political associations are constantly changing. We capture all of the associations destroyed and remade by focusing on the details of the locality.

raid as an example of the deteriorating manufacturing climate caused by zealous government agencies, stating, "When I first heard about the raid at Gibson Guitars I was appalled that this could happen in the United States of America; That we would send in federal agents from Fish and Wildlife [Services] with automatic weapons to invade a company that hires 2,800 people around our country" (Paul 2012).

⁹ Laminate wood materials are constructed from multiple thin layers of wood glued together. The grain structures of each layer lie perpendicular to enhance stability. The outer layers are usually made of a wood enhancing the visual appeal of the material. Phenolic composite materials consist of wood and paper pulp mixed with a strong resin compound. Brand names for phenolic composites are Richlite and Duratop, both used in home building materials like kitchen countertops.

1.3 Methodological Details: Locating and Linking “Uncertainties”

Having defined the scope of a typical ANT study, I now turn to the categorization of data. ANT systematically enumerates data types, and links different modes of data together. Within the first half of *Reassembling the Social*, Latour lists five “uncertainties:” categories of variables that allow an ANT scholar to define networks: agencies, matters of concern/controversy, actors/groups, objects/technology, and accounts of the network (i.e., documentation, artifacts, and studies of the network). The exact form of these variables shift depending on the locality studied, leading to a reconsideration of the uncertainties for any given network of activity. The goal of listing these uncertainties is not to structure a theory according to specific roles or interactions, but rather to consider the different interactions and actants within a network. In fact, few ANT scholars structure their studies around all five uncertainties or refer to them as “uncertainties,” instead choosing specific connections between two or three types of variables at a time, such as (but not limited to) ideas and documents (matters of concern and accounts), or activities between people and technologies (agencies, actors, and objects).

1.3a Uncertainty: Agency and Translation of Agencies

ANT primarily focuses on the various forms of agency and the linking of agencies that give life to networks. Localized, identifiable activities involving people and technologies form the basis of social interactions such as musical interplay, the dissemination of media technologies, and the development of scientific ideas. ANT studies identify three dimensions of agency: agency as actions of desire and will, agency as actions constrained and instigated by affordances, and the translation of

agencies to each other. Agency is both the choice to act and the result of other agents acting on the subject. The definition of “translation” in ANT refers to agencies brought into agreement with each other. The occurrences of agency and translation should be understood as heterogeneous: action and the aligning of activities are specific to the locales studied. Agency and translation reassemble and work to maintain the assembled black box of “the social.” Actors’ active participation leads to the construction of their culture/society/community, not passive inclusion in a group.

By describing agency as desire and will-through-action, ANT theorists account for a wide range of behavior. Agency in this sense is “wanting,” “planning,” and “doing.” Whether enacted, planned, or unfulfilled, a full range of abilities and goals become important details to an ANT study. Actors situate themselves amongst groupings of people and technology in the hopes of attaining some goal, or maintaining processes already underway. They gather others around plans in the hope of enlisting their abilities. In his most recent literature regarding Tarde’s social economics, Latour posits that economic exchange is built from desire-as-agency and its translations, rather than financial capital or exchange value (Latour and Lépinay 2009). Reconceived as a “science of passionate interests,” the patterns of consumption and production theorized by economists reveal the site-specific embodiments of actors’ desires. According to ANT, we easily forget that economic flow results from aligning and conflict of desires because these interests are reinforced and made durable through currencies, financial institutions, and ephemeral “financial products.” These are the products, not causes, of desires: the figurations of agency that represent a range of interests. From this position, Latour argues that capitalism as a whole is not

a cold, uninterested leviathan that subjugates humanity (as per Marxist thought), but instead is the “irrational” maelstrom of accumulate desires that push and pull against each other (Latour and Lépinay 2009, 23-25). Capitalism represents agencies-as-desires working in concert, contrary to each other, and often unchecked.

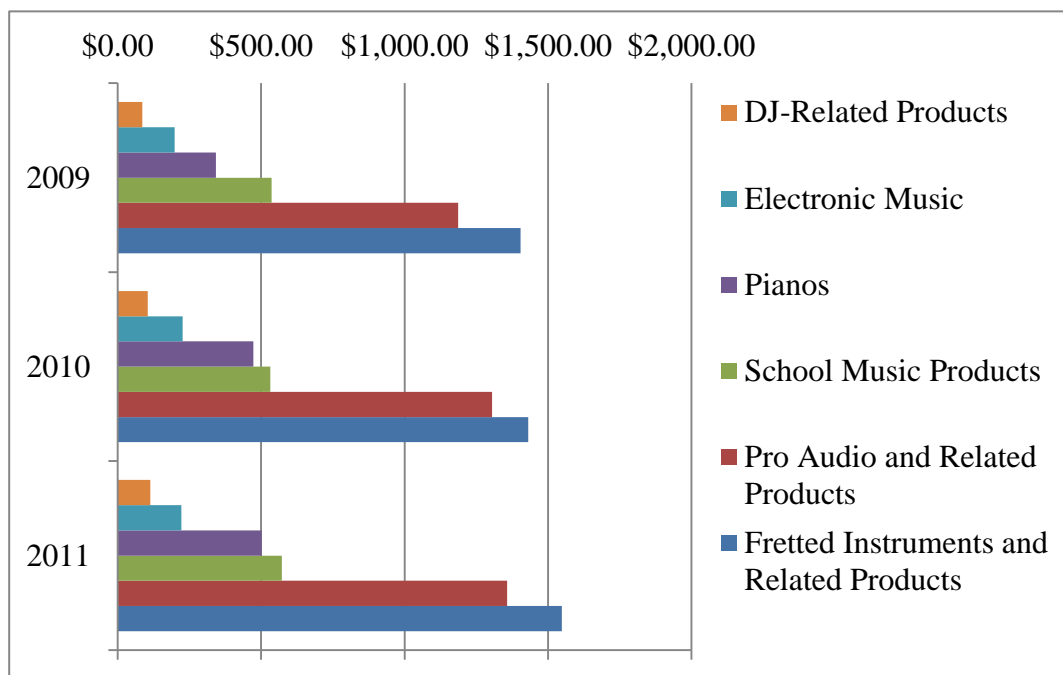


Figure 1.1: Instruments Sales by category and year, dollar figures in millions. (Data from Music Trades 2012: 51)

The concept of agency-as-desire holds relevancy to my study in several ways.

The economics of guitar culture as a whole remains the most sizable portion of the \$6.6 billion musical instrument industry, totaling \$1.54 billion for the 2011 fiscal year (Music Trades 2012). Figure 1.1 displays the sales of musical instruments, related by instrument type and year. While many members of the guitar community and some scholars of guitar culture argue that the guitar and guitar culture are “dying” (see Ryan & Peterson 2001 for what seems to be a “eulogy”) these numbers suggest it remains a

dominant industry. Many of the individuals interviewed for this project have developed successful careers or side-businesses from online guitar activities.

However, I strongly emphasize that an economics-only explanation mistakes economic activities as the predominant cause of online guitar activity; what often starts as a hobby of tinkering and experimentation for its own sake can quickly develop into a cottage-industry. They are the products and embodiments of desires aligned and translated. As equally valid demonstrations of agency-as-desire, many guitar technologies developed out of desires made visible, tangible, and audible. Technologies developed out of actors' desire to simulate the sounds of incredibly loud amplifiers at significantly reduced volumes (modeling technologies), the ability to record oneself on-the-fly to mimic ensemble performance (looping technologies), and to use and hear rare and vintage equipment (boutique instruments). These technologies often emerge from musical practice and creative desire. While we can attribute much of Gibson and other large manufacturers' activities as financially motivated, quantified as \$1.5 billion in retail, the cause of this exchange is built from agencies-of-desire found at local levels.

Agency as action-constrained-and-instigated may be the least contentious definition used, and most obviously identified through direct observation of actors in networks. Individual musicians are constrained by their interactions with other members of a musical ensemble. The interactions may be determined by ensemble's musical style as in a traditional orchestra or rock band, or determined on-the-fly as in a free-improvisation performance. Musical behavior is largely shaped through training and emulation within particular stylistic parameters, embodied by educational

institutions and media representations of normative practice. This type of agency relates to the notions of situated and distributed cognition (see Lave 1988 and Hutchins 1995 respectively) in which action and cognition are dependent upon contextual and environmental constraints. Agency is dependent on the cues and affordances made available to us, whether in the practice of mathematics (as per Lave) or navigational techniques (per Hutchins). Such practices and techniques derive from the constraints created by inter-personal, environmental, and (as will be discussed below) technological affordances.

Returning to the Gibson/Lacey Act incident and its aftermath, we can frame Gibson's sourcing of potentially illegal wood as agency-within-constraints. Their actions were in response to environmental, material, and inter-personal conditions. The use of Indian rosewood (*Dalbergia Latifolia*) in guitar construction developed due to the shortages and restrictions on Brazilian rosewood harvesting. While the CITES Act of 1975 halted the importation of freshly lumbered Brazilian rosewood - a legal constraint - the lumbered stumps were still legal. These cuts of stump wood were less stable and often too small to use for the backs, sides, and fingerboards of guitars, splintering when bent and cracking long after the drying process – a material constraints for builders. And despite a number of other wood species that having been compared to Brazilian rosewood's timbral qualities, such as African Blackwood (*Dalbergia melanoxylon*) and Ziricote (*Cordia Dodecandra*, found in Central America), guitarists and luthiers treat them as exotic substitutes sonically and aesthetically differentiated from Brazilian rosewood – an inter-personal constraint shared amongst guitarists and builders. Each constraint acts upon guitar makers in

such a way as to dictate specific actions. As part of the guitar culture network, Gibson was led to act, whether legally or not, to source wood based on these constraints.

Taken in total, multiple connections in a network instigate an actor's response.

Agency-as-constraint becomes the compliment to agency-as-desire. The balance between modes of agency (desire and constraint) has largely been read by the social sciences as resistance or compliance with the social, economic and political forces that descend from macro-level social structures. ANT does not summarize these forces into a homogenous, unseen structure, but unravels each observable constraint. Of the summation of constraints Latour writes, "An 'actor'... is not the source of action but the moving target of a vast array of entities swarming toward it" (Latour 2005: 46). The actor-as-subject position is decentered as the analyst looks at the connections between actors demonstrated by actions and negotiations, and not the individual actor as the source of all activity.

The concept of agency translation addresses how individuals associate with each other and reveals the true nature of social ties. As in the linguistic definition of translation, agency translation links two entities. The linguistic definition links two distinct utterances while the ANT definition links two distinct actors. Considering translations as the basis of all relations, Latour writes, "There is no society, no social realm, and no social ties, but there exists translations between mediators that may generate traceable associations" (Latour 2005: 108). With this in mind, Latour argues that networks represent the way to describe the connections between people and describe the many forms "the social" may take. In *Reassembling the Social* he writes, "Network is an expression to check how much energy, movement, and specificity our

own reports are able to capture. Network is a concept, not a thing out there” (Latour 2005: 131). The energy and movements he refers to are agencies and their translations between actors. For the ANT analyst, the most reliable data is found in actions (agency) and associations (agency translations). The theoretical ANT network replaces all that is commonly referred to as “social,” yet requires the analyst to define the network through localized activity.

Michel Callon summarizes four dimensions of translation that establish and stabilize network connections. First, he describes translation as the act of “speaking” for the network. Often, an actor functions as a *translator-spokesman* by enumerating actors (human and technological) and delimiting their range of agencies within the network (Callon 1986b: 24). Figure 1.2 depicts an Actor-Network in which a guitar manufacturer may serve as “translator-spokesman.” The luthier or company (like Gibson) determines who will be involved (e.g., materials suppliers, hardware manufacturers, dealers, and advertising press) and how they will interact with each other. The spokesman’s agency-as-desire is ultimately translated to others’ desires and wills, gathering actors into a network of limited activities. This spokesman role does not guarantee translation or the stability of the network. A particular hardware supplier may refuse to follow the builder’s requests to produce a specialized piece, instead requiring the builder use a generic design that is also supplied to other builders. A dealer may reject the particular model offerings of the builder for a given year based on existing stock. The press may demand the builder buy a specific amount of yearly advertising to have an instrument reviewed in their publication. While the role of “translator-spokesman” may seem to be a position of power, it does not guarantee

compliance. This first, vital step of translation, gathering actors together, requires bridging multiple desires from the onset of group activity.

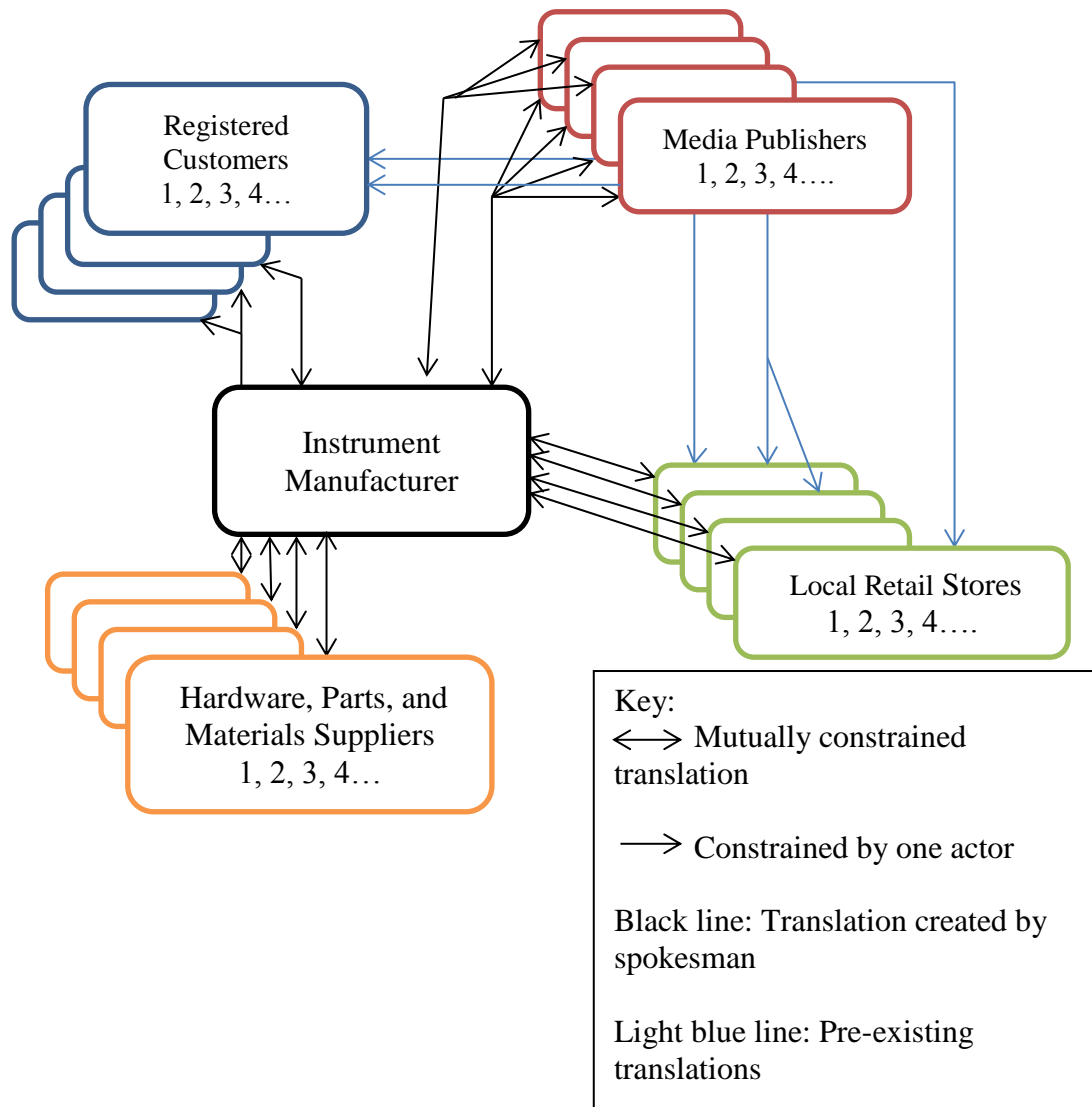


Figure 1.2: A diagram of an Actor-Network based on the Instrument Manufacturer as “Translator Spokesman.”

A second dimension of translation is the recontextualization of individual agency by diverting actors into predictable flows of activity. Callon describes how translation “detours” actors from other existing network pathways, refocusing efforts

through *obligatory points of passage* (Callon 1986b: 26-27). Detours may lead to geographic locations such as the retail shops where guitars are sold. In the examples given throughout my study, the points of passage include websites, YouTube channels and forums through which viewers and content creators gather. This aspect of translation localizes actors and agencies, bringing them into closer relation by delimiting the pathways their actions may travel. Detours of translation further delimit what agencies are possible. Even in the age of Web 2.0, in which the media consumption conflates with media production, websites such as Twitter, Facebook, and YouTube carefully limit actors to a relatively small amount of activities. Callon argues that detours are essential to the durability of network ties. If these points-of-passage, real or virtual, are not substitutable for other places then the whole network of agencies and actors becomes indispensable.

Callon lastly describes translation as movement in the form of displacement (Callon 1986b: 27-28). The points of passage refer to *where* translation occurs, but displacement accounts for *what* is moved. We can include the actors, technologies, currencies, and communications as some of the items displaced by the act of translation. The volume of materials and people moved through obligatory points reinforces the strength of the network connection between entities or individuals. As translator, a company like Gibson works to transport materials through their manufacturing facilities (including subcontracted, overseas manufacturers), send increasing amounts of people to their retail locations (real or virtual), exchange money between actors, and diffuse product information amongst the network. After the federal raid, Gibson and its CEO Henry Juskiewicz engaged in a series of translations

via information campaigns about the Lacey Act (Juszkiewicz 2011), the health of the Gibson Corporation in spite of the raids (Smith 2011), and the wood and synthetic substitutes used in lieu of ebony and rosewood (Gibson 2012). When understood as translations of displaced information, the information campaign reinforced the existing associations between Gibson, their dealers, and their existing and potential customers.

A fourth dimension of translation, referred to as “interreusement,” maintains associations by blocking other potential translations. This aspect of translation defines the network through exclusion. The translations of agencies between two actors may take such a form that a third actor is unable to establish an association. ANT theorist John Law summarizes the concept: “The elementary case of translation is thus triangular. One entity enrolls. Another is enrolled. And a third fails in its attempts to enroll” (Law 1986: 71). Within music retail, the most common example of interreusement can be found in manufacturer/dealer agreements. A dealer may request exclusive dealership rites within a specific geographic radius, cutting off other potential dealerships.¹⁰ A manufacturer may also require the dealer to purchase a specific amount of goods, effectively expending a dealer’s yearly budget on one brand.¹¹ The process of interreusement allows us to further consider the failure of networks and dissolution of connections. The translations of agencies between two actors can cut existing connections between other actors. By amending the Lacey Act to include the exportation laws of foreign countries as one standard to be met, Indian

¹⁰ During my experiences in acoustic guitar retail, I repeatedly witnessed this process. Dealers often vied for exclusive rights with manufacturers, excluding local competition. In examples when exclusivity was not granted, dealerships often arranged for models to be sold exclusively at their stores. In both cases, the process of interreusement blocked third-parties.

¹¹ This level of wholesale purchasing was often a prerequisite for exclusive dealership rights for an area.

laws were translated to United States laws, and effectively blocked Gibson's importation of larger cuts of rosewood by severing Gibson's ties to Indian loggers. In these examples of interreusement, translation disrupts and limits associations as much as it builds associations.

Viewed in total, the figurations of agency and four components of translation describe the social and technological associations which are the most important elements of a network. This first "uncertainty" moves our analysis away from static listings of people, ideas, and objects, to dynamic associations built from activity. In this study, YouTube videos attract specific actors to specific locations, and behave in novel ways. Guitar technologies enlist specific types of users and deny others. My premise of "thinking like a guitarist" means that I have chosen and been enrolled with a specific set of actors and technologies, according to specific types of agency. Some of these associations are quite strong, while others are bound by only one translation. Regardless of their strength, these associations are movements of activity, ideas, people and things. The dynamic nature of Actor-Networks situates everything "social" in a sea of constant evolution and change. For Latour, Callon, and Law, as much work and activity is required to maintain the network as was needed to assemble it. Networks form out of forces that are simultaneously putting people together and pulling them apart. The guitar community is evolving because all social practices are, according to ANT, unstable and shifting. A consideration of agency and translation lets the ANT analyst describe such evolution through observed action.

1.3b Uncertainty: Objects and Technology in the Network

A second uncertainty - technology's agency - allows me to consider musical and new media technologies as part of the guitar community networks I describe and analyze. Objects and technologies hold a central role within any ANT analysis, because ANT holds that objects may themselves be "actants" which affect a network and cause other actors to respond. As referred to earlier in the discussion of agency-within-constraints, technology often limits humans' activities through morphological and procedural affordances (e.g., limits created by user interfaces and the workflow structure respectively). This idea echoes similar concepts within theories of extended cognition, which holds that humans' ability to act and think are directly tied to employed technology, as opposed to existing in a disembodied Cartesian mind. If a notebook serves the same role of dependable recall as a brain in activity, as in cognitive science philosopher Andy Clark's example of "Otto," it is an equally vital part of the network of cognitive activity (2000).¹² Clark argues that a map serves the same role as a brain in recalling directions, and should therefore receive the same "cognitive credit" for the work. Expanded to musical technologies like the guitar, the exact form of our translations to a technology's agency shapes the act of music making through the morphological affordances of the instrument. The coordination of the left hand fretting notes on the neck and the right hand plucking the string is the most basic requirement of guitar technique: the instrument constrains activities into a specific figuration of agency. When I look at the fretboard of the guitar, the

¹² The issue regarding whether or not humans use technology to "think for us," seems less radical than it may have when Clark first proposed his example in 2000. Increasingly, the argument is not whether technology is integrated into cognitive processes, but instead questions the ethics of such technology.

perpendicular angle of the strings relative to frets creates a visual grid that helps me recall chord shapes and scalar patterns (Figure 1.3). Guitarists learn to rely on the grid of pitch-fret space as a map of affordances and patterns. The learned negotiation of this grid provides direct access to music making, and does not require knowledge of music theory or traditional music-notation literacy.

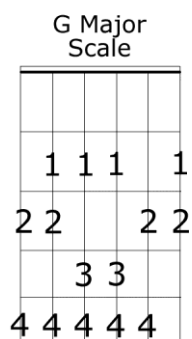


Figure 1.3: Scale pattern as displayed by a fretboard diagram

Agency translations with technologies also affect our understanding of the world. The morphological engagements with technology may be mapped onto our engagements in a particular domain. Cognitive scientist Edwin Hutchins provides an example in his analysis of naval navigation (1995: 49-114). Hutchins considers how the birds-eye-view maps used in Western navigation lead Westerners to conceptualize the world in a manner outside of their immediate perceptual faculties. The technology has shaped Western understanding of geography and the ability to navigate long distances. This ability stands in comparison to Polynesian navigational practices which employ a very different type of cognitive interaction with the environment: the use of stars' positioning relative to the horizon. Hutchins' example reveals how the technology causes us to think and act relative to our technological and environmental

resources. A translation has occurred with the map-as-technology that motivates people to act in specific ways.



Figure 1.4: The notes F, G, and A played on a guitar (photo by author)



Figure 1.5: The notes F, G, and A played on a keyboard (photo by author)

When considering technology use as a mode of translation, technology directly affects the “translator-spokesman” and “intersement” processes that enroll and block others from participating in a network. These forms of translation prove useful in accounting for internet technologies’ effects on communities of guitarists. New media technology reshapes the manner in which social connections are built. Media technologies act as a type of “translator-spokesman” by gathering and linking people together within a limited range of agencies. Currently dominant new media sites group information and situate actors into site-defined networks. The YouTube website gathers “similar” videos together based on a set of metadata criteria, the Pandora radio website bases its song playlists on the “Music Genome Project,” and the Google search engine organizes information according to a number of parameters that have become the focus of the search engine optimization (SEO) industry. Conversely, sites implicitly deny connections through the prioritization and categorization of metadata, and explicitly block connections through copyright enforcement algorithms, as is the case in YouTube ContentID system.¹³ Software and internet sites perform a mode of intersement by denying access to pre-existing features and content based on a user’s subscription level; a platform upgrade often “unlocks” software functions already downloaded and installed on a computer. These sites perform the work of “speaking” for the interests of media consumers and producers, deciding what and who is grouped or blocked. In this way, a software interface reconfigures how media is accessed and

¹³ While we can attribute these technologies to software algorithms created by programmers, the results they produce can escape design intentions. Such was the case when the YouTube ContentID system blocked a video produced by comedian Brian Kamberer, which was featured on *The Tonight Show with Jay Leno* (Kamberer 2012). The ContentID system identified Kamberer’s video within a posted *Tonight Show* clip, and subsequently removed the video as a copyright violation.

understood, and how people connect with each other through media (Manovich 2012: 5). If the internet is best understood as an archival-database comprised of information, agencies, and human interests, as suggested by media theorist Pelle Snickars (2009: 292-313), then these same technologies have been entrusted with sorting and organizing human agency.

Considering the implications of technology's impact on behavior, translating and mediating relationships between actors, an application of ANT's perspective of technology-as-agent must also avoid the pitfalls of technological determinism. Latour and other ANT theorists carefully distinguish technology's ability to make humans act in constrained ways from a hierarchical structure in which humans are subservient only to the affordances of the tools they employ. In addition to the affordances of the technology, interactions between people shape how they use technology. It is both technologically and socially determined. But instead of opposing the human to the technological through this long-held binary, Latour asks that we consider how interaction moves between various forms, whether traditionally considered "social" or "technological."

We have to accept that the continuity of any course of action will rarely consist of human-to-human connections (for which the basic social skills would be enough anyways) or of object-object connections, but will probably zigzag from one to the other. (Latour 2005: 75)

By emphasizing translation as the primary bond of networks, instead of specific figurations of agency or how the term "actor" is defined, then the distinction between social interaction and technological interaction becomes blurred. The position of ANT attempts to occupy a middle ground between a socially-determined use of technology

and a wholly technological determinism by arguing against the social/technological binary.

1.3c Uncertainty: Accounts and Documentation of the Network

While we must consider media technologies as actors with their own agencies and most importantly translations with other actors, they also constitute another “uncertainty” within an ANT study: accounts and documentation. This uncertainty is comprised of the content within the medium, and reveals how ideas, findings, and debates are disseminated amongst community. These documents display the actors’ ways of knowing within the network, and often reveal which actors are being enlisted into the network. ANT theorists consider how journal articles relocate ideas and debates into laboratory environments and then are molded into new documents (Latour 1987: 21-62). ANT scholars further argue that texts like grant applications work as translators by linking funding agencies to laboratories, and patents create intersement by blocking other companies from developing copyrighted technologies (Rip 1986: 84-99). Most importantly, documents are understood as the most durable aspects of a network (Law 1992). The durability of documentation reveals connections that may no longer exist, and invites new actors to participate in similar agencies and translations (particularly for the scientific community replicating experiments).¹⁴

The analysis of this “uncertainty” applies directly to my studies that focus on new media and guitar communities. Some of these documents demonstrate ways of knowing, like instructional materials (the focus of Chapter 2), and the guitar-focused

¹⁴ It is useful to distinguish durability here as the persistence of the account, but not necessarily as its clarity or the possible interpretations readers may draw from it.

magazines and “fanzines” *Guitar Player*, *Fretboard Journal*, and *Guitar Aficionado*. These documents act as a “translator-spokesman,” localizing new players into a perceived affinity community and enrolling the beginner to behave in prescribed manners. For instance, a user manual allows an initiate to address a piece of technology in a manner dictated by its designer or manufacturer. The manual enables the translation of technological functions according to the manufacturer’s desires. The manual provides the user with a measurement of “proper functionality,” by listing how the user’s input should be processed by the technology. By extension, we can identify how manufacturers accept or disavow users’ agencies via manual content. Explicit warnings about improper use, modification, and repair invalidate warranty claims, delimiting what types of agencies are allowed in the manufacturer-designated network. Such limits on users’ agencies form a type of intersement against experimental practitioners, “circuit benders,” and tinkerers.

The process of enrollment through documents often establishes authority. Latour argues that one of the key aspects of scholarly and scientific work, situating a study amongst past works via citations, reinforces the validity of both works. On one hand, an amassing of footnotes and citations creates a bedrock of validity for the scholarly reader, whether or not our reader has actually encountered these works or chooses to follow these references to their sources. On the other hand, the act of citation reaches back and reintroduces the older work to a new audience as relevant, or often “ahead of its time.” Latour writes, “Depending on their interests, [articles] turn [references] more into facts or more into fictions, thus replacing crowds of uncertain allies [with] well-arrayed sets of obedient supporters” (Latour 1987: 35). Both the

author of the document and its agreeing citations are made valid through a circular process.¹⁵ Guitarists will often cite their own chains of references that are built off of older documentation, such as interviews in publications or music recordings. Facility with chains of references (e.g., knowing the details of every song on a specific recording, quoting interviews from older publications, or the ability to play a famous guitar solo note-for-note) leads to a recognition of cultural authority. These citations emphasize the importance of these older documents, such as obscure recordings known as “deep cuts.” We can consider such strategies, whether performed by scientists or guitarists, as forms of translation establishing authority through another person’s documents and media.

In considering the durability of documents in the guitar community, I argue that inherent differences exist in my study that were not factors in ANT scholars’ analyses of scientific locales. The documents I analyze in this study are less stable due to the nature of new media technologies. They consist largely of posts to internet forums, contributions to YouTube in the form of videos and comments, and uploaded streaming media. While many of these documents have been the sources of translation and figured directly into the stabilization of networks, the documents themselves are vulnerable to a number of forces that scholarly articles are immune to. Forum data losses caused by technical malfunctions have erased large amounts of contributions and posts; the two largest guitar forums, Harmony Central (HC) and The Gear Page (TGP) both experienced server crashes and unexpected technical problems that deleted

¹⁵ ANT theorists employ this same engagement with older sources as well. We can critique Latour’s support for Gabriel Tarde’s ideas as means of reinforcing the validity of his own work. And of course, in reviewing ANT literature, I engage in the same process as well.

months of activity documentation. Occasionally, media producers will remove their own media from streaming media sites like YouTube and Soundcloud. And as will be discussed in the second chapter regarding online lesson videos, the issue of copyright infringement has led to YouTube deleting videos and canceling user accounts.

Rather than presenting an impediment to my study, however, I suggest that such loss of documentation is itself a factor in guitar communities' evolution. Additionally, internet-based documentation, like a YouTube video, allows us to follow the patterns of consumption; internet media documents the dissemination of ideas through views and numbers of downloads in addition to chains of references created by hypertext links. Most importantly, ANT differentiates itself from other social theories by emphasizing media's role in structuring and maintaining communities of shared practice; media is not reduced to a cultural artifact. Yet, unlike media studies, the content of media does not become secondary to the medium. Media, content, technology, and human actors are all held in equal regard as to their effects and agencies.

1.3d Uncertainty: Matters of Concern/Matters of Fact

The discourse that occurs in forums, Facebook posts, and YouTube comments reveals a fourth uncertainty: "matters of concern" to the community. Matters of concern may be best understood as information floating through networks, though this information is highly susceptible to transformations via translations. These matters are the ideas, beliefs, and conflicts that energize the community. Matters of concern demonstrate how "social beliefs" are often in the state of becoming as opposed to being fixed. The most interesting and radical aspect of this "uncertainty" is the

ramification to the notion of fact. Even when stabilized, “matters of fact” are under the threat of being undone. Latour argues that once an ANT investigation has traced the histories of facts, whether community belief or scientific theory, such facts will instead appear to be well-developed matters of concern. Latour describes the evolution of concerns into facts:

By watching the fabulous film that our colleagues the historians of science were shooting for us, we could attend, frame after frame, to the most incredible spectacle: truth slowly achieved in breathtaking episodes without being sure of the result. (Latour 2005: 90)

Through the multiple and durable connections built by chains of references, debates in a community transform into deeply held beliefs. The transition from “concern” to “fact” is further reinforced by the measurements and measuring tools used to quantify factual evidence. By tracing the development of matters of concern in documentation like YouTube videos and forum posts, an ANT analysis follows the emergence of new community values and contestation of older values.

Within the realm of musicking, the varied nature of aesthetic reaction and wide range of musical practices point more to “concerns” instead of “facts.” As will be discussed throughout this study, musical preferences, a guitarist’s expertise, and even ontological considerations of songs are debated by the community. Evidence in these debates range from objective criteria (e.g., the densities of a particular wood species or synthetic material) to subjective qualitative statements (e.g., how a material “feels” and “responds” to a player). As groups rallying behind one idea while “disproving” another and unearthing histories as evidence, the guitar community may be seen as a network of energies and ideas put into motion by these matters. The manner in which

the community “re-assembles” itself partially depends on the exact “concerns” that may or not be later seen as facts.

Latour uses the concept of “matters of concern” to describe the stabilization and destabilization of networks as a whole. When a network stabilizes its translations, agencies flow towards what may be described as a unified purpose. Concerns solidify into facts. Messy “things” (using Heidegger’s terminology) become well-defined objects (Latour 2004: 235). Conversely, the neatly defined object/fact can easily unravel into a thing/concern. Gibson’s recent legal troubles show a fact devolving into a matter of concern: the cuts of rosewood went from being construction materials to the focal point for debates over international law and the future of guitar building. The incident transformed cuts of Indian rosewood from a stable object and uncontested fact into a complex thing and concern. Expanded into the realm of electronic technology, components, circuits, and assembly methods are scrutinized as concerns. Chapter 3 examines how electronic equipment moves between being a fact and concern amongst online guitarists, using streaming video as a measurement tool.

As a theory originating in the analysis of technological and scientific dissemination, ANT considers the ontology of shared belief to be inherently unstable. This position allows for the continued evolution of social beliefs, though not necessarily in a progressive or positivist manner. Ultimately, ANT’s perspective embraces a relativism demonstrated through objective and observable details. Latour identifies this relativism as a search for inter-subjectivity through the means that structure experience (2005: 195). ANT addresses one of the primary issues facing musicology as a discipline: balancing the subjective, aesthetic experience with the

objective qualities of music and music making. Assigning these two aspects of music to a social and natural dichotomy, musicology has been split into a socially-oriented “new musicology” and the “new empiricism” of systematic musicology (Huron 1999). Instead of positioning the two against each other, ANT uses the subjective and objective to describe the evolution and development of shared practice.

1.3e Uncertainty: Actors and Groups

The fifth uncertainty regards the definition of actors and ANT’s treatment of people in the network. ANT defines actors based on their activity in some form. For Latour, the term “actor” is based on a “performative definition, not ostensive... For the sociologists of associations, the rule is performance,” writes Latour (Latour 2005: 34-35). Actors may be understood as individuals within the system, or groups acting with a “singular” agency.¹⁶ As in the case of the “translator-spokesman,” one of the first acts is the delineation of the group.¹⁷ Agency and activity gather people together, and also “individualizes” and differentiates actors from each other. Roles are not defined by a predefined structural force, but instead are dependent on the exact behaviors we analyze. ANT’s position on human agents and groups, therefore, reverses traditional sociological treatments: activity dictates roles, as opposed to roles dictating activities.

Actors-defined-through-agency take on many different appearances in my study. The most notable actors largely consist of individuals posting YouTube videos, streaming audio, and numerous forum postings. Their activities in the community span

¹⁶ In this sense, a community or “collective actor” is itself another “black box” that can be treated as a unified whole. Yet, like technologies or networks destabilized, can be unpacked or torn apart.

¹⁷ Again, I emphasize that even the act of delineation is contested and negotiated by all of the actors enrolled in the network.

years and consist of countless hours of online activity. Highly visible YouTube posters will upload thousands of videos to their channels, while highly active forum members will easily post over five times a day. But these forms of agency are only a portion of the actors and agencies at play in the guitar community. In the case of YouTube, Facebook, and Twitter, actors join and engage the network through channel subscriptions, video views, comments, “friendships,” and “followers.” The specific translations that bridge viewers to media and content producers lead to identities within the network. Compared to the actor with only minimal connections, the person or technology linked to multiple nodes of the network is individualized more with each agency translation.

Even “lurkers,” who view videos or forum posts but do not actively contribute material, are actors within networks. As an obvious example, a study of YouTube videos is undoubtedly affected by the sheer number of views. These views affect a video’s standing within search results, the “recommended video” links, and for some contributors, lead to preferential treatment by YouTube and Google. In these examples, a relatively limited amount of activity is required from an actor to affect the network. But this “lurking” mode of agency does not have the same effect in discussion forums. Simply viewing a thread does not change its positioning amongst other threads, even though thread views are listed. Instead, a contribution to the thread (including a minimal “bump” post) raises the position of the thread. Considering passive viewership in each context, lurkers demonstrate how the same activity of viewership can have very different effects and outcomes on the network.

An aggregate of people may be considered an actor in its own right, with its own set of agencies. A company may act as a unified voice when communicating to customers, as in the Gibson example. The groups may individualize themselves from each other based on potential agencies and matters of concern. For example, guitarists coalesce into groups of actors based upon a perceived tenor of discourse, as in the case of internet guitar forums such as Harmony Central (HC), The Gear Page (TGP), Boutique Gear Talk (BGT), and Telecaster Discussion Page Reissue (TDPRI).¹⁸ The members of these online communities police each other in terms of “appropriate behavior,” which can vary significantly from one group to another. Negative comments, direct criticisms and “flame wars” within the TGP forum may be understood as acceptable discussion on HC. BGT organized according to perceived difference in values and grouping relative to TGP. The initial post by Boutique Gear Talk founder “LVC” alludes to this difference in values.

Boutique Gear TalkSM (BGT) was founded out of a need for folks to go have a place to talk about boutique music gear, and music gear in general, in a civil environment with out [sic] the extreme political correctness that is found in other music gear websites. (LVC 2011)

While many individuals participate or frequent other forums, claiming association with one particular group may also carry a host of implications regarding a guitarist’s age, musical preferences, and even political affiliation. Each forum monitors and debates its own matters of concern, while maintaining and stabilizing its own matters of fact. These forums-as-groups can also be understood as actors relative to each other, performing their own agencies within a larger context of guitar culture.

¹⁸ These forums are commonly referred to by their acronyms.

ANT's use of networks as a primary form of organization provides an alternative methodology to Kay Kaufman Shelemay's consideration of music as "an integral part of processes that can... generate, shape, and sustain new collectivities" (2011: 349-350). Shelemay adopts the notion of *affinity groups* to describe interpersonal groupings. However, I argue that groupings of people often resist such positive notions. While guitarists may share a similar interest in their chosen instrument, they may often define themselves according to what they do with the instrument and not its mere presence. Guitar instructor Ken Rosser described his frustrations with over-generalizing guitarists into similar patterns of behavior and thought, particularly in relation to the use of music notation and terminology. For Rosser, guitarists' terms such as "hammer-on" and "pull-off," describing two slurring techniques, mean little to non-guitarists and hinder their ability to effectively work and communicate in professional ensembles (personal communication). In such situations, his ability to communicate in more widely used terminology and to facilely read traditional notation productively group him in non-guitaristic ways. Agency provides the means for him to associate with his working ensembles, not his identification as a guitarist.

1.4 Critiques of ANT

Based on the review of ANT's methodological considerations and perspectives detailed above, we can see how this theory of science and technology challenges traditional conceptions and political projects of contemporary social theory: roles are determined by interactions, there is no difference between technological interaction and social interaction, and social structure emerges from local interaction. Latour,

being fond of dramatic statements and condemnations, positions himself as an iconoclast within sociology, leading to a number of critiques of ANT as a whole. The ANT analyst is asked to retrace associations, and in doing so disregards fields of power and patterns of social imbalance until their means can be identified. Critics further argue that ANT studies largely focus on centers of power instead of peripheries: scientific institutions, government agencies, and large corporations. Critics consider ascribing agency to technology as the anthropomorphization of objects. These are some of the most common critiques of ANT.

As a social theory of cultural practice, ANT appears devoid of social or political critique. At first glance, there is no sense of hierarchical power structures that empower or disempower based on gender, race, or class. An ANT network assumes no macro-level power imbalances or hegemonic forces that reproduce themselves across sites. ANT's main theorists argue that the issues of asymmetric power are the result of other localities being tied together and constraining actors through multiple connections. A global or national force bears on a locality by the multiplication of connections within the networks, exhibiting properties of hegemony as an effect rather than a cause. John Law writes, "We need, I think, to distinguish between ethics and sociology. The one may – indeed should – inform the other, but they are not identical" (Law 1992: 383). Ethics may derive from the observation of a network's effects, but the examination of networks endeavors to concretely identify the sources of such effects. Latour's response addresses the disciplines that have identified and named the social forces. He argues that traditional sociological theories, the "sociology of the social" and critical sociologies, have effectively summarized the results of networks

and created their own technologies and analytical objects that have been deployed into networks.

Theories of what a society is or should become have played an enormous role in helping actors to define where they stand, who they are, whom they should take into account, how they should justify themselves, and to which sort of forces they are allowed to bend. (Latour 2005: 230)

Thus, while he often spends a great deal of effort in dissuading the potential ANT analyst from using other sociological theories in a study, he also suggests that such theories themselves are powerful and useful agents in the world, spread through a chain of documents and references. The *concept* of power imbalance owes to academic and humanistic documentation of localized effects; the widespread application of these concepts belies the success of such investigations.

The earliest applications of ANT throughout the 1980s and 1990s examined sites of power and activity, such as Pasteur's lab (Latour 1988), the French government's attempt to create an electric car program (Callon 1986b: 19-34), and pharmaceutical companies' applications for patents (Callon 1986a: 163-188). Such examples may lead one to believe that ANT argues in favor of a "might-makes-right" approach to science and technology studies. Yet, the very notion of networks in ANT is premised on their instability. Agencies, translations, and intersement often cause networks and communities to develop in unpredictable ways. Revolutions and evolutions are not an exception in the world, but instead are the rule. Regardless of this ontological perspective, contemporary studies have used ANT to problematize and critique existing social structure. Studies into muscular dystrophy (Callon and Rabihiresoa 1998), feminism (Singleton 1996), and technology in the Zimbabwean

Bush (de Laet and Mol 2000) examine “peripheries” through combinations of ANT with other sociological theories.

The criticisms of technological determinism and anthropomorphizing objects cut to a critical aspect of examining material culture. While ANT’s treatment of technology has been linked to ideas from cognitive science, the very notion that objects could have any agency is characterized as anti-humanistic. Those that deny the agency of objects espouse the opposite of technological determinism: technologies are nothing more than the product of human networks, and their use and meaning are completely determined by social practice. Any focus on technology is read as the ‘fetish’ of both the analyst and subject. Both positions-as-extremes are straw-men arguments created by the very nature of the technology/social binary. ANT states that there is no specific balance between the amount of human interaction to technological interaction; each site is best understood by the specifics of technology and human interactions at play. Latour writes “ANT is not... the establishment of some absurd ‘symmetry between humans and non-humans’” (Latour 2005: 76). ANT views technologies as having their own trajectories through the world: distinct from the intentions of their designers, manufacturers, or users, and unbound from a purely economic value. These trajectories are the very agencies that affect networks of associations.

My goal in reviewing these criticisms is not to apologize for ANT, but rather situate the theory amongst other sociological thought. It is, as Latour believes, another way of seeing the world, but not the world itself. They are his “tricks of the trade”

(Latour 2005: 262).¹⁹ In this study, the perspective offered by ANT has directed my analytical focus towards localities instead of global forces. I use ANT to explain guitar-based practices in accordance with the accounts, words, and documents produced by guitarists. ANT remains a powerful apparatus that offers different methodologies to musicological pursuits. But it must be critiqued once the local evidence escapes the concerns of the theory.

1.5 ANT Applied to Music Studies

Previous ANT studies of music provide an opportunity to critique the theory's application to music. A brief review of such applications points to the possible directions and potential hazards my study must navigate. Perhaps the most tempting application of ANT only considers the theory in relationship to technology while disregarding the vital notions of association and agency. In some cases, ANT provides new perspectives of well-worn locales of music making, such as ANT theorist Antoine Hennion's analysis of music recording and distribution (1989). Hennion has also recently applied ANT theories to listeners' music preferences and the evolution of aesthetics (Hennion 2008). ANT requires a self-reflexive examination of music scholarship, critiquing some of the most commonly used tools of musicologists.

Nick Prior's 2008 application of ANT to "glitch" music considers the agencies and affordances of modern synthesizer and computer-based music technologies. A major feature of glitch music is the approximation and use of sounds produced by broken technologies: scratched CDs, digital distortion caused by excessive volume

¹⁹ Latour most recent work, *An Inquiry into Modes of Existence* (<http://www.modesofexistence.org>, accessed January 20, 2013), uses as ANT as one of many approaches, and is discussed in the conclusion of this work.

levels, and unexpected delays and repetitions caused by memory and buffer failures. Glitch music sounds can be considered aesthetically comparable to the overdriven amplifiers figuring prominently in rock music (including variants like heavy metal and punk). These sounds have now become design features: amplifiers are purposefully built to distort, and synthesizers and effects (both hardware and software types) make glitching sounds with added benefit of technological stability and predictability.²⁰



Figure 1.6: Keiran Foster’s “Glitch” software (Illformed.org, accessed May 2012)

While Prior titles his article in terms of ANT, his perspective primarily embraces Bourdieu’s critical sociology, including its emphasis on fields of production and habitus. For Prior, ANT provides a convenient means of discussing technology’s role

²⁰ The most obvious example is programmer Keiran Foster’s “Glitch” VST software effect. Specific parameters allow the user to simulate random reorderings of buffered audio, bit distortion, and other sample “mangling” techniques. See Figure 1.6 for a screenshot of Foster’s software.

in the creation of glitch music. In this sense, ANT is a “supplement” to the shortcomings of Boudieu’s analysis of technology (Prior 2008: 304). Prior only considers the technological aspect of ANT. However, the use of this “uncertainty” must also be tied to ANT’s analysis of agency and translation, which in many ways stands counter to Bourdieu’s ideas.²¹ For this reason, my use of ANT includes technology *and* other aspects of the theory.

Hennion’s earliest work, on the other hand, remains quite faithful to ANT as originally conceived by Callon, Latour and Law. His 1989 study, “An Intermediary Between Production and Consumption: The Producer of Popular Music” examines the concept of music producer-as-mediator. According to Hennion, the producer acts as a translator-spokesman by bringing musicians, technology, and sounds through a specific point of passage: the music studio. A recording session becomes an Actor-Network: the agencies of each actor are determined within the immediate locale, and may not bear resemblance to other recording sessions. Musical activity, like social interaction or experimentation in a laboratory, reassembles in that specific locale according to local agency translations. Hennion’s argument seems quite persuasive in this sense, as music studios are often treated as “sonic laboratories:” spaces for exploration and testing. Once recorded, the songs put to tape (the article predates the wide use of digital recording) were displaced from the context in which they were created: sent to mass-duplication facilities, sold in stores, and played on radio broadcasts. In this application of ANT to music, Hennion clings too tightly to the

²¹ Latour in particular frequently cites Bourdieu as representative of critical sociology’s missteps (Latour 2004: 229 and 2005: 139).

notion that all agency is determined in the studio. There is no sense of musicians being chosen for what they may potentially bring to a session, or what they already represent to other musicians or the public. He writes, “[Producers] work from a catalog of odd fragments, according to need, without worry about the objects’ attempts to be internally autonomous” (Hennion 1989: 409). Hennion treats everything in the studio as a blank slate. This sense of the histories and previous agencies that bear on shared practice becomes a major concern in my fourth chapter regarding guitar heroes.

Hennion’s more recent work examines the formation of musical taste (Hennion 2008). Again, his analysis of music through ANT considers translations of agency, this time between the music and the listeners. Taste is not just a product of social forces, according to Hennion, nor is it immanent within the musical material itself. In this sense, Hennion has transformed ANT’s consideration of technology and objects (neither technologically nor socially-determined in full) into a consideration of music. Instead, music provides multiple opportunities for listeners to develop preferences for and against particular styles, songs, and composers, realized through the music’s affordances. In relation to guitar practices, the aggression of a punk rock guitarist’s strumming is heard in recordings and seen in live performances, and is not *singularly* interpreted through a “social” hearing piece. However, institutions-as-actors may champion a particular musical canon (e.g., a local radio station, the Rock and Roll Hall of Fame, or an Introduction to Western Music course), further shaping preference. Individual music aesthetics are crafted by a combination of sounds and social interpretation thoroughly entwined. This particular work of Hennion’s avoids Prior’s mistaken appraisal of technology, while also better reflecting musical practices

when compared to his own earlier works. From this vantage point, the complex interactions within networks lead to aesthetics and music practice.

Like the fields of sociology, economics, and other social sciences, musicology and ethnomusicology have created theories and technologies for examining music. However, studies of music often favor these theoretical constructs over the accounts and practices of musician. Perhaps the most widely practiced abuse of musicology's tools lies in notational practices. Early ethnomusicology studies employed the five-line staff notation system to describe non-Western music. But all too often, differences in melodic treatment (including microtonality and ornamentation) and rhythmic complexity (such as African polyrhythms and Hindustani time cycles) were confused by Western notation. Avoiding the tools of musicology and ethnomusicology, Hennion regards his early writings as "anti-musicology" (1983). For my study, "anti-musicology" is a reminder to self-reflexively examine my own analytical practices. However, I also believe that music theory and musicology's technologies can still be useful in describing local practices and are directly used in musicians' epistemologies. As suggested by Latour, an ANT analysis of music provides another way of seeing and hearing associations.

Conclusion

To answer the questions posed at the beginning of this chapter, I use ANT to show guitarists' "way of knowing" current online practices. The theory directly addresses a disciplinary issue facing musicology: addressing the subjective experience of music making and listening while attending to objective details. I aim to demonstrate how guitarists perceive of their own music making activities, how they

relate to each other, and how documents currently being produced online further the development of guitar practices. An Actor-Network approach, when understood for all of its ramifications regarding localities and associations, requires a close examination of agencies demonstrated by guitarists without resorting to unseen or disembodied forces. Emergent effects occur between guitar-specific technologies, performers, and music, treated equally as actors. The last two decades of guitarists' online activity have produced new types of media documents and new modes of agency. The panorama of guitar practices attests to a continued evolution and development of musical activity. An Actor-Network approach begins with detailed accounts, allowing the actors to reveal network connections.

ANT offers a unique methodology treatment of guitar practices. My application of the theory supplements, rather than displaces, the rich body of guitar-focused popular music studies. In the chapters that follow, I adhere to the terms and concepts outlined by Latour, Callon, Law, and Hennion as a test of the theory. I employ the "believing game," as suggested by education theorist Peter Elbow (1986: 268-276), using the full theoretical apparatus of the Actor-Network approach to see what conclusions it produces, rather than critiquing ANT for hypotheses left unexplored. From Elbow's perspective, theories need to be tested through practice to fully understand their advantages and deficiencies. The success of this constructive test lies in identifying the emergent effects of guitar-based networks. The rewards of my efforts are found in new associations between socio-technical studies and musical practice.

YouTube Guitar Lessons: The “Gravity” of Network Connections

YouTube lesson videos have become a vital source of learning for guitarists of all abilities. Online lessons are documents of guitar repertoire and technique, born from publicly observable socio-technological networks. Many guitarists also use online pedagogy as a professional activity, generating income alongside in-person lessons, performances, and recording. Budding guitarists use online media as a primary learning resource. While the traditional setting for private one-to-one lessons occurred in spaces restricted from public view, guitar pedagogy has become an increasingly public activity. The amount of freely available online lessons rivals the amount of original music distributed through internet channels like YouTube. Creating and distributing lessons, whether as a hobby or for profit, has become a common shared practice amongst guitarists.

In this chapter, I demonstrate how pedagogical networks arise from translations of agencies involving guitar teachers, students, and a variety of technologies. In *Reassembling the Social* Latour writes, “...the word ‘translation’ now takes on a somewhat specialized meaning: a relation that... induces two mediators into coexisting” (2005: 108). Without translation, no network and therefore no *social* would be possible. Translations also reflect how humans interact with technology. By adopting the concept of translation as the basis for connections, my account of online lessons consists of actors being drawn together in an often provisional manner. YouTube lessons show how YouTube viewers and video producers negotiate media technologies to create what is now a shared online activity. A guitarist who searches YouTube for a specific song lesson is brought into translation with multiple actants:

the vast database of YouTube videos, the teaching styles of the various online guitar instructors, and the guitar technology he/she uses. From a teacher's perspective, the video creation process derives digital video editing software, the organization of the lesson content, and pedagogical method of the video producer. Each technological element and actor affects each other, yielding a unique lesson video genre. Therefore, to consider the emerging pedagogical practices found in YouTube videos we must look for these translations between actors.

I consider four types of network connections that constitute modern pedagogical practice. First, I examine the relationship between lesson construction and the musical material. Many beginning and intermediate guitarists learn the instrument through popular songs, and not according to structured methods or syllabi. Online guitarist Nick D. notes, "I use videos to learn specific songs and riffs. Eventually, I want to be able to listen to a song and figure out how to play it myself" (personal communication). His guitar education consists almost exclusively of songs acquired through YouTube and streaming media. Differing from the goals of viewer-students, teachers use songs as vehicles for discussing guitar technique as a whole. Six videos presenting the same song provide a cross-section of pedagogical practices demonstrated in YouTube lessons. My analysis suggests that musical material itself must be understood as an actor that shapes lesson content, structure, and students' understanding of the instrument. The affordances of a song, including its melodies, harmonies, rhythms, and embellishments, provide instructional focal points determining what is taught and how it is conveyed. But the network also affects the ontology of the song as well. Popular music scholars have considered how the

ontologies of recorded songs challenge the notational process (Bennett 1983). Any transcription of the song from its original form remains an approximation or incomplete interpretation. In the examples presented here, the defining elements of the song are transformed and reprioritized by the abilities of each teacher. The connection between teachers' abilities and the song constitutes a primary dimension of the lesson: a bi-directional translation of agencies between teacher and materials.

Unpacking the "black box" of video recording technology, I then consider the effects of media technologies on lesson materials. This second type of network connection consists of the recording hardware, and the editing and distribution software transforming pedagogical practice. I identify video recording technologies' effects on lesson content and structure. YouTube imposes additional constraints and affordances on lesson production. A teacher's video may be constrained by the upload limits of the video hosting site and its position amongst search relevancy and relatedness to other videos. I examine how YouTube further affects the lesson genre and its distribution through metadata. Combined, the recording technology and YouTube constraints result in a medium-specific aesthetic that transforms pedagogical relationships.

The inter-personal relationships that develop from instructional videos demonstrate a third type of connection. What were once translations and negotiations in agency become established practices stratifying and defining a new type of pedagogical role within the online guitar community. Comments from viewers of the six "Gravity" videos show the new manner in which video producers and viewers associate with each other, challenging hierarchical differences between teacher and

student. This particular connection results from the totality of network interactions, including inter-personal and technological interactions. The very notion of the “social” is reconstructed by his negotiation of media technologies, the instrument, and music materials.

The fourth type of connection accounts for broader connections that lead to further network effects, though they may not initially be part of the educational process. I consider the process of interreusement as demonstrated by music publishers and record companies. They are motivated to act because of online pedagogy’s rising popularity, claiming that the use of songs in lessons is a violation of copyright. The very songs that motivate the agencies of teachers and students have spurred reactions by record labels and copyright enforcement organizations like ASCAP and BMI. Instrument manufacturers also notice online lessons’ popularity, and consider these lessons as potential advertising opportunities. Whether driven to act or choosing to insert themselves into the network, the presence and activities of these “third-parties” attest to the importance of YouTube lessons in the guitar community. Most recently, teachers have combined their efforts, translating their individual work to each other. Such cross-promotional work reinforces educational associations and reveals the broader panorama of pedagogical activity now taking place through online media. In total, these broader connections are evidence of the transformations occurring in guitar pedagogy.

Amongst existing guitar culture literature, two works have addressed the panorama of online guitar pedagogy. Their findings point towards the new practices of guitar education in the last two decades, and the conflicts that have arisen in the era of

digital-media copyright protection. Information systems theorist Thomas Chesney examines the contributions of guitarists to the now defunct Online Guitar Archive, commonly referred to as OLGA (2006).¹ Chesney argues that the archive, which consisted of thousands of “guitar tabs” (guitar-specific notations for a given song) offered benefits to the community at large and to the individual contributors. Like the videos examined in this chapter, the accuracy and ontology of a song largely depended upon transcribers’ musical knowledge and facility with the guitar. Ethnomusicologist Kiri Miller examines the role of YouTube instructional videos as a type of “playing along” with popular culture (2012). Her work highlights teachers’ attitudes towards the medium and students’ attractions to the format. Both studies emphasize the manner in which teachers, students, and internet media collective shape modern guitar pedagogy. While their subject matter is the same as mine (especially compared to Miller’s work), this chapter differs in its theoretical and methodological approach.² Most importantly, this chapter considers a different set of questions: how do the various actors at play in this network affect each other, and what is the effect on guitar culture as a whole?

2.1 Video comparison: Songs as Actants

Six video lessons presenting the same song provide an entrance into the translation between musical material and teacher. Each video producer aligns the

¹ The site existed in a variety of incarnations, and was issued cease-and-desist orders by publishing companies on multiple occasions. The parallels between OLGA’s legality and YouTube instructional videos are discussed in the final section of this chapter.

² I was made aware of Miller’s work during my own interview with online instructor David Taub, a shared interview subject. In comparing my interview transcription to Miller’s published interviews, I find many instances of Taub giving the same response, or directing our conversation to a specific subject. Miller suggests in her writing that these responses result from media coverage and “anticipating students’ perspectives” in regards to online lessons’ benefits and disadvantages (Miller 2012: 163).

musical details of the song, its melody, harmony and rhythm, to his own abilities, knowledge, and motivations.³ The subjective interpretations of the song determine the musical techniques, concepts and explanations given in the videos. The specific finger configurations (referred to as “chord shapes”), verbal descriptions, and written notations displayed as subtitles owe to the video producer’s abilities with the guitar and their grasp of music theory terminology. For some of the teacher-producers, their videos are part of broader pedagogical and professional efforts, using the song to demonstrate specific techniques. For others, lesson videos are documents of their own negotiations with the instrument. The comparison of these videos tells a story of how actants negotiate the pedagogical network through individual means, work towards varying goals, and arrive at differing conclusions about the song.

The song chosen for this study, “Gravity” by popular rock artist John Mayer (2006), derived from my own navigations of guitarists’ social networks.⁴ Mayer’s musical style and the nuances of this song became the focus of discussion during a chance encounter with an informant. Abe C. had been playing guitar as a hobby for

³ All of the instructors in this first comparison are male. No submissions by female guitarists were found at the time of writing.

⁴ Mayer’s success over the last decade coincides with shared guitar practice’s evolution in online environments. John Mayer’s musical style bears testament to his influences, ranging from the acoustic and songwriting styles of Dave Matthews and Bob Dylan, to the electric blues styles of Buddy Guy and Eric Clapton, and the rhythmic guitar playing and chordal embellishments of artists like Curtis Mayfield, Jimi Hendrix, and Stevie Ray Vaughn. Mayer is further known for being a “gear head,” an aficionado of guitar equipment. Coupled with his continued success and active participation in mainstream media (including MTV videos, fanzine interviews, and tabloid headlines), guitarists frequently praise and criticize Mayer. On one hand he continues a specific lineage within guitar culture (confirmed by frequent appearances with artists like Guy and Clapton) and demonstrates an ideal knowledge and use of guitar technology. But he also represents the commodification of these exact beliefs; for some guitarists he is a “pop singer” (in the derogatory sense of the phrase), a guitarist who has made a career based on others’ riffs and melodic lines, collects unusually expensive equipment, and seemingly embraces tabloid-style celebrity. The song “Gravity,” from his 2006 release *Continuum* represents these influences, demonstrates his particular affinity for specific musical equipment, and serves as an autobiographical account of his dealings with stardom. “Gravity” serves as a continuation of guitar culture and is representative of its current controversies.

three years, and was eager to discuss guitar technique. In particular, the song “Gravity” was posing a new set of dexterity challenges, primarily involving the chordal embellishments performed by Mayer. Abe demonstrated his knowledge of the song by forming chord shapes with his left hand. He had consulted numerous tablatures posted online, Mayer’s live and studio performances of the song, and YouTube instructional videos. I attempted to demonstrate my cursory knowledge of the song by discussing two of Mayer’s musical influences, Curtis Mayfield and Jimi Hendrix, evidenced by the song’s rhythm guitar. My knowledge of Mayer’s influences largely shaped my ability to discuss the song, while the instructional lessons he had found on YouTube shaped Abe’s perception of “Gravity.” This encounter spurred my research, analyzing the way other guitarists present their interpretations of “Gravity” through online video lessons.

Entering “How to play John Mayer Gravity” into YouTube’s search toolbar, yielded five instructional videos on the first page of results (videos from Mupino, Learn Songs Today, Bear Rose, MrGjams, and Stingeray).⁵ A sixth video appeared on the third page of results (created by Beautiful Nightmare 97). During my initial research into the song, the same six videos appeared in various orderings as “related videos” in the right hand column.⁶ In addition to these videos, a number of live renditions of “Gravity” performed by Mayer and other (mostly amateur) musicians

⁵ The specific rankings have varied during various stages of research. Videos from Mupino, Learn Songs Today, MachoGriz, and MrGjams have consistently ranked within the top five results. The oldest submission from Stingeray has moved from the first page of results to the second and third pages during the course of my research.

⁶ YouTube continually refines the related video algorithm, now prioritizing videos related to my viewing patterns over others.

populated the search results. Because my goal is to establish how the song is represented within a pedagogical context, I restrict my analysis to these six videos.⁷

The act of teaching Mayer's song suggested questions regarding the ontology of the song. Does the song consist of the melodies and embellishments performed by Mayer on the guitar? Is the song the harmonic structure of the song? Does proper performance of the song require a strict adherence to the rhythmic patterns played by Mayer, or is it instead suggested by the gestalt of the rhythm section? Are other elements of the song, such as vocal melody, even referenced in these lessons? Which of these videos are truest to the song, and is accuracy measurable by video views? Musicologist Theodore Gracyk argues that for much of popular music, a pop song (referring to its melodies, harmonies and rhythms) is ontologically weak, as the same elements may be found in other songs that are considered distinct (Gracyk 1996). Gracyk argues that recordings, the documentation of a specific performance of the song, are ontologically "thick" and define the song. Mayer's original studio recording of "Gravity" often serves as the primary document for the composition.

Yet, the variations in the lesson videos analyzed here suggest that these lessons are not an exact reproduction of the studio version of "Gravity." A video instructor must choose which elements to explain and demonstrate within a constrained time-frame.⁸ In doing so, elements of the song's ontology are identified as "important" and reordered accordingly. Kiri Miller uncovers this same "subjective" approach to song interpretation in her analysis of YouTube lessons. For Miller, these variations cause

⁷ Guitarists also use live renditions to transcribe and rearrange a song. Live videos visually show how the original artist performs a song.

⁸ YouTube time-constraints are discussed in the following section of this chapter.

moments of authoritative conflict between amateur instructors and amateur viewers (2012:190-191, and 195-196). While Miller frames the subjective approach to musical ontology as an interpersonal negotiation, a focus on the musical materials proves instructive for this ANT analysis. The song is essentially “reconstructed” based on these choices. As suggested by ANT theorist Antoine Hennion, the affordances of the song (e.g. its harmonic progression, melodic lines, and rhythms) serve as constraints, a type of agency that affects other actors. These agencies are then translated to the instructors’ technical expertise on the guitar. In turn, the song and the instructors’ abilities are remade into varying pedagogical goals. In the following analysis, the lesson emerges from translations between the instructor, the instrument, and the song.

For most beginner-level, song-based instructional videos found on YouTube, the performance of chords within a harmonic sequence is placed above all other techniques. The logic of this instructional method holds that the acquisition of a limited number of chord shapes allows for the performance of a near limitless amount of songs. Four of the videos (Learn Songs Today, MrGjams, Stingeray, and Beautiful Nightmare 97) begin their instruction by demonstrating the underlying harmonies of each stanza of the song. Notated in Figure 2.1 according to chord names, the harmonic progression (primarily in the key of G major) is produced across multiple instruments in the original recording, including two guitar tracks, an organ, and electric bass. The performance of this harmonic sequence on the guitar is often considered “playing the song” in instructional videos.⁹

⁹ A common criticism from my former private-lesson students was that their performance of the harmonic sequence, no matter how accurate to the source material, didn’t “sound” like the song. Perhaps too few aspects of the song were represented to build an ontological connection.

:G	G	C	C	G	G	C	C	
Am7	Am7	D7	D7	Gm/Bb	Ebmaj7	D7	D7	:

Figure 2.1 Harmonic progression for verses in John Mayer's "Gravity"

But while the focus on harmonic sequence may seem to simplify the song according to one affordance, its application to the guitar still negotiates what is ontologically "correct." For a song like "Gravity," a harmonic sequence suggests a range of possible physical gestures, as the same harmony voicing may be represented by multiple chord shapes. Three of these four videos (Learn Songs Today, MrGjams, and Stingeray) warn that the chord shapes presented differ from Mayer's actual performance. Learn Songs Today prefaces his video by stating, "It's not exactly the way [Mayer] plays the chords, but if you're going to do the song by yourself you might try it like this" (Learn Songs Today 2009). These three instructors acknowledge their presentation of the harmonic progression as subjective interpretations of an abstracted feature.

The variations in chord shapes taught tell us as much about the instructors' agencies (including technical facility and performance goals) as they do about the song itself. Amongst the six videos, three variations of a G major chord are given: an open string voicing, a "full bar" position chord beginning at the third fret, and a position utilizing the left hand thumb wrapped around the neck (Figure 2.2a, 2.2b, and 2.2c respectively). Of these three demonstrated chord shapes, guitarists consider the open shape (Figure 2.2a) the easiest, and frequently use it in introductory lessons. The bar shape (Figure 2.2b) poses more of a challenge, using four fingers and applying

equal pressure with the index finger across all six strings. This bar chord shape is considered a significant milestone in beginning guitarists' accomplishments.



Figure 2.2a: Open G chord



Figure 2.2b: "Bar" G chord



Figure 2.2c: "Thumb-over" G chord
(Photos by author)

The "thumb-over" position (Figure 2.2c) requires the guitarist to both fret one note and mute the adjacent A string with the left hand thumb. This unique chord shape was employed by many R&B guitarists, and was frequently employed by Mayer's influences Curtis Mayfield and Jimi Hendrix. While these chords contain the same

pitches (G, B and D), Mayer invariably uses the third position in performances. Of the six videos, Bear Rose and Mupino utilize the “thumb-over” shape in their instruction, MrGjams and Stingeray mention the shape but use the “full bar” position, while Learn Songs Today and Beautiful Nightmare 97 neither mention nor use the shape.

The examination of the first chord of the song alone demonstrates a triadic relationship between the instructor, the guitar, and the song. As instructors craft their videos from personal interpretations of the song, their demonstrations are shaped by their technical abilities as opposed to a musicological analysis of the progression or video analysis of Mayer’s actual performance. Based on Beautiful Nightmare 97’s performance of the song and his ability to switch between the G and other chords, the open G chord falls comfortably within his abilities on the guitar. Comparatively, Mupino’s video consists of a skilled demonstration of the song with no verbal instruction. Mupino’s ability allows him to duplicate Mayer’s techniques and performance, using the “thumb-over” position. From the G harmony alone, I argue that video demonstrates the mutually constrained relationships between the song and performer, mediated by the guitar (Figure 2.3).

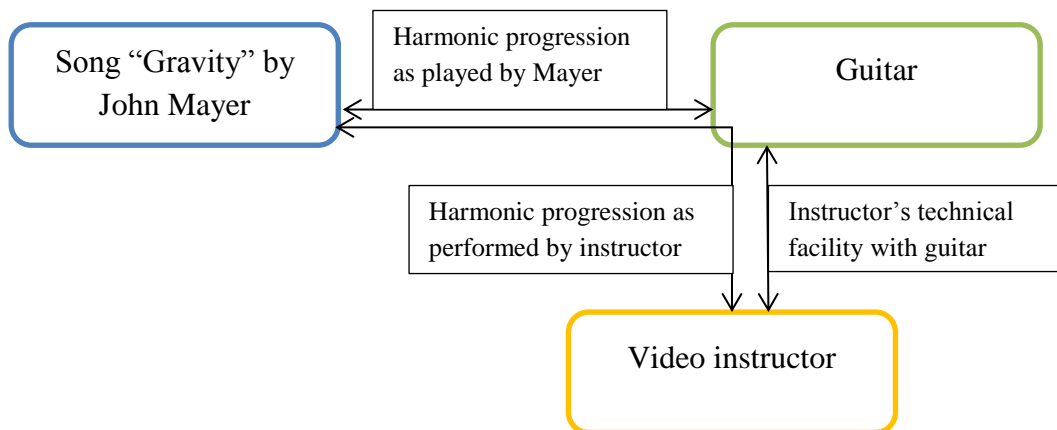


Figure 2.3: Mutually constrained relationships in song demonstrations

The song's affordances must also translate to the instructor's ability to hear and transcribe a song correctly. Many of the instructors present the wrong chords for the Gm/Bb and the Ebmaj7 harmonies, which are "borrowed" from the parallel minor tonality of G minor. The atypical nature of the harmony and its distribution across multiple instruments in Mayer's recording pose a challenge for the instructors. For example, the Ebmaj7 chord was difficult for Bear Rose to identify, as he states in his video.

This chord took me *forever* [original emphasis] to learn. I mean I learned [the chord] easily, but it took me a long time to learn it was in the song. This chord gave me hassles for a while. (Bear Rose 2009a)

While Bear Rose's transcription was the closest to Mayer's studio performance, the other videos demonstrate similar difficulties with the passage. Figure 2.4 compares the last four measures of the chord progression, identifying discrepancies between the videos. For example, the bass plays the low Bb note of the Gm/Bb in Mayer's original recording, while the other instruments play other voicings of G minor. MrGjams, Stingeray, and Learn Songs Today interpret this harmony from this lowest note, resulting in a Bbmaj7 chord containing one different note from the original harmony (an A instead of the G).¹⁰ The mistake is subtle, and can easily sound appropriate.¹¹ If the instructor can't produce the chord, whether by recognition or manual dexterity, another "unusual" chord (both in terms of harmony and fingering) may seem acceptable to the instructor, as is the case of Beautiful Nightmare 97's later use of the

¹⁰ Learn Songs Today uses incorrect enharmonic spellings: A#maj7 for Bbmaj7, and D#maj7 for Ebmaj7.

¹¹ The imposition of the Bbmaj7 harmony over the recorded Gm harmony produces a Gm9 harmony, which may seem relative consonant to the instructor or viewers.

Fmaj7 instead of the correct Ebmaj7; the former is a considerably easier chord to perform than the latter, while providing a noticeable harmonic movement. This particular comparison highlights instructors' abilities to discern harmonic movement based on an ensemble performance; they all hear a harmonic change, but the specific harmonic movement may be incorrect. The triadic relationship between instructor, song, and guitar leads to differing pedagogical framings of the same song.¹² The teachers are confronted with a problem space they must analyze and interpret for their audience. They represent the song based on their own knowledge of the guitar.

Original progression	Gm/Bb	Ebmaj7	D7 (no 5 th)	D7 (no 5 th)	
Bear Rose	Gm	Ebmaj7	D7 (no 5 th)	D7 (no 5 th)	
Beautiful Nightmare 97	Gm	Fmaj7	D	D	
MrGjams	Bbmaj7	Ebmaj7	D7	D7	
Stingeray	Bbmaj7	Ebmaj7	D9	D9	
Learn Songs Today	A#maj7	D#maj7	D	D	
Mupino	Ebmaj7	Eb7	D7 (no 5 th)	D7 (no 5 th)	

Figure 2.4 Different interpretations of the last four measures of “Gravity”

Some of the instructors relate the song to guitar technique as a whole.

“Gravity” provides opportunities to focus on harmonic progressions (particularly the shift from major to parallel minor) and intermediate chord shapes. Instructors frame the song as pertinent to a beginner's guitar technique; it contains unusual harmonies and infrequently encountered chord shapes. In five videos (excepting Mupino who gives no verbal instruction), the instructors mention the usefulness of these chords within a well-rounded guitar technique. For the first borrowed harmony, MrGjams

¹² Educational theorist Donald Schön suggests that all professional activities exhibit the same framing process (Schön 1983). According to Schön, an undefined problem space is categorized according to possible constraints and available materials. This “framing” is then tested for its efficacy, and revised. In his later work, Schön suggests that successful educational practices in science, engineering, and mathematics should be based on the emulation of problem-framing strategies, as opposed to the repetition of existing processes (Schön 1990).

states, “This is a valuable chord to learn... a really versatile shape.” The second harmony is presented as a chord “... you may remember from ‘Under the Bridge’,” referencing its use in another song performed by the rock band The Red Hot Chili Peppers (1992). Learn Songs Today makes a similar connection by relating the EbMaj7 chord to “...that Stone Temple Pilots song way back,” referring to the song “Plush” (1993). In both cases, connections are drawn between a particular chord formation, its resultant harmony, and its use in other popular guitar-based songs. The song has presented the instructors with a problem space to negotiate, and they have crafted their lesson based on this negotiation. I believe that because of the unique harmonic function of these chords (borrowed from the parallel minor), coupled with the use of specific chord shapes considered to be “difficult” on the guitar, the instructors see “Gravity” as a pedagogical opportunity. A translation occurs between teacher and song, though the “correctness” of this translation varies from teacher to teacher.

Lesson variations resulting from translations between instructors’ facility, guitar, and song can be also found in the pedagogical approaches to the song’s rhythm. The song “Gravity” has a slow gospel rhythm that can be understood as heavily swung 6/8 meter. Mayer’s sparse and semi-improvised rhythmic playing does not yield an easily identifiable strumming pattern to apply to the harmonic progression. Bear Rose and Mupino remain faithful to Mayer’s performance by interjecting rhythmic variations and ornamentations throughout their lessons (discussed below), avoiding any regular rhythmic strumming. The other four teachers instead give their own interpretations of the rhythmic gestalt: a combination of guitar strumming, accents

provided by bass and harmonic changes, and the swung feel most apparent in the drummer’s hi-hat playing. But the simplification of the song’s rhythms into a single strumming pattern is rarely discussed as an essential element of the song, instead serving as a generic means to performing the harmonic sequence correctly. Figure 2.5 illustrates the various rhythms inferred by these four instructors. Learn Songs Today references the rhythmic strumming pattern, but incorrectly states that the song is a 3/4 rhythm. Similarly, Beautiful Nightmare 97 uses video subtitles to denote a metrically incorrect rhythm: “G chord count 4.” The “count 4” instruction refers to the four emphasized beats perceived by two measures of a 6/8 rhythm. The other two videos remain focused on the harmonic progression of the song by repeating a specific instructional sequence: an explanation of a chord’s fingering followed by demonstrations, but not explanations, of strumming.



Figure 2.5: Different interpretations of “Gravity” strumming rhythms

Mayer’s embellished rhythm guitar playing in both studio and live versions of “Gravity” presents a final example of translations with music material. As suggested earlier, Mayer’s rhythmic guitar style may be situated as part of informal musical lineage, traceable through guitarists like Stevie Ray Vaughn, Jimi Hendrix, Curtis

Mayfield and countless uncredited R&B and soul guitarists from the 1950s and 1960s. Some aspects of this rhythm guitar style include the “thumb-over” G chord discussed earlier, use of harmonic inversions, and frequent melodic slurs, appoggiaturas and mordents. Four videos demonstrate these chordal embellishments (Bear Rose, MrGjams, Mupino, Stingeray).¹³ The difficulty in presenting this idiosyncratic mode of rhythmic guitar playing owes to its largely improvisational nature. The teachers almost exclusively focus on individual finger movements within the context of chord shapes: lifting or adding one finger to a shape to create an embellishment. Yet, because of the improvised nature of Mayer’s performance, none of the teachers give a note-for-note recreation, instead suggesting a number of embellishments that can be improvised during a performance. This style of rhythmic playing may be the most authentic relative to Mayer’s performances, but like the harmonic and rhythmic aspects of the song, it is simplified and pedagogically “reconstructed” according to translations between the instructor, song, and the guitar.

While the techniques, rhythms, and chord shapes presented in these six lessons can be found in other songs, I suggest that it is the song itself that has led to a specific set of lesson materials; the song’s affordances function as agencies that affect lesson structure. John Mayer’s song allows these instructors to demonstrate what they each consider to be difficult and important aspects of guitar performance. Viewers are presented with a teacher’s perspective of the song, largely owing to the instructor’s personal negotiations with the instrument. “Gravity” introduces a guitarist to the physical challenges of guitar technique coupled to musical ideas (borrowed chords and

¹³ Of the four, only MrGjams situates these particular embellishments within the larger musical lineage from which they are derived.

using multiple fingerings for the same harmony) valuable across repertoire. But the triadic relationship between instructor, song, and instrument is only one dimension of associations within the network of YouTube lessons. The influence of the instructional media itself must be taken into account as an equal partner in video lessons, regardless of whether we analyze an individual video, multiple representations of the same song, or all guitar-related YouTube videos.

2.2 Video comparison: YouTube Videos as Black Boxes and Actors

Turning my analysis to the media itself, I now treat the video medium and the site YouTube as actors that affect pedagogical practice. The YouTube pedagogue must be musically and *digitally* literate to some degree. Lesson producers must understand video recording practices and YouTube constraints in addition to guitar practices. To understand the constraints imposed by recording technology, I unpack videos as technological “black boxes” resulting from translated agencies involving recording hardware and editing software. These translated agencies affect how guitar technique is visually demonstrated and represented through notation. YouTube constrains video creation and distribution through time limitations and a database architecture that ultimately links videos together. The diagram in Figure 2.6 represents the multiple translations that occur once we consider streaming videos as actors in the educational network.

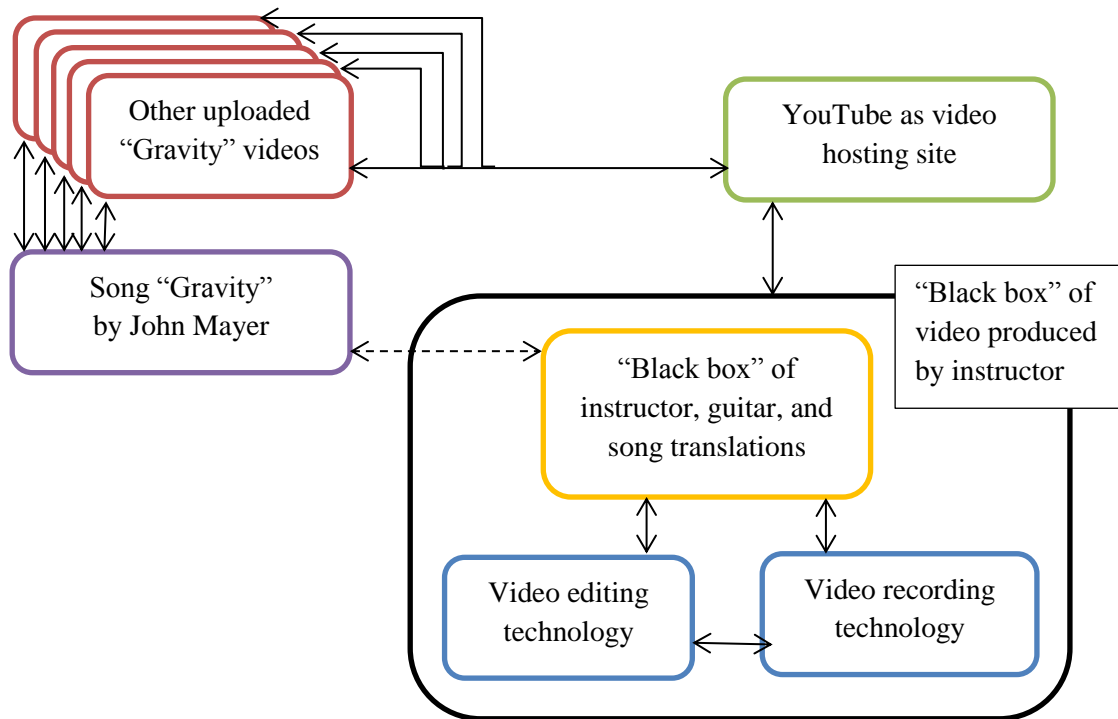


Figure 2.6: Network diagram of "Gravity" lessons on YouTube

As one component of the video "black box," recording technologies constrain the visual demonstration of guitar technique. This constraint reveals itself through the overall quality, and how the instructor positions himself relative to the camera. Currently, the lower resolution of video owes to consumer-grade recording equipment. For the older posted videos, YouTube also limited the quality of the video as well, converting higher definition clips to 240p resolutions.¹⁴ The videos made by Stingeray, Beautiful Nightmare 97, MrGjams and Learn Songs Today suggest recording via webcam-quality device, whether external or built into their computer. In these four videos, lessons are shot from a stationary camera angle, angled upwards in the direction of the instructor's left hand. The instructors move themselves relative to

¹⁴ YouTube increased the maximum playback resolutions to high definition rates of 720p in 2008, and then 1080p in 2009 (http://www.youtube.com/t/press_timeline, accessed January 15, 2013).

the camera to achieve close-ups and detailed demonstrations. MrGjams hold his guitar in an unusually high position to make both hands visible, while Stingeray, sitting on the floor, shifts the guitar around throughout the video to emphasize a chord shape and detailed finger movements. Comparatively, Bear Rose and Mupino's tripod-mounted, high resolution cameras allow more freedom in their positioning. The split-screen views demonstrating coordinated left and right hand movements, absent from these videos but often seen in DVD and VHS video lessons, require at least two tripod-mounted cameras. These instructors utilize whatever recording technology is readily available, limiting the type of shots used to show guitar technique. The result from these limited means is a lesson aesthetic differentiated from professionally produced lessons utilizing cameramen, high resolution video, and multiple camera angles. "Prosumer" grade electronics encourages any type of media user to become a producer, as suggest by Lev Manovich (2009). To this, I add that the resulting aesthetic emerges from the translation with recording technologies in an improvised and contingent manner. YouTube instructors adapt their demonstrations of guitar technique to consumer-grade recording equipment; viewers see the instructors playing to and navigating around a camera.

Video editing software also constrains lessons by limiting the type of notational representations employed by instructors. No available video editing software includes guitar tablature or music notation symbols. The only way an instructor can include tablature and music notation is by importing a graphic file into the video, which in turn would require additional steps and notational software. Instead of the traditional notation, instructors turn to the readily available affordances

of the editing software. Five of the videos (excepting Learn Songs Today) use software-generated subtitles at various points throughout their videos to denote harmonies, chord shapes, and various points in the song. Stingeray, Bear Rose, and Beautiful Nightmare 97 use subtitles to label common chord symbols such as “G,” “C,” and “Ebmaj7.” MrGjams uses text to “spell out” individual chord shapes in detail, such as the “5-X-5-5-5-X” notation representing the Am7 chord. Each character represents a string, the 5’s show which fret is held down, and X’s indicate muted strings. Mupino uses subtitles to indicate the specific section of the song he is demonstrating, as his video contains no narration. However, subtitles do not translate to melodies or chordal embellishments. Traditional notational methods, such as the five line staff and guitar tablature, efficiently capture the frequent finger movements in melodies and embellishments. Editing software precludes traditional notation use, leaving melodies and embellishments to be demonstrated instead of notated.

Considering the recording hardware and software as a black box suggests that “internal” translations stabilize their relationship. Video recording hardware, in the form of webcams, smartphones, or camcorders, allows for relatively simple transfer of data to editing environments. Hardware now records common file formats like MPEG and MOV to “flash” media compatible with most computers, or transfers through hardwired and wireless communication protocols. These file formats are also used by YouTube’s uploading process, further stabilizing their use as a self-contained black box. Older recording cameras using VHS or MiniDV media are generally excluded because of the additional layers of data transformation that must occur before they can be edited or uploaded. In the six videos for “Gravity,” we see the hardware/software

combination that functions as a relatively self-contained system, allowing these video makers to quickly film, edit and upload their lessons.

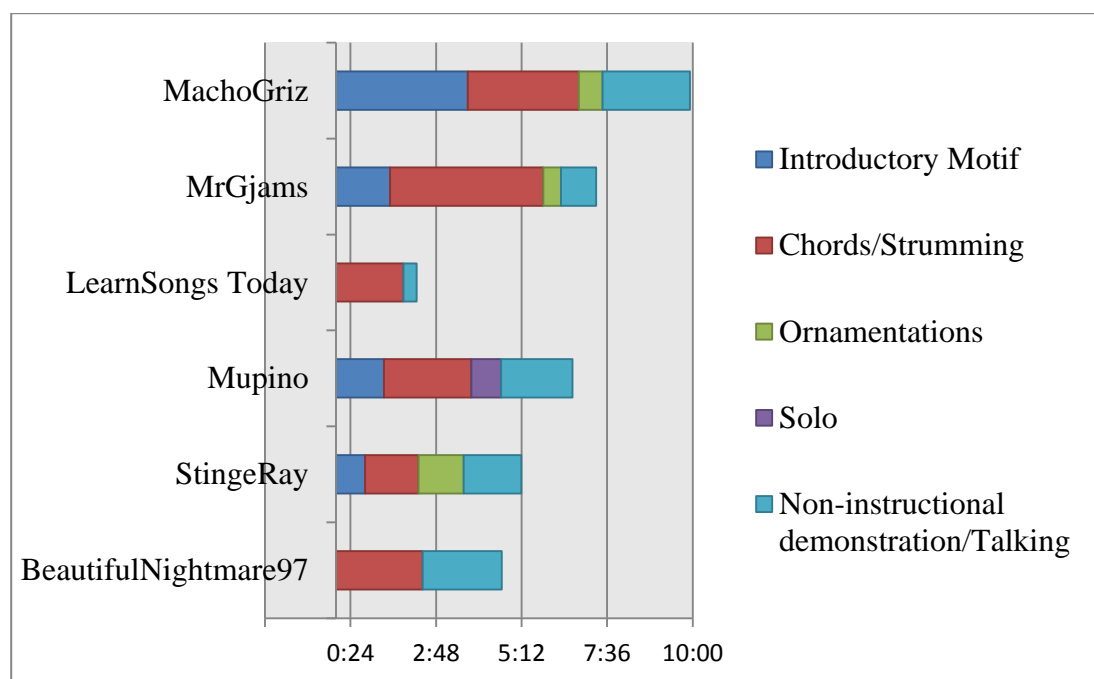


Figure 2.7: Comparison of time allocated in “Gravity” lessons

Once the instructor’s interpretation of the song has inscribed into a digital video, it undergoes further translation to the YouTube hosting site, introducing further constraints on the video lesson. One of media-dependent constraint of all six videos owes to the time limits YouTube imposes on submissions. Until July of 2010, all uploaded videos were limited to ten minutes (<http://youtube-global.blogspot.com/2010/12/up-up-and-away-long-videos-for-more.html?>, accessed January 17, 2013). As the six video analyzed were uploaded prior to July 2010, such limits shaped how much content and explanation an instructor provided for each aspect of the song. Figure 2.7 compares the relative amount of time given to various aspects of “Gravity.” The harmonic progression and various amounts of chordal ornamentation receive the bulk

of the instruction time in these videos. Three of the instructors also address the introductory melodic line played by the guitar.

Focusing on the videos from Bear Rose and MrGjams, I suggest that YouTube's time constraints affected lesson structure and instructional depth. In order to encompass the harmony, introductory line, and guitar solos performed in the studio version, Bear Rose divided his video lesson into two parts. The lesson presents the same phrase at various speeds so viewers can play along, in a manner similar to older VHS style lesson videos. The video is structured for continuous viewing: no replaying of sections is needed as the same material is shown multiple times, in the order they appear in the song. While this instructional depth may seem to be helpful, it ultimately affects his viewership. His second video has received only one quarter of the views compared to the first section (Bear Rose 2009b). Comparatively, the owner of the MrGjams channel, Marty Schwartz, argues that the YouTube time constraints have simplified his lesson creation (personal communication). Instead of demonstrating the same melodic fragment, or "lick," repeatedly for his viewers, Schwartz minimizes repetition within all of his videos, believing students use the YouTube interface to repeat what they want with a click of their mouse and watch in a non-linear fashion. His lack of repetition overcomes time constraints through another YouTube affordance, and makes (according to Schwartz) a more entertaining video. In both Bear Rose's and Schwartz' examples, YouTube time constraints affected lesson structure, and ultimately affect aspects of viewership.

Since 2010, YouTube has extended their upload limits to 15 minutes for standard users, and two hours for those who request longer upload times. To date,

Schwartz is the only instructor of the six here to take advantage of these longer time lengths in other instructional videos. Because of the exceptional success Schwartz enjoys on his primary channel, MartyZSongs, Schwartz' upload lengths are currently unrestricted and occasionally exceed twenty minutes in length. However, he still keeps repetition within the longer videos to a minimum, offering instead a broader range of generalized materials. In general, few YouTube instructors even approach the 15 minute time limit, maintaining an aspect of the genre that originated from the medium's constraints.

As another type of internet-specific affordance, metadata also directly affect uploader and viewer behavior. Lesson creators must create a string of metadata, and often develop their own strategies to achieve high search positions. Table 2.2 relates some of this data, ordered according to search result ranking. Media theorists suggest that YouTube and other media sharing sites employ a "database logic" that users must adopt through site-specific practices (Manovich 2001; Schröter 2009). Building upon this idea, Frank Kessler and Mirko Tobias Schäfer consider meta-information as "the indispensable basis for the database's information management" (2009: 285). The use and manipulations of metadata (such as tags, titles, viewer comments and categories) are YouTube-specific practices employed by uploaders, differentiated from the meta-information practices of institutional archives (*ibid.*: 282). Uploaders strategically employ tags to position videos higher in search rankings and in novel categories. The tags "lesson" and "how to" position these videos within the realm of do-it-yourself videos. The identity of the uploader may also be used as a self-identification tag, positioning the channel as a type of "brand."

Table 2.2: Listing of “Gravity” videos compared

Search rank as of 1/17/13	User name	Video title	Video Time	Views as of 1/17/13	Keyword tags
1	Bear Rose	“John Mayer - "Gravity" Lesson 1 - Intro and Chords”	9:56	269,446	john, mayer, gravity, guitar, lesson, tutorial, intro, chords, solo, how, to, play, excellent, tasteful, playing, justin, sandercoe, instruction, continuum, battle studies
2	MrGjams	“guitar lesson - how to play gravity - john mayer - easy beginner guitar songs”	7:18	50,031	gravity, guitar, lesson, marty, Schwartz, jamz, easy, beginner, songs, john, mayer, how, to, play, learn, on
3	Mupino	“How to play Gravity by John Mayer – Guitar Mupino”	6:37	45,596	gravity, mayer, guitar, Mupino, tutorial
4	Learn Songs Today	“Easiest song to play gravity how to play john mayer u2 can play”	2:16	114,015	gravity, lesson, easiest, fastest, best, world, record, mayer, john, where, the , light, is, u2, can, play, hilarious, bet, you can't, watch, without, laughing, bloopers, expert village, where
28	Stingeray	“John Mayer - Gravity(Tutorial/Lesson)”	5:14	287,727	john, mayer, gravity, tutor, tutorial, lesson, acoustic, jazz, blues, ray, cheong, Stingeray, live, chords, tabs, asian, penang, malaysia
51	Beautiful Nightmare 97	“Beautiful Nightmare 97 How to Play Gravity by John Mayer”	4:48	1,701	Gravity, John, Mayer, Cover

Most importantly, tags link these videos to each other, revealed in the “suggested videos” column displayed to the right. For YouTube as a whole, videos linked to each other through meta-data resulted in as a much as one third of total viewership, nearly equaling the amount of views found through YouTube’s search function (Zhou, Khemmarat, and Gao 2010: 406). The video statistics for each lesson display referrals from other related videos, and the amount of views generated by these connections. Approximately 90% of Mupino’s views owe to related video references utilizing the “Mayer” and “Gravity” tags. With the exception of BeautifulNighmare97’s video (which has no viewership data available for its views), at least 10% of “Gravity” lessons’ viewership owes to connections between these six videos. Like the OLGA studied by Thomas Chesney (2006), similar videos are compared, evaluated, and jointly used by the community. The six videos function collectively. YouTube viewer Nick D. frequently watches videos from multiple sources in order to learn a song, largely because of many of the video-related constraints discussed above (e.g. lack of instructional depth and video quality). He writes:

Most videos on YouTube are created by people that aren’t necessarily great teachers. They don’t speak clearly, they forget to talk about certain parts of the song, the video quality is low, or they teach a way to play the song that you know is wrong or use bad technique. I’ll often put together short riffs or chords from a couple of videos to get the song right. (Personal communication)

Including the non-instructional “Gravity” videos in addition to these six lessons, viewers are presented with hundreds of representations of the song, ranging from the lessons, to Mayer’s live performances and covers by other musicians (some of whom

may have learned the song from watching YouTube lessons). In this way, YouTube links these videos to each other and creates a broader sense of the song “Gravity.”

YouTube-as-database may already be restructuring community-held beliefs and facts. I believe that the search algorithms and metadata have a potential to restructure hierarchies and canons within the guitar community. Recalling my encounter with Abe, I wonder how video lessons shape his conceptions about guitar history. Will guitarists learning this song associate it with Curtiss Mayfield or Jimi Hendrix based on stylistic similarity, or with the Red Hot Chili Peppers based on the use of the EbMaj7 chord? Historical “facts” can derive from the associations created by YouTube’s constraints. The effect of tagging constraints on guitar knowledge is already evident in the case of “blues” lessons. Quite frequently, the difficulty of a lesson is bound to the notion of genre. “Easy” lessons focus on blues-related and “classic rock” music. Presented as instructional materials organized according to technical difficulty, YouTube instructional videos erase much of the ideological and historical context of a genre. Marty Schwartz qualified much of his material as “beginner rock,” allowing amateurs the ability to “rip a little blues solo” (personal communication). The blues he and other YouTube instructors refer to owes more to British blues bands from the 1960s (e.g. the Yardbirds, the Animals, and Cream) than to African-American artists like Robert Johnson, Son House, or Muddy Waters. Associations between British musicians, technical facility, and genre can result in a highly problematic canon. The genre of blues is defined as a “simple” music (echoing countless decades of subtly racist beliefs about the music), and its history funneled through one specific strain occurring in the 1960s. This canon is reinforced and

disseminated by YouTube tagging practices linking the blues to “beginning” and “easy” guitar lessons.

2.3 Flattening Pedagogical Interactions

Many of the video-related constraints, ranging from the quality of the video to meta-tags, restructure the relationship between teacher/uploader and student/viewer. The combination of recording technology affordances and YouTube practices ultimately results in a site-specific aesthetic that mediates the pedagogical relationship. In their analysis of semi-professional “vloggers,” Jean Burgess and Joshua Green state that the aesthetics of “YouTube-ness” contribute to a perceived authenticity and “direct discourse” between video producers and audiences (2009: 94-95). As noted by Kiri Miller in her interviews with online instructor David Taub, the use of complex video editing and production techniques like “green-screen” effects are often rejected by viewers (Miller 2012: 168). Taub believes students feel more comfortable with simple edits: close-ups of his hands and the occasional superimposition of text (personal communication). Taub suggests that these simple editing tools create the sense of authenticity that his students strive for.

They wanted that sitting there “it’s just me and you” learning. That’s what people in my audience can relate to. I even leave mistakes in sometimes because I used to always edit everything out. I get emails from students saying, “You know when I see you making mistakes at your level, it makes me feel good, it makes me feel like I can do this because I’m making all these mistakes. I’ve seen you making mistakes in your teaching.”... I found with my audience that the real organic approach seems to really work. (Personal communication)

Despite the fact that Taub has many professional video production tools, including a specialized camera, lighting boxes, and advanced video editing software, he situates

his videos within the same aesthetics of YouTube-ness as seen in the “Gravity” lesson videos.

This direct discourse often results in a pedagogical relationship in which instructors prompt their viewers for responses. In turn, viewers feel free to praise or criticize video uploaders. The viewers’ ability to dialogue with the video uploader/instructor ultimately separates this form of pedagogy media from older pedagogy documents: VHS videos, instructional books, and magazines. Across all of the “Gravity” videos and present in most other YouTube guitar lessons are requests for comments and questions from viewers. They often appear as super-imposed texts and in the video descriptions. Many of the comments in the “Gravity” videos offer praise. While Stingeray’s version of “Gravity” includes many chords and licks not used by Mayer, his video is celebrated for its originality. Viewer BelleM44 writes, “Hey man great version, I really like all the different chords you throw around to mix it up and make it your own” (comments in Stingeray 2007). However, the peer-to-peer relationship of YouTube pedagogy also allows BelleM44 to gently critique the lesson: “One question though... Do you think that third to last chord in the chorus (the BbM7) could be some form of a G minor? Or are my ears playing tricks on me?” Stingeray responds noting the commonalities between the BbMaj7 chord and G minor. Quasi-peers produce online lessons, not expert instructors. Questioning the validity of the lesson is well within the realm of discourse.

The “in-home” production quality also allows the instructor to qualify their performances as personal interpretations, rather than authorized or licensed transcriptions of the original material. For example, viewer Travis Dudding’s

comment, “WRONG!!!!!!! COMPLETELY AND UTTERLY WRONG!!!!!!!,” (original emphasis) is a challenge to Mupino’s authority regarding the song and instruction that would rarely occur in traditional pedagogical contexts (comments in Mupino 2011). Mupino’s response acknowledges the video as his own interpretation and challenges Dudding to produce something of equal quality:

Uhhh... I know I'm not [John Mayer] and I know there are some mistakes while playing it, but [the] chords position are correct, and [the] solo is taken from live videos...So I don't think it's COMPLETELY wrong, maybe if you are so smart and good guitar player, you can post YOUR video lesson for this song so I can learn [from] you! Thanks anyway for your precious comment.
(Comments in Mupino 2011, original emphasis)

The tenor of this exchange largely owes to the context of YouTube: videos primarily produced by amateurs which are easily compared to other amateur and professional work. The multiple constraints imposed by the YouTube video creation process (including recording technology, editing, and links to similarly tagged videos) result in a peer-to-peer relationship between video creator and viewer, highly differentiated from broadcast aesthetics and relationships.

In her study of online lessons, including guitar, drums, conga, piano, and Ashtanga Yoga, Kiri Miller situates two types of instructional videos in opposition of each other: those produced by professionals and amateur-to-amateur (A2A) videos. This binary is ultimately premised on the nature of social relationships assumed by her analysis. The “professional” videos, as represented in her study by Taub and drum instructor Nate Brown, base the teacher-student relationship on economics: free lessons enticing viewers into purchasing other instructional products. Her account of A2A instruction is perhaps more celebratory; these videos function through shared

participation in which the amateur instructor dialogues with their audience. Miller outlines five aspects of A2A videos:

1. The destabilization of the teacher-student relationship
2. The appropriation of existing “institutional authority”
3. “Creative experimentation” in media practice
4. “A sense of mutual obligation, emotional investment, and social connection among participants,” and
5. “Dispersed and diverse” perspectives that lead to a constant negotiation of authority

(Miller 2012: 218-219)

Miller’s analysis of A2A instruction reveals many aspects of online lessons seen in the six “Gravity” lessons and other guitar lessons. The relocation of the lesson study to online environments reflects an evolution of the *new professionalism* described by Robert Walser, in which rock musicians joined the ranks of institutional education (1992: 290-292). I suggest, however, that the differentiation between professional and amateur instruction should be reconsidered. The pedagogical relationships emerging from online lessons (whether for free or profit) exhibit all of these aspects. The issues of compensation further complicate the distinction, as a creator of monetized content receives a portion of advertising sales (Knopper 2011). Popular instructors like Taub and Schwartz must contend with “haters” and “trolls” as much as amateur video creators.¹⁵ New social roles develop from specific networks of associations involving people, music, and internet media, and may not neatly fit into old categories.

¹⁵ These terms refer to online participants who post negative comments to videos and content. The issue of negative comments, and their utility to online personas is explored in the fourth chapter.

2.4 Extending Networks through Online Lessons

The success of online guitar lessons has attracted more actors into network activities. Marty Schwartz', whose MrGjams video was described above, and Taub's videos reveal other actors who do not engage in the pedagogical act, but have significant effects on the network activity.¹⁶ Some of these actors, such as recording labels and music publishing companies, have recognized the significant amount of viewership dedicated to online lessons and disrupt many of the translations that have been reviewed above. Conversely, additional actors serve to reinforce network connections. Instrument manufacturers have sought to take advantage of the network without directly interfering with the pedagogical translations. Most recently instructors have begun to engage in cross-promotional activities, appearing on each other's video channels and offering joint-subscription packages. Regardless of whether these additional actors seek to maintain or interrupt the online lesson network, their activities drive further change in pedagogical networks, and link networks of activity into wider panoramas.

The enormous popularity of certain online lesson teachers attract negative attention from recording labels and music publishing companies, such as The American Society of Composers, Authors and Publishers (ASCAP) and Broadcast Music Incorporated (BMI). A fundamental pedagogical tactic of teachers and goal of students – teaching the chord progressions, licks and riffs of a popular song – is now broadcast publicly on sites such as YouTube. The practice of teaching popular songs

¹⁶ Further details regarding Schwartz' online career and professional relationship are detailed in the fourth chapter.

became the target of institutional power once the practice entered into a wider, public sphere. The OLGA discussed by Chesney in his study of online tablature was taken offline multiple times in response to legal threats by National Music Publishers' Association and Music Publisher's Association of the United States (Chesney 2004). Like many YouTube lessons, OLGA consisted of user-submitted song transcriptions. As of 2006, the materials contributed to the OLGA were taken offline and the site deactivated. The Next Level Guitar site run by Taub also received similar legal threats for his distribution of copyrighted-song lessons. Only weeks after a 2007 National Public Radio feature regarding YouTube lessons, Taub's videos were removed from YouTube at the request of music publishers claiming copyright violation (Langfitt 2007a and 2007b). Taub now pays for the publishing rights to any songs he uses in his instructional materials (Miller 2012: 177). At the time of our meeting, Schwartz use of Sony-artist compositions in YouTube lessons prompted intervention from the company's lawyers. Do to the ongoing legal negotiations, Schwartz did not give details of any possible agreements, but suggested that many of the videos on the Martyzsongs channel could be taken down at any given time. To date, none of the videos reviewed for this study have been removed, and Schwartz continues to use popular songs for his YouTube lessons.

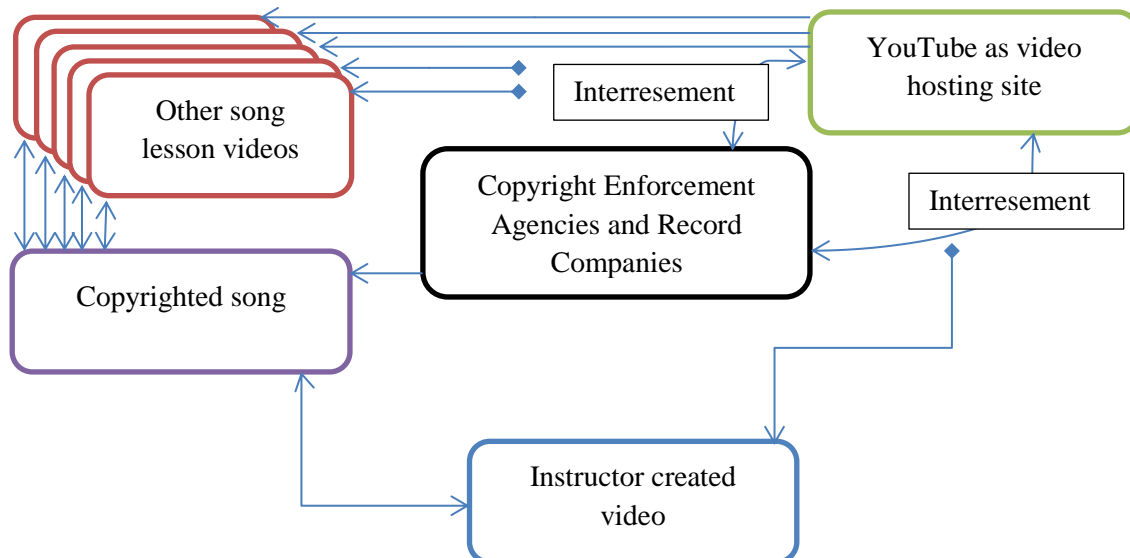


Figure 2.8: Copyright claims as a form of interressement

The interference from recording companies and publishing houses is best understood as an example of *interressement*: the process of actors disrupting and preventing possible translations. This type of interressement occurs between publishing companies, a specific video, and the YouTube hosting site (Figure 2.8). Record companies have not restricted all lesson materials regarding one song, but instead focus on videos of successful teachers with millions of views. Miller notes this same type of “targeting” by the publishing companies who specifically pursued Taub (Miller 2012: 176). Schwartz further stated that only specific songs, originally recorded by Sony artists, were the focus of his negotiations. While such issues over copyrighted material continue to cause disturbances amongst network connections, the interressement that occurs to date is relatively limited. Videos may be removed from YouTube based on claimed copyrights, but the YouTube lessons as a whole will not be eliminated in the same manner as the OLGA. In this way, interressement is a limited

activity, blocking specific actors from translating to each other. Only some representations of a song are restricted, while others are left unchecked.

Because these notices of copyright violation are focused on individual videos, teachers adopt tactics to avoid these issues. These tactics often take advantage of existing network translations. Online teachers qualify their videos as approximations (such as in Mupino's "Gravity" lesson), rather than claiming to be an authoritative presentation. Teachers mark the ontological basis of the song by outlining its harmony, while also stating that the chord progressions are common and therefore could be any number of songs. Another tactic involves not naming the song in the lesson, and instead naming the lesson based on the "style" of a particular artist, as seen in the case of Schwartz's "Easy Acoustic Guitar Songs - Tesla Style Chord Progression - inspired by" (Martyzsongs 2012a).¹⁷ In both examples, teachers present the lack of adherence to the details of a song as non-infringement. This produces a contradiction regarding the song's ontology as defined by the lesson video: the lesson "is" the song to a viewer, but "is not" the song in terms of copyrighted material or tagging. Schwartz also believes the various YouTube channels shield some of his videos from policing by copyright holders. Without specifically noting how these other channels function relative to each other, he stated that he will often distribute his videos as a type of redundancy or back-up; if one channel was shutdown (as was in the case of Next Level Guitar channel), others bearing Schwartz' name would remain active. Ultimately these tactics may prove to be temporary and ineffective solutions. However, these examples of interessement and maneuvering demonstrate how actors

¹⁷ This video features many of the identifying melodic fragments and harmonic progression of the band Tesla's "Love Song" (1989).

instigate each other to react, utilizing any existing translations to maintain or disrupt the network.

Instrument manufacturers have also situated themselves amongst online guitar lesson networks. But instead of destabilizing and blocking activity, these actors reinforce the authority of online instructors and making the network as a whole more durable. Online instructors dedicate videos to the subject of technology use, discussing a particular piece of equipment in depth. Seeing “technology-lessons” as a low-cost advertising opportunity, instrument manufacturers approach guitar instructors to include their products in lessons. Free instruments from companies allow for “giveaway” promotions, such as the acrylic guitar offered by Taub (Rockongoodpeople 2010). The equipment manufacturer Line 6 approached Marty Schwartz, giving him free effects and amplifiers reviewed in three YouTube videos (Martyzsongs 2010a, 2010b, and 2011b) and featured in two song lessons (Martyzsongs 2011c, 2011d). He noted that many companies have become more aware of online activities and hope to engage audiences outside of retail and print environments. Instructors do not act as official endorsees of manufacturers and are not required to create manufacturer-approved reviews of the gear. However, gear reviews are beneficial to both actants. Instructors are able to position themselves as authorities in all aspects of the guitar: knowledgeable in repertoire, technique and technology. Companies become situated amidst network activities they would otherwise be excluded from.

Recently, Schwartz began to cross-promote with other instructors’ services and products. Like his partnerships with instrument manufacturers, these connections

reinforce the network as a whole. Schwartz has engaged in multiple cross-promotions with Taub's Next Level Guitar site, offering memberships from both brands. A partnership indicative of YouTube-specific associations occurred on June 24, 2012, when Schwartz partnered with another famous YouTube guitar instructor, Justin Sandercoe, for an in-store clinic in Carlsbad, California. The May 2012 video announcing the clinic received over thirty-five thousand views as of July 2012, prompting fan comments such as, "Justin + Marty ==> Holy mother of awsome O_o !" (comments from Martyzsongs 2012c). Another viewer's comment spoke to perceived similarities in pedagogical style and personality:

Marty, this is awesome! I love both of you guys, Justin was my first online teacher and nobody compared to his level of patience, knowledge, and skill, until I found you on [YouTube] too. I am glad you guys are doing this clinic together. I'm sure you guys are going to become great friends after this, and hopefully, make a video together that would be a dream come true! Thank you guys for being the shit and making me a better guitar player!!! That is all my dude. (ibid.)

The cross-promotion produced one YouTube video in which both instructors "jammed" (resulting in seventy-six thousand views in two months) and a number of Facebook photos of the clinic (resulting in 96 "likes" as of August 2012) (Martyzsongs 2012d). Despite the fact that the two did not produce a lesson together, the partnership was considered a success by their fans. One viewer celebrated the collaboration and encouraged the duo to continue the relationship:

Two of the BEST web-guitar teachers in the same mother f-ing place at the same mother f-ing time. Epic! you guys need to collaborate on more lessons together, they will be well received. Can I get an amen people!?!? We appreciate you both. Keep on rocking!! On a personal note, I want to thank you

both. Keep doin what yer doing. Yall are F-ing awesome!!!! thx...
 (Comments in Martyzsongs 2012b)

The partnership reinforced their online personas, which is the mode of agency that ultimately differentiates their online lessons from the multitude of other YouTube lessons and instructors (discussed in Chapter 4). The scant material produced from the Carlsbad meeting resulted from the expansion of pedagogical networks into a broader panorama of actors.

Conclusion

A profound shift in guitar instruction has occurred. The use of popular songs, a staple of private guitar lessons, has been made visible through thousands of videos hosted on YouTube. The structure and success of such videos depends on the translations of multiple agencies involving musical material, media technology, recording publishers, and teacher/student relationships. Each video functions as an actor within the broader panorama of YouTube-based guitar lessons, and is further acted upon by corporate entities outside of pedagogical interactions. The network I have characterized here must be understood by observing the tensions and reinforcements between localized details, such as an instructor demonstrating a chord shape, and broader patterns of behavior demonstrated by corporations and teachers' interactions with viewers. Each actor, whether human or not, pushes and pulls on the network as a whole.

Guitar pedagogy will continue to evolve through other media-practices, building on and perhaps overshadowing the YouTube lessons reviewed here. Already, a number of companies have employed teams of instructors, each specializing in a

particular musical genre. This expanded faculty approach allows an individualized approach using new media technologies. The company TrueFire's "Guitar Sherpa" program offers streaming videos created for specific members. Students upload their own videos, demonstrating their progress for their teacher. Many private teachers now advertise Skype-discussion lessons, allowing for an experience similar to private studio lessons with the added benefit of geographical convenience (learning from two locations) and repeatability (recording the discussion). I suggest that the success of these lessons ultimately depends on the translations between music practice, the media technology, and the interpersonal relationships, all working in tandem.

Guitar Gear Demonstrations: Matters of Concern and Mythic “Tone”

The gear demo video genre constitutes a significant portion of guitar-related, online activity. Guitarists film videos and record audio clips revealing the sonic and technological capabilities of a piece of gear and suggest how it may be used by other musicians. Viewers and listeners often turn to these videos as part of their own gear research, discovering items that they have only read about in magazines or guitar discussion forums. While the economics of guitar retail have a hand in many of these demos, these videos are also viewed and created for non-economic purposes. Whether demonstrating or listening, guitarists employ their authority to establish new facts in the community and challenge long-held beliefs. Videos are compared to each other and employed as part of community discourse; arguments for and against each technology refer to streaming media as proof. Guitarists create new clips in attempts to sway others' opinions. I argue that gear demonstrations mobilize the discussion, beliefs, and controversies surrounding guitar technology, frequently for discourse sake alone. The community employs demo videos as evidence in debates about guitar gear, and most importantly, the search for an idealized guitar “tone.” Debates, considered *matters of concern* in ANT parlance, stabilize into shared values and *matters of fact* through experimentation and discourse. But through the same processes, facts are contested and contradicted to become concerns again. These matters of concern persist amongst guitarists who have no motivation to sell their own creations or purchase the latest boutique pedal. The dissemination of these technologies owes in large part to the negotiation of matters of fact and matters of concern. An analysis of the videos, audio

clips, and discourse surrounding these new technologies shows how new gear is integrated and affects the community.

I show a wide range of community concerns that derive from the same community “fact”: the importance of specific gear in timbral production. It is the dominant point of discussion on a majority of online discussion websites. Guitarists’ qualitative perceptions of timbre and tactile characteristics are discussed as objective facts, quantified by circuitry and construction materials. The evidence of “tone-as-fact” is found in YouTube clips, and other online media like Soundcloud and mp3 audio files. From this fact, guitarists negotiate concerns regarding manufacturing processes and materials, intellectual property, proper equipment use, and the mediating properties of online media. By carefully creating and listening to gear demonstrations, guitarists partake in new timbral experiences and confirm existing beliefs about equipment.

Guitarists make a claim to cultural authority via gear demos. Much like an oenophile, many guitarists hope to develop exceptional perceptions as traits of experience; critiques are performances of deep knowledge.¹ Viewers’ claims to authority lie in how they hear and distinguish equipment. Demonstrators claim authority by presenting the sonic capabilities and limitations of guitar gear. These advanced listening and performing skills are valued by a majority of online guitarists, and form the basis of demonstrations’ creation and reception by hobbyists, semi-professionals, and professionals. Understood through the lens of ANT, guitarists’

¹ Some guitarists frequently employ the oenophile comparison . They refer to well developed “palettes” or pejoratively criticize others as “cork-sniffers.”

expressions of authority often implicate the various actors and modes of agency that constitute community discourse. The displays of cultural authority rely on the use and understanding of multiple forms of technology. Using the results from an online survey, I ask guitarists to identify the most important actors in the gear demonstration network. The human-to-technology translations begin with the guitar equipment “signal chain” that includes the guitar, any effects, cables, and the amplifier. The sonic characteristic of the signal chain is further mediated by audio recording technologies, and uploaded and translated to internet media technologies. The viewer/listener must also employ their own audio playback equipment that introduces more sonic effects. Guitarists identify these different layers of mediation in their evaluations of a demonstration’s quality.

The matters of concern and tone-as-fact engaged by gear demonstrations are essential elements of a technology’s dissemination and evolution. In this chapter, I chart the development and demonstrations of “boutique” guitar equipment. Boutique equipment is often characterized by specific construction methods and materials, and exclusivity. A boutique effects pedal may use rare electronic components, be produced in very small numbers, or is priced at the upper limits of the gear market. Tonal evaluations of boutique gear often center on unique and highly refined sonic properties. For example, guitarists may question whether a slight alteration to a circuit results in a better timbre by comparing similar effects to each other. I tie the spread of boutique instruments to retail factors in the 1990s and increased communication between do-it-yourself builders and guitarists looking for the “ultimate tone.” My analysis of boutique demos and discourse specifically focuses on the Klon Centaur

overdrive pedal and pedals based on the Klon circuit, often referred to as “klones.” Multiple demonstration videos of Klon pedals show how guitarists negotiate and transfer the meaning of “boutique” according to their perceptions and beliefs. Matters of concern regarding the Klon’s construction and economic context are weighed against the fact of tone heard in demonstration videos. The videos function as mediating agents in the stabilization and destabilization of meaning and shared values.

3.1 Tone as a Matter of Concern/Fact

The most important aspect of a demonstration is “tone,” the resultant timbre and tactile response produced by an equipment signal chain. Descriptors, research, and imagination all combine to reinforce “tone-as-fact” in guitar communities. Guitarists link specific gear to specific tones. Through increasingly closer comparisons, guitarists negotiate a shared language built from gear-to-tone associations. A Vox AC30 amplifier “chimes” when compared to a Marshall amplifier’s “crunch.” One Fuzz Face pedal sounds “smooth” while another Fuzz Face “spits” and “snarls.” These terms are indicative of multimodal perception and the translation of a guitarist’s action into sound. Sociologist Thomas Porcello refers to this combination of listening, action, and discourse as “professional audition” (2004: 734). The conflation of equipment and tone leads many guitarists to research and analyze equipment at any possible opportunity. Examining guitarists’ fetishization of tone, and with it tube and solid state music equipment, guitarist Robert Poss (formerly of The Band of Susans) writes:

Many musicians bring an almost ornithological zeal to equipment and its identification, scanning concert stages from a distance for obscure pieces of gear as if they were searching for the rarest of migratory birds. (Poss 1998: 46)

The search for gear and “ultimate tone” is an elusive and sometimes contradictory quest, yet it is discussed and compared as a goal on par with well-developed technique, compositional prowess, and improvisational facility. Guitarists’ “tone quest” (to borrow the title of a popular guitar magazine) takes the form of fan-generated “gear rig” photos, journal-run “Rig Rundowns” (per Premier Guitar Magazine), and YouTube gear demonstrations. The knowledge produced and shared reinforces the relational descriptions, and with it the value of an imagined and idealized tone. Mastery of communal knowledge in gear is itself a recognized skill, most often displayed by noted performing artists, instrument collectors, retail salesmen, and instrument makers. The efforts of these varying actors, the documents of gear research, and the community’s descriptions of sound affirm the primacy of tone, defined as a matter of fact.

But in keeping with ANT’s treatment of social facts, tone is a stabilized concern, not an objective certainty. Challenges to the concept of tone, and by extension community knowledge and valued skill, reveal the vacillation of concerns between stabilized facts and unstable controversies. Known for producing retailer Rock ‘N Roll Vintage’s gear demonstrations, Nick Jaffe (publicly known as Just Nick) posted such a challenge in a three minute video entitled *Tone is a Lie – a Calm, Reasoned Discussion with Just Nick* on September 7, 2012 (Figure 3.1). In the video, he pauses briefly while “musing on [his] epic and god-like guitar tone” to note how the fuzz guitar timbre in the background sounds “small and strident” out of musical context. Based on the video comments, Jaffe’s position echoed some of the sentiments community, and was a revelation for others caught up in the hunt for tone. But the

reaction was not entirely enthusiastic. Some YouTube viewers considered the video a diatribe that questioned the community's understanding of tone. YouTube user Tsuptz responded in the video's comments with the most pointed critique:

This seems more like meandering than informing. What am I to take from this video? Tonal and sonic qualities are of the most important considerations when playing with other instruments/people? We know this. You spent two minutes demonstrating something that is readily apparent to most people, even those who do not play instruments. Better, it would have been, had you offered tips on how to more effectively find your place in the mix, instead of just smugly acknowledging this hurdle. (Comments in Jaffe 2012b)



Figure 3.1: Image from Jaffe's video *Tone is a Lie – a Calm, Reasoned Discussion with Just Nick* (Jaffe 2012b, screen capture by author)

The primary issue can be found in the purposefully hyperbolic title of the video, *Tone is a Lie*. Jaffe's title suggested that the matter of fact, "tone," is really a matter of concern; objective timbral qualities are actually constructed by subjective judgments dependent on the musical context. Jaffe also embedded the video in a thread on The Gear Page (TGP), a popular online guitar forum (Jaffe 2012a).² The responses echoed those of the YouTube comments. TGP member Fatback (another

² As of September 2012, approximately 104,000 individuals constitute TGP's membership. I have been a member of TGP since January of 2006.

well-known gear demonstrator), thanked Jaffe for the “bold and sobering statement” (comments in Jaffe 2012a). Contrarily, one member writes, “I’m sorry.... but Tone (the quality or Character of a sound) can’t lie. Only the people whose opinions are uneducated on the subject can lie....LOL” (ibid.). Similarly, another TGP’er writes:

If he'd said that tone is often illusory, or a nebulous concept of ongoing pursuit, I'd agree. To say it's a lie, is a lie, or at least, a misleading characterization of something that most of us here, find tangible. (ibid.)

Guitarists like these forum members believe that the “character of sound” is an objective and observable reality. While the preferences for one sound over another are widely recognized as subjective, tone itself is considered undeniable by all but the uneducated who have never experienced or recognized these qualities. Jaffe had upended one of the most important matters of fact shared amongst many guitarists: the nature and importance of guitar tone.

The revolutions of facts into concerns, and vice versa, are the very negotiations of communal values and competitions for communal authority. As suggested by Latour, we can see facts as a unification of multiple points of view (2005: 116). Videos like Jaffe’s create a “gathering” of either reinforcing or weakening forces around an object or idea (Latour 2004: 233). The varied opinions in the YouTube and TGP comments attest to the lack of unification. Jaffe’s questioning of tone mobilized others to reestablish it as fact. In response, Jaffe would post a second video and linked TGP thread entitled *Tone is True* on September 16, 2012 to discuss the objective aspects of sound (Jaffe 2012c and 2012d). In the seven minute video, he invokes music cognition, the physics of a vibrating string, and the nature of a guitar rig as a dynamic electronic system. Listing measurable components of timbre, further

buttressed by scientific theory, Jaffe gathers forces that solidify the “truth” of tone. No members of YouTube or TGP questioned this second video, instead praising the demonstrator’s ability to reinforce their beliefs with scientific findings. The matter of concern is seen again as a matter of fact.

3.2 Boutique Gear History and the Klon Centaur

The dissemination of technologies depends on the coordination of actors, agencies, and the stabilization of concerns. Boutique equipment found its way into the ears and hands of guitarists through the alignment of circuit designs, retail forces, and internet communications in the mid-1990s. The various concerns addressed by the individual actors collectively make up the definition of “boutique.” The concerns and the definition of boutique are embodied by specific intrinsic qualities (physical qualities such as construction methods and materials) and extrinsic qualities (non-physical attributes such as the country of origin and price).³ Most importantly, the boutique gear’s ontology is inextricably bound to tone-as-fact: boutique gear is judged by tone above all else, and boutique gear reinforces the obsession with idealized tone. However, through the examples of Klon demonstrations in this chapter, I aim to show how the continued negotiation of concerns also destabilizes the ontology of “boutique.” Over the course of two decades, boutique gear’s intrinsic and extrinsic qualities continue to evolve.

The defining intrinsic qualities of boutique gear lie in design and componentry.

The circuits of early boutique amplifiers and effects were based on increasingly rare

³ I borrow the terms intrinsic and extrinsic from marketing studies (Richard, Dick, and Jain 1994; Teas and Agarwal 2000). I find these terms useful because they emphasize differences in the physical qualities of the object, as opposed to only considering qualities as products of social interaction. The object remains distinguished from other examples and cannot be substituted for another.

and expensive vintage equipment. Boutique amp manufacturers such as Victoria, Matchless, and Kendrick tied their designs to 1960s-era Marshall, Vox, and Fender models, and to 1950s “tweed” Fenders, using similar circuitry and visual aesthetics. Pedal makers such as Prescription Electronics, Fulltone, and RMC copied the circuit schematics of old effects, such as Fuzz Face pedals and Vox wah pedals. The replication of circuits extended into hand-made manufacturing techniques, employing the same point-to-point construction.⁴ Vintage circuits and assembly methods represented the idealized sounds heard in recordings, and ease in serviceability and modification. Conversely, printed circuit boards and surface-mounted technologies were rejected as sonically inferior and prone to failure. Boutique manufacturers electronically measured and selected the diodes, capacitors, and resistors before installation, minimizing the supposed inconsistencies of 1950s and 1960s era equipment. Boutique gear was priced as a reasonable alternative to the inflated vintage market, with the added benefit of new construction, warrantied work, and minor “improvements” of older technologies. Advertisements for boutique gear appeared in demographic-specific publications like *Vintage Guitar Magazine* instead of populist magazines such as *Guitar World* and *Guitar Player*.

By the late 1990s, the intrinsic qualities of boutique began to diverge from its vintage origins. Emerging boutique companies focused on modified modern circuits. Brands such as Analogman and Keeley Electronics became known in boutique circles for offering “refined” and “improved” versions of mass-produced Ibanez and Boss

⁴ Point-to-point manufacturing involves the direct connection or wiring of electronic components. Printed circuit board (PCB) components are connected by machine-made conductive traces. Like PCB construction, surface-mount components are connected by traces but use significantly smaller components robotically assembled.

effects pedals (see Analogman.com and RobertKeeley.com respectively). Reflecting the practices of boutique selectivity, measured and selected resistors, capacitors diodes, and op-amps were grafted onto existing circuit boards. Other boutique makers, such as Zachary Vex, experimented with new circuits, creating sounds formerly considered “malfunctioning.” Ethnomusicologist John Fenn, offering one of the only scholarly examinations of the boutique market, focuses on these types of makers who “improvise” with circuit design, altering common pedal circuits despite a lack of electrical engineer training (2010). As noted by Fenn, improvisational practices also extend into visual aspects, as many are uniquely painted and decorated by hand.⁵ Over time, the intrinsic qualities of boutique gear included a broadening set of practices that expanded beyond recreations of vintage circuits. One element remained within the realm of intrinsic qualities: each pedal was built or modified by only a few hands.⁶ The hand-made quality was considered, most importantly, audible to the skilled guitarist.

Boutique guitar gear bears many similarities to finely-crafted, artisanal musical instruments, such as hand-made violins and flutes. The term “artisanal” has long been associated with highly specialized labor and guarded methods constituting the membership and practices of professional guilds (Blondel 1997: 163). Artisanal musical instrument makers and luthiers perceived their work as essential to the advancement of musical practice using careful, scientific study (Jackson 2006: 13-44).

⁵The exhibit *The Art of the Stompbox*, curated by the Museum of Making Music, examines the visual aspect of guitar effects, dominated by hand-painted, boutique effects (see Museum of Making Music 2010).

⁶ As will be discussed later, the current state of boutique equipment manufacturing contradicts these characteristics. Circuit boards, automated manufacturing, and the outsourcing of labor have become common practice amongst well-known boutique makers.

As industrialization decentered hand-made practices, artisanal represented an intimate relationship between makers and customers.⁷ Artisanal practices still continue in the realm of Flamenco and Spanish guitar construction; access to master-builders and luthiers is granted only to the smallest minority of guitarists (Dawe and Dawe 2001). The hand-made quality and rejection of mass-production lends an air of exclusivity to both artisanal and boutique instruments.

The term boutique, however, is largely preferred by many in the online guitar community. It is also commonly used in print media and in advertising by both small and large manufacturers. “Artisanal” is avoided. Small manufacturers from the 1970s and 1980s like Dumble, Mesa-Boogie, and Electro-Harmonix further complicate the appellation, as they may not be considered boutique but bear the intrinsic qualities and exclusivity noted above. This categorization of equipment reflects an insiders’ knowledge (Kartomi 1990). Boutique gear, as a classification of equipment, is specifically produced by guitarists’ beliefs and practices within a localized context. The economic and media contexts, recognized and inhabited by guitarists, define and historicize the term “boutique.”

⁷ Jackson notes that during the early 1800s, mechanization was often considered of superior quality to hand-made instruments. Even “naturalist philosophers” feared machines’ abilities to surpass human production (2006:81). In this sense, artisanal instruments offered a specific social interaction as opposed to the sense of quality now attributed to artisanal instruments.



Figure 3.2 The Boston Guitar Center’s “Wall of Guitars” (<http://www.berklee.edu/news/4620/guitar-center-is-coming-to-the-berklee-neighborh>, accessed August 5, 2012)

To understand why the notion of boutique gear is a matter of concern instead of a fact, an examination of boutique dissemination proves crucial. The differences between artisanal and boutique gear lie in the extrinsic qualities of where boutique instruments were sold and how they were presented to the public. Boutique instruments’ dissemination involved local retailers’ reaction against national chains, and a subsequent migration to online stores and internet forums. First, boutique gear flourished in environments where knowledge and authority were valued. In a study of guitar retail environments, Carey Sargent compares the performance of authority between “mom-and-pop” stores and national chain stores (2009). In regards to smaller guitar stores, she refers to the relationship between retail employees and customers as a “geeky paternalism” (ibid.: 671).⁸ She argues that the second relationship, “fraternal

⁸ From my own experiences as a retail employee in a smaller guitar store, I became acutely aware of the “geeky paternalistic” relationship between me and my customers. Beginning guitarists, or in many cases the parents of beginning guitarists, would ask for assistance in identifying and explaining the important

competition,” persists in larger stores where employees do not have the same level of knowledge or experience, and thus actively compete between themselves and their customers for authority (ibid.: 673). The most successful of the retail chain stores, Guitar Center, expanded across the country opening 70 new retail outlets in the 1990s (<http://gc.guitarcenter.com/company/90s.cfm>, accessed December 30, 2012). Guitar Center became an economic force, buying unprecedented amounts of mass-produced stock from manufacturers featured in warehouse-sized showrooms (Figure 3.2).⁹

Locally owned “mom-and-pop” stores responded through increased service and knowledge levels, and by purchasing little known, boutique brands. This specialization allowed retailers to differentiate themselves from Guitar Center, and smaller manufacturers to distance themselves from large brands like Fender, Gibson, and Ibanez.¹⁰ Guitar Center came to represent mass-produced, imported products, while local shops sold hand-made equipment designed and manufactured in the United States. The specialized service and knowledge imbued these products with an air of selectivity. The higher prices of boutique equipment, when compared to mass-produced gear, was justified through “geeky paternalistic” explanations and

features of an instrument through verbal explanation and performance. As they had no mastery of guitar-specific terminology, nor context for the metaphors and descriptors frequently used in explaining timbre (such as “boomy,” “bright,” or “jangly”) my performance had to evoke, and frequently exaggerate those qualities to become apparent to my customers. These demonstrations of “professional audition” (per Porcello) were also employed in more nuanced discussions with experienced guitarists. If I was able to direct the customer into hearing as I heard, and lead them through the process of professional audition, then my authority in the environment was reinforced.

⁹ Guitar Center experienced financial troubles throughout the 2000s, eventually being bought by the private equity firm Bain Capital in 2007. Guitar Center’s continuing financial problems also affect large manufacturers like Fender, who withdrew its IPO offering in July 2012 partially due to \$11 million owed by Guitar Center (Akhtar 2012).

¹⁰ The small retail store I worked in throughout the 1990s and early 2000s engaged in the same small-manufacturer buying practices. The store featured small acoustic manufacturers Larrivee, Taylor, and Collings, all early boutique acoustic guitar makers.

“professional audition” descriptors. Marketing studies point towards the positive effect that extrinsic qualities can have on brand perception and the stature of the stores that carry them (Richard, Dick, and Jain 1994; Teas and Agarwal 2000). Stores like Chicago Music Exchange in Illinois (Figure 3.3), Guitar Sanctuary in Austin, Texas (Figure 3.4), and Eddie’s Guitars in St. Louis, Missouri transformed their stores into luxury showrooms with plush couches, soft lighting, and cabinet displays for individual instruments. The boutique buying experience transcended the crass consumerism of Guitar Center *and* the restricted, dusty work-room of the artisan. Boutique instruments embodied an elite and sophisticated retail experience that is equated with equipment’s sound and construction.



Figure 3.3: Chicago Music Exchange (http://www1.chicagoreader.com/best_of_chicago_09/music/guitar_shop/, accessed December 30, 2012)



Figure 3.4: Guitar Sanctuary in Austin Texas (<http://www.Guitarsanctuary.com>, accessed December 30, 2012)

The advent of electronic bulletin boards, online forums, and websites consisting of user-submitted reviews spread the boutique market beyond the confines of individual retail shops. Boutique manufacturers participated alongside guitarists, offering direct dialogue as a form of increased customer service.¹¹ Companies such as Lovepedal offered hand-wired pedals direct to forum participants for prices far below retail offerings (e.g. Lovepedal’s “Tone for 50 bones”). User-reviews on the site Harmony Central (<http://harmony-central.com>, accessed June 4, 2012) provided supposedly unbiased opinions from guitarists’ hands-on experience, bypassing the sales-pitches of both chain and local retail shops. Online communication also accelerated the spread of schematics, allowing hobbyists to build and sell their own modified circuits. DIY pedal builders such as Clay Jones offered limited batches of pedals, known only to participants at sites like TGP. But by moving away from the “seat” of cultural authority, guitarists discourse began to increasingly resemble

¹¹ Mass-manufacturing brands participate in online discourse as well. Members expect that companies follow online guitar forums and web-reviews. Discussion threads may directly address these companies in critiques of guitar gear, suggesting improvements or requesting service.

“fraternal competition” instead of “geeky paternalism.” The competition over who understands tone the best now plays out in web environments. Like the evolution of boutique intrinsic qualities, its extrinsic qualities have evolved as well.

Cultural authority now circulates amongst the whole online guitar population. The case for the decentering of authority has been well established by media scholars. Eggo Müller argues that through the example of video production values, or “quality discourse,” we must reconsider the professional/amateur binary in favor of a larger spectrum of users, each with their own claim to establishing and maintaining the values of quality (2009). He writes that, “Traditionally, quality discourse is identified as a top-down force that maintains the cultural elites’ control of an emerging field of cultural practice” (ibid.: 127). However, in the case of YouTube, Müller suggests that quality discourse emerges from the “amateurs’, dabblers’ and novices’” own videos and comments, dialoguing with “full, semi, pre- and post-professionals.”¹² Considering demonstrations of authority in this way, I characterize YouTube demonstrations as a form of this discourse: a performance of cultural authority that was previously performed in retail locales. As such, YouTube demonstrations are a crucial part of boutique gear’s dissemination and evolution.

¹² Müller’s study compares the reception of YouTube videos created by a retired videographer to amateur videos discussing lighting and camera techniques. Müller suggests that professional experience did not necessarily guarantee online authority.



Figure 3.5: The first version of the Klon Centaur overdrive pedal (<http://www.dirtbox.net/news/klon-centaur-is-no-more/>, accessed December 30, 2012)

The Klon Centaur epitomizes the varied intrinsic and extrinsic qualities presented above (Figure 3.5). Its designer and primary manufacturer, Bill Finnegan, released the Klon Centaur Professional Overdrive pedal in 1994.¹³ The pedal became widely visible through a *Vintage Guitar* article written by amplifier builder Ken Fischer (1995). Fischer’s review touches on important aspects of boutique quality: specialized components made in the United States (“not the Taiwan junk that’s popping up everywhere”), limited availability, and a circuit resulting from years of careful experimentation (ibid.). While other boutique manufacturers like Way Huge and Fulltone offered new versions of old circuits, Finnegan blazed a new trail with a circuit unlike any other, using components supposedly unavailable to other builders.

¹³ Overdrive effects increase an amplifier’s distortion levels through increased volume input and distortion generated within the pedal.

To protect his efforts, he covered his work with a thick, black epoxy (Figure 3.6). Fischer describes the sound as “big, fat, and warm,” seamlessly blending its timbral effect into a guitarist’s existing rig. While Fischer offered some critiques of the pedal (e.g., mildly noisy and not as distorted as Finnegan claimed), his endorsement firmly established the pedal in minds of “tone-hounds.”

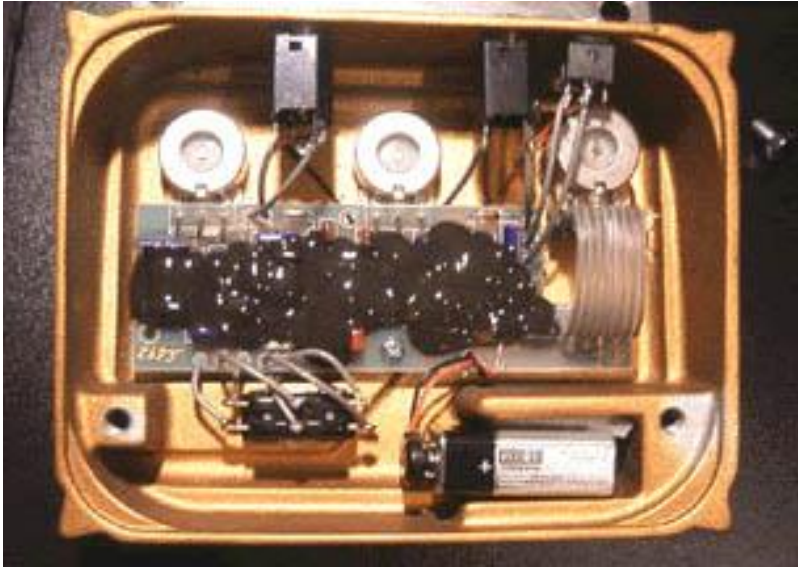


Figure 3.6: The “gooped” circuit of a Klon Centaur (<http://www.diystompboxes.com/smfforum/index.php?topic=1139.0>, accessed December 30, 2012)

Other publications followed suit, praising the pedal’s ability to surpass the tone of costly vintage gear (Matuza 1996), or mass-produced stompbox designs (“Review – The Klon Centaur” 2000). The pedal appeared in the rigs of famous guitarists such as Brad Whitford and Joe Perry of Aerosmith, Warren Haynes of the Allman Brothers Band, Jeff Beck, Nels Cline and John Mayer. It was sold directly by Finnegan and in a select number of boutique-oriented stores. The price of the pedal climbed from \$249 in the mid-1990s, to approximately \$350 by the mid-2000s. The manufacturing times extended from 6 weeks to 12 weeks as more guitarists signed onto Finnegan and retail

shops' "wait-lists" (Finnegan 2009). The pedal's visual design changed, first losing the Centaur figure, and then changing color to a bare aluminum enclosure. Guitarists wondered whether or not the circuitry changed between these versions, as some claimed that the versions sounded different. Because of the wait-times and different versions, used "horsey" Klons (the first generation unit) sold on the online auction site eBay for more than double the retail cost. In December of 2009, Finnegan ceased the production of the Klon, stating a new version would be released in 2010. The first generation pedals are now some of the most sought-after pedals in the used gear market, now selling for more than \$1,300 in eBay auctions.¹⁴ In fifteen years, the Klon Centaur became as mythical as its namesake. The Klon's extrinsic qualities (e.g. historical context, price) and its intrinsic qualities (e.g. method of assembly, rare components) all become matters of concern debated via YouTube demonstration videos. The tone of the Klon is used as the objective evidence.

3.3 Gear Demonstrations as Technological Black Boxes

To understand how boutique tone is heard as an objective fact, I unpack the gear demonstration as a technological black box. Gear demonstrations result from networked translations between members of the community, musical equipment, musical performance, and recording media. A viewer's performance of authority, through listening to and describing tone, is itself a translation with a demonstration video. Demonstrations are evaluated based on the strength of the translations.

¹⁴ The Klon Centaur is not the highest valued boutique pedal in the new or used markets. A used Pete Cornish TES delay effect sold for \$3,750 (three times its original value) on September 16, 2012 on eBay.com (auction webpage deleted). The boutique builder Tone Czar offered a new limited edition Echoczar Quad delay effect for \$1,875 in late September 2012 (www.toneczareffects.com/gallery-echoczmn3005.htm).

However, before a demonstration can be employed as evidence, it must capture the most “truthful” representation of a Klön’s tone.

I conducted an informal survey through TGP, asking members how they used gear demonstrations, what qualities they valued most, and whether or not these demonstrations altered or directed their gear purchases (JamonGrande 2011). The responses from this survey identify the different human agencies and technologies involved in the creation of gear demos. Guitarists may validate a demonstration based on the strength of the presenter or recording method, while others may point to the streaming media’s inability to capture fine nuance. Using demonstrations as evidence, guitarists will either praise or critique the video based on these agencies and technological actors.

Above all else, TGP respondents point to the audio quality as the most important aspect of a gear demonstration. A demo’s sound quality is largely determined by two separate factors: the recording and processing equipment used in the demo, and the file compression of the hosting service. For many TGP members surveyed, the recording equipment is of utmost importance to hearing the demo clearly. TGP member Indravayu writes, “Sound quality is very important to me - nothing ruins a demo for me quicker than a [distorted] camera mic” (comments in JamonGrande 2011). The type of equipment used to record demos varies greatly, ranging from smartphone-recorded audio to demonstrations conducted in professional recording studios using multiple microphones. Given the ease of publishing these recordings, many guitarists’ skillset now includes the ability to quickly create a document of sound with minimal recording distortions. Increasingly, “close micing”

techniques are used to record directly into a software recording program with minimal processing.¹⁵ In addition to the guitar gear used, demonstrators frequently note the type of microphone and audio interface used in the recording. Viewers want the simplest audio path, with no post-recording processing or editing. Carefully positioned camera mic audio is understood as more “truthful” than a close-mic’d recording utilizing audio compression or equalization. For many guitarists, the recording’s honesty is a top priority, achievable by amateur and professionals alike.

Guitarists tolerate the audible effects of hosting sites like YouTube.¹⁶ Even with YouTube’s ability to now encode at “high-definition” audio bitrates, demonstrators and viewers note changes to audio quality when compared to “raw” WAV files.¹⁷ As part of YouTube’s uploading algorithm, frequency compression changes the overall file size of the audio clip by truncating inaudible portions of the frequency spectrum. Many guitarists believe they are still able to hear the important aspects of a demo clearly through these mediating effects. TGP member Gixxerock writes, “Youtube [sic] sound quality is not ideal, but not that bad. I use it as a benchmark to see if something is in the tonal ballpark” (ibid.). For evaluating gear, users compare the effects of YouTube mediations to other audio recordings. TGP’er Sackville Dan makes this type of comparison:

I think that the audio quality is degraded - which is why I take gear demos with a grain of salt. It is similar to the fact that the sound of a certain guitar

¹⁵ Close micing typically uses one microphone placed two to three inches away from the amplifier speaker. The result minimizes room acoustics, though it also produces a characteristic sound.

¹⁶ Other sites used for gear demonstrations include the video hosting site Vimeo and the audio hosting site Soundcloud. Soundcloud uses a similar 128kbps mp3 encoding format that introduces noticeable audio distortions (help.soundcloud.com/customer/portal/topics/109407-uploading-transcoding).

¹⁷ See <http://support.google.com/youtube/bin/answer.py?hl=en&answer=1722171> for the specific audio encoding rates available per video resolution.

and amp that you hear on a CD will not be exactly what you hear with the same guitar and amp live - there are many other processors and effects going on with those sounds as well. (ibid.)

In almost all survey responses, listeners claim to hear enough general characteristics from a recording to evaluate the sound of the demoed gear.

Listeners claim an ability to identify and attribute sound qualities to the gear, YouTube's audio quality, and their own listening devices. Their evaluations of the gear are tempered with their knowledge of the recording and listening technologies. These claims of authority are similar to the "epistemic authority" in the audiophile community by Marc Perlman (2004). One group of audiophiles studied by Perlman used scientific testing as the basis of their authority and claims to knowledge, establishing controlled procedures to establish variables and controls. In this vein, one TGP member who responded anonymously via email writes:

My Klipsch TBX is used for all the videos I listen to, so any differentiation must be to the quality of the gear and/or the quality of the demo. I do listen for nuances and sometimes hear them. Given the low expectations for the quality of a video demo, those identified nuances are accepted as the exception rather than the rule. While I might prefer a better sound system than I use, it is far superior to what is available on my laptop. (Comments in JamonGrande 2011)

His listening and evaluation process includes the control conditions (his listening system and the consistent distortions inherent to YouTube audio), set against the variability of the demonstrated gear and the quality of the demonstration itself.

Similarly, Indravayu identifies YouTube and his listening system as the control conditions, and the gear as the variable. He replied in the thread:

You always need to take into consideration that YouTube audio is terrible (I know this especially from my own demos that I have uploaded there - what goes in is not what comes out!) and that gear generally sounds better in person - but often you can tell, even with the degraded audio, that a certain piece of

gear is not right for you (or even outright junk). I listen to demos through mid-level professional soundcard (RME HDSP AIO) and KRK VXT4 monitors. (ibid.)

Just as the gear demonstrators list all of the equipment they use in their demonstrations to establish their authority and control conditions, the viewers who responded to my thread explain how they are able to objectively hear the demonstration based on their listening technology. For these respondents, audible variations in timbre can be attributed to the guitar gear and demonstration quality. Figure 3.7 represents the individual technological “black boxes” that constitute the layers of mediation involved in one demonstration video.

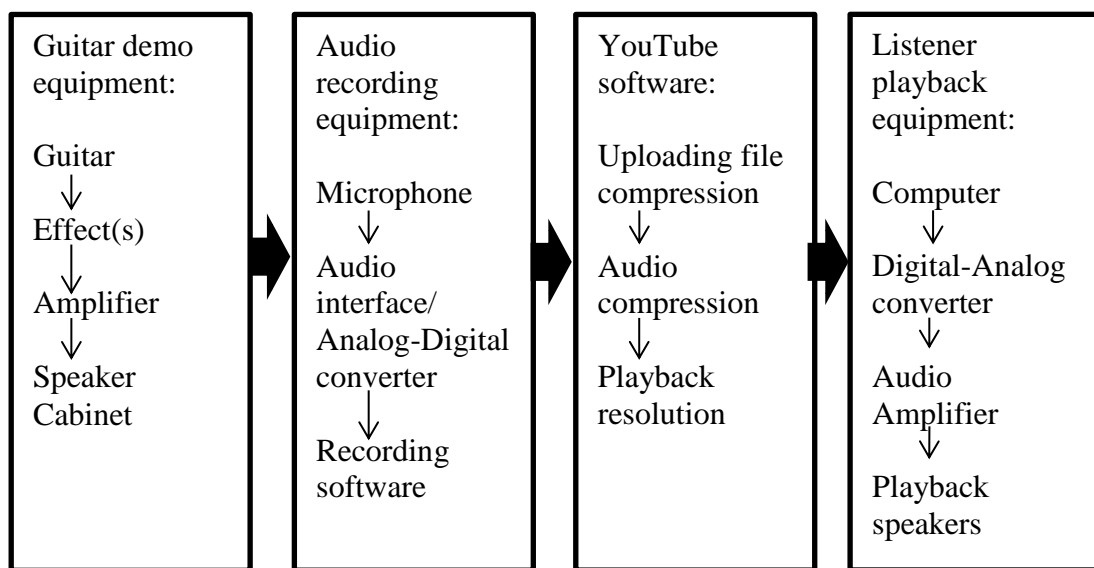


Figure 3.7: Technological “black boxes” mediating gear demonstrations

A majority of respondents prefer demonstrations containing minimal narration.

A demonstrator’s excessive discussion of the gear detracts from the video’s utility, and causes viewers to lose interest in the review. According to some viewers, a poor demonstrator fills the video with narration to compensate for a lack of ability to

demonstrate the equipment effectively. *TGP* member Shiney Beast concisely summarizes the idea by stating, “Less talk, more rock” (ibid.). Guitguy28 writes:

Guys just talking about their gear and not playing it until the last 30 seconds of the video, and even then it's just a few riffs that give me no idea of how the gear actually sounds.... and it really does the gear manufacturers a disservice. It's like an anti-ad for the gear. (ibid.)

The demo itself is not the location of discussion about tone, but is instead part of the exchange created amongst viewers. Indravayu situates demos within the overall context of gear discussion:

I watch gear videos to hear the instrument/pedal/amp - any other info on the product can be found on the makers' websites or on forums like *TGP*, so I find extended monologues about the gear to be total time wasters. (ibid.)

These viewers see themselves as the final arbiters of timbral quality and do not necessarily want to be told what they are hearing. The matters of concern appear via dialogue in the community, as opposed to a video-recorded monologue.¹⁸

Most viewers seek a comprehensive approach encompassing the demonstrated gear's settings. Frequently, the demonstrated equipment features prominently in the video frame, displaying the equipment's parameter settings and any adjustments made during the course of the video. GuitGuy28 writes, “I like there to be playing in a variety of [playing] styles, and hopefully on different pickup settings, different guitars, and different EQ and channel settings, just as I would demo an amp myself” (ibid.).

He listens for variety of guitar settings processed through a variety of amplifier settings seen on screen. The same applies for effects pedals. This comprehensive

¹⁸A small number of demonstrators, including Just Nick and others discussed later in this chapter, have gained substantial followings and YouTube subscribers. Viewers find utility in their performances rather than comments. I also suggest that their popularity owes more to perceived, online personas rather than their opinions about equipment, discussed in Chapter 4.

approach to gear settings suggests the complex interaction of one element with the rest of a signal chain.

With narration minimized and multiple settings utilized, the demonstrator's performance contextualizes the sound. This context includes genres deemed appropriate for the equipment. Gixxerock writes, "Amateur blues wanking, or a 16-year-old playing Master of Puppets to a cell phone camera, shirtless, bad lighting really turn me off" (ibid.). Most importantly, a contextualized performance centers on guitar technique. Bad performances invalidate demonstrations; the gear is used improperly. TGP'er Lanny writes:

As a viewer, I do not want to identify with a demonstrator who is a weak player. My search is to find something to make me sound better. A weak player cannot do that, no matter how wonderful the gear may be. (ibid.)

Conversely, virtuosic performances may obscure the capabilities of gear in a manner similar to overly produced recording techniques. John C. names the popular YouTube demonstrator Gear Mann Dude as an ideal example. "[Gear Mann Dude] does a good job playing basic runs that let the gear being demoed be the star, not him as a player," he writes. For those seeking to evaluate the sonic characteristics of a guitar, amplifier, or effect, the most useful performances are neither virtuosic nor amateurish.

Summarizing both aspects of comprehensiveness, JohnC writes:

I also like someone who plays very basic things but really works their way through all the various capabilities of the piece of gear being demoed. I'm not looking for a fantastic player - in fact, if the gear is demoed by a really top player I'll always wonder how much of what I'm hearing is the gear and how much is the player. (ibid.)

Seen together, a comprehensive video uses a modest exploration of guitar technique to emphasize the equipment's capabilities. Viewers also believe that effective

demonstrators understand the proper context for a piece of equipment and its timbral capabilities. Context implies a prescribed technology use, demonstrated in videos *and* confirmed by viewers considering themselves as authorities.

The qualities enumerated by the poll respondents all correspond to mediators at play in each video. Recording and playback equipment, and the audio compression effects of audio and video hosting sites are mediating technologies, each acting on the exchange of knowledge. A guitarist's abilities to comprehensively explore a piece of equipment in a "proper" context and effectively record a demonstration are translated through and to other actors. Imbued with a self-identified authority, viewers filter out the mediational effects of the recording to imagine themselves hearing the demonstrated equipment in person. The demonstration acts as a proxy for the viewer. The minimal editing and audio processing are objective accounts of a "live and in-the-room" experience. The modest performances are neither superior nor inferior to the viewer's beliefs in their own ability. To borrow a phrase from new media scholar Jens Schröter regarding YouTube videos, gear demonstrations create a "chiasmus of subject and image – you are the tube and the tube is you" (2009: 339). For many of these respondents, demonstrations are used as reflections of their own gear explorations.

The YouTube-hosted viewer comments in two early Klon demonstrations display how both demonstrations and the pedal are scrutinized by the viewing audience. Videos produced by two Klon demonstrators, Skydog46 and Diablo76 may appear to be similar, but are received differently. Viewers critique the various technologies and agencies listed above, including the demonstrators' skill. Like Jaffe's

Tone is a Lie, these demonstrations also “gather forces” around matters of concern: the Klon’s intrinsic and extrinsic qualities, and tone.

YouTube user Skydog46 produced two of the earliest Klon YouTube demonstrations in November 2006 (Skydog46 2006a and 2006b). Using the built-in camcorder microphone to capture his performance, he plays a variety of classic rock riffs (Wishbone Ash’s “Blowin’ Free”) and jazz standards (Errol Garner’s “Misty”). Skydog46’s demonstration is a celebratory testimonial, considering the Klon is the “fattest, most transparent volume boost” (Skydog46 2006b). While a few viewers praised his video, others criticized the recording quality as failing to portray the Klon properly. Some viewers directly engaged the Klon’s price, comparing the overall effect of the pedal to cheaper pedals. Blackradio writes, “It got a tad bit louder/crunchy and a bit more compressed. A \$50 pedal could do something pretty similar” (comments in Skydog46 2006b). Similarly, user DJtele writes:

I wated [sic] 6 months for my klon and I thought it sucked. Not worth 350. sounded like I was playing with a sock over my guitar. The ts8 blows it away and it's half the price. (ibid.)

In response to these criticisms Skydog46 writes, “You guys seem like quite the tone gurus. Got any vids so that I can check it out?” (ibid.). The short exchanges in the discussion read as a competition over authority, further complicated by the demonstration’s audio quality.

Having failed to make a definitive case, Skydog46’s second video is a response to viewers rather than a refinement of methods. He attributes his second Klon demo to the poor listening ability of the viewers, stating in the clip, “People couldn’t tell when it was on and when it was off” (Skydog46 2006a). The negative responses mirrored

those of the first video, and included further criticisms of Skydog46's demonstration method. Rambo29 writes, "Less talk, more chops please" (comments in Skydog46 2006a). Alexizephyrmage9 questions the audio quality, writing, "Sounds like there is some nasty compression... I don't know if it's the camera or a compressor pedal." Jthread and ROCKSTARCRANE question his use of "Misty" in demonstrating an overdrive pedal. Jthread writes:

For Misty I want something smooth. No overdrive at all. Sweet sounding... I've sold all my pedals and just concentrating on the guitar. IMO they are just a distraction at my level of playing. :) (ibid.)

Skydog46 does not respond to any of the user comments in the second video. In both videos, the pedal's attributes are negatively conflated with elements of the demonstration including the recording equipment, his choice of musical materials, and his verbosity.

Minimally narrated, comprehensive demonstrations exploring a variety of settings are well received by viewers. YouTube user Diablo76 produced three Klon demonstrations between August of 2006 and April of 2007 (Diablo76 2006a, 2006b, and 2007). Despite using the same recording setup as Skydog46 (i.e. built-in camcorder mic), Diablo76's videos are praised based on his exploration of pedal settings. In each video, Diablo76 sets both his guitar and his Klon to different settings, announcing each before playing a string of blues-influenced solo lines. User Chuckstarnes writes, "Great demo. [The video] shows the versatility from different settings, pickups used, and guitar volumes. Love the way it boosts just the right frequencies. Thanks" (comments from Diablo76 2006b). Despite audible distortion from the recording microphone, as noted by 1957fenderstrat and Okearthling, most of

the users praise the videos, and are less critical of the pedal overall (comments from Diablo76 2007). The overall tenor of the comments favors Diablo76's videos compared to the comments in Skydog48's videos. Diablo76's videos are utilitarian and contain minimal commentary while Skydog48's videos celebrate his boutique equipment through constant narration. Diablo76's videos are considered objective representations while Skydog48's are perceived as "cork-sniffing" elitism.

3.4 Klon Comparison Videos as Networked Documents

Returning to Latour, Callon, and Law's original formulation of ANT, I view gear demos as a document of matters of concern regarding technology.¹⁹ In this sense, demos function like the experiments, journal articles and books produced by the scientific community. And like scientific documents, demos are linked to each other through explicit references in discussion forums. Referenced videos are often used as positive evidence in support of a specific piece of equipment. In opposition to their creator's intentions, demos may also be used to highlight the weaknesses of a technology or the fallibility of another guitarist's argument. The demos rarely exist as independent entities that initiate *and* resolve discourse. They are recontextualized and reinterpreted through citations in online forums.

For ANT theorists, the examination of documents chart "how texts are able, historically, to become emissaries that are durable, transportable and forceful, and therefore crucial agents of social control" (Callon, Law, and Rip 1986b: 229).²⁰ Many

¹⁹ Latour lists matters of concern and documents as two important "uncertainties" that comprise socio-technological networks (See Latour 2005: 87-120 and 121-140 respectively).

²⁰ For the scientific community, the "social construction of scientific fact," the rallying cry of both ANT theorists and Science and Technology Studies as a whole, was misconstrued as disbelief in scientific

of the videos and audio clips analyzed here are hyperlinked and embedded in the discussion threads aimed at transforming concerns about technology into facts about tone, by both video creators and viewers. Such linking helps to make demo clips more transportable, whether on their native hosting site or on externally linked sites. YouTube video statistics frequently display where and when videos are embedded or linked to from external sites, or from other YouTube clips with related material. Unlike scientific documents, demonstrators can withdraw their submissions by deleting the audio or video.²¹ Still, demo videos allow for a sustained and durable medium for community discourse. Their forcefulness ultimately depends on how they are used and received by the community. These artifacts of community discourse are the signs of community and interaction that early ANT analysts had to infer from co-word and quali-quantitative methods (Callon, Law and Rip 1986c: 110-116; Latour 1992). Klon and boutique pedal discourse is well documented, time-stamped, fast-moving, and distributed amongst a community of professional guitarists, hobbyists, retail agents, and instrument makers.

While matters of concern are discussed in YouTube comments, as shown in the Skydog46 and Diablo76's videos, the community negotiations of concerns occur across multiple gear forum threads, with the demos acting as proofs. Online exchanges are performances of community knowledge and authority. Systems scholars Molly Wasko and Samer Faraj apply the idea of communities of practice to internet-based

findings. Similarly, my aim is not to debate subjective perceptions against objective qualities of sound, but to chart how technological issues vacillate between subjectivities and objectivities.

²¹ Discussion threads are also subject to deletion by the thread's creators or by forum moderators.

communities, asserting that online discourse can result in a similar sense of community problem solving and issue negotiation (2000). They write:

People feel that the [online] community provides access to knowledge rather than just information, and becomes a valuable forum to receive feedback on ideas and solutions. The exchange character of the discussion creates a ‘synergy’ that is often noted in face-to-face groups, where the end idea is better than the idea contributed by any one individual.
(ibid.: 169-170)

Experiences between members are exchanged, and solutions are often negotiated by guitarists, manufacturers, and retailers in discussion threads. Forums also act as the oral histories of community issues, capturing “people’s subjective engagement with an activity, community or social setting” (Hopton 2007: 94).²² Analysis of discussion threads uncovers the community’s concerns, tracked over time, that are implied by demonstrations.

Demonstrations directly comparing the Klone to other pedals are frequently used to enhance or demystify the pedal’s stature. These comparison videos invite community discourse, and form a network of documents regarding timbre and tone. Paths can be traced between Klone comparison videos on YouTube (linked by metadata), and outwards to other gear discussion sites. Figure 3.8 diagrams the relationship between three Klone comparisons analyzed below and linked TGP discussion threads. Within these threads, the same matters of concern are brought to light. Issues regarding the economics of the boutique market, the specificity of the Klone circuit, and the experimental conditions of comparisons are implicated in this network of discourse. Viewers and forum members utilize their own directed-audition

²² In his study of Mixed Martial Arts, John Hopton considers how forum discussions are used to discuss public perception of the sport, and reveal the development of community discourse over time (2007: 95).

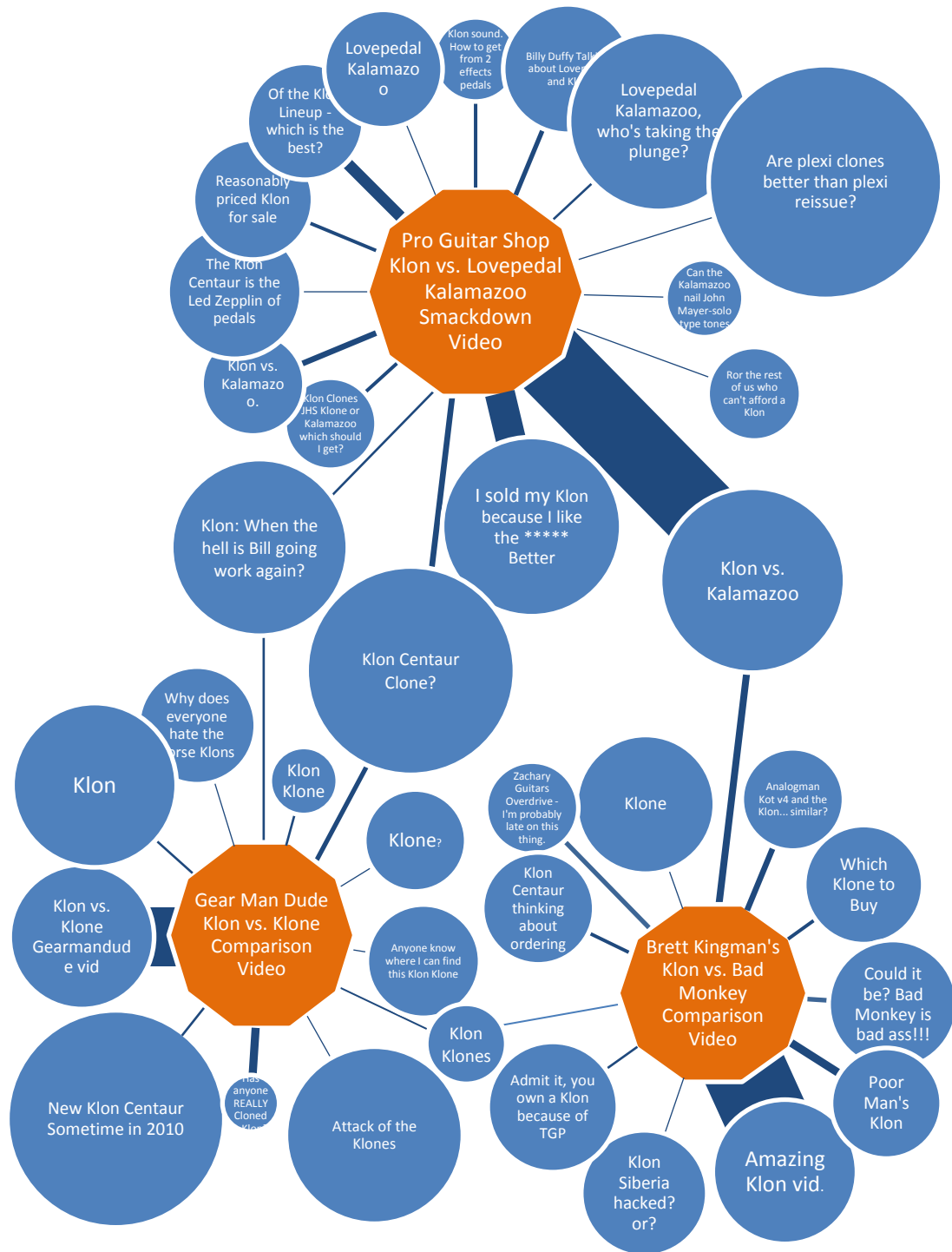


Figure 3.8: Citations between Klone comparison videos and TGP discussion threads. Circles represent TGP discussion threads and decagons represent YouTube demonstration videos. See Appendix 3.A for specific viewership and forum post data.

descriptors to characterize each pedal's timbre as objective facts. The three videos are used as evidence in support of and against the Klon.

3.4a Video - *Klon Centaur vs Bad Monkey: Sadie presents.*

Brett Kingman's comparison of the Klon Centaur to the Digitech Bad Monkey, seen in Figure 3.9, is perhaps the most inflammatory comparison (Kingman 2009).

The Bad Monkey pedal represents "anti-boutique gear": mass-produced in China, using surface-mounted circuitry, and available at almost all retailers for approximately \$50. Knowing that the video invites debates about the pedal, he prefaces the video with a disclaimer. He writes:

I made the clip not to be nasty (I would always prefer a Klon if I could afford it) but to show that you can approximate a sound if you try hard enough. The Klon has a gorgeous clean boost that can in no way be rivaled by the Bad Monkey, but the Bad Monkey may satisfy people's dirt needs. Your call. YouTube compression doesn't help much but it will put you in the ballpark. (ibid.)

He qualifies the overall quality of the video by identifying YouTube's effects on audio. The video's dialogue begins with Kingman's daughter, Sadie, describing the pedal as "very expensive" and looking "a bit like a toaster" (ibid.).²³ Kingman sets the two pedals to somewhat similar settings, performing the same riff on each pedal in succession. He offers no commentary in the video, instead leaving the viewer to compare the two pedals. Some viewers stated that the Klon was "creamier," "fatter," and "organic," and that the Klon was clearly the better overdrive (comments in Kingman 2009). The most "liked" YouTube comment, from Chooseyourblues, offered

²³ Sadie's toaster comment has become a frequently used descriptor, repeated in at least fourteen TGP threads.

the opinion that any difference was negligible, particularly in regards to non-guitarists' ability to distinguish "good" tone. He writes:

I have wanted after a klon for a year or so, but you know what? I'm starting to think it's all internet hype. After all are any of the 70 drunken idiots who attend my band's gigs gonna give a shit about the Klon's beautiful clarity? Hell no! (ibid.)

None of the viewers claimed that the Bad Monkey sounded better, but instead argued the Klon could easily be replaced by a mass-produced pedal. For these viewers, the Klon's sound was still good, but not worth the ever-increasing prices.



Figure 3.9: Brett Kingman's Klon Centaur/Digitech Bad Monkey comparison video (Kingman 2009, screen capture by author)

Kingman and his daughter's descriptions establish the matters of concern at stake: the price of a rare boutique pedal in comparison to mass-produced effects. Based on the "fact" of tone, the video is used as evidence for and against each pedal's value. This clip was embedded and referenced in twelve TGP discussions regarding Klon alternatives. Those citing the video claimed that the pedals sounded similar and

that Kingman had successfully challenged the value of the Klon. One TGPer writes, “Wow. So, I could buy a used Bad Monkey and a MIM Strat and save \$1500? This thread should be called Myth Busters” (comment in Painasusual 2009). In almost every instance of its citation, however, another TGP member quickly dismissed the comparison, claiming to hear an insurmountable difference between the two pedals. TGP member David Fisher (username Tibbon), who filmed another Klon demonstration for Finnegan (analyzed below), criticized the video’s sound quality. For Fisher, Kingman’s methodology invalidated any evaluations of tone. He writes:

That's a horrid video for comparison. On camera sound and the pedals sound all that much the same even in the video. It's really just silly and I hope he did it tongue in cheek. (Comments in Markf786 2011)

While this comment focuses on methodology, incorrectly identified as camcorder microphone sound, the remark ultimately supports the value of the Klon over the Bad Monkey. Guitarists like Fisher argue that the Klon offers something unique that other mass-produced pedals cannot approximate. His dismissal of the video is meant to reinforce the value and justified exclusivity of the Klon. In this comparison, tone was used to justify price and exceptionality, extrinsic qualities of the pedal. The drastic difference in price was contrasted to subtle timbral differences. The boutique pedal was evaluated against a device considered to be its opposite, based in terms of construction, value, and most importantly sound. Continued references by TGP members would stabilize the comparison between the two pedals.

3.4b Video - *KLON Centaur overdrive guitar effects pedal shootout against a KLONE*

Seen in Figure 3.10, Gear Mann Dude 's video *KLON Centaur overdrive guitar effects pedal shootout against a KLONE* pits the first generation Klon against the Fancy Lad, another pedal based on its circuit (2009c).²⁴ Despite the epoxy “goop” on the Klon circuit, a number of electronics hobbyists and semi-professionals have reverse engineered the pedal and disseminated the Klon schematic amongst internet forums devoted to pedal construction and modification.²⁵ Using these schematics, a number of hobbyists have produced “klones”: supposed copies of the Klon. Like Kingman's video, Gear Mann Dude offers little commentary for the majority of the video, only describing changes he makes to his guitar's settings. He turns the knobs of both pedals to similar positions, playing the same riffs as he switches back and forth between the two. He offers his opinion of the two pedals at the end of the video, stating that someone “cloned a Klon!” (ibid.). He concludes by wondering whether he would actually publish the comparison, knowing that his video, like other Klon comparisons, would generate controversy. Unlike Kingman's video, some YouTube viewers preferred the Fancy Lad over the Klon. Qualifying his opinion by listing his listening equipment, one TGP member writes:

I liked the clone, or should I say: KLONE better ... a bit less congested and more "open", very close though. Listening on my Tannoy System 600A speakers in my online suite. (Comments in Vintage66 2009)

²⁴ Gear Man Dude produced three other Klon videos. Two demonstrate the pedal using different guitars, while the third compares an early, gold-boxed Klon to a later, unpainted Klon. See Gear Man Dude 2009a, 2009b, and 2010.

²⁵ Forums such as FreeStompBoxes.org and DIYStompboxes.com regularly exchange and reverse engineer vintage, mass-produced and boutique effects. Members will share diagrams, modifications, and pool resources to purchase pedals to dissect.

Klon supporters countered that the Klon had more “subtle overtones,” was more “open sounding and rich,” and sounded more “buttery” (comments in Gear Mann Dude 2009c). Many would accept Gear Mann Dude’s appraisal, believing that the circuit could be accurately copied.



Figure 3.10: Gear Mann Dude’s Klon/Klone comparison video (2009c, screen capture by author)

Gear Mann Dude’s video is often used as evidence in concerns regarding the timbral properties of a cloned circuit.²⁶ Klone discourse typically focuses on the accuracy of the circuitry compared to Finnegan’s pedals. Owing to boutique practices of modifying existing circuits, many guitarists claim that subtle variations in circuitry result in distinct timbres. Dissidents use the video to show how any minor differences in components are negligible. Citing the video in the thread “New Klon Centaur Sometime in 2010,” one TGP member writes:

²⁶ Klone videos also stimulate discussions about the ethics of copying circuits by other boutique manufacturers, and the business practices of at-home builders who often become overwhelmed with orders. Gear Man Dude’s video appears in some of these threads, but is not directly referenced to these subjects.

If you put all the esoteric construction differences aside a good klon sounds practically identical to the original Klon. Its [sic] all smoke and mirrors. (Comments in Leftyman 2010)

Leftyman equates the supposedly exceptional circuit to an illusion, created by Finnegan and reinforced by Klon fans. Bill Finnegan frequently argues that most (if not all) klones fail to achieve the same tone as his pedal because of circuit discrepancies. In a TGP thread titled “Klones,” Finnegan writes:

It's certainly possible, and maybe even likely, that a purported clone in clean-boost mode could sound very similar to my original [Klon] set up the same way, but you should know that there are a good number of things the would-be cloner would have to do right - in terms of component selection, board layout, etc. - to truly realize the same results. (Comment in Therewillbehotcake 2011)

The details of component selection are often used to discredit the sound of a klon. Finnegan often claims that the Klon Centaur employs two diodes that are no longer available, and that only the exact measured component tolerances result in the Klon's unique sound. For those who believe in the superiority of the Klon over similar Klones, the specificities of the pedal's components evidenced the builder's efforts to maximize the circuit's potential. The specific circuit and component values were hallmarks of Finnegan's work, unachievable by any “kloner.” For some in the guitar community, Gear Mann Dude's video demonstrates that a klon is a viable, or even preferable alternative to the Klon. Others claim that the supposedly different circuitry is audibly inferior. The video bridged communities of do-it-yourself tinkerers, and consumers of boutique instruments.

3.4c Video - *PGS Smackdown - Klon Centaur Vs. Lovepedal Kalamazoo Overdrive*

Pro Guitar Shop's (PGS) Klon comparison was initially presented as an experiment in boutique tone (ProGuitarShopDemos 2010a). The company and their main demonstrator, Andy Martin, were early presences in the gear demonstration genre and are still widely respected. All of PGS's 1000 demos feature professionally recorded audio. Martin's encyclopedic knowledge of guitar riffs contextualizes pedals' tones amongst iconic guitar recorded timbres, accompanied by his radio-friendly voice-over commentary. The *PGS Smackdown – Klon Centaur vs. Lovepedal Kalamazoo Overdrive* video consists of a pseudo-scientific, “blind” comparison between the Klon and another popular boutique brand carried by the retailer (Figure 3.11). Both pedals are run at the same operating voltage and inserted into switchable “effects loops” capable of mechanically removing the effects from the signal chain. Martin then repeats the same riffs, switching back and forth between “Contender A” and “Contender B.” Halfway through the video, Martin switches from a Gibson Les Paul to a Fender Stratocaster, stating that “the pedals become even harder to tell apart” (ibid.). The “smackdown” concludes with Martin soliciting comments and opinions as to which pedal “won.”



Figure 3.11: Pro Guitar Shop’s Klon/Kalamazoo “Smackdown” (ProGuitarShopDemos 2010a, screen capture by author)

Pro Guitar Shop created the ideal conditions for the expression of a number of contradictory opinions, each competing as authoritative statements regarding tone. Despite a majority of viewers hearing the first pedal as “brighter” and second pedal as “fatter,” viewers did not conclusively identify each pedal. That same day (April 19, 2010) a thread entitled “Klon vs. Kalamazoo” was started by TGP member Whaiyun. Like the YouTube comments, TGPers debated as to which pedal was which, employing the same descriptors for either pedal. One TGP member claimed that Contender B had more treble frequencies (comments in Whaiyun 2010). Another felt that Contender A was the brighter pedal (*ibid.*). Other adjectives were introduced in oppositional binaries, such as “crunchier” vs. “creamier,” and “compressed” vs. “muscular” (*ibid.*). Few viewers from either site commented on the prices of the pedals, nor was the difference in circuitry presented as evidence as to the tonal qualities of one pedal over another. The blind comparison allowed YouTube viewers

and TGP forum members to freely comment on qualities of tone produced by two boutique pedals.

A second video revealing each pedal's identity was released the following day (ProGuitarShopDemos 2010b). With this follow-up video, the online retailer's motivations were framed as an important matter of concern. Martin begins the video reiterating the similarities between the two pedals before identifying the two pedals. Martin's concluding remarks invoked the difference in market pricing, and the availability of each pedal. He states:

So if you're not looking to spend 800 bucks on Ebay for a used Klon Centaur, I'd say the Kalamazoo is a pretty strong alternative with its \$200 price tag. (ibid.)

While YouTube viewers posted their own preferences and thanked Martin for the comparison, TGP members began to question the retailer's motivations. The supposedly genuine comparison of two boutique pedals now appeared to be an advertisement for the Kalamazoo. TGPer TheDroid was the first, writing:

I think this is the first time I've seen PGS would make a video featuring a pedal they don't sell. They're obviously trying to push the Kalamazoo as a Klon substitute while the Klon is out of production. Makes good business sense, I suppose. (Comments in Whaiyun 2010)

Another TGP member interjects a conspiratorial tone into the discussion by adding, "Sean [owner of Lovepedal] made a kclone, and Andy [Martin] is hyping it" (ibid.).

Other members quickly reject these conjectures, arguing that the Klon had been demystified by the test's conditions. User Jgm writes, "Most importantly - it shows how similar a lot of gear really is and if you buy with your ears instead of hype you

can find some great values and avoid wait lists and nonsense” (ibid.).²⁷ The identity of each pedal slowly became secondary to the debates over Pro Guitar Shop’s intentions in creating the “smackdown.”

Like the other comparisons, PGS’s critics argued why the video, and not viewers’ perceptions, failed in the experiment. Claims of invalidity centered on the methodology of the comparison, despite professionally recorded audio and Martin’s consistent playing. According to critics, setting both pedals to similar sounds failed to neither show the breadth of each pedal nor highlight either pedal’s strengths. Of the first point, user Pulse. writes:

Never played klon nor kalamazoo... it's not fair to compare 2 pedals, one with a legacy, highly sought after, out of production (for now) that was never available from your shop, that almost every one wants it [sic], with a new product, that's available from your shop.
And only on the settings that sound identical? Why not a demo of all the sounds that you can get from both pedals. (ibid.)

The video may have compared one aspect of both pedals, but for users like Pulse., a comprehensive review of each pedal would be more valuable to guitarists. TGPer Mobis8 commented on PGS’s failure to use the Klon for its recognized strengths, writing:

The giant elephant in the room here is the fact the Klon was not set in a way that it is best known for. A clean boost. I mean if you all would consider how this sounds... **THERE IS A PEDAL THAT SOUNDS LIKE THE KLON AT ITS WORST SETTING!!! SAVE YOUR MONEY AND BUY IT INSTEAD!!!!** (ibid.)

Similar complaints were voiced in Kingman and Gear Mann Dude’s comparisons: the Klon was simply not being used correctly. Other comparisons (including Kingman’s)

²⁷ Ironically, the Lovepedal brand is often critiqued for creating similar “hype” around limited edition pedals sold directly to guitarists, and the use of lengthy waitlists.

were embedded in the “Klon vs. Kalamazoo” TGP thread to both discredit PGS’s methodology and “dehype” the Klon Centaur. But none of the other demonstrations were criticized for their motivations. The company’s authority was overshadowed by economic incentive; geeky, paternalistic advice was dismissed as underhanded salesmanship. Despite creating a video showing a broad range of settings based on carefully controlled conditions, many challenge PGS’s pseudo-scientific comparison based on the motivations of its creators.²⁸

For each of the three videos above, a matter of concern was brought to light through its citations in TGP threads. Guitarists debated whether Kingman’s Bad Monkey comparison proved that the high prices and exclusivity of the Klon, and by extensive boutique pedals, were justified or merely “hype.” Gear Mann Dude’s Fancy Lad klon was used as both evidence of the Klon’s unique circuitry and the annulment of circuit myths. PGS’s blind comparison tested guitarists’ ability to identify and evaluate tone, but was rejected based on their motivations. The videos continue to be cited years after their launch; they remain durable, transportable and forceful documents of tone.

3.5 The Klon KTR and the Evolution of Boutique Gear

I conclude with video comparisons and demonstrations commissioned by Finnegan. In light of these videos, and the numerous concerns contained in Klon videos and TGP threads, I identify the continued evolution and dissemination of

²⁸ Other gear comparison videos created by retailers and manufacturers have drawn similar complaints. Pedal manufacturer Visual Sound produced a series of blind comparison videos, conducted in front of an audience. Critics of these videos claim that Visual Sound used their competitors’ pedals with less-than-flattering settings. See Visual Sound 2009 for an overdrive comparison involving the Klon Centaur.

boutique gear. Like other Klon demonstrations, these videos are used as objective proofs of tone. They address the intrinsic qualities of Klon pedals, and incite discussions over boutique pedals' extrinsic qualities. Increasingly, the intrinsic and extrinsic qualities deviate from boutique's origins. Finnegan's videos show how demonstrations are used to stabilize boutique ontology through comparisons in tone.

The most recent Klon comparison videos involve a yet-to-be released Klon pedal named the KTR. Three videos, commissioned by Finnegan and created by videographer Fisher and session guitarist Taylor Barefoot, were part of an extensive pedal comparison project involving 35 different overdrive pedals (see Barefoot and Fisher 2011a, 2011b, and 2011c).²⁹ At the onset of the 35 minute main video, entitled *Ultimate Overdrive Pedal Shootout & New Klon Premier*, Barefoot outlines the boutique guitar *and* recording equipment used (Barefoot and Fisher 2011c). Their methodology refined every aspect of the demonstration black box up to the viewer's listening system. Sixteen minutes into the video Barefoot announces a newly designed Klon pedal unavailable to the public: the KTR. The prototype, hidden in a white box, is used in the same manner as the other pedals in the comparison (Figure 3.12).³⁰ TGP members' interest focused on the new unit, as extracted KTR footage and the full length comparison were referenced in 32 different discussion threads, while no threads linked to the extracted gold Klon footage. The comparison successfully diverted Klon discussions away from clones and inflated Centaur prices towards the anticipated KTR. Anticipation grew, despite a previously passed release date of 2010 and few

²⁹ Fisher and Barefoot had previously collaborated on a comparison of 10 boutique delay pedals (2010).

³⁰ Barefoot states that the pedal's enclosure design was incomplete at the time of shooting.

updates from Finnegan. The pedal would make an appearance at the 2012 National Association of Music Merchants trade show in Anaheim, but few would hear the pedal in person.

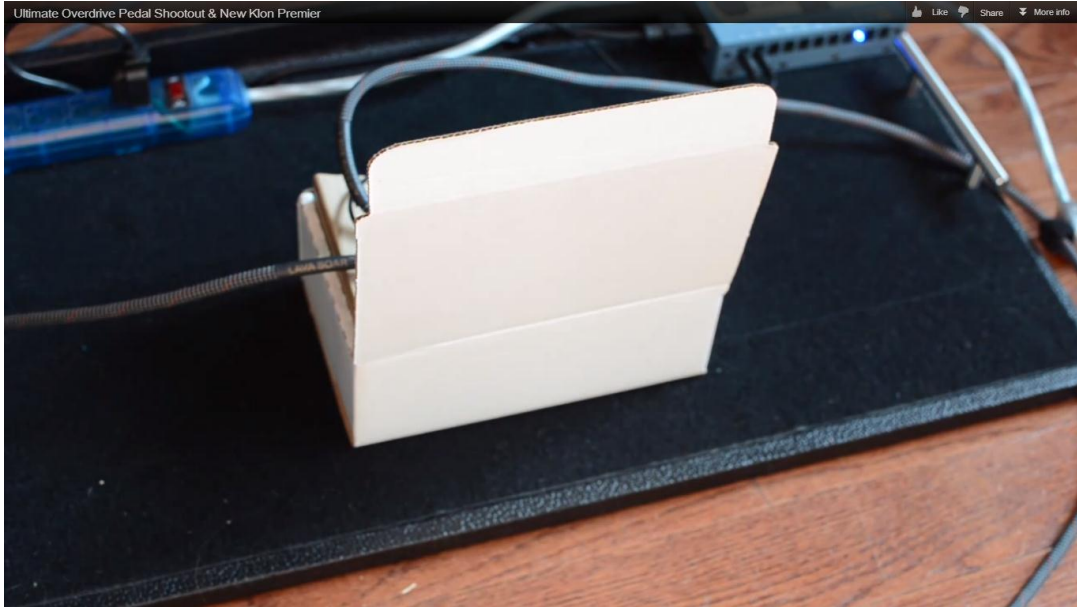


Figure 3.12: Barefoot and Fisher’s new Klon premier (2011a, screen capture by author)

In March 2012, Finnegan, Barefoot and Fisher would collaborate on another high-definition video comparing the gold, unpainted, and KTR versions of the Klon design (2012a). Using Barefoot’s high-end recording studio again, Finnegan explains his design choices and some of the KTR’s production delays.³¹ Finnegan would no longer assemble the KTR by hand, instead searching for a manufacturer that would meet his standards. The TGP discussions regarding the pedal’s tone largely concluded that the variations in timbre between the three pedals, though present, were too minimal to be heard in an ensemble context (see Hecube 2012). This clip generated more questions regarding its construction, the release date, and the price. Seven TGP

³¹ A majority of the video consists of Finnegan talking, as opposed to an exhaustive demonstration by Barefoot.

threads make reference to this video, all questioning if this was another “teaser” video, like the *Ultimate Overdrive* video from 2011. Fisher contributed to these discussions, offering few answers; another video would resolve these questions. Viewers at both YouTube and TGP were generally grateful for Fisher’s work, with only one person criticizing the recording quality. Boutique retailers These Go To 11 (Stockholm, Sweden), Guitar Sanctuary (Austin, Texas), and Harbor Music (Redondo Beach, California) all began waitlists, despite the unknown release date and price (Comfortableman 2012; Gearopenia 2012).

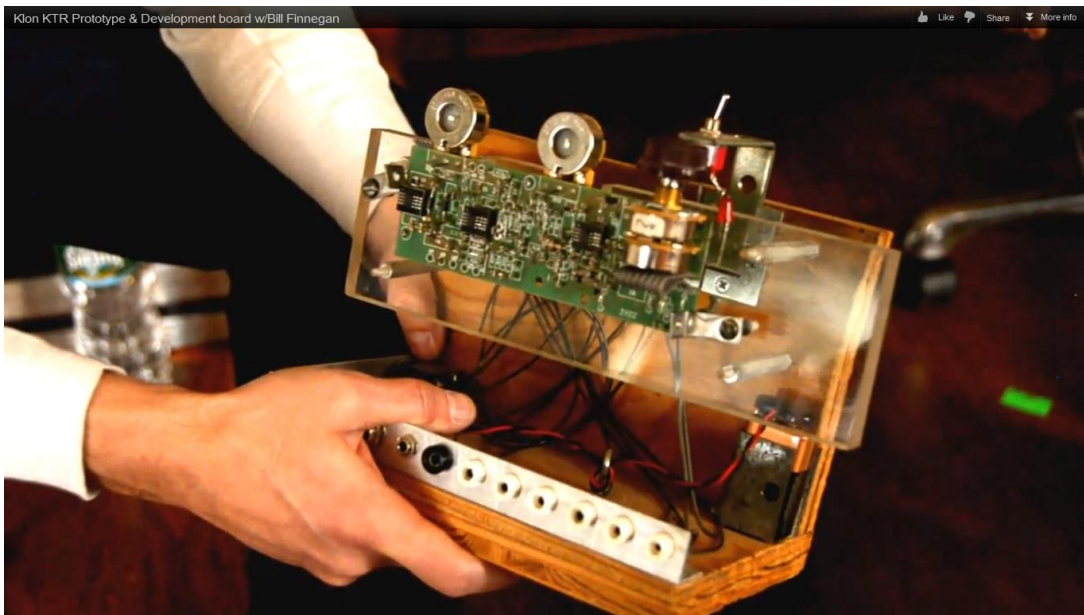


Figure 3.13: *Klon KTR Prototype and Development Board w/ Bill Finnegan* (Finnegan, Barefoot, and Fisher 2012b, screen capture by author)

Filmed the same day in March 2012, but not released to the public until September 25, 2012, the second video features Finnegan providing a view of the KTR circuit and explaining his use of a “testing jig” in experimenting with circuit components (Finnegan, Barefoot, and Fisher 2012b). The new KTR uses surface-mount technologies, once the hallmark of inferior pedals. Figure 3.13 shows the jig

that is featured in a majority of the 6 minute video; despite using surface-mount technology and a third-party manufacturer, the KTR was still a product of his hands. Finnegan explains that this video's delayed release allowed viewers to "listen to the ABC results with an open mind" (ibid.). Finnegan would frame this issue as the debated matters of concern. In the video he states:

Subsequently, once it becomes common knowledge that the KTR is made with surface mount components... If people start saying "Oh, it doesn't sound as good..." Well hopefully other people will weigh in and say, "Wait a minute, a while back when we were listening to the ABC results, a bunch of us agreed that they really did sound the same." (ibid.)

Finnegan frames the March 2012 video as the proof regarding his new design's similarity to earlier Klone circuit. Finnegan hoped to counter the long-held beliefs against surface-mount technology now employed in the KTR. Fisher and well-known boutique builders Analogman and Paul Cochrane would repeat similar statements in the TGP thread "Is the Klone KTR handwired?" (Erniestrings 2012). KTR supporters currently argue that modern surface-mounted components are functionally superior to their larger and inconsistent counterparts (Hecube 2012). Dissenting guitarists argued that differences were heard by viewers, attributable to the surface-mounted components. The concern over circuit detail, once used by Finnegan to discredit clones, was used against Finnegan. Undoubtedly, Finnegan predicted the controversies regarding the new assembly methods and the implied contradictions with his previous statements. He was well-aware of the matters of concern that swirled around his work, and preemptively tried to create a demonstration that provided the fact-of-tone as his evidence.

The string of videos created by Finnegan, Fisher, and Barefoot do more than reveal matters of concerns regarding circuits. Just as the Klon Centaur represented early boutique practices, the KTR serves as an example of the continuing evolution and dissemination of boutique gear. Intrinsicly and extrinsicly, the boutique denomination becomes increasingly vague. Intrinsicly, the Klon KTR defies many of the old characteristics of boutique equipment. It is no longer hand-wired; its components are selected in bulk instead of being individually tested by Finnegan. The extrinsic qualities of boutique equipment have changed as well. Finnegan no longer manufactures his work. The use of larger teams of builders and third-party manufacturers differentiates “professional” boutique companies from cottage-industry makers; the former might be hand-made, while the latter is home-made. Paul Cochrane, who had helped design the KTR’s bypass circuitry, even alluded to the possibility of overseas manufacturing (comments in Erniestrings 2012). Other boutique companies have already tested the ontology of “boutique,” selling through large retailers like Guitar Center and the catalog-based Musician’s Friend. Yet, the term “boutique” persists in guitar culture and is still used to denote an exclusive and refined experience. The KTR demonstrations were purposefully created to reinforce and stabilize the Klon’s boutique status and the KTR’s tone as a “fact.”

Conclusion

Gear demonstrations are one of the primary forms of documentation used to evaluate, celebrate, and criticize beliefs about equipment and tone. Guitarists use self-produced demonstrations and reference other online videos to support their positions. Like journal articles and scientific publications, demonstrations may be used as

evidence in a number of ways. They may support the author's position, or be used as counter-evidence against the author. Demonstrations are critiqued for their methodology and the underlying motivations of their creators. These demonstrations collectively form a knowledge base that is deployed in discourse regarding matters of concern. YouTube gear demonstrations are networked to discussion threads negotiating matters of technology, commerce, and authority. When viewed as nodes in a complex network, Klone demonstrations and comparisons show how these beliefs are presented, negotiated and disproven in online guitar discourse. The same "fact" lies at the heart of these debates: the equipment's influence on a guitarist's tone. As revealed by the thousands of comments made on YouTube and on TGP, boutique equipment still holds the promise of the "ultimate tone." However, as seen in Jaffe's video, this fact can be overturned and questioned. I believe that the only fact lies in the continued dissemination and evolution of musical technology through musical practice and communal discourse, regardless of the nomenclature given to the music or the equipment. No longer confined to professional recorded albums and songs, this fact is performed by amateurs, hobbyists, retail chains, and professional guitarists in gear demonstrations.

Appendix 3.A

Table 3.A.1: TheGearPage.net discussion threads referencing Klon videos

TheGearPage.net discussion thread title	Total discussion posts	Total video citations	Videos Cited
Klon Centaur Clone	314	4, 5	Gear Mann Dude 2009c, ProGuitarShopDemos 2010a
Klon: when the hell is Bill going to work again	134	2, 2	Gear Mann Dude 2009c, ProGuitarShopDemos 2010a
Klon vs. Kalamazoo	164	66, 6	ProGuitarshopDemos 2010a, Kingman 2009
Klon Klones	9	1, 1	Gear Mann Dude 2009c, Kingman 2009
Has Anyone REALLY Cloned a Klone?	52	7	Gear Mann Dude 2009c
Klon vs. Klone Gearmandude vid	112	5	Gear Mann Dude 2009c
New Klone Centaur Sometime in 2010	992	2	Gear Mann Dude 2009c
Klone	212	2	Gear Mann Dude 2009c
Attack of the Klones	316	1	Gear Mann Dude 2009c
Why does everyone hate the horse Klone	46	1	Gear Mann Dude 2009c
Anyone know where I can find this Klone Klone	41	1	Gear Mann Dude 2009c
Klone?	27	1	Gear Mann Dude 2009c
Klone Clone	4	1	Gear Mann Dude 2009c
Amazing Klone vid.	116	72	Kingman 2009
Poor Man's Klone	38	7	Kingman 2009
Analogman Kot v4 and the Klone... similar?	29	5	Kingman 2009
Which Klone to Buy?	50	3	Kingman 2009
Klone Centaur thinking about ordering	42	3	Kingman 2009
Klone	96	1	Kingman 2009
Admit it, you own a Klone because of TGP	71	2	Kingman 2009
Could it be? Bad Monkey is bad ass!!!	68	1	Kingman 2009
Klone Siberia Hacked? or?	62	1	Kingman 2009

Table 3.A.1 cont.

TheGearPage.net discussion thread title	Total discussion posts	Total video citations	Videos Cited
Zachary Guitars Overdrive – I’m probably late on this thing	21	1	Kingman 2009
I Sold My Klon Because I like the xxxxx Better	199	36	ProGuitarshopDemos 2010a
Of the Klon Line – which is the “best”	31	10	ProGuitarshopDemos 2010a
Klon vs Kalamazoo.	21	5	ProGuitarshopDemos 2010a
Billy Duffy Talking about Lovededal & Klon	44	4	ProGuitarshopDemos 2010a
Reasonably priced Klon for sale	34	3	ProGuitarshopDemos 2010a
Klon Clones – JHS Klon Clone or Kalamazoo which should I get?	15	3	ProGuitarshopDemos 2010a
Klon sound. How to get from 2 effects pedals??	12	3	ProGuitarshopDemos 2010a
Lovededal Kalamazoo who’s taking the plunge?	195	2	ProGuitarshopDemos 2010a
Are plexi clones better than plexi reissue	777	1	ProGuitarshopDemos 2010a
The Klon Centaur is the Led Zeppelin of pedals	53	1	ProGuitarshopDemos 2010a
Lovededal Kalamazoo	33	1	ProGuitarshopDemos 2010a
For the rest of us who can’t afford a Klon	16	1	ProGuitarshopDemos 2010a
Can the Kalamazoo nail John Mayer – solo type tones	10	1	ProGuitarshopDemos 2010a

Gathering Communities: Guitar-Vloggers and YouTube Heroes

Among the guitar-based videos that populate YouTube, a small group of individuals regularly appear in the search results and related video suggestions offered by the site.¹ As I read the comments in these YouTube guitarists' videos, I see the same type of enthusiasm that I held for my own guitar role-models and shared with other guitarists. These are not the “guitar heroes” and rock music celebrities that are featured in the popular press. Instead, a contingency of guitar-vloggers (i.e., guitarists blogging through streaming video) have built sizeable fanbases through lessons and gear demonstrations posted to YouTube. Like “traditional” guitar heroes, YouTube heroes are known for an identifiable and stylized public persona that differentiates them from thousands of other equally skilled guitarists. The manner in which they present songs or demonstrate the capabilities of a piece of technology bring guitarists together. I argue that traditional and YouTube-based guitar celebrities serve a valuable, associative function within networks of guitar-based activities that surpasses the utility of their lessons and reviews; these heroes facilitate a broader sense of guitar society.

In order to define concepts like “community,” “society,” and “culture,” an Actor-Network analysis looks for connections between locales. My primary interest is in identifying the associating and translating *mediators* that construct a sense of community and analyze how these mediators function in online environments.

Mediators perform the act of translation, connecting actors to each other and locales to

¹ Because of my search previous search queries, my user interface is populated with “personalized” suggestions. Cookies and user-personalized suggestions shape my user experience through an interface-imposed constraint. Scholarly investigations of online practice translate to and echo back from internet technologies.

panoramas of activity (Latour 2005: 187-190). Physical and digital media, the documents shared between localities, perform much of this mediating work by connecting distant locales into perceived communities. Similarly, “brick and mortar” instrument stores and repair centers serve as geographical *points of passage* between hobbyists, professionals, manufacturers, and retailers. The internet forums and YouTube comments described throughout this study also bridge a variety of practices, opinions and beliefs, and miles of geographical distance to bind individuals into self-perceived groups. Lastly, shared standards, normalized behavior, and roles circulating within well-defined networks mediate locales into co-existence. Referred to as *quasi-standards* by Latour, their ontological nature distinguishes this last type of mediator: activities and agencies produce their meaning and existence (2005: 229). Mediators prevent a sense of shared guitar culture from destabilizing, while extending agencies outwards into new locales. These mediators, frequently bound under the umbrella term “social” (e.g., social roles, social behavior, etc.), help people conceive of the collective nature of the world and assemble groups of people into networks of activity.

Guitar-vloggers extend the panorama of guitar culture into the digital realm through “hero-esque” associations, behaviors and performances. This chapter explores the guitar hero identity and its contemporary manifestations in five ways. First I present examples of the identity as presented in popular and academic literature. In both types of discourse, heroes are an idealization of what guitarists do and aspire to become. Second, I review popular and scholarly accounts of guitar heroes. Whereas the traditional guitar hero identity functions through broadcast media and academic literature, guitar-vloggers construct their own methodologies of promotion and

theories about viewership. Third, I identify the translation of musical materials with the guitar-vloggers' public personas by focusing on arrangements and improvisations of "covers" - music previously composed or written by others. Heroes use covers to translate and situate their performances within an informal lineage of performance practice and music making. Fourth, I show the mediation performed by endorsements and signature gear, connecting viewers by enrolling their participation. Fifth and last, I consider the role of aesthetics in the appreciation and celebration of YouTube heroes. These five dimensions of past and present guitar heroes reveal developments in the hero identity owing to online activities and persona.

YouTube guitarists use the hero identity to create a sense of community amongst thousands of viewers. The methods of viewer outreach, use of musical materials, and endorsement of equipment provide the means for the hero identity to bridge distant locales into a perceived, but contingent, whole. The assemblages of viewers and fans may disperse as quickly as they gather around a noted musician; the aesthetic values evolve despite the artist's work. The notion of community I employ does not pinpoint a stable demographic of viewership, or even a self-identifying grouping of guitarists. Such notions rely on "an old public, the result of preceding equations" (Hennion 1989: 412). The YouTube heroes described here succeed because of efforts and means in assembling and continually refreshing their fanbase; their work is bound under the heading of guitar hero.

4.1 The Guitar Hero in Popular Media and Academic Literature

To understand how the guitar hero identity mediates localities into panoramas, I present examples of the hero identity in popular media and academic studies of

guitar culture. Iconic songs and virtuosic performances were inscribed into nationally and internationally distributed recordings. Among off-line media, video documentaries, live concert footage, MTV and music videos provided the visual evidence of the guitar hero's ability and crafted persona. Instructional books and materials implicitly celebrated guitar heroes' techniques and music. Magazine articles, reviews, and advertisements reinforced the hero persona and defined the identity outside of the performance venue. Popular video games like *Guitar Hero* and *Rock Band* continue these processes, reinforcing a guitar-based canon, emphasizing virtuosity in musical and gaming performance, and creating an environment in which the game player and the virtual musician can engage an audience through visual theatrics (Miller 2012: 119-123). In recent years, many broadcast-media guitarists have made forays into website and blog creation, as well as streaming video interviews. Academic literature has similarly pulled the guitar hero identity into realm of popular music studies. The personas that populate these documents are commonly used to characterize the state of guitar culture, encompassing the machinations of the music industry and the desires and goals of non-professional guitarists. Regardless of whether these traditional representations are created by corporate interests or academic inquiry, they delineate guitarists' agencies and activities.

Davis Guggenheim's 2009 documentary *It Might Get Loud* uses the idealized guitar hero identity to compare the work of guitarists Jimmy Page (Led Zeppelin), David "The Edge" Evans (U2), and Jack White (White Stripes, Raconteurs) (Figure

4.1).² Like most traditional media accounts of famous musicians, the documentary provides celebratory narratives of the three guitarists' journeys through popular music making. These narratives frame the guitarists' relationships to the instrument, music composition, their audience, and a broader history of guitar playing. Each guitarist manipulates guitar equipment in idiosyncratic ways, ranging from Jack White assembling a one string "slide guitar" to The Edge experimenting with his multi-component guitar rig. Page discusses the recording of *Led Zeppelin IV* while roaming the English manor where the album was recorded, and later teaches The Edge and White how to play the Led Zeppelin song "In My Time of Dying." All three guitarists situate themselves within a history of other guitarists, discussing influences they absorbed into their own music and public personas: Page reminisces about learning Link Wray's 1958 instrumental "Rumble," while White plays a recording of Son House's "Grinnin' In Your Face."³ The documentary then shows how the guitarists aim to translate these influences to their own styles and abilities. Each guitarist's stage presence is shown through concert footage, including Page's use of a violin bow on the guitar, The Edge playing for an audience of tens-of-thousands, and White's frenetic performance using color-coordinated equipment. White, the guitar "anti-hero," uses the documentary to craft his own guitar-related story by rejecting stereotypical guitar conventions and narratives.⁴ Most importantly, each guitarist

² Subsequent press and reviews commonly frame the documentary as a meeting of guitar heroes (Jenkins 2009; Puig 2009; Miller 2009; Gleiberman 2009).

³ Interestingly, both guitarists play these songs from vinyl records, suggesting that the only way to truly experience these artists is through most direct source instead of a remastered CD or digital audio file. The record player represents the authenticity and historicity of the lineage they continue.

⁴ As a guitar "anti-hero" White rejects technical virtuosity for a more aggressive, blues and punk influenced technique. He is usually associated with "pawnshop" instruments, supposedly eschewing

comments on the achievements of their documentary cohorts: they have each achieved fame for what they do with the guitar. Page is widely recognized as a guitar hero, and is considered such by The Edge and White. Page in turn describes The Edge as a sonic innovator whose music has become part of the rock and roll canon. The film does not seek revelations about the trio, but instead relies on traditional narratives about famed guitarists shared with other guitarists and rock music fans.



Figure 4.1: *It Might Get Loud* publicity photo featuring Jack White, David “The Edge” Evans, and Jimmy Page (Eric Lee/Sony Pictures)

The moniker of “guitar hero,” however, is not necessarily used for any celebrity musician who plays guitar, nor any skilled guitarist who achieves a modest amount of notoriety. For some viewers of *It Might Get Loud*, Guggenheim’s choices were either misguided attempts at broadening the documentary’s audience, or at worse were ignorant of what made a great guitarist. Participants in guitar forums like *The*

modern gear (though this is false). In the opening scene White states, “Who says you need a guitar?” These denials of a guitar hero’s technique and use of gear are keen manipulations of typical guitar hero attributes.

Gear Page and movie-interest sites like *Independent Movie Database* (IMDB.com) question Guggenheim's choices of The Edge and White, and suggested a stronger cast for an imaginary sequel. Critics essentially argue that The Edge's and White's use of equipment, compositional styles, and persona did not translate to existing lineages within rock, and could not extend guitar practices into wider panoramas. While The Edge has become known for a complex use of effects, detractors claim the technology hides a lack of ability. White receives the brunt of the criticisms, owing to his iconoclastic statements and a perceived inauthenticity. Disapproving viewers reject framing them as significant guitarists of the same stature as Page; The Edge and White are not considered guitar heroes.

Academic accounts of guitar culture also reinforce the individualization and valorization of guitar players, sometimes in spite of their identification and critiques of underlying economic and social structures supporting the hero identity. Popular music scholars like Waksman, Dawe, and Walser canonize the performances, appearances, and biographies of Jimi Hendrix, Eric Clapton, and Jimmy Page to the same degree as documentaries like *It Might Get Loud*. While these accounts approach their subject material with a critical eye regarding race, gender, and various hegemonic forces of the Western music industry, scholars of guitar cultures and popular music predominantly use famous guitarists as their source material. These scholars are familiar with the different modes of performance and important recordings widely understood as the pinnacle of rock guitar, based on their own experiences as guitarists. Their insights encompass academic perspectives and guitarists' knowledge. Academic guitar literature employs the guitar hero identity as a model of behavior, and in doing

so continues to position the guitar hero identity as a primary mediator between sites of guitar activity.

Waksman recognizes the social value of the hero persona as a mediating force. He concludes *Instruments of Desire* by critiquing the hierarchical rankings among guitarists, as seen in lists of the “Greatest Guitarists” produced by *Musician* and *Guitar Player* magazines. The lists and rankings of guitar heroes suggest which particular configurations of normalized practice are valued, only to reorder and revise history with the next list of “Greatest Guitarists.” Waksman states that such lists “are a key part of the way that artistic and cultural products move from being isolated objects to being socially embedded works” (ibid.: 279). However, I suggest the “artistic and cultural products” to which he refers are often the guitarists translated into the hero identity, and are not necessarily guitarists’ musical works. While these lists refer to recordings and notable performances as part of the evaluated criteria, such rankings make the idealized personalities durable amongst a wider populace. The guitar hero identity mediates communities of guitarists *and* non-guitarists.

Kevin Dawe’s *The New Guitarscape in Critical Theory, Cultural Practice and Musical Performance* (2010) also addresses the listings of popular guitarists in magazines like *Rolling Stone*, and with it the notion of guitar heroes and “guitar gods.” Using the “-scape” metaphor that runs throughout the book, he characterizes those listed in *Rolling Stone*’s list of “New School of Guitar Gods” as “landmarks in a musical ‘map’ of the contemporary guitar world” (ibid.: 161). He identifies how the magazine constructs a potential canon and lineage of contemporary heroes. The *Rolling Stone* article describes guitarists Kaki King, Radiohead’s Ed O’Brien and

Jonny Greenwood, and Jack White in relation to Van Halen and Bootsy Collins, Pink Floyd, and John Lee Hooker and the Doors, respectfully. He writes:

Some are more able than others challenge the guitar canon, and some are part of it, but all are able to demonstrate performance ability at the highest level as judged not just by me but through an emerging consensus of opinion as observed in a range of sources. (ibid.: 34)

His guitar-scape situates other twenty-first century guitarists within the larger history of guitar playing. Dawe avoids using the terms “guitar hero” or “guitar god” to describe the guitarists he describes throughout his book, yet they share the same mediating function as those considered heroes. He associates these terms as part of the limited purview of Western guitar practice that seemingly ignores the rest of the world (ibid.: 162). His guitar-scape includes female guitarists, the LGBT guitar community, and non-Western guitarists who have gained attention through online sites. Dawe populates his map of guitar culture with numerous heroes, but he hopes to include a broader population than is typically represented through popular media.

The guitar hero identity is thoroughly entrenched in any discussion of guitar culture.⁵ Dawe, Waksman and other scholars of guitar culture approach this subject matter as fans of guitar, fully aware of the different norms and practices between various communities of guitar practice. In the conclusion of *Instruments of Desire*, Waksman includes his own “personal investment” in the instrument as the source of his academic inquiry (1999: 279-280). In an extended footnote, Dawe lists the scholars who created the foothold on which his study rests, noting how almost all are deeply-invested performers (2010: 19). Scholars of guitar practice reference the magazines

⁵ My study of guitar culture has also employed the same myths and beliefs often repeated in popular magazines. Part of my challenge in writing this work is recognizing the assumptions that color my outlook on guitar pedagogy, boutique gear, and famed guitarists.

Rolling Stone, *Vintage Guitar*, and *Guitar Player* as data sources. Because of this, the same guitarists reappear across popular and academic accounts; their personal narratives are repeated and maintained. Robert Walser's 1993 book *Running with the Devil* largely draws on the same documents and narratives that create a pantheon of guitarists and other heavy metal musicians, as noted by Deborah Wong's review of the book (1998). Such academic accounts of guitar culture rely on the documents (including sound recordings, video, and popular press) that reinforce the guitar hero persona and its agencies. The guitar hero identity serves as a vital mediating link between communities of musical practice and communities of scholarly inquiry.

A significant methodological problem arises because of the use of popular press: myths about guitar heroes survive despite critical methodologies. Increasingly, non-academic investigations unearth the fallacies that passed between popular and academic literature. A comparison of fan-generated threads like "The Franky – A Pictorial History" (<http://www.vhlinks.com/vbforums/franky-pictorial-history-t51924.html>, accessed December 28, 2012) to Waksman's 2001 and 2004 writings on Eddie Van Halen's modified guitars reveals how much of the scholar's data comes from the guitarist's often misleading and contradictory interviews.⁶ Waksman's analysis, though insightful, repeats the same myths surrounding one of the greatest "guitar heroes." These documents, whether popular or academic, continue the legacy of the specific guitarists they cover, and more importantly reinforce the notion of the guitar hero identity and its attendant agencies.

⁶ Eddie Van Halen admitted to such fabrications about his equipment in an interview for *Esquire Magazine* (Curcurito 2012).

The transfer to online media does not necessarily cause a reconfiguration of the guitar hero identity, particularly when the new media is created by the same types of producers. The website GuitarTV.com, co-founded by noted guitarist Steve Vai, provides the same type of interview format seen in print media. The website's "Periodic Table of Guitarists" consists of web links to the equipment, biographies, downloadable audio, and concert schedules of two hundred different guitarists (Figure 4.2).⁷



Figure 4.2: GuitarTV's "Periodic Table of Guitarists" (<http://guitartv.com/artists/>, accessed November 5, 2012, screen capture by author)

This particular website reinforces, but does not reconfigure, the underlying characteristics of a guitar hero. As suggested by Philip Agre, broadcast media and internet media did not result in the total political, social, or economic upheaval that

⁷ Like many lists of great guitarists, the list consists primarily of men who play rock and heavy metal guitar. As is typical of such lists, a few notable women guitarists are represented in addition to jazz and blues predecessors of the rock guitar continuum.

media scholars envisioned in the 1990s (1998: 95-96).⁸ Publications like *Premier Guitar* gain viewership through their streaming-video interviews with popular rock guitarists. Their regularly featured “Rig Rundowns” explore famous guitarists’ equipment to the finest detail, including picks and strings used. The details of guitarists’ equipment are more than fan curiosity or attempts at spinning endorsements into further gear sales; these rig overviews are models of how touring and professional guitarists use their equipment and how they characterize technology the experience of guitar technologies. Thus, the products of broadcast media translate to the fetishization of tone described in Chapter 3. The applications of broadcast methodology to online technologies continue the processes of idolization and idealization.

Based on this use and reinforcement of the guitar hero paradigm, popular and academic media use the identity as a quasi-standard to connect guitarist and audience. Despite two arguably different audiences, the fans of rock guitar and scholars of modern guitar practices use similar behaviors, narratives, and personas to idealize what guitarists do and identify who they emulate and aspire to surpass. Considering these documents within an ANT framework, numerous mediators stand between guitarists and their audiences: writers (whether popular or academic), publishers and editors, media distribution chains, and the media on which idealized personas are inscribed. ANT theorist Hennion’s concept of the music producer-as-mediator (1989) applies the to popular and academic mediation of guitar celebrities. He writes:

⁸ Agre’s insight into possible genres of new media considers the economic, political and communal ramifications of emerging media practices, offering more questions than answers. While his analysis centers on the static webpages characteristic of the 1990s, these same issues remain in the era of consumer-generated, “Web 2.0” content.

Producers put the obstacle of their bodies between the singers and the public's desire, and this obstacle concentrates on them all the forces that were going in every direction, as long as they did not run up against the localized resistance of a flesh-and-blood listener. (ibid.: 412)

Popular and academic media stand between the guitarist and his or her audience and fans. Ironically, the guitar hero identity succeeds because of the separation between guitarists and their fans. Despite using similar equipment, guitarists like Page, The Edge, and White are not believed to shop in the same locales as other guitarists (e.g., they get their equipment directly from the manufacturer or dealer, or are given special and secluded access while shopping). Heroes receive gear for free and participate in its design, while the guitar population at large “consumes” equipment. Most guitar heroes do not publicly participate in communal resources like online forums; at most they assume pseudonyms to avoid detection or “lurk” undetected.⁹ Popular and academic press and carefully produced media represent the celebrated musician to an audience. The layers of mediation result in a perceived distance between the guitar hero and listener. Turning to the online practices, I show how well-known guitar-vloggers overcome this distance through elements of the idealized guitar hero persona.

4.2 Media Methodology and Theories of Viewership: Building a Whirlpool

At this point in guitar-media history, the guitar hero identity has itself become the filter through which guitarists are conceived by audiences, and conversely, how guitarists present themselves and are presented by the music industry to the public.

Internet technologies offer amateurs and online professionals the ability to extend their

⁹ Occasionally, threads on The Gear Page question which guitar celebrities may participate on the site. Moderators often respond that well-known guitarists are members but request anonymity. Similarly, threads critical of a guitarist are often “locked,” under the pretense that the guitarist in question may be a forum participant.

agencies through the hero quasi-standard. The idealized role still functions in this new environment, and online guitar celebrities dialogue with their audience under the guise of direct exchange. Contemporary heroes do not emerge only from the careful machinations of the recording industry, but also come from the masses of professional and semi-professional guitarists who craft their own media. Musicologist Steve Jones addresses industry constructed methodologies, writing:

The industry has *its own vernacular accounts* [original emphasis] of fan, market, and audience, and it will be useful to attend to the manner in which industry participants and discourse reveal their understanding of industrial practice. (2000: 226)

In the examples I present, the “industry” consists of individuals and small teams, not large companies. The practices used by guitar-vloggers speak to their understanding of online media consumption and to the nature of guitar hero-like celebrity. Creating and maintaining their specialized personas, these guitarists work to position themselves as the next generation of influential media producers.

YouTube instructor Marty Schwartz, featured in Chapter 2, represents the media practices of the online guitar hero. Like the vloggers studied by Burgess and Green (2009), Schwartz engages with his viewers in a pseudo-dialogue, and in doing so crafts an online persona that is equal parts educator, internet entrepreneur, and guitar hero. Schwartz’s persona owes to a minimally-mediated interaction with his students and viewers. Schwartz’ activities reveal his own theories about the nature of online consumption, and show how an idealized persona can traverse distances to create a sense of a unified viewership and guitar-centric community.

Schwartz may be the most famous guitar teacher in the world at this time. Designated a YouTube “guru,” a majority of his instructional videos receive over thirty thousand views within one week of being uploaded.¹⁰ As of January 2013, his primary YouTube channel, Martyzsongs, has approximately 506,874 subscribers and has received over two-hundred twenty million views.¹¹ Schwartz was once ranked as the twenty-third highest-viewed user in all of YouTube’s history.¹² While Martyzsongs is his most popular channel, Schwartz’ other video channels (including the MrGjams channel discussed in Chapter 2) add to these impressive numbers.¹³ His popularity on YouTube is echoed in other online media. Schwartz estimates his email contact lists exceeds half-a-million addresses, and that he has close to ninety-thousand Facebook “friends” and subscribers between his GuitarJamz and personal pages (personal communication). This success largely owes to the ways he has navigated social networks, whether face-to-face or online.

A gradual evolution in video content and quality demonstrates Schwartz’ negotiations with online media. His first nine videos, produced in 2008 and uploaded to the Martyfs78 channel, consist of demonstrations and solo guitar covers of popular songs rather than instructional videos. Often, they were shot with no emphasis on video production or interaction. The sunlight from nearby windows frequently reduces

¹⁰ The “guru” designation holds its own set of account privileges. “A Guru account is an account type which you might want to select if you enjoy making videos which teach people a certain skill or explain how to do something. Like the other special account types, Guru accounts have extended performer information profiles” (YouTube 2012b).

¹¹ To provide a further sense of Schwartz’ popularity, these numbers represent a 15% increase in subscribers and 19% increase in total views over a six month period.

¹² This rank is according to a YouTube published listing of top uploaders, channels, and videos that is no longer publicly available.

¹³ I’ve discovered three other channels besides Martyzsongs and MrGjams, and one viewer believes that Schwartz has 17 active YouTube channels (comments in BobbyCrispy2008).

the overall image quality. Schwartz then added content from other musical pursuits, including live performances. In November of 2008 he began to produce instructional videos, focusing on blues soloing techniques. Over the course of a year, Schwartz continued to add to his online lessons by providing backing tracks: prerecorded material over which a viewer could improvise. These videos have no name brand attached to them and are titled only by the lesson's materials.

Uploaded November 22, 2008, a Next Level Guitar lesson video (RockonGoodPeople 2008) positioned Schwartz as one of the most successful YouTube celebrities. Founded by instructor David Taub and his business partner Tim Gilberg, Next Level Guitar was one of the first YouTube-based lesson brands. As both guitarists knew each other and lived close by, Taub approached Schwartz in the hopes of having different personalities present material, increasing Next Level Guitar's presence on YouTube and allowing Taub to focus on video production and DVD material.¹⁴ Schwartz's Next Level Guitar video, entitled "Acoustic Blues guitar lesson spice up that bluesy playing," was a success for Schwartz, Taub, and Gilberg. The video has since accumulated over 7 million views since December of 2012, and is often the top search result for "guitar lesson" queries on YouTube.

Gilberg subsequently approached Schwartz about a different brand exclusively featuring Schwartz' lessons and personality. While the GuitarJamz.com business model remained the same as Next Level Guitar, directing viewers from free YouTube lessons to a paid DVD lesson site, Schwartz' developing online persona differentiated

¹⁴ Kiri Miller's 2012 study of online lessons focuses on Taub and Gilberg's work. Miller also notes Taub's use of other instructors, but only mentions the female instructors (2012: 173).

the two brands. Schwartz produced DVD materials while also creating his own lesson materials for YouTube. The YouTube lessons were often filmed during face-to-face lessons with students, who are seen in the background. Rather than adhering to the organized, formal approach used by Taub, Schwartz covered questions and topics that came up in private lessons, questions also relevant to online lesson users but frequently unaddressed in YouTube lessons. While Taub's structures lessons around pedagogical interactions, Schwartz dialogues with his audience with an informal tone.



Figure 4.3: Marty Schwartz' home studio (photo by author)

Today, Schwartz's multiple YouTube channels, including MrGjams (discussed in Chapter 2), Martyfs74, Guitarjamzdotcom, and Martyzsongs feature new submissions every week. He adopted the production methods employed by Taub, using professional video and recording equipment to craft a repeatable lesson structure

that was in the service of mass production. Located in a 6'x8' room built into his home garage, his studio now consists of a backdrop with a couple of carefully positioned pieces of guitar gear, a tripod mounted video camera and two box lights directed at the backdrop, and a single desktop computer (Figure 4.3). Cut-shots allow him to quickly produce videos without having to rehearse material as one long take, and enable close-up views of his hands for the bulk of the video. This simplicity in videography allows him to create, compile and upload a video in less than three hours. Most importantly, fewer mediators stand between Schwartz and his audience because he plans, scripts, films, edits, and uploads the videos by himself.

Every video emphasizes the semi-direct connections between Schwartz and his viewers. Schwartz begins with a short performance the song, over which a superimposed graphic for the Guitarjamz.com website fills the screen. After playing the song for ten to twenty seconds, the video cuts to him greeting his viewers in a casual manner, such as his typical: "Hey! What's up you guys. Marty Schwartz here, Guitarjamz dot com."¹⁵ He often follows his introduction by noting an interaction or observation with his audience. In the video for Taylor Swift's "Mean," he discusses the use of a capo (a mechanical device for transposing chord shapes on a guitar), and how he has read the debates on forums and in video comments about using the device. Schwartz ties this anecdote to a link that appears in the video information text located below the playback window, which leads the viewer to the Guitarjamz.com website. Most videos then cut to a close up shot of the guitar and his hands as he presents a

¹⁵ This use of a scripted sign-on and sign-off also mirror the structure used by Taub. While they differ in instructional tone, they utilize the same production methods.

song. The end of each video cuts back to a full view of Schwartz, who thanks his viewers, directs them again to the aforementioned website link, and closes with the Guitarjamz.com logo.

The consistent video structure allows Schwartz to produce at least four videos per week for the Guitarjamzdotcom channel alone. Schwartz believes that a constant output of video materials keeps his audience engaged with his online persona (personal communication). As seen in Figure 4.4, the viewership patterns of his videos demonstrate a near immediate impact. Within ten days of uploading the video, marked by the letter “H,” the video received nearly fifty thousand views. This logarithmic viewership pattern is most comparable to viral videos (Boynton 2009). YouTube statistics, however, reveal that he has established a consistent viewership interested in his persona, and not necessarily the lesson content. At least a quarter of the views are attributed to Martyzsongs subscribers and viewers searching for his lessons.

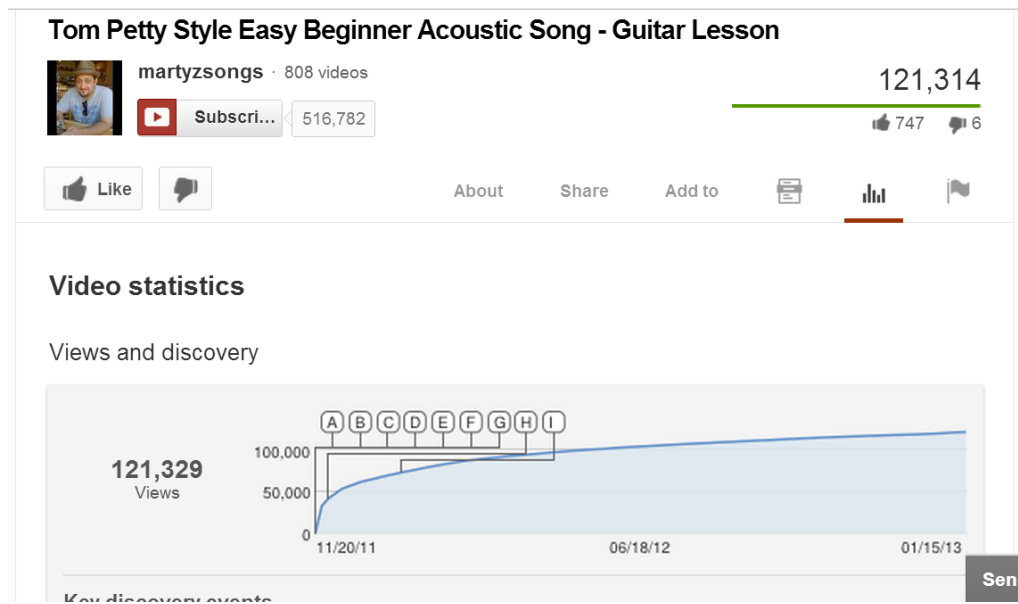


Figure 4.4: Martyzsongs viewership statistics (2011g, accessed January 18, 2013, screen capture by author)

Schwartz directs some YouTube and Facebook submissions to maintaining his persona through a vlog-style interaction. He discusses some of his latest creative projects, which are also made available through digital music distribution channels like iTunes. He does not expect these projects to generate any significant income, but instead support his brand. Other competition and promotional videos, like a hat giveaway based on email list subscription, do contain lesson materials (Martyzsongs 2011e). His Facebook posts regularly feature details of his touring or traveling activities. A 2012 tour with American Idol contestant Elliot Yamin resulted in a number of “behind-the-scenes” photos and videos (Schwartz 2012). These videos often achieve the same viewership numbers as his lesson videos, and allow Schwartz to vary his video content.

Online media allows for Schwartz to interact with his audience, further differentiating his persona from the highly mediated personas of traditional media. Many of the lesson videos respond to his viewers’ requests that are culled from emails, Facebook posts, and YouTube video comments. Representing a significant percentage of his viewers comments, requests provide Schwartz with a constantly evolving lesson repertoire. They also provide an opportunity for his viewership to interact with the instructor, providing a vital means of associating with the instructor. Fielding requests and covering a vast repertoire serves his online persona: that of a skilled professional who participates in online discourse. Schwartz devotes an equal number of hours to selectively responding to his viewers’ comments, to Facebook accounts for himself and GuitarJamz.com, to the GuitarJamz.com discussion forum, and to personal emails. The comments for most of his YouTube videos regularly exceed one hundred remarks,

including general thanks and appreciation from fans, questions about technique, and the aforementioned requests. Their expressions of gratitude sometimes take the form of student-made videos demonstrating songs they have learned from him, akin to the personal gifts fans often give to their favored celebrities. Positive comments on the *Guitar Jamz* Facebook page are repurposed as “testimonials” on the business’ website. Schwartz’ responses primarily take the form of student encouragement (e.g., “Keep practicing, you’ll get it soon,” and “Wow, Good job, keep it up bro!!”), which subsequently develop their own Facebook “Likes.”¹⁶ Schwartz devotes this mode of interaction to reinforcing his persona as a supportive and “laid-back” teacher.

The lack of mediation between Schwartz and his audience does not mean that his persona is not carefully controlled and crafted. Schwartz specifically limits the content of his communications. He rarely responds to requests for clarification of lesson materials. Rather than focus on the details of one lesson, Schwartz prefers to respond with another video. Negative comments, usually in regards to the song taught or to other viewers, are never addressed by Schwartz himself, and instead are self-policed by other viewers. His viewers rebuffed another YouTube instructor who had criticized Schwartz (personal communication). They posted negative comments and gave the “Dislike” to the competitor’s videos. Students may also present videos in an effort to “dialogue” with Schwartz, such as a video by Scarlettjoswanson demonstrating why he uses different chords than the instructor (2012). Schwartz does not respond to these videos, saving instructional advice for his paying viewers.

¹⁶ In our meeting, Schwartz responded to one Facebook submission with congratulations and encouragement, despite not watching the video.

Schwartz describes this focused interaction with his viewership as a “whirlpool,” using a term he adopted from an internet-advertising consultant. Non-paying participants maintain the constant stream of activity that keeps his YouTube videos near the top of every lesson search, comprising the outermost layer of the whirlpool. Schwartz includes multiple opportunities to “convert” viewers into customers by discussing promotions and including multiple links to the Guitarjamz.com paid website (though these links do not always lead to their advertised purpose).¹⁷ In the Taylor Swift video, the accompanying Guitarjamz.com link purports to be a “viewer request” link (Martyzsongs 2011f). A video lesson for Eric Clapton’s “Layla” has a link to “more free blues lessons” (Martyzsongs 2011a). Other lessons include a link to a free chord e-book. Such links often lead to a web page where viewers are encouraged to enroll in Schwartz’ email list. These emails, often crafted by a ghost-writer working under Schwartz’ guidance, direct viewers to the DVD products Schwartz sells or to other free lessons. More recently, the business of Guitarjamz.com began to utilize membership programs. These programs, structured according to varying lengths of subscription, offer access to streaming videos and to forum discussions contributed to by users and Schwartz. At the most basic membership level, Schwartz offers a three-day, free subscription. The free membership model allows students to “experiment” with different levels of involvement with his system, rather than purchasing hard media. In a recent link for Tom Petty’s song “Learning To Fly,” Schwartz features the most involved level of the

¹⁷ Schwartz also updates the video descriptions of older videos that did not originally link to the Guitarjamz site.

GuitarJamz.com membership whirlpool, the “Coaching Club” (Martyzsongs 2011g). The members buying the \$397 Coaching Club membership receive all of the materials Schwartz has and will ever produce: a lifetime “studentship.” Schwartz equates this membership to an artist’s fan club, offering seemingly unlimited access to Schwartz’s work.

While much of our discussion focused on the business aspects of GuitarJamz.com, much of Schwartz’s persona differentiates him from a pedagogue focused on syllabi and teaching methods. Schwartz is seen as a celebrity in the eyes of his viewers, many of whom consider themselves his students regardless of their financial investment. Viewers are attracted to his casual demeanor presented in his lessons, yet are also in awe of his online celebrity. As one student stated, “I feel like I’m talking with a rock star!” His viewers are both students and fans of his work. Schwartz’ method of developing his YouTube lesson plans based on student requests and a need to maintain activity does not create a linear progression through lesson materials. While Schwartz has experience with and still practices more traditional forms of pedagogy and curriculum building, the free videos he distributes on YouTube require shifts in educational and production strategy.

Viewing the totality of Schwartz’ online participation, his own theory of media consumption becomes clear. It is based partially on the notion of semi-direct contact between himself and his viewers, and partially on the notion of a guitar hero-like persona. In analyzing the development of his YouTube video process and aesthetic, the early videos of private instructor Marty Schwartz differ from the later videos of YouTube hero Marty Schwartz in terms of interaction and presence (discussed at the

end of this chapter). The sense of direct communication that is characteristic of his videos obscures many of the business machinations that drive the GuitarJamz.com business. Still, Schwartz' dialogue with his viewers differentiates him from the guitar heroes that have preceded him. His lessons and persona are not mediated or transformed by his business partner Gilberg, unlike the guitar heroes who contend with producers, label executives, and magazine writers. Modern guitar celebrities seek out their audiences through a deluge of materials, and ask them to speak back. The ability to create and distribute their own media without interceding mediators may perhaps become another important characteristic of the guitar hero. To understand why Schwartz and his cohorts are understood as heroes, I now turn to the types of associations that have long-defined guitar heroes, and how these associations are transformed in online environments.

4.3 Repertoire and Lineage: Rocking the Canon

Repertoire plays an important role in the celebration and idealization of guitar heroes, and provides a focal point for a guitarist's identity. As often cited in popular and academic works, Jimi Hendrix's live performances of "The Star Spangled Banner" and "Machine Gun" epitomize many of the innovations he brought to electric rock guitar. Waksman characterizes Eddie Van Halen's live solo exhibition, a semi-improvised amalgamation of his recorded instrumentals, as a "hard rock ritual" that recounts his history as a guitar virtuoso, and serves as a focal point for aspiring guitarists (2001: 128-129).¹⁸ While the guitar heroes of the 1960s, 1970s, and 1980s

¹⁸ Of course, the celebratory and critical descriptions of such repertoire often exaggerate the performer's virtuosity or obfuscate the recording techniques that result in "perfect performances." While Hendrix's

became generally known for their original compositions and improvisations (Hendrix’s covers of “The Star Spangled Banner,” The Trogg’s “Wild Thing,” and Bob Dylan’s music being rare exceptions), the material of celebrated YouTube guitarists overwhelmingly consists of covers and verbatim reproductions of existing performances. Only a few guitarists, such as Eric Mongrain and Andy McKee, have become famous through YouTube for their original compositions (“Air Tap” and “Drifting” respectively).¹⁹ The virtuosic YouTube cover becomes the primary referent in this media environment; original recordings are often rendered silent. In turn, other guitarists cover these YouTube performances and reify the YouTube cover as a unique piece of music.

performance of “The Star Spangled Banner” presented a unique interpretation of the piece laced with feedback and distortion, he struggled with the tuning of the Stratocaster throughout the performance. The recordings of Van Halen’s solo compositions result from numerous takes composited together; “official” live recordings of the solo are likely edited and composited in a similar fashion. Recorded media and subsequent written accounts of these pieces idealize the performance and the performer to fit the guitar hero identity.

¹⁹ McKee’s 2006 video for his composition “Drifting,” received over forty-five million views and eighty thousand comments, and made acoustic percussive and slapping techniques *visible* to the world in a particularly YouTube-ian manner. Viewers consider these techniques masterful and novel ways of approaching the guitar based on what they see. Like many modern fingerstyle pieces, “Drifting” employs an over-handed left-hand position and right handed tapping, in addition to both hands slapping the guitar body for different percussive effects. For the YouTube audience members who have never heard of pre-internet fingerstylists like Leo Kottke and the late Michael Hedges, McKee appears to be revolutionizing guitar technique. Dawe devotes multiple sections in *Guitarscapes* to fingerstyle guitarists like Mongrain, McKee, and Kaki King (see 2010: 13-15 and 74-75).



Figure 4.5: Funtwo performing “Canon Rock” (2006, screen capture by author)

Perhaps the most widely known and covered YouTube guitar performance is “Canon Rock,” a hard rock arrangement of Pachelbel’s “Canon in D.” The arrangement quickly dispels traditional interpretations of Pachelbel’s work in favor of heavy metal shredding and hard rock textures. The version of “Canon Rock” that became known to the world was featured in a now-deleted YouTube video entitled “Guitar.” In this video, a South-Korean guitarist using the online name Funtwo performs “Canon Rock” in his bedroom, his face obscured by his baseball cap (Figure 4.5). In an article for *The New York Times*, Virginia Heffernan attempted to identify the performer behind the viral video. Heffernan situates Funtwo’s performance squarely within the realm of the guitar hero, writing:

Over and over the guitarist’s left hand articulated strings with barely perceptible movements, sounding and muting notes almost simultaneously, and playing complete arpeggios through a single stroke with his right hand.

Funtwo's accuracy and velocity seemed record-breaking, but his mouth and jawline — to the extent that they were visible — looked impassive, with none of the exaggerated grimaces of heavy metal guitar heroes. The contrast between the soaring bravado of the undertaking and the reticence of the guitarist gave the 5-minute, 20-second video a gorgeous solemnity. (Heffernan 2006)

The techniques, accuracy and speed highlighted by Heffernan were not Funtwo's compositional or performance choices, but rather originated virtually note-for-note from another guitarist, JerryC. from Taiwan. Funtwo, the cover artist, enjoyed the bulk of the fame from the arrangement, including an invitation to perform the piece for a "YouTube Live" event in 2008 (<http://www.youtube.com/watch?v=AjCnqPYf8XI>, accessed December 28, 2012).

YouTube's misattribution of compositional credit owes to the site's unexpected, mediating effects. A YouTube search for "Canon Rock" results in over 167,000 videos, many of which "compete" against Funtwo's performance. Covers link to Funtwo's performance through "suggested video" and "response video" referrals, creating a network of interrelated videos. In particular, the verbatim cover and subsequent rearrangements by French guitarist Matt Rach have ascended amongst the search results. YouTube's Content ID system, which compares audio and video data against formally registered material, now associates Rach's name and a link to purchase his recordings with every "Canon Rock" video. Rach receives all advertising money from other "Canon Rock" videos, not JerryC or Funtwo.²⁰ YouTube's policies and algorithms intercede in matters of attribution and credit that makes the practice of covering increasingly complicated.

²⁰ See <http://www.youtube.com/t/contentid> for YouTube's policies regarding the monetization of content.

Canadian guitarist Theofilos Xenadis, known as Phil X, has turned the use of covers into a cornerstone of his hero-like persona. As of January 2013, Phil X has amassed an enormous YouTube subscriber base of 58,608 viewers and 31.5 million total video views over four years. His online celebrity derives exclusively from his gear demonstrations for retailer Fretted Americana, regardless of prior guitar work for rock artists Tommy Lee, Avril Lavigne, Alice Cooper, and Rob Zombie. Like Schwartz, a historical overview of his videos shows an evolution from short demonstrations with minimal interaction to the emergence of a distinct online personality. Most of his viewers cannot afford the vintage instruments he presents, nor are they primarily interested in his original music. Instead, Phil X has emerged as a YouTube hero whose fame predominantly owes to his cover performances. His repertoire demonstrates a near encyclopedic knowledge of rock guitar music; his performances suggest an effortless mastery that positions his virtuosity alongside the guitarists he covers.

The video “PHIL X GOES CRAZY! DOES INSANE HENDRIX ON A 1969 Fender Stratocaster 01020,” which received over half-a-million views as of January 18, 2013, shows how Phil X uses covers to simultaneously present and exceed the canonical performances of rock guitar (Figure 4.6). Uploaded on November 11, 2009, his presentation makes little reference to the vintage Stratocaster he demonstrates on behalf of Fretted Americana. Detailed information about the guitar is primarily located in the “About” section of the video page. Despite the video’s purpose as an advertisement, the content focuses on Phil X’s virtuosic performance of Jimi Hendrix repertoire, including “Hey Joe” (a Billy Roberts composition), “Fire,” and the iconic

Woodstock performance of “The Star Spangled Banner.” Phil X’s performance appears spontaneous, as he claims that he hadn’t performed “Hey Joe” in “nearly twenty years” (Fretted Americana 2009). Similarly, he seems to search for the appropriate key for Hendrix’s version of “The Star Spangled Banner,” concluding the video with, “I think I did the same part twice, but I’m Canadian... Thanks!” Viewers do not interpret his mistakes as deficient performances. Instead, his semi-improvised performances acknowledge the history of the electric guitar while demonstrating his mastery of the instrument.



Figure 4.6: Guitarist Phil X (Fretted Americana 2009, screen capture by author)

He plays and sings the song “Fire” verbatim until the guitar solo, launching into his own improvisation with wild abandon. His playing does not reference Hendrix’s improvisations, and owes more to 1980s era electric guitar histrionics. Of this solo, YouTube viewer Tradnwal writes, “4:50 – 5:20 = Completely UNHINGED!”

Amazing” (comments in *Fretted Americana* 2009). Another 112 viewers concurred by liking Tradnwal’s praise for the guitarist. Hendrix’s song provided a focal point for the demonstration, but Phil X’s solo mattered the most to viewers. The vintage guitar and Hendrix’s music are springboards for the guitarist to amaze his fans.

Idiosyncratic covers populate Phil X’s videos for *Fretted Americana*, and serve as the basis for his online persona. Phil X has mastered the canon of rock guitar, and simultaneously shreds it apart. Phil X’s use of covers differs from the duplicate versions of “Canon Rock” discussed above, or the hundreds of song lessons created by Schwartz and other online instructors. The latter often strive to emulate the original recordings note-for-note, while Phil X’s videos rely on his online persona and unique interpretations of well-known songs. Musicologist Gabriel Solis suggests that the use of covers in rock music differs from the use of standards in jazz or performances of “classical” works, claiming that rock cover is a type of “versioning.” He writes:

A cover is a new version of a song in which the original version is a recording, and for which musicians and listeners have a particular set of ideas about authenticity, authorship, and the ontological status of both original and cover versions. (Solis 2010: 298)

The authenticities of both versions are maintained in this particular context; no viewers doubt Phil X’s ability, nor his appreciation of the rock guitar canon. Solis further distinguishes covers from their originals in the way that the underlying meaning of the song is transformed in the cover. The *Fretted Americana* demonstrations strip any message away from the covered song, replacing it with the lone sound of rock guitar and Phil X’s over-the-top, rock-star persona.

As in Schwartz' careful structuring of his videos and online communications, Phil X has developed a specific conception of his audience and their viewing preferences. He highlights his YouTube work over many of his "offline" musical activities. In an interview for the blog *Loud Guitars*, Phil X suggests that YouTube, his "best friend," built his fan base and led to other professional opportunities, such as substituting for rock band Bon Jovi's lead guitarist (Loud Guitars 2012). He states, "YouTube man! A guy sees me on YouTube, gives my number to Bon Jovi, his management calls... yeah" (ibid.). However, his emphasis on his YouTube presence omits other details he cannot disclose for contractual reasons: "I actually can't... really, really can't get into details... but that's the avenue that was taken" (ibid.). The persona he's built depends on YouTube; his fame is a product of the medium and the cultural significance that YouTube holds. The interviewer also notes the guitarist's use of covers in building his online fame. Phil X replies that his viewers prefer his own interpretations of classic songs rather than verbatim reproductions. Instead of his own original material (though his music is often used in the opening and closing credits), his versions, per Solis, represent his authentic persona. Statements about the efficacy of YouTube and the desires of his audience implicate his distinct versioning process and the hero-like persona that he employs. As a YouTube guitar hero, he has mastered a canon of music in his own distinct way as the means to further develop his fanbase.

4.4 YouTube Heroes and Equipment: Design My "Signature" Guitar

Guitar heroes' recorded guitar timbres frequently become bound to their identities in deeply meaningful ways to guitarists. These personal, and often iconic, timbres result from idiosyncratic techniques combined with equipment they have

collected and organized in their rig. Waksman identifies guitar equipment as the means through which guitar heroes in the 1970s projected themselves through “volume, distortion, and other effects,” to achieve “relative dominance within some prominent strains of recent popular music” (1999: 289). Guitarists like Van Halen and Black Flag guitarist Greg Ginn assembled and modified their guitar rigs in service of their idiosyncratic techniques (Waksman 2004). The guitarist and equipment, translating through technique and technological affordances, result in a network of “signature sound.”

As many guitarists aspire to emulate their heroes by dutifully learning songs, solos, and improvisational styles, the brands and models of equipment offer another avenue. Well-known guitarists often parlay their fame into endorsements and signature equipment. The guitar, amplifiers, effects and accessories bearing the likeness of the guitar hero becomes distinguished from other generic equipment. Dawe writes that signature guitars become *autographic* instruments, bearing unique qualities when compared to mass-produced or generic *allographic* instruments. He writes:

No longer *just* [original emphasis] a commodity, it is Robert [Fripp’s] guitar, Sharon [Isbin’s] guitar, and so on. It takes on meaning in the hands of its owner. For its owner, particularly one filled with youthful aspirations, it may present the means of social transformation, of turning the self into some other person (at least for the moment) and of personal growth. (Dawe 2010: 169)

The equipment takes on special meaning for the owner, representing their influences and musical (or according to Dawe, personal) goals. As an object with the ability to transform the fan, the autographic object becomes a fetish in the truest sense of the word: capable of magical qualities and effects. Even mass-produced objects are capable of fetishized meanings, as demonstrated in Fernandez and Lastovicka’s study

of guitar fetishization (2011), and Ryan and Peterson's study of baby-boomers' equipment purchases (2001). The focus on autographic guitar equipment undoubtedly drives the vast amounts of signature gear purposefully damaged by manufacturers to mimic every aspect of the hero's equipment.

Endorsements and signature gear suggest a tripartite relationship of celebrity, manufacturer, and consumer. Like Hennion's producer-mediator, famed guitarists suggest a particular type of consumer to the manufacturer, while enhancing the stature of the brand to the consumer. Manufacturers mold their products to fit the hero's audience, while viewers expect functional characteristics and quality based on the hero's musical style and tastes. In both ways, the hero's idealized persona helps one party imagine the other.

Adopting the endorsement and signature gear traits of the guitar hero identity, many of the gear-demonstrating YouTube celebrities endorse their own signature equipment. The vintage Magnatone amplifier Phil X uses for a majority of his demonstrations was reproduced as his signature "Evil Robot" amplifier. Gear Mann Dude sells his self-designed "Luther Drive" pedal through his website GearMannDude.com. Demonstrator Brent Kingman endorsed the Farndurk "Burgs" Compressor until customer complaints and poor business practices beset the company. Performer and manufacturer extend the online persona and translate reputation into wider brand visibility for both parties. A consideration of marketing studies sheds light on how such endorsements may function amongst guitarists and competing brands of guitars, amplifiers, and effects. Dwayne Dean argues that third-party endorsements often enhance the perceived quality of a brand for little-known brands (1999).

Marketing researchers Tripp, Jensen and Carlson found that multiple endorsements by a celebrity may have a negative effect in brand attitudes, distinguished from “over-exposure” to the celebrity (1994). For smaller, boutique brands, the endorsements of Phil X, Gear Mann Dude, and Kingman are valued and effective. Conversely, multiple endorsements by a guitarist contradict the idea of a signature timbre based on specific equipment: if a guitarist can get the same tone from two different brands of amplifiers, no functional relationship exists between the hero and his or her gear.

Transforming the notion of “signature” equipment, British guitarist Rob “Chappers” Chapman created a brand of equipment more indicative of his YouTube celebrity than a signature tone. Since his first instructional videos were posted in 2006, he has established himself as one of the most well-known YouTube heroes through sixty-eight thousand subscribers and nearly thirty million views as of January 2013. His videos reflect a characteristically YouTube-ian relationship with his audience; heavy metal-oriented lessons and gear demonstrations adopt the tone of a casual vlog rather than formalized interaction. Paralleling Phil X’s identification as a YouTube-based professional, Chapman identifies himself as “the underground current of the new way the music industry is beginning to run” (2009). And like Schwartz and Phil X, a chronological exploration of his videos shows an evolution in both his production style and online persona. His 2008 video “How to get Endorsed in the music industry – Step by step guide by Rob Chapman” indicates how endorsements and signature equipment have become inextricably linked with this persona (Figure 4.7).²¹ In this video, he outlines his own theory and methods for obtaining product endorsements

²¹ See Baur 2001 for another industry-created article on endorsements.

using social media as evidence of a fanbase. Emphasizing gear demonstrations in later vlogs, Chapman switches between multiple endorsements: moving from Orange to Marshall amplifiers, and from Faith to ESP branded guitars. While such changes may seem to be capricious and possibly opportunistic uses of endorsements, such changes occurred over the course of years and hundreds of videos. Each change in equipment was a “step up” for the guitarist. Chapman’s fans, referred to as “minions” and “shred monkeys,” accompanied him in his advancement among manufacturers and growth in popularity.



Figure 4.7: Rob Chapman discussing endorsements (Chapman 2008, screen capture by author)

Chapman used the idea of “signature equipment” to acknowledge his viewership. In 2009, he partnered with the instrument distributor Barnes and Mullins to create the Chapman guitar line. His video “The ‘Rob Chapman/Monkey Lord’ signature guitar Blog 2” proposed that his viewers submit requests for design features (Chapman 2009). In the video he states:

I have the tradition of sharing everything on YouTube, fostering a spirit of involvement with people on YouTube... because that's what this really for, isn't it... It's about talking with some dude in Hawaii who I've never ever met, who has a great idea. And I take it onboard and I use it. I know what I would like to do in my mind... but I'm very interested in seeing what you guys think you would like, because after all, you are going to buy it. (ibid.)

Chapman's "crowd-sourcing" of design ideas is the hallmark of his brand.

Subsequent videos featured updates on design ideas and conversations with the manufacturer. The website ChapmanGuitars.co.uk became an obligatory point of passage where fans voted for their favorite body styles and hardware options. Unveiled in October of that year, the Chapman ML1 was touted as "the first collaborative design" between a guitarist and audience. The response for the guitar was overwhelming, and resulted in a multi-model range of viewer-designed Chapman guitars. With each successive design, an accompanying video featured an excited Chapman unboxing the instrument and praising its design, sound, and feel. His compliments celebrate his fans' preferences and desires as much as the actual instrument. Expanding the brand to include other YouTube contributors, he currently invites other guitarists "who base their activities in YouTube, Facebook, and Twitter" to apply for endorsement deals with Chapman Guitars (<http://Chapmanguitars.co.uk/endorsements>). His signature instrument denotes his viewership, not his technique or identifiable timbre. Chapman serves as a mediator between manufacturer and audience, but the mediation has been qualitatively altered by the affordances and practices of online communication. The "Chappers sound" consists of thousands of online voices.

4.5 Stage Presence and YouTube Aesthetics: Mediated “Live-ness”

The three guitarists highlighted in this chapter, Schwartz, Phil X, and Chapman, have built notable careers from their YouTube videos. Their distinct online personas distinguish them from countless other online lesson creators, gear demonstrators, and guitarists. The kinds of media employed, songs covered, and equipment endorsed reinforce their idealized, hero-like identities that are crafted and distributed through hundreds of videos. I have made reference to the personas created by these guitarists through their use of online media, covers, and equipment. Yet, something else besides these three types of translation also figures into their online personas, and allows Schwartz, Phil X, and Chapman to connect with others in meaningful ways. These guitarists, and the guitar heroes that have preceded them, are recognized for having a unique and identifiable stage presence. Schwartz, Phil X, and Chapman exemplify a stage presence characterized by mediated “live-ness.” This aesthetic experience emerges from the specific interaction of online media, guitar technology, music, and performance.

ANT theorists describe these aesthetic qualities and their reception as the result of network interactions. Hennion suggests that jazz aesthetics developed at an accelerated pace due to the influence of audio recordings: “...jazz covered in fifty years [what] a history of classical music took 500 years to write” (2002: 88). He contrasts the aesthetics of rock as the product of the “mythic stage” to rap’s aesthetics of “where you live, [and] where you hang about” (ibid.). Latour conceptualizes art reception and aesthetics to be matters of layered influences (2005:237). The affordances of the work and different interpretive strategies brought by the audience

produce unlimited additive effects. He uses the metaphor of the software plugin that allows audience members to see and hear more with each additional download (ibid.: 207). In this way, networks of media, technology, and inter-personal connections produce aesthetics as an emergent effect.

New media scholars suggest that YouTube-specific production and aesthetics challenge a number of existing dichotomies and hierarchical structures: the separation between production and consumption (Manovich 2009), differences between professionals and amateurs (Müller 2009, Burgess and Green 2009, and Miller 2012), and the separation between live and mediated experience (Johns 2010, Lange 2009). This last aspect of “YouTube-ness,” Burgess and Green’s term for the medium’s aesthetics (2009: 103), serves as the basis for a contemporary experience of stage presence. They suggest that the simplified production methods, semi-improvised performances, and dialogue with viewers all reinforce the video creator’s authenticity. Phil X’s videos seem spontaneous and loose; the aforementioned Fenders Stratocaster demonstration includes his mistakes. But the flattening of hierarchies only provides half of the aesthetic experience.

Schwartz, Phil X, and Chapman still perform in the dramatic sense. Performance studies prove a useful counterpoint to new media theories of YouTube aesthetics. Examining different metaphors for stage presence and dramatic performance, theater studies scholar Jane Goodall links commonly used descriptors to religious ideology and scientific discovery (2009). “Presence,” as a bridge between supernatural and human realms, evolved into metaphors of radiation and electric magnetism. Modern metaphors of presence denote proximity and time: Bob Dylan’s

stage presence in the 1960s depended on the intimacy of acoustic instruments and was emblematic of the era's zeitgeist (ibid.: 179-184).

Building on this notion, I suggest that artists like Schwartz, Chapman, and Phil X are understood through a metaphor of live presence that is thoroughly mediated. Enormous PA and video systems mediate the live concert experience. Appreciation once expressed as the individual flames of lighters held up in rock concerts is now the glow of cell phones held up to record the spectacle; fans capture the souvenir as a token of their own presence. Similarly, the videos of YouTube heroes are understood as a mediated live-ness. A brief moment, rarely lasting over ten minutes, is captured, featuring the YouTube hero speaking freely to his computer screen. The semi-improvised dialogue and performances occur as if the viewer were in the same room. Framed within ANT, this aesthetic emerges from the combination of media technologies combined with the video creator's need to quickly produce content.

The power of this aesthetic, and the YouTube hero's reliance on it also extends into face-to-face encounters. Demonstrating his "Evil Robot" amplifier at the 2010 Anaheim NAMM show, one of the largest musical instrument trade shows, Phil X performed for a small crowd that gathered multiple times throughout the day (Fretted Americana 2011). Above his head, a video screen played videos from the Fretted Americana YouTube channel; a banner identified the guitarist as "Phil X of YouTube fame" (Figure 4.8). NAMM attendees stop by to film the performance on their own phones, and Fretted Americana posts their own footage of his live demonstration. The mediated live-ness of his performance represents an authenticity in an era of media manipulation. His performance and his persona draw in attention, as opposed to the

dazzle and glamour of 1980's era hard rock and heavy metal musicians that overwhelmed audiences. As I watched Phil X live at NAMM in 2010, the moment captured the essence of the contemporary YouTube guitar hero.



Figure 4.8: Phil X at the NAMM trade show (Fretted Americana 2011, screen capture by author)

Conclusion

The examples above demonstrate how YouTube guitar celebrities build an audience through hero-like associations. While the older generations of celebrity guitarists relied on record companies and media outlets to present and mold their identity, YouTube celebrity guitarists must often create their own media. Their mediated interactions with their audience create the persona that fans rally around. This persona develops with each successive view, every modification to the YouTube platform, every song that is reworked into a new version, and each new piece of guitar technology that is demonstrated on camera. If Guitar Jamz students, Phil X followers,

and Chapman's "monkey minions" see themselves as a group, it is through their idealized perceptions of and interactions with their personal, mediated heroes. Viewers dialogue with video creators and each other through comments, emails, Facebook posts, and viewings. As a mediating pseudo-standard, the YouTube hero identity extends the guitar-vloggers agencies into wider locales. The guitar hero identity changes to fit this technologically mediated network, and remains durable enough to gather thousands of devoted subscribers, and an ever-growing viewership of millions.

Conclusion: Taking the Rig Apart in Search of Musical Possibilities

Throughout out this study, I have made modern guitar networks visible and audible. Online media reveal sites of learning, the negotiation of values, and the interactions between a musician and his or her fans and peers. The sounds of the guitar that were previously bound within the homes, private studios, retail shops, and regional venues now permeate spaces separated by distance and time. The inscription of ideas, beliefs, and information onto digital media push and pull subjective standards into new arenas of debate. Guitar-vloggers link thousands of people into perceived groups of fans; they carefully use media, music, and equipment to situate themselves in a history of guitar practice. Internet and musical technologies provide the conduits through which these agencies extend outward into panoramas of localities. In identifying the sounds and images of current guitar agencies, my ANT study of online communities has charted the evolution of shared practice.

ANT's methodology sends the analyst inward towards the locus of agency and activity prior to exploring the ramifications for communal practice. The use of "network" in place of "society" and "culture" shifts the analytical focus from theorized forces to observable agency. "Network is a concept that helps you redistribute and reallocate action," according to Latour (2010). The three specific developments in current online practice – lessons, gear demonstrations, and YouTube guitar-vloggers – represent video genres shared through YouTube and frequently referenced in online discourse. Each video distributes the agencies of lesson creators like Bear Rose, Mupino, and Marty Schwartz among thousands of guitarists; the

instructor's negotiations with the instrument influence the viewer's negotiations. Similarly, JerryC's arrangement of "Canon Rock" continues to draw guitarists close to their instrument, and encouraging "shredders" to share their own recorded performances. The constraints and affordances of mediating technologies link actors into a network of musical agencies.

ANT provides a theoretical means for locating the sources of action, and then following action's path outwards. Lesson and demonstration creators now extend their networked activities through panoramas of off-line guitar practice. Thus, despite the fact that Phil X and Fretted Americana were not displaying any products meant for resale, they display at the NAMM trade show as "exhibitors" of YouTube celebrity. Similarly, NAMM granted Chapman access to the trade show as a specially designated "artist."¹ Increasingly, the music industry recognizes the impact of these guitarists and offers connections located off-line. The presence of Phil X and Chapman attest to their videos' translation to a broader populace of musicians and the music industry. From, ANT's hierarchically flattened perspective, these guitarists help create the sense of community by extending their agencies outward into new locales.

The distributed nature of agency puts any notion of a community of practice or guitar culture into a continual state of evolution. The lesson videos, gear demonstrations, and the mediating efforts of YouTube heroes featured in this study are snapshots of current practices, and will undoubtedly continue to respond to changes in internet, recording, and guitar technologies. In previous chapters, I implicated

¹ Trade show members are distinguished as exhibiting manufacturers, buyers, media, visitors (including non-exhibiting manufacturers), and musical artists. Having attended the show three times between 2008 and 2010 under different auspices, I observed different interactions based on the category displayed on my membership badge. Exhibitors devoted the least amount of attention to "visitors."

YouTube's changing time restrictions and audio resolutions in communal exchange. These modifications to the medium result in new modes of agency for other actors. Gear demonstrators employ increasingly sophisticated video and audio recording techniques; professional videographers like David Fisher (videographer for the Klon KTR debut) formalize the demonstration process through broadcast media aesthetics and extend their businesses into guitar practice. Attesting to this revised sense of "YouTube-ness," growing numbers of professionally-shot gear demonstrations occupy the highest search rank positions. New guitar technologies allow individuals to share settings and reconfigure another guitarist's rig from afar; digital instrument modification and customization does not require face-to-face encounters. "Kickstarter" guitar technology projects enroll customers as investors. Collectively, these innumerable effects unsettle the stability inherent in concepts like "society" and disrupt the hierarchies and dichotomies used to distinguish people.

The communities and processes I identify now may disappear or completely transform within a year's time. This remains, perhaps, the greatest challenge of online ethnographic work. The media documents I examine are not as durable as the documents analyzed in the first decade of ANT studies. The software and hardware interfaces make digital media malleable in ways that transform utility, meaning, authorship, and authenticity. Information that I found through YouTube's analytics one month disappeared the next. As YouTube modified their "Recommended Video" algorithm and user interface, my own viewing habits began to skew later search results. During the three years of close observation of online practices, YouTube and uploaders removed videos and audio clips, forums and websites lost data and

participants, and new hardware and software reconfigured the mediated associations between guitarists.

Changes in media consumption lead to changes in a community's constitution. Consider the online communities devoted to "live-looping" technology.² Beginning in September of 1996, live-loopers connected through the "Looper's Delight" email list.³ Through this list, performers exchanged their looping-equipment techniques, announced performances, and promoted their recorded works. An ancillary Facebook page ([https://www.facebook.com /groups/LoopersDelight/](https://www.facebook.com/groups/LoopersDelight/), accessed January 22, 2013), addresses live-looping performance as well, but draws different participants and encourages different modes of discourse compared to the email list. Most recently, a web forum has created yet another space for live-loopers to assemble and share practice (<http://www.liveloooping.org/>, accessed January 22, 2013). As the technological means through which members associate, each type of media creates its own figuration of community. Already, communities like Looper's Delight mailing list and the videos examined in this study portray what Hennion refers to as "an old public" (1989: 412). Long-standing members of TGP occasionally decry the changing "feel" of the site, attributing this change to new members. The shifts in population directly affected my ethnography on more than one occasion: a few of my study's informants simply stopped participating on TGP or were no longer available for

² Live looping utilizes tape-based and digital sampling technologies to record, replay, and transform live musical performances "on-the-fly." As a varied stylistic genre, the aesthetics of the music owe to the distinct technological affordances of these recording and processing devices. Some performers relate to "ambient" music and soundscapes, while other performers associate with a "cut and paste" or "turntable-ist" approach .

³ An archive of Looper's Delight email digests can be found at <http://www.loopers-delight.com/cgi-bin/wilma/LDarchive/> (last accessed January 22, 2013).

further questions. My analysis may identify the human and non-human actors in a network of activity, but it does not predict the nature of the network in the future.

According to ANT, networks of activity must expend energy to stabilize social and technological associations. The partnerships between professional instructors like Schwartz and Sandercoe (as described in chapter 2) suggest some of the ways guitarists shore up network resources to reinforce inter-personal associations. The Chapman Guitars brand also provides the means for Chapman to maintain his visibility amongst guitarists. Both Chapman and Schwartz use giveaways to motivate their audiences. In a rather deft use of YouTube's comment feature, Chapman announced a giveaway for a Faith brand guitar on July 6, 2012; at an undisclosed time, the last commenter would win the guitar (Chapman 2012). The video attracted over one hundred thirty thousand views and generated more than forty-six thousand comments that day alone. The rush of comments and views reinforced Chapman's position among the socio-musical networks of YouTube, using the affordances of the site. Most importantly, Chapman's giveaway and other similar methods of reinforcing network connections rely on the agency and activity of his viewers; YouTube vloggers like Chappers enroll viewers into networked behaviors.

ANT and its practitioners continue to develop their anthropological and sociological methodologies, refining their observations of agency within social networks. In his annotated bibliography of ANT works, John Law (2004) refers to the most recent literature as "after-ANT," describing efforts to reconcile ANT's perspectives with other disciplines. Latour calls his most recent multi-media project *An Inquiry into Modes of Existence* (<http://www.modesofexistence.org/>, accessed

January 20, 2013). His project hopes to theorize subjective modes of experience and existence through user-submitted reports and commentary. Whereas ANT sought to calculate the objective means through which people were associated, and technology and scientific ideas disseminated, Latour's new work addresses the subjective experiences and metaphysics that emerge from networks of activity. Recognizing the ways in which ANT has always been situated within the shared practices of science and technology studies, Latour crafts the inquiry to use digital media as flexible and transportable media. His enrollment of participants bears some similarity to Marty Schwartz' call for requests and Rob Chapman's surveys of signature guitar features. Regardless of the domain, these actions gather resources into a community of action.

Latour's latest project engages a vital area that ANT does not address: the subjective experience of aesthetics. While Latour and Hennion theorized how aesthetic preferences emerge from perceptual constraints and affordances, their theories pay far less attention to the resulting effect as an end unto itself. Yet, from my perspective as a musicologist, performing musician, and lover of music, the effect of music often deserves the most care and attention. Studies of popular music fandom, such as those in Daniel Cavicchi's *Tramps Like Us* (1998), rest on his and informants' accounts of personal musical meaning. To that extent, I hope to have captured some part of the visceral and emotional experience of playing guitar in the twenty-first century through the comments of interview subjects and online participants. ANT provides an objective means of tracing pathways to subjective experience. As emergent effects, these experiences are not necessarily predictable from the constituents of the network.

Reflecting on my experiences participating in online guitar culture while also analyzing it through socio-technological theory, I see further opportunities to use my participation as a means of research. Video creation and deployment can gather information regarding viewing habits, the concerns over musical technology and performance, and the ever-changing aesthetics of guitar practice. Additionally, membership within a community is contingent upon my associations with people and technology; further investigations of online guitar practices require deeper participation. ANT has provided a useful means of analyzing shared practice while foregrounding musical materials, guitar technologies, and online media. However, a developed musicological account of subjective experience requires techniques and tools outside of the theory's domain.

A final vignette serves as reminder of the social and musical choices humans make. After years of participating in the Looper's Delight email-list community, guitarist Andre La Fosse purposefully turned away from live-looping, its technologies, and its online communities (personal communication). Regardless of the prominence he enjoyed through these communal and technological associations, he sought different technological, musical, and social experiences. To achieve this, La Fosse reconstructed his guitar rig, eschewing old equipment in favor of engaging new technological connections. He also turned to non-looping online communities in support of his two 2012 releases, *A Hard Bargain* and *Do the Math*. According to La Fosse's blog, the album received mixed reviews from those who primarily associated him with looping (2013). Regardless, he has embraced the "eclecticism" that his reconfigured guitar and social rigs produced.

As I consider the constant changes to my own rig and my negotiations in socio-musical networks, I'm increasingly aware of my own attempts to disseminate certain types of technology often rejected by guitarists. Now employing a touch screen device to control effects processors, I strive to achieve my own identifiable "tone," and share the excitement of exploration with others. To date, many guitarists on TGP have been wary of my experiments. As one member wrote, "That is the scariest thing I've ever seen. I'm going to go hug a germanium transistor to soothe myself" (comments in Occam 2012). A few interested peers have responded, asking for opinions and help with programming. Rather than diagramming every detail of my rig, I provide short videos of its applications; I give programming tips and suggest techniques by sharing my existing code. Using the affordances of media technology, I create new social associations through my evolving guitar rig.

Bibliography

- Agre, Philip E.. 1998. "Designing Genres for New Media: Social, Economic and Political Contexts." In *Cybersociety 2.0: Revisiting Computer Mediated Communication and Community*, edited by Steven Jones: 69-99. Thousand Oaks, CA: Sage Publications.
- Akhtar, Omar. 2012. "Why Fender pulled its IPO." *Fortune*, July 20. <http://finance.fortune.cnn.com/2012/07/20/why-fender-pulled-its-ipo/>.
- Appadurai, Arjun. 1986. *The Social Life of Things: Commodities in Cultural Perspective*. Cambridge: Cambridge University Press.
- . 1990. "Disjunction and Difference in a Global Economy." *Public Culture* 2(2): 1-24.
- Barefoot, Taylor and David Fisher. 2010. "Ultimate Boutique Guitar Delay Pedal Shootout: Moog, EchoCzar, MXR, Memory Man + More." YouTube video, 9:56. Uploaded July 11. https://www.youtube.com/watch?v=sISNMxpjI_Y.
- 2011a . "Klon Centaur Professional Overdrive (Gold) demo." YouTube video, 0:53. Uploaded March 5. <http://youtu.be/kmL0rhGr0OU>.
- . 2011b. "New Klon Overdrive Premier Demo." YouTube video, 1:00. Uploaded March 5. <http://www.youtube.com/watch?v=Tp5v-TV1SXk>.
- . 2011c . "Ultimate Overdrive Pedal Shootout and New Klon Premier." YouTube video, 35:25. Uploaded January 25. <https://www.youtube.com/watch?v=WuTt8YFblcE>.
- Baur, Bernard. 2001. "How You Can Get Free Gear: Product Endorsement." *Music Connection* 25 (2):42, 46-47.
- Bear Rose [pseud.]. 2009a. "John Mayer – 'Gravity' Lesson 1 – Intro and Chords." YouTube video, 9:56. http://www.youtube.com/watch?v=pvOYBO2_eTw.
- . 2009b. "John Mayer – 'Gravity' Lesson 2 – Solo." YouTube video, 6:03. Uploaded November 16. <http://www.youtube.com/watch?v=VBFQKzcl1rg>.
- BeautifulNightmare97 [pseud.]. 2009. "How To Play Gravity By John Mayer." YouTube video, 4:48. Uploaded June 26. <http://youtu.be/fRYw3U6HTN0>.
- Bennett, H. Stith. 1983. "Notation and Identity in Popular Music." *Popular Music* 3: 215-34.

- Bennett, Andy & Dawe, Kevin (eds). 2001. *Guitar Cultures*. New York: Berg.
- Blondel, Christine. 1997. "Electrical Instrument in 19th Century France, Between Makers and Users." *History and Technology* 13: 157-182.
- BobbyCrispy [pseud.]. 2008. "MOTHER Solo (Guitar Lesson) by PINK FLOYD, With Tabs." YouTube video, 8:08. Uploaded March 28. <http://www.youtube.com/watch?v=KI7bQJh8k9c>.
- Burgess, Jean and Joshua Green. 2009. "The Entrepreneurial Vlogger: Participatory Culture Beyond the Professional Amateur Divide." In *The YouTube Reader*, edited by Pelle Snickars and Patrick Vonderau, 89-107. Stockholm: National Library of Sweden.
- Callon, Michel. 1986a. "Pinpointing Industrial Invention: An Exploration of Quantitative Methods for the Analysis of Patents." In *Mapping the Dynamics of Science and Technology*, edited by Michel Callon, John Law and Arie Rip, 163-188. London: The Macmillan Press LTD.
- . 1986b. "The Sociology of an Actor-Network: The Case of the Electric Vehicle." In *Mapping the Dynamics of Science and Technology*, edited by Michel Callon, John Law and Arie Rip, 19-34. London: The Macmillan Press LTD.
- . 1986c "Some Elements of a Sociology of Translation Domestication of the Scallops and the Fishermen of St. Brieux Bay." In *Power, Action and Belief: A New Sociology of Knowledge?* edited by John Law: 196-223. London: Routledge.
- . 1999. "Actor-Network Theory: the Market Test." In *Actor Network and After*, edited by John Law and John Hassard, 181- 195. Oxford: Blackwell Publishers.
- Callon, Michel, John Law and Arie Rip (eds). 1986a. *Mapping the Dynamics of Science and Technology*. London: The Macmillan Press LTD.
- Callon, Michel, John Law and Arie Rip. 1986a. "Putting Texts in Their Place." In *Mapping the Dynamics of Science and Technology*, edited by Michel Callon, John Law and Arie Rip, 221-230. London: The Macmillan Press LTD.
- Callon, Michel, John Law and Arie Rip. 1986b. "Qualitative Scientometrics." In *Mapping the Dynamics of Science and Technology*, edited by Michel Callon, John Law and Arie Rip, 103-123. London: The Macmillan Press LTD.
- Callon, Michel and Vololona Rabihireso. 1998. "Articulating Bodies: the Case of Muscular Dystrophies." In *Bodies on Trial: Performance and Politics in Medicine*

- and Biology*, edited by Madeleine Akrich and Marc Berg, 74-96. Durham: Duke University Press.
- Cavicchi, Daniel. 1998. *Tramps Like Us: Music and Meaning Among Springsteen Fans*. Oxford: Oxford University Press.
- Chapman, Rob. 2008. "How to get Endorsed in the music industry – Step by step guide by Rob Chapman." YouTube video, 9:27. Uploaded December 20. <http://www.youtube.com/watch?v=nBOFbTYNQcE&>
- . 2009. "The 'Rob Chapman/Monkey Lord' signature guitar Blog 2." YouTube video, 9:31. Uploaded June 24. http://www.youtube.com/watch?v=d_F9avu7Mvk&.
- . 2012. "Faith Guitars Eclipse Neptune – Competition Over!!!" YouTube video. 7:03. Uploaded July 2006. <http://www.youtube.com/watch?v=RzB1dMrnUBc>.
- Chesney, Thomas. 2006. "other people benefit. i benefit from their work: Sharing Guitar Tabs Online." *Journal of Computer-Mediated Communication* 10(1).
- Clark, Andy. 2001. *Mindware: an Introduction to the Philosophy of Cognitive Science*. Oxford University Press.
- Comfortableman [pseud.]. 2012. "The Klon KTR on its way?" Internet forum thread. <http://www.thegearpage.net/board/showthread.php?t=1068461>.
- Curcurito, David. 2012. "Eddie Van Halen: The Esquire Interview." *Esquire.com*, April 17. http://www.esquire.com/the-side/music/eddie-van-halen-interview-2012-8147775?click=main_sr.
- Dawe, Kevin. 2010. *The New Guitarscape in Critical Theory, Cultural Practice, and Musical Performance*. Farnham: Ashgate Publishing Limited.
- Dawe, Kevin and Dawe Margaret. 2001. "Handmade in Spain: The Culture of Guitar Making." In *Guitar Cultures*, edited by Andy Bennett & Kevin Dawe, 63-87. New York: Berg.
- Dean, Dwayne Hal. 1999. "Brand Endorsement, Popularity, and Event Advertising Cues Affecting Pre-Purchase Attitudes." *Journal of Advertising* 28 (3):1-12.
- Diablo76 [pseud.]. 2006a. "Klon Centaur Demo." YouTube video, 3:56. Uploaded August 16. http://www.youtube.com/watch?v=2PX4ly_5ZsI.

- . 2006b. “Klon Centaur straight into HR Deluxe.” YouTube video, 4:11. Uploaded August 13. <http://www.youtube.com/watch?v=oreeZrbDFkU>.
- . 2007. “Klon Centaur into Super Reverb.” YouTube video, 3:07. <http://www.youtube.com/watch?v=l8uyNd6DVyI>.
- Elbow, Peter. 1986. *Embracing Contraries*. New York: Oxford University Press.
- Erniestrings [pseud.]. 2012. “Is the Klon KTR handwired?” Internet forum thread. <http://www.thegearpage.net/board/showthread.php?t=1145092>.
- Fenn, John. 2010. “The Building of Boutique Effects Pedals: The “Where” of Improvisation.” *Leonardo Music Journal* 20: 67-72.
- Fernandez, Karen V. and John L. Lastovicka. 2011. “Making Magic: Fetishes in Contemporary Consumption.” *Journal of Consumer Research* 38 (2): 278-299.
- Finnegan, Bill. 2009. “Magazine Reviews.” <http://www.klon-siberia.com/swf/magazine.php>.
- Finnegan, Bill, Taylor Barefoot and David Fisher. 2012a. “Klon KTR, Centaur Gold and Centaur Silver Comparison Demo with Bill Finnegan and Taylor Barefoot.” YouTube video, 35:50. Uploaded March 25. <http://www.youtube.com/watch?v=WcWqMuPSfgs>.
- . 2012b. “Klon KTR Prototype and Development board w/Bill Finnegan.” YouTube video, 6:14. Uploaded September 25. <http://www.youtube.com/watch?v=T00XAMazpoA>.
- Fischer, Ken. 1995. “Product Review: The Centaur Professional Overdrive.” *Vintage Guitar Magazine*, July, quoted in Bill Finnegan 2009. “Magazine Reviews.” <http://www.klon-siberia.com/swf/magazine.php>
- Fretted Americana. 2009. “PHIL X GOES CRAZY! DOES INSANE HENDRIX ON A 1969 Fender Stratocaster 01020.” YouTube video, 7:16. Uploaded November 11. http://www.youtube.com/watch?v=PLp9NQd_uNQ.
- . 2011. “Phil X AT NAMM: Episode II Attack of the Sound Patrol.” YouTube video, 10:45. Uploaded January 25. <http://www.youtube.com/watch?v=Q7lZkRViFas&>.

- Funtwo [pseud.]. 2006. "Canon Rock." YouTube video, 5:23. Uploaded April 2. <http://www.youtube.com/watch?v=2xjJXT0C0X4>
- Gear Mann Dude [pseud.]. 2009a. "KLON Centaur guitar effects pedal demo w/ Gibson SG Historic & Jaguar Amplification JAGUAR JR." YouTube video, 6:55. Uploaded February 25. http://www.youtube.com/watch?v=5BmuGMK_jdE.
- . 2009b. "KLON Centaur guitar effects pedal demo with King Bee Guitars relic Tele and Jaguar Jr amp." YouTube video, 7:15. Uploaded February 25. http://www.youtube.com/watch?v=fquk_14F_7c.
- . 2009c. "KLON Centaur overdrive guitar effects pedal shootout against a KLONE." YouTube video, 6:33. Uploaded June 25. <http://www.youtube.com/watch?v=ne9tIUeyxSk>.
- . 2010. "KLON Centaur shootout Gold versus Silver with humbucker pickups SG Dr Z amp." YouTube video, 10:01. Uploaded February 26. <http://www.youtube.com/watch?v=aiKmzUrX7c4>.
- Gearopenia [pseud.]. 2012. "so who has ordered the new Klon???" Internet forum thread. <http://www.thegearpage.net/board/showthread.php?t=1133768>.
- Geertz, Clifford. 1973. *The Interpretation of Cultures*. New York: Basic Books.
- Gibson Guitar. 2012. "FAQ-Tonewoods." Accessed December 30, 2012. <http://www2.gibson.com/Support/FAQ-Tonewoods.aspx>.
- Gleiberman, Owen. 2009. "Movie Review: It Might Get Loud." *EW.com*, August 20. Accessed November 10, 2012. <http://www.ew.com/ew/article/0,,20297380,00.html>
- Goodall, Jane. 2008. *Stage Presence*. London: Routledge.
- Gracyk, Theodore. 1996. "That Wild Thin Mercury Sound: Ontology." In *Rhythm and Noise: An Aesthetics of Rock*, 1-36. Durham: Duke University Press.
- Guggenheim, David. 2009. *It Might Get Loud*. New York: Sony Pictures Classics. DVD, 97 min.
- Guitar Center. "IPO's PDA's DAT's & RAP." Accessed December 30, 2012. <http://guitarcenter.com/company/90s.cfm>.
- Havigurst, Craig. 2011. "Why Gibson Guitar Was Raided By the Justice Department." "Nation Public Radio blog, August 31. Accessed November 30, 2012.

<http://www.npr.org/blogs/therecord/2011/08/31/140090116/why-gibson-guitar-was-raided-by-the-justice-department>

Hecube [pseud.]. 2012. "New Klon Centaur Sometime in 2012." Internet forum thread. <http://www.thegearpage.net/board/showthread.php?t=957200>.

Heffernan, Virginia. 2006. "Web Guitar Wizard Revealed at Last." *NYTimes.com*, August 27, Television. Accessed November 30, 2012. http://www.nytimes.com/2006/08/27/arts/television/27heff.html?_r=2&.

Hennion, Antoine. 1983. "The Production of Success: An Anti-Musicology of the Pop Song." *Popular Music* 3: 159-193.

———. 1989. "An Intermediary between Production and Consumption: The Producer of Popular Music." *Science, Technology, and Human Values* 14 (4): 400-424.

———. 2008. "Listen!" *Music and Arts in Action* 1 (1): 36-45.

Herndon, Marcia. 1993. "Insiders, Outsiders: Knowing our Limits, Limiting our Knowing." *World of Music* 35(1): 63-80.

Hopton, John. 2007. "Mixed Martial Arts and Internet Forums: A Case Study in Treating Internet Sources as Oral History." *Oral History* 35(2): 91-99.

Huron, David. 1999. "The New Empiricism: Systematic Musicology in a Postmodern Age." *The 1999 Ernest Bloch Lectures*. Accessed January 16, 2013. <http://csml.som.ohio-state.edu/Music220/Bloch.lectures/3.Methodology.html>.

Hutchins, Edwin. 1995. *Cognition in the Wild*. Cambridge: MIT Press.

Jackson, Myles. 2006. *Harmonious Triads*. Cambridge: MIT Press.

Jaffe, Nick. 2012a. "Tone is a Lie." Internet forum thread. <http://www.thegearpage.net/board/showthread.php?t=1138614>

———. 2012b. "Tone is LIE – A calm, reasoned discussion with Just Nick." YouTube video, 2:55. Uploaded September 7. <http://www.youtube.com/watch?v=pOwFLWKfSuY>.

———. 2012c. "Tone is TRUTH." Internet forum thread. <http://www.thegearpage.net/board/showthread.php?t=1142879>.

- . 2012d. “Tone is Truth – More Gear Talk with Just Nick.” YouTube video, 7:39. Uploaded September 16. <http://www.youtube.com/watch?v=NQMLo1xym0Q>.
- JamonGrande [D. Joseph Bigham]. 2011. “Ph.D. Research: Youtube Gear Demo Videos.” Internet forum thread. <http://www.thegearpage.net/board/showthread.php?t=857222>.
- Jenkins, Mark. 2009. “‘It Might Get Loud’: For Music Buffs, Plenty to Riff On.” *NPR.org*, August 13. Accessed November 10, 2012. <http://www.npr.org/templates/story/story.php?storyId=111631670>.
- Johns, Mark. 2010. “Inter-net, Inter-action.” *Symbolic Interaction* 33, 4: pp. 499-500.
- Jones, Stephen. 2000. “Music and the Internet.” *Popular Music* 19 (2): 217-230.
- Juszkiewicz, Henry. 2011. “Repeal the Lacey Act? Hell No, Make it Stronger.” Last modified November 2. http://www.huffingtonpost.com/henry-juszkiewicz/gibson-guitars-lacey-act_b_1071770.html.
- Kamerer, Brian. 2012. “An Open Letter to Jay Leno About Stealing My Video and Then Getting It Removed From YouTube.” *Splitsider*. Accessed January 16, 2013. <http://splitsider.com/2012/05/an-open-letter-to-jay-leno-about-stealing-my-video-and-then-getting-it-removed-from-youtube/>.
- Kartomi, Margaret. 1990. *On Concepts and Classifications of Musical Instruments*. Chicago: University of Chicago Press.
- Kessler, Frank and Mirko Tobias Schäfer. 2009. “Navigating YouTube: Constituting a Hybrid Information Management System.” In *The YouTube Reader*, edited by Pelle Snickars and Patrick Vonderau, 275-291. Stockholm: National Library of Sweden.
- Kingman, Brett. 2009. “Klon Centaur vs Bad Monkey: Sadie presents.” YouTube video, 3:52. Uploaded October 4. http://www.youtube.com/watch?v=OaZ-fGVBp_Q.
- Knopper, Steve. 2011. “Digital Music’s Unlikely King.” *Rolling Stone* 1127: 17-18.
- La Fosse, Andre. 2013. “OK, I’ll Confess (Sort Of).” *Altruistmusic.com* (blog), January 18. Accessed January 22, 2013. <http://altruistmusic.com/uncategorized/ok-ill-confess-sort-of/>.

- Lange, Patricia. 2009. "Videos of Affinity on YouTube." In *The YouTube Reader*, edited by Pelle Snickars and Patrick Vonderau, pp. 70-88. Stockholm: National Library of Sweden.
- Langfitt, Frank. 2007a. "Learning Guitar for Free (for Now) on YouTube." *Morning Edition* (April 7, 2007). Accessed December 30, 2012. <http://www.npr.org/templates/story/story.php?storyId=9291453>.
- . 2007b. "YouTube Guitar Lessons Pulled in Copyright Spat." *Morning Edition* (July 6, 2007). Accessed December 30, 2012. <http://www.npr.org/templates/story/story.php?storyId=11778602>.
- Latour 1987. *Science in Action: How to Follow Scientists and Engineers Through Society*. Cambridge: Harvard University Press.
- . 1988. *The Pasteurization of France*. Cambridge: Harvard University Press.
- . 1992. "A Reply to Carlson and Gorman." *Social Studies of Science* 22(1): 91-95.
- . 2004. "Why Has Critique Run out of Steam? From Matters of Fact to Matters of Concern." *Critical Inquiry* 30(2): 225-248.
- . 2005. *Reassembling the Social: An Introduction to Actor-Network Theory*. Oxford: Oxford University Press.
- . 2010. "International Seminar on Network Theory Keynote." YouTube video. Accessed January 22, 2013, <http://www.bruno-latour.fr/node/28>.
- . 2012. *An Inquiry into Modes of Existence*. Accessed January 22, 2013. <http://www.modesofexistence.org/>.
- Latour, Bruno and Vincent Antonin Lépinay. 2009. *The Science of Passionate Interests: An Introduction to Gabriel Tarde's Economic Anthropology*. Chicago: Prickly Paradigm Press.
- Latour, Bruno, Philippe Mauguin, and Geneviève Teil. 1992. "A Note on Socio-Technical Graphs." *Social Studies of Science* 22(1): 33-57.
- Lave, Jean. 1988. *Cognition in Practice*. Cambridge: Cambridge University Press.

- Law, John. 1986. "On the Methods of Long Distance Control: Vessels, Navigation and the Portuguese Route to India." In *Power, Action and Belief: A New Sociology of Knowledge?* edited by John Law, 234-263. London: Routledge.
- . 1992. "Laboratories and Texts." In *Mapping the Dynamics of Science and Technology*, edited by Michel Callon, John Law and Arie Rip, 35-50. London: The Macmillan Press LTD.
- . 2004. "Actor Network Resource: Thematic List." Accessed January 22, 2012. <http://www.lancs.ac.uk/fass/centres/css/ant/ant.htm>.
- LearnSongsToday [pseud.]. 2009. "easiest song to play gravity lesson how to play john mayer u2 can play." YouTube video, 2:16. Uploaded February 22. <http://www.youtube.com/watch?v=x76rLjW8FNc>.
- Leftyman [pseud.]. 2010. "New Klone Centaur Sometime in 2010." Internet forum thread. <http://www.thegearpage.net/board/showthread.php?t=672902>.
- Loud Guitars. 2012. "NAMM 2012-Phil X." YouTube video, 13:53. Uploaded January 30. <http://www.youtube.com/watch?v=NYwM6P7BF6A&>.
- LVC [pseud.]. 2011. "Welcome to Boutique Gear Talk." *Boutique Gear Talk*. <http://www.boutiquegeartalk.com/content/>.
- Ma, Xueguang, and Roy Rada. 2008. "Web-Based Education Accountability System and Organizational Changes: An Actor-Network Approach." In *Web-Based Education and Pedagogical Technologies*, edited by Liliane Esnault, 1-16. Hershey: IGI Publishing.
- Manovich, Lev. 2001. *The Language of New Media*. Cambridge: MIT Press.
- . 2012. "Media After Software." Accessed January 16, 2013. <http://lab.softwarestudies.com/p/publications.html>.
- . 2009. "The Practice of Everyday (Media) Life: From Mass Consumption to Mass Cultural Production?" *Critical Inquiry* 35 (2):319-331.
- Markf786 [pseud.]. 2011. "Which Klone to Buy?" Internet forum thread. <http://www.thegearpage.net/board/showthread.php?t=900887>.
- Martyzsongs [Marty Schwartz]. 2010a. "Guitar Amplifier review Line 6 Spider IV 75 & Line 6 Spider IV – Metallica Green Day RHCP Nirvana." YouTube video, 9:19. Uploaded June 24. <http://www.youtube.com/watch?v=iktooH7LHrc>.

- . 2010b. "Line 6 M9 Review – Guitar Effects." YouTube video, 10:00. Uploaded May 23. http://www.youtube.com/watch?v=dF2sXgX8_Yg.
- . 2011a. "Eric Clapton - Layla - Unplugged - Guitar Solo lesson pt 1." YouTube video, 13:08. Uploaded November 3, 2011. <http://www.youtube.com/watch?v=buYwCzcbtMM>.
- . 2011b. "Guitar Amp Reviews – Entry Level – Practice Amps – Line 6 Spider IV 15 by Marty Schwartz." YouTube video, 8:13. <http://www.youtube.com/watch?v=U2uDGK7c46A>.
- . 2011c. "Guitar Lessons - How to play the riff from Outshined by Soundgarden Tutorial." YouTube, 5:32. <http://www.youtube.com/watch?v=49EolQW9jec>.
- . 2011d. "How to Play the solo from Crazy Train by Ozzy and Randy Rhoads part 2." YouTube video, 8:51. <http://www.youtube.com/watch?v=4ZEUkSV-oF0>.
- . 2011e. "Marty Schwartz Brixton Hats for Facebook." YouTube video, 4:11. <http://www.youtube.com/watch?v=dMI4teanJ2A>.
- . 2011f. "Taylor Swift - Mean - Super Easy Beginner Acoustic Guitar Songs Lesson - Easy songs." YouTube video, 11:37. <http://www.youtube.com/watch?v=5Rv7Wao9b7E>.
- . 2011g. "Tom Petty Style Easy Beginner Acoustic Song - Guitar Lesson." YouTube video, 6:00. <http://www.youtube.com/watch?v=SkWc38GqQtQ>.
- . 2012a. "Easy Acoustic Guitar Songs - Tesla Style Chord Progression - inspired by." YouTube video, 6:36. <http://www.youtube.com/watch?v=rsUxKWdDTeY>.
- . 2012b. "Justin Sandercoe and Marty Schwartz Guitar Jam - San Diego Visit June 2012." YouTube video, 3:57. <http://www.youtube.com/watch?v=HznqZnTkWs>.
- . 2012c. "Marty Schwartz and Justin Sandercoe Guitar Clinic in Carlsbad California June 24th." YouTube video, 3:07. <http://www.youtube.com/watch?v=zrwthkwEHWI>.

- . 2012d. “Marty Schwartz Guitar Jamz Updates - Allensworth Gig, Justin Sandercoe Clinic - Hat Giveaways.” YouTube video, 8:39. <http://www.youtube.com/watch?v=Pzzgy2odLV4>.
- Matuza, Ray. 1996. “Product Review – Klon Centaur Overdrive.” *20th Century Guitar*, August, quoted in Bill Finnegan 2009. “Magazine Reviews.” <http://www.klon-siberia.com/swf/magazine.php>
- Mayer, John. 2006. “Gravity.” On *Continuum*. Columbia 82876 79019 2, compact disc.
- McKee, Andy. 2006. “Drifting.” YouTube video, 3:19. Uploaded November 25. <http://www.youtube.com/watch?v=Ddn4MGaS3N4>.
- Miller, Brian. 2009. “*It Might Get Loud* Directo Talks Guitar Heroes.” *SeattleWeekly.com*, August 26. Accessed November 10, 2012. <http://www.seattleweekly.com/2009-08-26/film/it-might-get-loud-director-talks-guitar-heroes/>.
- Miller, Kiri. 2012. *Playing Along: Digital Games, YouTube, and Virtual Performance*. Oxford: Oxford University Press.
- MrGJams [Marty Schwartz]. 2010. “guitar lesson - how to play gravity - john mayer - easy beginner guitar songs.” YouTube video, 7:18. <http://www.youtube.com/watch?v=mGyjXsf-0oc>.
- Müller, Eggo. 2009. “Where Quality Matters: Discourses on the Art of Making a YouTube Video.” In *The YouTube Reader*, edited by Pelle Snickars and Patrick Vonderau, 126-139. Stockholm: National Library of Sweden.
- Mupino [pseud]. 2011. “How to play Gravity by John Mayer - Guitar Mupi.” YouTube video, 6:38. <http://www.youtube.com/watch?v=BLg2CiAnTZI>.
- Museum of Making Music. 2010. “About the Exhibit Art of the Stompbox.” <http://www.museumofmakingmusic.org/stompbox>.
- Music Trades*. 2012. “A New Sense of Stability.” *Music Industry Census*, April, 51-56.
- National Resources Committee. 2012. “Witnesses: Bills to Amend Lacey Act Would Correct Unintended Consequences of Law, Protect from Over-Criminalization.” Press release, May 8. <http://naturalresources.house.gov/news/documentsingle.aspx?DocumentID=294486>.

- Occam [pseud]. 2012. "Best midi ways of controlling your Strymon/Eventide pedals?" Internet forum thread. Accessed January 22, 2013. <http://www.thegearpage.net/board/showthread.php?t=1180413>.
- Painasusual [pseud.]. 2009. "Amazing Klon vid." Internet forum thread. <http://www.thegearpage.net/board/showthread.php?t=610354>.
- Paul, Rand. 2012. "Sen. Paul Testifies in House Hearing on FOCUS Act." Press release, May 8. http://paul.senate.gov/?p=press_release&id=512.
- Perlman, Marc. 2004. "Golden ears and Meter Readers: The Contest for Epistemic Authority in Audiophilia." *Social Studies of Science* 34 (5): 783-807.
- Porcello, Thomas. 2004. "Speaking of Sound: Language and the Professionalization of Sound-Recording Engineers." *Social Studies of Science* 34 (5):733-758.
- Poss, Robert. 1998. "Distortion is Truth." *Leonardo Music Journal* 8: 45-48.
- Prior, Nick. 2008. "Putting a Glitch in the Field: Bourdieu, Actor Network Theory and Contemporary Music." *Cultural Sociology* 2 (3): 301-319.
- ProGuitarShopDemos. 2010a. "PGS Smackdown – Klon Centaur Vs. Lovepedal Kalamazoo Overdrive." YouTube video, 5:01. <http://www.youtube.com/watch?v=Ywyhz9i2bw0>.
- . 2010b. "Who's Who: Klon Centaur Vs. Lovepedal Kalamazoo Overdrive." YouTube video, 2:15. <http://www.youtube.com/watch?v=YYS2WXRgHHw>.
- Puig, Claudio. 2009. "'It Might Get Loud' takes measure of 3 guitar heroes." *Usa Today*, updated August 14, 2009. http://usatoday30.usatoday.com/life/movies/reviews/2009-08-13-might-get-loud_N.htm.
- Red Hot Chili Peppers. 1992. "Under the Bridge." *On Blood, Sugar, Sex, Magic*. Warner Brothers 9 26681-2, compact disc.
- Richard, Paul S., Alan S. Dick and Arun K. Jain. 2004. "Extrinsic and Intrinsic Cue Effects on Perceptions of Store Brand Quality." *Journal of Marketing* 54 (4): 28-36.
- RockonGoodPeople [David Taub]. 2008. "Acoustic Blues guitar lesson spice up that bluesy playing." YouTube video, 10:32. <http://www.youtube.com/watch?v=Xmleah8K1cE>

- . 2010. “Win a FREE GUITAR acrylic Strat style giveaway from Next Level Guitar.” YouTube video, 6:38. <http://www.youtube.com/watch?v=h-Rboj5Z1iw>.
- Rip, Arie. 1986. “Mobilising Resources Through Texts.” In *Mapping the Dynamics of Science and Technology*, edited by Michel Callon, John Law and Arie Rip, 84-102. London: The Macmillan Press LTD.
- Ryan, John and Richard A. Peterson. 2001. “The Guitar as Artifact and Icon: Identity Formation in the Baby Boom Generation.” In *Guitar Cultures*, edited by Andy Bennett and Kevin Dawe, 89-116. Oxford: Berg.
- Sargant, Carey. 2009. “Playing, Shopping and Working as Rock Musicians: Masculinities in ‘De-Skilled’ and ‘Re-Skilled’ Organizations.” *Gender and Society* 23 (5): 665-687.
- Scarlettjoswanson [pseud.]. 2012. “Shadow Days – John Mayer Acoustic - @martyzsongs.” YouTube video, 1:58. <http://www.youtube.com/watch?v=U95hrqiWFQk>.
- Schön, Donald. 1983. *The Reflective Practitioner: How Professionals Think in Action*. New York: Basic Books.
- . 1990. *Educating the Reflective Practitioner*. San Francisco: Jossey-Bass.
- Schröter, Jens. 2009. “On the Logic of the Digital Archive.” In *The YouTube Reader*, edited by Pelle Snickars and Patrick Vonderau, 330-346. Stockholm: National Library of Sweden.
- Schwartz, Jeff. 1993. “Writing Jimi: Rock Guitar Pedagogy as Postmodern Folkloric Practice.” *Popular Music* 12 (3): 281-288.
- Schwartz, Marty. 2012. “Guitar Jamz.” Facebook webpage, accessed January 3, 2013. <https://www.facebook.com/pages/Guitar-Jamz/211844342207>.
- Shelemay, Kay Kaufman. 2011. “Musical Communities: Rethinking the Collective in Music.” *Journal of the American Musicological Society* 64 (2): 349-390.
- Skydog46 [Dan Duntze]. 2006a. “Blues You Can Use: Klone Centaur Demo.” YouTube video, 8:30. <http://www.youtube.com/watch?v=QOG2EmIe2dw>.
- . 2006b. “Klone Centaur Demo; 1952 Les Paul 1965 Deluxe Reverb.” YouTube video, 5:30. <http://www.youtube.com/watch?v=nrz9mvHiG-Y>.

- Simmons, Michael John. 2008. "A Guitar Lover's Guide to the CITES Conservation Treaty." *Fretboard Journal* 11. <http://www.fretboardjournal.com/features/magazine/guitar-lover%E2%80%99s-guide-cites-conservation-treaty>.
- Singleton, Vicky. 1996. "Feminism, Sociology of Scientific Knowledge and Postmodernism: Politics, Theory and Me."
- . 2000. "Made on Location: Public Health and Subjectivities."
- Slobin, Mark. 1992. "Micromusics of the West: A Comparative Approach." *Ethnomusicology* 36 (1): 1-87.
- Smalls, Christopher. 1998. *Musicking: The Meanings of Performing and Listening*. Middleton: Wesleyan University Press.
- Smith, Nancy Dewolf. 2011. "The Government and the Guitar Man." *Wall Street Journal*, November 12. <http://online.wsj.com/article/SB10001424052970203554104576655273915372748.html>.
- Snickars, Pelle. 2009. "The Archival Cloud." In *The YouTube Reader*, edited by Pelle Snickars and Patrick Vonderau, pp. 292-313. Stockholm: National Library of Sweden.
- Solis, Gabriel. 2010. "I Did It My Way: Rock and the Logic of Covers." *Popular Music and Society* 33 (3): 297-318.
- Soundcloud. "Help/Uploading & Transcoding." Accessed January 2, 2013. <http://help.soundcloud.com/customer/portal/topics/109407-uploading-transcoding>.
- Stingeray [pseud.]. 2007. "John Mayer – Gravity(Tutorial/Lesson)." YouTube video, 5:14. <http://www.youtube.com/watch?v=QdTDOOI9z0o>.
- Stone Temple Pilots. 1992. "Plush." On *Core*, Atlantic 7 82418-2, compact disc.
- Taylor, Bob. 2012. "The State of Ebony – Taylor Guitar." YouTube video, 13:22. <http://www.youtube.com/watch?v=anCGvfsBoFY>.
- Teas, R. Kenneth and Sanjeev Argwal. 2000. "The Effects of Extrinsic Product Cues on Consumers' Perceptions of Quality, Sacrifice, and Value." *Journal of the Academy of Marketing Science* 28 (2): 278-290.
- Tesla. 1989. "Love Song." By Frank Hannon and Jeff Keith. On *The Great Radio Controversy*, Geffen 24224, compact disc.

- Therewillbehotcake [pseud.]. 2011. "Klone." Internet forum thread. <http://www.thegearpage.net/board/showthread.php?t=911810>.
- "Review – The Klone Centaur." 2000. *The Tone Quest Report* 1 (8), quoted in Bill Finnegan 2009. "Magazine Reviews." <http://www.klon-siberia.com/swf/magazine.php>.
- Toneczar Effects. 2007. "Echoczar." Accessed January 3, 2013. <http://www.toneczareffects.com/gallery-echoczmn3005.htm>.
- Tripp, Carolyn, Thomas D. Jensen, and Les Carlson. 1994. "The Effects of Multiple Product Endorsements by Celebrities on Consumers' Attitudes and Intentions." *The Journal of Consumer Research* 20 (4): 535-547.
- Vintage66 [pseud.]. 2009. "Klone vs Klone-Gearmandude vid." Internet forum thread. <http://www.thegearpage.net/board/showthread.php?t=567774>.
- Visual Sound. 2009. "Visual Sound: Pedal Shootout #1: Overdrive." YouTube video, 9:25. http://www.youtube.com/watch?v=ZMy_Jt7A1wA.
- United States Department of Agriculture. 2012. "Plant Health: Lacey Act." Accessed September 20. http://www.aphis.usda.gov/plant_health/lacey_act/.
- Waksman, Steve. 1999. *Instruments of Desire: The Electric Guitar and the Shaping of Musical Experience*. Cambridge: Harvard University Press.
- . 2004. "California Noise: Tinkering with Hardcore and Heavy Metal in Southern California." *Social Studies of Science* 34 (5): 675-702.
- Walser, Robert. 1992. "Eruptions: Heavy Metal Appropriations of Classical Virtuosity" *Popular Music* 11 (3): 263-308.
- . 1993. *Running with the Devil: Power, Gender, and Madness in Heavy Metal Music*. Middletown, CT: Wesleyan University Press.
- Wasko, Molly Mclure and Samer Faraj. 2000. "'It is what one does': Why people participate and Help Others in Electronic Communities of Practice." *Journal of Strategic Information Systems* 9: 155-173.
- Whaiyun [pseud.]. 2010. "Klone vs Kalamazoo." Internet forum thread. <http://www.thegearpage.net/board/showthread.php?t=707488>.

- Wong, Deborah. 1998. Review of *Running with the Devil: Power, Gender, and Madness in Heavy Metal Music*, by Robert Walser. *Journal of the American Musicological Society* 51 (1): 148-158.
- YouTube. 2012a. "Encoding Video For YouTube: Advanced Specification." Updated October 16. <http://support.google.com/youtube/bin/answer.py?hl=en&answer=1722171>.
- YouTube 2012b. "Guru Accounts." YouTube.com. Accessed July 15, 2012. <http://support.google.com/youtube/bin/answer.py?hl=en&answer=95442>.
- Zhou, Renjie, Samamon Khemmarat, and Lixin Gao. 2010. "The Impact of YouTube Recommendation System on Video Views." *IMC 2010 Proceedings of the 10th ACM SIGCOMM Conference on Internet Measurement* November: 404-410.