EMBALMING THE DEAD

TAPING, TRADING, AND COLLECTING THE AURA OF THE GRATEFUL DEAD

A thesis

submitted by

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GRATEFULLY DEADICATED

TO ALL THOSE WHO LABORED
TO CAPTURE, SHARE, AND PRESERVE
THE MUSIC AND THE MAGIC OF
THE GRATEFUL DEAD

Abstract

In this study, I offer an analysis of the complex world of live recordings of the Grateful Dead, produced by both the band and the fans, that function as mediated artifacts of the concert experience and cultural currency within the Dead Head scene. The non-commercial networks of exchange of these recordings formed a vital aspect of fandom and cultural production. Through the replication and dissemination of recordings, the culture itself reproduced. Few scholars have focused on those who are presently engaged with the music of the Grateful Dead or the role of amateur recordings in the expansion of the fan base after Jerry Garcia's death. With new digital technology and mass distribution via the Internet, investigation in the shifting nature of collecting and archiving the Grateful Dead warrants attention. This thesis will examine tape trade as a "technologized social [musical] life" (Taylor 2001:20) where identity and sociality are tied to the production and circulation of recorded music. The Grateful Dead deeply affected their fan base; though this thesis does not hope to pinpoint and define the power of the Dead and their music, it does strive to demonstrate the way that power manifests within the taping, trading, and collecting subculture inside the larger scene of Dead Heads.

CONFESSIONS
Offered in Kind

I do not have a Nagra Playback machine.
I have never seen a Sony D5 in person.
I do listen to MP3s. When I have to.
I enjoy tape hiss.
I turn SPACE up really loud – even when in the car – especially in the car – especially when
other people are in the car.
I sing. Not well.
I do not know the words. All the words.
Grateful Dead gives me pleasure.
I was given my first tape in ninth grade: one side Grateful Dead, one side Phish.
I prefer analog.
On principle 24 bit is better than 16 bit.
I do not label my recordings well or take notes.
I have placed tapes in the wrong case.
I write on my CDs.
I wonder if my ineptitude with BitTorrent clogs the system.
I am working on my share ratio.
I am bad with set lists. Getting better.
I play Grateful Dead tapes on repeat in my room. While I sleep.
I like to hear speed fluctuations on the tape.
I am a dancer.
I have reverence for master tapes and originals.
I was 11 years old when Jerry Garcia passed from this world.
I do not always understand the lineages in text files.
I have misplaced CDs.
Computers + me + can mean = disaster.
I still do not fully understand the magic of microphones.

I listen.
I enjoy my work.

With gratitude and respect,
Katie Harvey

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INTRODUCTION
POURING LIGHT INTO ASHES

Tape hiss fills the room weighing down the silence. Isolated notes ping the air as Jerry finely tunes his guitar. The tape flutters. Phil pungently strikes an open string. Dissonant chords rise slowly from the organ. A snare drum rattles in the not so far distance. The anticipation thickens and kinetic energy pauses for a moment, perched.

"The Monitors. Give me some more monitors. Turn up the guitar in the monitors." … Jerry begins the opening notes of Funiculì, Funiculà.

More organ. … The tape speed lurches forward. And the band launches into Howlin' Wolf's "Smokestack Lightning." Pigpen comes alive. The sounds of the Dead majestically manifest yet again. After a long bluesy rap, the song climaxes and the crowd claps its appreciation.

More tuning. A quiet pause hangs in the air. Someone grabs a tambourine. Bobby transforms into a young fugitive recently caught with *Mama Tried*, "…and I turned 21 in prison, Doin' life without parole."

FEEDBACK. Jerry teases the first notes of "Dark Star" as stray A and G chords echo throughout the hall. The tape speed fluctuates. The recording device makes itself visible. The higher frequencies ring. More wows and flutters.

Gracefully, the band slips into "China Cat Sunflower," "adjusting the flow from beat to beat, drifting from mood to mood" (Scully and Dalton 1996:17). Ever so slowly within the context of "China Cat," the well-known folk tune "I Know You Rider" materializes.

"You're going to miss me when I'm gone…"

The song ends.

Bobby's voice returns. "Everybody take a step back. 1…2…3 step back. And 1…2…3 step back. And ANOTHER step back." Phil, Mickey, Billy, and Pigpen begin playing circus tunes. A moment of chaos ensues.

Another pause.

Hints of musical form dance in the air as Jerry re-tunes.

"Dark Star." Time travel. The band expands and contracts finding "spontaneous consensus" like nodes in the music. The organ floats above.

> Contrast and complement: Each of [the members] approach the music from a different direction, at angels to one another, like the spokes of a wheel (Lesh 2005:57).

Sounds whip through the air. Plucked strings bend, moan, and screech.

Mirror shatters,

Tape reflecting matter… …

Deep within the musical cavity of "Dark Star" the sound stops suddenly. The machine comes alive with moving parts. Click. Silence. Rolling. Click. Tape hiss. And the Dead emerges just as suddenly as they disappeared still inside the cavernous depths of the music.

After a long musical journey, the structure shifts and *Saint Stephen* is unveiled "with a rose, in and out of the garden he goes."

"…Ladyfinger dipped in moonlight"

Tape Hiss.

The play button abrasively releases. Silence. Return.

In live performance, the Grateful Dead manifested a musical world pregnant with the possibility of enlightenment. Recording technology enabled the fans to capture this discovery, to translate the experience into an artifact that could be shared and collected. Fans participated in the scene by taping and preserving the music itself. Through circulation of these recordings, fans strengthened their relationship to the music and each other. As technology changed, the social networks adopted it and adapted to it meet their needs. Because of their efforts, "the music never stopped,"[1] and the trading and collecting culture continues to thrive and evolve. This story offers a compelling history that speaks to the power of live music, the ability to record it, and the relationship between musicians and their fans. This thesis aims to demonstrate and explore this power in the lives and relationships of those within this dynamic scene as well as the role of technology in facilitating these relationships.

The Recorded History of the Dead

Performing from 1965-1995, the Grateful Dead were as much a cultural phenomenon as a popular rock and roll band. Drawing from folk, blues, gospel, bluegrass, classical, avant-garde, jazz, and rock and roll, the Grateful Dead constructed a dynamic musical ethos full of risk and the prospect of shared musical epiphany. Due to the band's focus on improvisation and experimentation, each concert offered a unique, transitory musical experience situated in time, space, and performance history. The live concerts, as unique

[1] "The Music Never Stopped." Lyrics by John Perry Barlow.

works of art with a specific place in history, contained what Walter Benjamin referred to in his 1936 article "The Work of Art in the Age of Mechanical Reproduction" as authenticity or "aura" (1936).[2] The music evolved and expanded with each show, tour, and decade as the band explored musical avenues and incorporated new material into their repertoire. The band itself fluctuated and included a rotating keyboardist chair that defined performance styles and musical era.[3] This sense of constant change defined each concert as an original, momentary event and produced a desire within both the band and the fans to record the music and the "magic" of the Grateful Dead. The efforts of the band's sound engineers and audience tapers reproduced the concerts in recorded form.

Walter Benjamin argued that a reproduction of an original work of art lacked authenticity, or aura. Yet, musicologist Albin Zak III, in his book *The Poetics of Rock: Cutting Tracks, Making Records,* argued that recording technology allows for "transferal of aura" (Zak 2001:19). Zak, however, failed to mention that in this process, the aura itself is translated as it passes through the

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[2] Walter Benjamin's work focuses mainly on film and photography, yet his concepts have often been applied to music and sound recording technology.
[3]The Grateful Dead was originally comprised of five musicians, Jerry Garcia on lead guitar and vocals, Ron "Pigpen" McKernan on organ, harmonica and vocals, Bob Weir on rhythm guitar and vocals, Phil Lesh on bass, and Bill Kreuztmann on drums. Within two years of their formation, they added Mickey Hart as a second percussionist. Though Hart stopped touring for a few years during the aftermath of his father's corrupt management of the band, he was a permanent, integral member of the Dead. Around 1970, Tom Constantan briefly toured with the band as a second pianist. Pigpen played until his untimely death in 1973. Keith Godchaux on keyboards and his wife Donna Jean Godchaux on vocals performed with the Dead from 1972-1979. Brent Myland served on keyboards and organ from 1979 until his tragic death in 1990. Then, for a short period in 1990 and 1991 Bruce Hornsby and Vince Welnick shared responsibility on keyboards. Welnick then played keyboards alone for the remainder of the band's touring career.

recording device onto a recorded medium; the recording solidifies as a *mediated* artifact of the performed original. The tapes reified the concert experience into tangible, repeatable artifacts, exchangeable within a complex system of fictive kin defined through the trade and gifting of tapes. Possessing, collecting, sharing, and archiving these recordings became a key aspect of fandom and established a history of the music in which the tapes became, "the talismans that unite[d] the tribe as a whole" (McNally 2002:385). Therefore, in contradiction to Benjamin, I argue that a piece of the original aura of the concert translates to the recording and each subsequent copy.

As fans documented the performances and shared tapes, set lists, and material artifacts with one another the perception and understanding of each concert within the context of the music's history became clear. Listening practices and cultural understanding changed as more recordings were made available, recording technology evolved, and dissemination techniques increased in sophistication. Artifacts multiplied, and the culture reproduced. Now, more than a decade after the death of Jerry Garcia and subsequent demise of the band, the music of the Grateful Dead remains and the vibrant culture formed around the collecting and trading of artifacts continues to thrive and build the collective musical history of both the band and their fans.

Studying the Grateful Dead and Dead Heads[4]

During my research, I was fortunate to encounter and engage with The Deadwood Society, a strong community of established Grateful Dead scholars researching across several fields such as sociology, business, folklore, musicology, ethnomusicology, and history. These scholars actively and rigorously work to bring the Grateful Dead into academic circles, using the band and the culture as a case study to demonstrate the nature of improvisation, power of community, and the "Grateful Dead model" as a positive alternative to the mainstream music industry. Yet these scholars have toiled in obscurity for over a decade.

Even taking into account the research of The Deadwood Society, little scholarship has been devoted to the continuation of the Grateful Dead culture after 1995. Few scholars have focused on those who are presently engaged with the music of the Grateful Dead or the role of amateur recordings in the expansion of the fan base after Garcia's death. With new digital technology and mass distribution via the Internet, investigation in the shifting nature of collecting and archiving the Grateful Dead warrants attention.

The band, their organization, and the fans labored to document almost every detail regarding the music of the Grateful Dead.. Grateful Dead collectors retained ticket stubs, stickers, letters, tape lists and original tape labels. Archivists

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[4] Often this term is spelled "Deadhead," and some quotes within this thesis will reflect the common form. However, documents by the band and their organization spell "Dead Head" as two capitalized words; therefore, I chose this spelling for my own work. I wish to thank Barry Barnes for pointing out this distinction to me.

catalogued the circulating opus with sophisticated detail.[5] Dead Heads continue to utilize their social networks including online forums and public news groups. Therefore, the main resource documents for this study stem from within the culture itself: fanzines, newsletters, reference guides, hand written set lists, artwork, tape labels, and recordings.

Notably, a small group of collectors compiled extensive statistics related to the Grateful Dead and their music. Published annually from 1987-1997 under the name *Deadbase,* these reference guides provide reviews of the live concerts alongside detailed information regarding the songs, the shows, and the fans. In 1998, tape collectors Michael Getz and John Dwork launched their own multivolume study of the recordings and tape culture entitled *The Deadhead's Taping Compendium: An In-Depth Guide to the Grateful Dead on Tape.* And in 2002, after several years of compiling recordings and documentation, a group of tape collectors moved their communal collection to Archive.org, a public online library available to anyone with Internet access. Even though this wealth of material exists in relation to the recording and exchange of the Grateful Dead's music, mainstream academia has been hesitant to approach the Dead and their fans as a deserving object of study.

The Deadwood Society has acknowledged this lack, referencing the possible stigma attached to the Dead and those who work with them. Sociologist Rebecca Adams, well known as one of the first academics to research Dead

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[5] The use of the term "opus" stems from dialogue within the Grateful Dead trading scene regarding the openly circulating catalogue of recordings available to the public. Specifically, Matt Vernon used the term to designate the public collection not available on Archive.org. For more information see Vernon 2005.

Heads, experienced a number of negative reactions when first embarking on her study. In her article "Inciting Sociological Thought By Studying the Deadhead Community: Engaging Publics in Dialogue," Adams writes about this stigma,

> Neither the general public nor all sociologists perceive Deadheads to be a "deserving population" [for academic study]. The general public perceives Deadheads to be undeserving not only because of their musical taste, but also because of their acceptance of psychedelic drug use and the way they dress. On the other hand, some sociologists view Deadheads as unworthy because they are not obviously victims of the social structure, oppressors, or change agents. On the surface, at least, Deadheads appear to be frivolous, spending time partying rather than working for social justice. Although my research has revealed a much more complex phenomenon, their public image prevails (Adams 1998:3).

My research has shown Dead Heads, especially those actively involved in the preservation and sharing of the Grateful Dead's music, to be both complex and articulate innovators—change agents in the world of sound recording and distribution. I found this population to be passionate in their enthusiasm for the music and their role in its dissemination and preservation. Here, the fans, regarded as equals by the musicians themselves, participate not only in the live event but also in the production of historical documents. By not only tolerating but later encouraging the act of recording, the band gave the fans the freedom and space to capture and share the concerts, to work willingly as "evangelists" for the band and as meticulous archivists of the music.

In this study, I offer an analysis of the complex world of these live recordings, produced by both the band and the fans themselves, and the non-commercial networks of exchange that formed a vital aspect of Dead Head

culture.[6] The tapes paved a central avenue through which fans related to the music and each other and preserved the band's music long after they stopped performing live. As stated by Religious Studies Scholar and Deadwood Society Member, Peter Sawyer, "In order to understand Deadheads it is essential to comprehend the extent to which they have marinated themselves in Grateful Dead music both on tape and live" (Sawyer 2003:181). Extending this notion, Dennis McNally comments, "The way to be a Dead Head is not listening to the [studio] records but listening to the tapes. And talking about this with people [to get] a sense of what an unusual and exciting thing this is—this sort of gypsy caravan called the Grateful Dead" (McNally, Interview 1).[7]

In my study I address a series of questions: What aspect of the concert experience is retained and circulated on the recordings? Who made them? Which recordings circulate? How do recordings acquire perceived quality or value? How does this circulation create and affect relationships? What is the role of technology in the production and dissemination of recordings and the social structure of exchange? What is the meaning and deeper value of these recordings to the tape subculture within the scene? What does this model of the band-fan relationship tell us about the power of live music and fandom? How does

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[6] To be clear, this thesis focuses on the live recordings circulated within the trading and collecting networks of exchange. Grateful Dead Productions has released several series of live recordings and continues to do so. This study, however, focuses on the non-commercial exchange of recording and therefore the impact of and the dialogue surrounding the commercial releases will not be covered.

[7] Citations in this form indicate an interview conducted by the author. Multiple interviews with the same person are numbered in chronological order. Dates and locations can be referenced in the List of Interviews and selected transcriptions can be found in Appendix C.

recorded sound affect and shape memory? Who owns the right to this music and this history? As I explore these questions I hope to contribute to our understanding of the power of music in contemporary culture, and the impact of technology on the relationship between musicians, their fans, and recorded sound.

Throughout the exploration of these questions, the profound relationship between the Grateful Dead and their fans remains the intangible element that ties this narrative together. This music deeply affects thousands of people. Dedicated fans traveled to all corners of the country to experience hundreds of shows. Tapers labored on a nightly basis to record every note played. Collectors worked tirelessly to compile the complete "opus" of the band. Archivists dedicated their lives to the dissemination of the music. The band's symbols have become ubiquitous on car stickers, t-shirts, posters, and even neckties. Individuals of all backgrounds cite Jerry Garcia as an important and influential figure in their lives, some going so far as to refer to him as a prophet or a saint. Though this thesis does not hope to pinpoint and define the power of the Grateful Dead or their music, it does strive to demonstrate the way that power manifests within the taping, trading, and collecting subculture within the larger scene of Dead Heads.

A Note on Terminology

Dead Heads consciously enculturated one another through a variety of interactions, stressing a mutual ethos of respect and love by commonly referring to each other not only as a community, but also as brothers and sisters, as family, or as a tribe. Grateful Dead writers and scholars have used these same terms to

characterize this population. However, due to the diversity and complexity of the Dead's extensive fan base, current scholarship has begun to reconsider these terms because they often imply consensus and specific cohesive forms of communal involvement. Using Stuart Halls's notions of spatiality, Elizabeth Yeager, an American Studies scholar, has argued "scene" is the appropriate term to delineate this phenomenon, highlighting the multiplicity and shifting nature of the population surrounding the band, music, and live performance (Yeager 2009). I adamantly agree with Yeager's approach and will therefore often refer throughout this thesis to both the culture of Dead Heads and the subculture of tapers, traders, and collectors as scenes. I designate the people within the scene as tapers, traders, and collectors to differentiate between those who produce recordings, those who trade recordings for other recordings, and those who collect and archive recordings. Many people within the scene overlap regarding these categories, but it important to highlight the activities as separate.

Though the terms "clan" and tribe" have been rejected by Grateful Dead scholars, anthropological work regarding kinship and exchange can help construct a framework for the circulation of recorded music. Within this study, especially in Chapter Three, I employ the work of anthropologists Marcel Mauss and Bronislaw Malinowski. These scholars described and analyzed webs of reciprocity and exchange within and across tribes and clans in Polynesia and Melanesia. Though their work is based on kinship ties not found in the Grateful Dead scene, their structures of exchange can greatly enhance the understanding of this non-commercial economy.

Bootleg vs. Piracy vs. Tape Trade[8]

Bootlegging is defined as the unauthorized production and *commercial* release of a band's live performance or studio outtakes. Piracy, in contrast, involves the copying and commercial sale of previous officially released material. Grateful Dead tape trading culture is based neither on bootlegging nor piracy.[9] As an alternative to bootlegging, a culture of exchange developed within the Grateful Dead scene where recordings themselves functioned as currency: recordings could be exchanged for other recordings or goods sold by Dead Heads at concerts such as food and clothing. In the words of Grateful Dead lyricist John Perry Barlow, "tapes are the currency for this economy, for our psychic economy, to say the least. And by the proliferation of tapes, that formed the basis of a culture" (McNally 2002:386). The tapes themselves acquired value apart from notions of monetary worth. Instead tapers and tape traders assessed and ranked the recordings according to Dead Head musical aesthetics and the timbre of the recording itself; this assessment then dictated the balance of trade and the reciprocity of gifts.

In 1984, Grateful Dead Productions officially sanctioned taping and tape trading by delineating a taper's section at the concerts; with this sanction, came

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[8] For more on the history of bootlegging see Heylin, 1994 and Marshall 2003.
[9] Vinyl bootlegs released during the first few years of Grateful Dead performance did have a role in jumpstarting the taping and trading culture. These bootlegs served as a catalyst for some fans to begin taping on their own, as will be discussed in Chapter Two, and new collectors and traders often made cassette copies of bootlegs they purchased in order to have something to offer for exchange, as will be discussed in Chapter Three.

the explicit prohibition of commercially releasing the recordings.[10] Many bands and record companies fear this model of a trust-based relationship with fans and worry that audience-made recordings will undermine other revenue streams. According to Grateful Dead publicist, Dennis McNally, the decision to openly support tapers and tape trading actually expanded the band's fan base and increased long term profits. McNally comments,

> If you ask, "Did tape trading cut into the band's profits?" the answer's probably a little. But, overall, going back into the…late '70s and early '80s, it far more extended them because it added [to the fan base]. It brought in Dead Heads. It created new Dead Heads (McNally, Interview 1).

As part of their business model, this policy proved to be a pioneering, revolutionary, and lucrative decision. Rather than reducing profits, fan taping functioned as free advertising and a key factor in building fan following and loyalty. This decision coincided with the Dead's existing business model based on revenue from touring as opposed to studio recordings. Upon seeing the success evident in the ever-expanding Grateful Dead fan base, other bands have since adopted this model through a focus on live performance and the open support of tapers and the non-commercial exchange of recordings.

Though Grateful Dead openly supported taping and tape trading, tapers and collectors have had to negotiate federal copyright laws. In general, tape traders and music collectors have a history of battling the Recording Industry Association of America (RIAA) and the US government in regards to copyright.[11]

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[10] The reasons and repercussions of this decision will be discussed more fully in Chapter Two.

[11] For more on this history see Heylin, 1994.

Specifically Grateful Dead tape traders have benefited from the band's blessing to record and share tapes on the condition that they are never exchanged for money. However, with the "Prioritizing Resources and Organization for Intellectual Property Act" (commonly referred to as the Pro-IP Act), signed by President Bush in October of 2008, current online trade has been threatened. With this act, copyright infringement shifted from a misdemeanor to a felony and fines increased from thousands to millions of dollars *per violation.*[12] Many online trading sites regulate their traffic, requiring written permission from the bands themselves. Yet, others allow recordings of "non-trader friendly" bands to slip through, therefore violating copyright. The danger lies in the fact that a single infringement permits the RIAA and the FBI to prosecute collectors as felons and confiscate their entire collections. Despite these regulations, relying on the support of Grateful Dead Productions, active trade with the Dead Head scene continues.

Technological Determinism and Cultural Feedback

Recording technology played a key role in the birth and development of this culture; tapers and tape traders brought music and recording technology together to form the social world of Grateful Dead tape trading. Recording technology provided a method to capture and preserve the live concert and create a souvenir of the musical event. Technology allowed the subculture of tape

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[12] For more information on the Pro-IP act see "The Threat Posed By Inflated Statutory Damages" and Mark Menthenitis. "LGJ: The Pro-IP Act and Gaming." http://www.joystiq.com/2008/10/10/lgj-the-pro-ip-act-and-gaming/ (accessed April 1, 2009).

trading to exist, shaping not only the production and dissemination of recordings, but also the means for individuals within the scene to interact with one another. In short, recording technology shaped "the way [this culture] live[d] together socially" (MacKenzie and Wajcman 1985:4).

Historically, technological theory often solely pointed to the technology itself and discussed its affect on society without considering human agency. Yet many recent technological theorists have questioned this notion of "technological determinism," which argued for what Timothy Taylor calls a "top down" model of technology (Taylor 2001). Taylor and other theorists argue against this "one-way" theory, highlighting a "bottom-up" model where human agents affect, use, and create meaning in relation to technology (Taylor 2001). Within the social web of tape trade, technology and culture form a positive feedback loop, affecting and building upon one another. Technology produces and influences culture while culture produces and influences technology. As technology made taping easier through smaller recording devices and higher fidelity microphones, more recordings were reproduced; consequently, the scene grew and was strengthened. And as the scene expanded, more tapes were made and better recording and dissemination technology was designed and utilized. Digital recording technology and Internet exchange systems further demonstrate this expansion and technological feedback as the scene adapted the technology to meet their needs. As stated by T.J. Misa, quoted by Donald MacKenzie and Judy Wajcman, authors

of *The Social Shaping of Technology*, "technology is socially-shaped and society-shaping" (MacKenzie and Wajcman 1985:XV).[13]

In order to "understand how using technology is implicated in the ongoing work of producing [specific] culture" (Lysloff and Gay 2003:8) and how culture affects and produces technology, this paper will examine tape trade as a "technologized social [musical] life" (Taylor 2001:20). I add "musical" to Taylor's phrase in order to keep music at the forefront of this culture, as, in my study, it is the music that provides the seed for the cultivation of the taping and collecting subculture and the technology that helps to shape and preserve it.

Collecting—What is Being Traded and Why?

Why do Grateful Dead tapers and traders collect these recordings? Why do they spend time, effort, emotion, and money to exchange, share, preserve, catalogue, copy, and accurately document thirty years of Grateful Dead music? Why do they keep thousands of cassettes, hundred of CDs, and multiple hard drives full of this *particular* band?

When asked the questions above, many traders refer directly back to the music itself, citing the improvisational freedom inherent in the Grateful Dead experience as the catalyst for the taping culture. In Volume One of *The*

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[13] The Grateful Dead sound engineers also participated in a positive feedback loop with technology. Their innovations and desires fed back to the manufacturers who were then forced to improve their products. Grateful Dead sound engineers in conjunction with a team of designers founded their own sound company, Alembic, as a result. For more on this concept see David Gans's 1991 interview with Augustus Owsley Stanley III: Gans, David. "Bear." *Conversations with the Dead: The Grateful Dead Interview Book.* Cambridge: De Capo Press, 2002.

Deadheads Taping Compendium: An In-Depth Guide to the Grateful Dead on tape, co-editor John Dwork writes,

> That they took such creative risks so often, and in their travels discovered breathtaking beauty, profound darkness, and enormous creative power so often, is simply incredible. And this is why we Deadheads are so enamored with the Dead's music. Time and time again they set out in search of magic and more often than not, found it. In its own way, each such discovery is, for us Deadheads, a small, tangible miracle (Dwork and Getz 1998:Hii).

For many Dead Heads who attended shows, the recordings have become a means to preserve memory, a way to revisit the experience. Jimmy Warburton, a taper and tape collector, relates,

> You can project yourself back there…I can pick a reel off the shelf and tell you another story, or fifteen. Talk for an hour on the one tape: the day that I did it, the people I was with, what was going in my life (Warburton, Interview).

For Alex Bushe, a trader and collector too young to have seen the Grateful Dead in person, exchanging tapes enables him to participate in this scene, find the moments of magic, and explore the history of the Grateful Dead's music in order to discover what he calls, "the Holy Grail,"

> I guess it is…about finding some sort of Holy Grail that probably doesn't exist, but I don't think the[re] are many shows that are straight through perfect. I think that's just not the nature of that band and not the nature of human beings in general. I mean there's always… warts (Bushe, Interview 2).

Bushe goes on to describe in detail what he listens for, citing the way in which the band was able to change their musical ideas over time,

> I think it's exciting to find something that's really good, and then to explore that period more because sometimes there [are] other shows right around then that have something similar that's special …I mean you have this ideal, this theoretical ideal, and then there are a million different forms of that…and sometimes the band will

> work with one of those different ideas and take that a bunch of different directions…[and] go back to something that's closer to one ideal again maybe two months later (Bushe, Interview 2).

This hunt keeps collectors searching long after they acquire what OBIE, a Dead Head and avid tape collector, refers to as "more music than minutes left to live" (OBIE, Interview 1).[14]

When asked this same set of questions, tape collector Noah Weiner combined the dynamic, shifting nature of the Grateful Dead's music with the practical notion that many Grateful Dead tape collectors arrived in the scene with the mentality of a collector and willingness to catalogue and systematize all of the recordings within their possession,

> The larger Dead community wasn't as obsessed with gathering every darn recording from 1973. In some ways the traders appear more devout in their love of the band's music, but that's coming from a rather biased side of the fence here. That devotion might have just provided for some folks a perfect outlet for pack rat tendencies…Match a love of Dead music with thousands of hours available, with a person that loves to collect and never throw stuff away, and you've got a party waiting to happen (Weiner, Personal Email).

Traders respect one another as collectors, as archivists, seeking more music than they could possibly listen to in order to enhance or "complete" their collections. Possessing a vast collection of tapes conferred status and power on the collector. Dwork writes,

> The social status attached to a large collection is also often deeply satisfying. It can be a real joy to have someone walk into your library and gasp in amazement at how vast your collection is, and then to blow them away by playing something especially amazing (Dwork 1998:Hiii).

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[14] OBIE prefers to have his name spelled in all capitol letters.

Collectors defined their relationship to the music in part through the act of taping, sharing, and archiving the Grateful Dead. Tape collectors often tied their own identity to their collections and their relationships to others through the gifting of music.

But what is it that they are collecting? Each recording and subsequent copy represents a translation of the original concert experience. The tapes, as mediated artifacts of the concerts are not the concerts themselves, yet as translations they "stand in the closest relationship to the original" (Benjamin 204:254). They provide an avenue back to the concerts, but the full aura of the performance remains distant. On the recordings, the aura takes a new, recorded form, a new work of art with its own aura that can be collected and shared. They give the music, the band, and the fans an afterlife.

Methodology and Fieldwork

Like many before me, I became a fan of the Dead through a gift: a friend of a friend made me a tape. Admittedly, the tape contained one side of Grateful Dead music and one side of Phish music.[15] At the time, the irreplaceable Jerry Garcia had already died, so I began my exploration of live improvisational music

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[15]Phish formed in Burlington, Vermont in 1984. Since then, the quartet has explored their version of rock music through elaborate contrapuntal compositions (as well as forays into pop, country, jazz, funk, minimalism, & everything in between), free form improvisation, playful imagery, fanciful lyrics, and irresistible dance grooves. Much like Dead Heads, their fans built a social and economic infrastructure based on touring with the band. Following the Dead's business model and expanding it relative to the proliferation of the Internet and digital media, Phish also made the decision to allow the taping and trading of their music. This resulted in an elaborate exchange system similar to, yet distinct from, the one discussed here.

through Phish. Yet, the music of the Grateful Dead persisted within my soundscape—played by friends in their homes, by fans in the parking lots of concert venues, and on my tape. While I was in high school, the remaining four members of the Grateful Dead, Phil Lesh, Bob Weir, Bill Kreuztmann, and Mickey Hart, toured together under the name The Other Ones. I traveled to several shows with a group of friends, and thus my relationship to current manifestations of the Dead's music began.

As I embarked on this research, I had to re-present myself to the scene not simply as a fan but as a researcher. My work "depend[ed] on [my] self constructed identity [as] the ethnographer in a social landscape" of musical experience and musical listening (Kisliuk 1997:32). I entered the "field" of Grateful Dead tape trading by placing messages in online forums. I hoped to connect to tape traders in the same way they connect to each other. This led me to OBIE, an experienced tape collector, a teacher, and leader in the network of traders. Under his guidance, I began to network with others.

Almost immediately, Dead Heads shared their recordings with me. I gratefully received several large gifts of music including hard drives, DVDs, and one single shipment of 156 tapes.[16] I traded. I shared. I downloaded. And I digitized reel-to-reels.[17] Soon I was playing the Dead's music on every playback device I owned; my stereo, car, kitchen CD player, living room sound system, and

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[16] I want to convey my gratitude to OBIE for the drive, Asa for the terabyte, John for the discs, and Alex for the plentitude of files. I also wish to thank Steve in Oregon for sending me the tapes and therefore sharing the experience of analog.
[17] I wish to thank Paul Lehrman for letting me work with his reels, for teaching how to use the equipment.

computer were all alive with the sounds of the Dead. In the words of OBIE, the tapes dictated the "soundtrack of my life."

In the tradition of early Grateful Dead Exchange groups that formed in the first half of the 1970s such as the "Free Underground Tape Exchange," I presented myself through a business card while in the field.[18] On one side I stated my occupation, ethnomusicologist, and my goal: "Looking for Grateful Dead Tapers and Tape Traders, Collecting Stories." On the other side, I placed a picture of the Queen of Spades in order to place the card within the texted history of the Grateful Dead; the Queen references "Dire Wolf" where the narrator "cut the deck to the Queen of Spades but the cards were all the same" (Hunter 2005:58)

My first gift of music in the mail consisted of several DVDs full of digital files with the message, "If you get confused, listen to the music play."[19] John, the gracious tape trader, quoted this Grateful Dead lyric as a reminder to keep the music central to my study. He reminded me to allow the sound and words of the Grateful Dead to be my guide. I kept this in mind as my fieldwork took me away from the computer and across the United States in order to meet collectors, attend concerts, conduct interviews, and listen to recordings. As I shifted back and forth between computer screens, phone interviews, in-person interactions, and the world of recorded music, I experienced what Michelle Kisliuk describes as an

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[18] For a description of early tape exchanges and samples of their cards, see Getz and Dwork, 1998.

[19] Hunter, Robert. "Franklin's Tower." *A Box of Rain, Lyrics 1965-1993*. New York: Penguin Books, 1993.

"intensified life," a method of fieldwork where research becomes a "part of a life-flow all the same" (Kisliuk 1997:24).

Throughout my research I conducted more than forty formal recorded interviews and many more informal conversations; this thesis relies heavily on this ethnographic material. Informants included those who are currently building the architecture of trade, actively sharing through online and mail exchange, and creating new audio documents through the digitization and preservation of analog tapes. I also looked for those who listen intently, spend time with the music, and continue to follow the Grateful Dead's musical legacies as they are created by Phil Lesh, Bob Weir, Bill Kreutzman, and Mickey Hart in their current bands. I spent time with Dead Heads and collected oral histories of their involvement with the Grateful Dead, their experiences recording and sharing tapes, and their involvement with other traders. Occasionally collectors allowed me to see and handle their collections, playback machines, and digitizing equipment, a rare opportunity and powerful experience as I have come to revere master tapes, recording devices, and the artifacts of this culture as magical objects that contain the powerful essence of the Grateful Dead.

Perhaps the most critical aspect of my fieldwork methodology stemmed from Dennis McNally's statement that, "Being a Dead Head is about faith: faith in synchronicity, faith in joy" (McNally 2002:390). I kept my eyes open to moments of synchronicity and followed divergent paths as they arose. This faith manifested itself in encounters with "golden informants" and important lessons that enhanced my understanding in unpredictable ways. Like the music, this

sometimes led to dead ends. But there were many times when this faith led me to my own epiphanies, my own "unspeakable, ineffable moments of joy, passion, and purity" (Sokoll, Interview, describing the music of the Grateful Dead).

Conclusion

A social world formed around the live performances of the Grateful Dead. The tapers, using recording technology to capture and translate the energy and essence of the concerts, extended this world far beyond the live event. The traders, collectors, and archivists labored to document this history and preserve it for the future. These fans developed a complex social structure and deep relationships to the music, the band, and each other through the production and exchange of recorded live music; within this structure, they defined and performed fandom. The reproduction of tapes, mediated artifacts of the live experience, reproduces culture.

Live Dead. Dead Alive. Liv[ing] Dead.

Figure 1.1 Grateful Dead Reel-to-Reels. Courtesy of OBIE.

CHAPTER ONE
REASON TATTERS: ESTABLISHING AURA

In Grateful Dead culture, the scene rotated around the axis of the live performance. For three decades, the Grateful Dead's music spun around while cultivating a tradition built upon improvisation and musical discovery, a tradition that was "thoroughly alive and extremely changeable" (Benjamin 1936:IV).[20] Each concert functioned as "the priceless original…the one-time live performance that will never be duplicated, that was created in real-time, unfolding like history" (Carr 2003:8). Turning around this axis, the complex and multifaceted energy cloud of the crew, the organization, and the scene rippled, tore loose, and coalesced while the aura of the Grateful Dead, colored by the band, the crew, and the audience, radiated directly from the music itself.

Forming the Core

The Grateful Dead sprouted in San Francisco while the city was "still in that transition period from Beat to Hip" (Scully and Dalton 1996:22). In coffee shops and clubs, the members of the Dead mingled with the remnants of the Beat Generation and the seeds of the hippie movement. Drug experimentation was common. "Jazz, Zen, and existentialism" reigned supreme (Scully and Dalton 1996:23). And the distinct sound of San Francisco rock and roll was only beginning to take shape.

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[20] To be clear, Benjamin's original writings stated: "The uniqueness of a work of art is inseparable from its being imbedded in the fabric of tradition. This tradition itself is thoroughly alive and extremely changeable" (Benjamin 1936:IV).

During this time, post-war youth in America began to "experiment with radically different social matrices" (Bear 1991).[21] They moved to the cities, concentrated on the coasts, and started challenging political, cultural, and sexual mores. San Francisco in particular attracted writers, musicians, and political activists; over time, the San Francisco scene grew organically, served as a center, an attractor in the chaos that developed into a network of creative, expressive youth.[22] Grateful Dead sound engineer, Dan Healy, related his experience,

> When I got old enough to leave home I went to San Francisco. This was in the early '60s. And by 1963 or '64 I started meeting…other people that had…somehow gravitated there that were like me. They had a good [home life] that didn't offer…what could ever possibly satisfy their dreams. So…like lemmings, we all kind of left…I mean it happened all over this country. In my case it happened in San Francisco…We all sort of migrated…and somehow stumbled into each other (Healy, Interview).

As the San Francisco scene consolidated and individuals networked with one another, a new music culture developed comprised of musicians, artists, promoters, production companies, sound engineers, fashion designers, dancers, tapers, and avid listeners. Outside of the mainstream music industry, this scene designed and implemented their own business models based on collective creativity, revenue from live performance, and artistic freedom. Within this social milieu, the Grateful Dead emerged.

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[21] This interview, conducted in 1991 between David Gans and Grateful Dead sound engineer Augustus Owsley Stanley III, commonly known as Bear, can be found in: David Gans. "Bear." *Conversations with the Dead: The Grateful Dead Interview Book*. Cambridge: De Capo Press, 2002, p.308.

[22] I wish to thank Glenn Allen Howard, Prankster and record collector, for giving me the image of an attractor and pointing towards chaos theory in general to describe the San Francisco scene.

By the early 1960s, Grateful Dead lead guitar player, Jerry Garcia, already possessed fast moving fingers and musical ideas. During his formative musical years, he traveled the country with his first wife Sara and his friend and fellow musician Sandy Rothman in order to collect folk songs from the South, learning and perfecting a style that would affect his playing for the rest of his career. Described by Phil Lesh as "a powder keg of [musical] influence," (Lesh 2005:25), Garcia was well versed in the traditional American genres of folk, bluegrass, and gospel. He taught guitar and banjo lessons at a music store in Palo Alto called Dana Morgan's. Ron "Pigpen" McKernan worked at the same store. An extremely knowledgeable bluesman, Pigpen grew up listening to his father's R & B radio show and extensive record collection. As a result, he cultivated a charismatic blues persona and performance style that included show-stopping bluesy rants and elongated renditions of the traditional blues repertoire. Bob Weir also lived in Palo Alto. Weir first met Garcia on New Year's Eve in 1963 when he and a friend walked past the music shop and heard Garcia playing inside. Upon meeting, Garcia and Weir decide to form a jug band named Mother McCree's Uptown Jug Champions with Garcia on guitar and Weir on washtub bass. Along with many other rotating members, Pigpen joined and contributed harmonica and vocals.

Eventually, however, Mother McCree's broke apart and gave way to a new musical project funded by Dana Morgan himself: an electrified blues band known as the Warlocks. Jerry Garcia remained as the lead guitar player and Bob Weir became the rhythm guitar player. Dana Morgan's son played the bass.

Pigpen, who played a Vox electric organ standing up while "bump[ing] his belly up against it [as he was] bang[ing] out the blues," stepped out into the role of front man (Scully and Dalton 1996:25).

Early on, Morgan's son stopped attending the gigs. Garcia turned to his friend Phil Lesh, a musician in the area who first met Garcia at a house known as the Chateau.[23] "More intelligent than for comfort," (McNally 2002:235) Phil Lesh entered The Warlocks with a background in classical music composition and trumpet; he had studied under Italian avant-garde composer Luciano Berio. With Garcia's encouragement, Lesh initiated his relationship with the bass guitar in order to join The Warlocks. Lesh brought his extensive knowledge of music theory and his understanding of counterpoint into the band. As a consequence, Lesh often served as second lead player gracefully dancing around Garcia's melodies.

Finally, the Warlocks recruited drummer Bill Kreutzmann, who also taught at Dana Morgan's. In opposition to Lesh's classical background and structured musical approach, Kreutzmann already knew how to swing and had experience performing in rock and roll settings. For some time, he had played with a local band called the Legends "covering James Brown, Junior Walker, Freddie King, the Isley Brothers…and Ray Charles" and his style enhanced the rock and R & B feel of the band (McNally 2002:79).

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[23] The Chateau was a house with multiple tenants who frequently moved in and out. Many of them were musicians or artists; the house was a small scene within itself. Garcia and Robert Hunter, who became Garica's song writing partner and the main lyricist for the Grateful Dead, actually lived in cars in the backyard.

These five musicians played in bars, pizza joints, and small clubs six nights a week and incorporated the strengths and weaknesses of the individual members into their own musical ethos. In 1965, fate struck (again): the Warlocks discovered a band in Florida who had already laid claim on the name. The five musicians tossed ideas back and forth, each with a distinct flavor. Possible names included "The Vikings," "The Crusaders," "Mythical Ethical Icicle Tricycle," and "His Own Sweet Advocates" (McNally 2002:100); none seemed to fit. Then, one afternoon, Garcia trusted kismet, tossed a dictionary in the air, and placed his finger on the first open page. Upon looking down, "everything else…went blank," [Garcia] later said, "diffuse, just sort of *oozed* away, and there was GRATEFUL DEAD, *big* black letters *edged* all around in gold (McNally 2002:100). The phrase, attributed to folklorist Francis Child, indicates a mythic ballad and folktale where a hero pays the debt of a corpse who is being denied burial, "without expectation of reward, often with his last penny" (McNally 2002:100). This hero is later repaid through the aid of the corpse's spirit. The band submitted to fate and accepted the name. From that point forward, like "Hieroglyphic reeds swaying in a tomb painting [and] [b]rain-slicing words that spin endlessly across your mind like a demented skater" (Scully and Dalton 1996:9), the Grateful Dead forever projected an image of mystery and power with an "asser[tion] that acting from soul and the heart guarantees that righteousness will result " (McNally 2002:101).[24]

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[24] For more on the Grateful Dead folklore motif, see Carr 2009.

Adding Color

In 1960's San Francisco, LSD (lysergic acid diethylamide, commonly called acid) infiltrated the city.[25] Several years prior to the Grateful Dead's formation, writer and musician Robert Hunter experienced psychedelics for the first time. Hunter had been a paid research subject in a psychological test at Stanford; this led him to the V. A. Hospital where he experienced four weekly sessions of psychedelic drug use, "under the auspices of what would prove to be the CIA" (McNally 2002:42).[26] Hunter brought his typewriter along for the experiments. Full of lucid depictions of the psychedelic journey, his words circulated in the scene and incited others to seek the experience. At the time, Hunter lived at the Chateau and shared his writing with Garcia; he later became Garcia's writing partner and the main lyrist for the Grateful Dead.

In Palo Alto, separate from Hunter, Garcia, and those at the Chateau, another small enclave of psychedelic drug use also thrived. This scene, referred to as Penny Lane, included a Stanford psychology student who supplied the street [actually named Penny Avenue] with LSD (McNally 2002:43). Novelist Ken Kesey was a creative writing graduate student at the time and hung out on Penny Lane. Conveniently, he also worked as a janitor at the V. A. Hospital.

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[25]LSD affected much more than the music and art scene. Of note, for a history of LSD's impact on the development of the personal computer see: John Markoff. *What the Dormouse Said*: *How the 60s Counterculture Shaped the Personal Computer.* New York: Penguin Group, 2005.

[26] LSD first penerated the United States through government and university research centers. These centers tested the drug for both psychiatric and warfare purposes.

Kreutzmann had a special connection to this particular scene that began in 1959 when he started taking drum lessons every Saturday with his eighth grade physics teacher, a resident on the avenue.

By 1964 Ken Kesey and his freaky friends, who had become known as the Merry Pranksters, embarked on an epic journey in a bus with a destination labeled "Further," and Neal Cassady at the wheel. Cassady, who was the inspiration for much of Jack Kerouac's Dean Moriarity character in *On the Road*, meditated while driving and "could see around corners…[and drive] through spaces that didn't exist" (McNally 2002:108). Using his powers, he drove the Pranksters on their epic journey from California to New York and back. Grateful Dead biographer, Dennis McNally, described the vehicle,

> It was not an ordinary bus. Wired inside and out, it could broadcast to the neighborhood over speakers, while microphones brought the outside world in, usually processed through time lag and electronic manipulation…A modestly understated sign reading "Caution: Weird Load" festooned the bus's rear. Splashed in Day-Glo colors, it was not merely transportation but something more akin to Don Quixote's steed Rosinante, for they were on a mythic quest, as Kesey said, to "stop the coming of the end of the world" (McNally 2002:109).

Upon their return, they settled in the woods at Kesey's house in La Honda, California. Their journey became the metaphor for the psychedelic scene at the time and Grateful Dead scene for the next thirty years and beyond: are you on the bus or off the bus? Their compound earned a reputation as a psychedelic haven and gathering place for the Bay area. Their parties attracted high-profile cultural icons including Allen Ginsberg, Ram Dass, and Hunter S. Thompson who brought along his friends and subjects of one his well-known books, the Hell's Angels.

These parties were such a success that Kesey and the Pranksters decided to increase their size and challenged the public to attend by asking, "Can YOU pass the acid test?" Instead of making money, the Pranksters organized the larger events in hopes of both "[s]preading consciousness of what LSD might teach you… [and] getting good and crazy and spreading the virtue of that" (McNally 2002:112). At these tests, the Pranksters planned to serve LSD in large bins of kool-aid and fill the space with electric signals, noise, microphones, feedback loops, video installations, and general mayhem, hoping creativity and self-discovery could emerge from the chaos. In the transition from La Honda to the public, the Grateful Dead became the house band.

Testing Space

The Acid Tests cultivated the group mind and the freedom to "freak freely."[27] For the Grateful Dead, the tests solidified the foundation of their performance style, including their relationship to their audience and their ability to improvise. Though the band practiced daily and performed six out of seven nights a week prior to the Acid Tests, the axis and essence of the Grateful Dead *experience* originated at the Tests themselves. According to Garcia, the tests

[27] Rock Scully described the Merry Pranksters as having an "anarchic philosophy…based on the ingestion of LSD and freaking freely" (Scully and Dalton 1996:11-12). When asked what it meant to "freak freely," musicologist and Grateful Dead scholar Graeme Boone replied, "freak freely: means be crazy with regard to society's repressive norms, do your thing, from the wild west to outer space. [A]nd do it with the full moral support of the other freaks" (Boone, Graeme. "Head Freak." *The Deadwood Society*, posted April 11, 2009).

allowed them to let go of regimented form and explore new musical dimensions. He stated,

> Okay, so you take LSD, and suddenly you are aware of another plane, or several other planes, and the quest is to extend that limit, to go as far as you can go. In the Acid Tests that meant to do away with old forms, with old ideas, try something *new.* Nobody was doing *something,* y'know, it was everybody doing bits and pieces of something, the result of which was something else (Garcia 1969).[28]

In the words of Phil Lesh, the Acid Tests provided an environment for the band to "meld [their] consciousness together in the unity of a group mind" and play music not as five musicians but as five "fingers on a hand" (Lesh 2005:56). In fact, Kesey and his Pranksters purposely manifested this atmosphere not only for the band but also for the entire room. Bear testified,

> The Pranksters would make these noises and the noises would seem to get inside your nervous system, as if there was some type of plug or something in your head. It would…make the connection available to be plugged into something. A psychic cable…It was not just thoughts, but you saw…a patchwork of images, and felt a patchwork of body sensations and everything else…[It was a] multiple-mind kind of phenomenon (Bear 1991).[29]

As musicians, the Grateful Dead adhered to this "group mind," locking into and interacting with the moment. They had the power to command the space, the crowd, and the energy, to actually tap into the collective experience and shape it

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[28] Jerry Garcia, quoted in Lydon, 'Dead Zone' (August 1969), reprinted in H. George Warren (ed.), *Garcia,* (Little, Brown and Co. Boston: 1995), pp. 61 and 64. I took this quote from Jim Tuedio. "Pouring Its Light Into Ashes: Exploring the Multiplicity of Becoming in Grateful Dead Improvisation." Annual meeting of the Southwest/Texas Popular Culture American Culture Association, Albuquerque, NM, February 27, 2009. I wish to thank Jim Tuedio for sharing this with me.

[29] Gans, David. "Bear." pp 305.

with the texture of the music. In his book *Living with the Dead*, the band's first manager, Rock Scully bears witness to this type of interaction,

> An hour or so into the set and something very odd starts to happen…The room is *breathing*. Breathing deeply like a great sonic lung from which all sounds originate and which demands all the oxygen in the world. We inhale and exhale with it as if to the great collective heartbeat of an invisible whale. We are all under the hypnotic spell of the ghostly pulse. Whoever these guys are, they are uncannily tuned into the wavelength of the room. They hover over the vibe like dragonflies (Scully and Dalton 1996:10).

The Acid Tests enhanced the band's musical explorations, and their ability to extend a "two-and-a-half or three minute song…into a ten minute epic" (Menke, Interview 1). With Pigpen and Jerry as the "nucleus" (Scully and Dalton 1996:24), "blues and major pentatonism…[acted as] two overlapping, melting dancers in their music" (Boone, Personal Email).[30] The group learned to follow one another from one musical idea to the next and to support Garcia's lead playing as he "carried on…long, looping musical, telepathic conversations with his guitar, adjusting the flow from beat to beat, drifting from mood to mood" (Scully and Dalton 1996:17). The band journeyed through musical time listening for rhythmic nodes and phrases as they jammed together to eventually land on the downbeat as a unit. In an interview with Jack Lydon, Garcia explained this concept,

> [O]ur policy is that the one is where you think it is. It's kind of a Zen concept, but it works well for us. It makes it possible to get into a phrase where I can change into little phrase spurts … and then turn that into a new pulse…Then I'm inside of a whole

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[30] Musicologist Graeme Boone has extensively investigated the music of the Grateful Dead from 1965-1969. For further study see Graeme Boone. "Grateful Dead Mode Star." Annual Meeting of the Southwest/Texas Popular Culture American Culture Association, Albuquerque, NM, February 26, 2009.

> irregularly rotating tempo in relation to what the rest of the band is playing, when they're playing, say, the original common time. It produces this ambiguity, but all I have to do is make a statement that says, "End of paragraph, AND, one," and they all know where it is (Garcia, 1969).[31]

This ambiguity formed the vehicle through which the band traveled. They transitioned fluidly from one musical ethos to the next, interacting with and affecting the sounds, ideas, and emotions vibrating around the room.

The band was not the center of the Tests, or even the main attraction. Kesey, though a driving force within the scene, was "not predisposed to 'controlling' the experience" (McFarland 2009).[32] Instead, he was known to "encourage [the Pranksters] to break down the barriers between one another in a rather egalitarian fashion" (McFarland 2009).[33] In accordance with this notion, all of the Pranksters "freaked freely" during the tests. Prankster Ken Babbs setup audio loop stations that picked up noise in the room and fed it back through various delay speakers. Neal Cassady juggled axes and hammers, and carried on several conversations at once. Mountain Girl repaired and rewired microphones, tape machines, light installations, and slide projectors. Active participation extended to everyone present at the Tests, including the "audience." Therefore, rather than creating a spectacle performed on stage separated from their spectators, the Grateful Dead approached the audience members as "companions

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[31] Jerry Garcia, quoted in Lydon, 'Dead Zone' (August 1969), reprinted in H. George Warren (ed.), *Garcia,* (Little, Brown and Co. Boston: 1995), pp. 155. I took this quote from Jim Tuedio. "Pouring Its Light Into Ashes: Exploring the Multiplicity of Becoming in Grateful Dead Improvisation." Annual meeting of the Southwest/Texas Popular Culture American Culture Association.
[32] McFarland, Scott. "Head Freak." The Deadwood Society, comment posted on April 13, 2009.
[33] *Ibid.*

in the odyssey" itself (McNally 2002:119). The band was able to improvise for hours or even stop playing altogether if they felt the desire to join the audience in freaking freely.

The idea of "freaking freely" was not in vain. According to Scott McFarland, author of *The Hippie Narrative: A Literary Perspective on the Counterculture*, Kesey and the Pranksters designed the tests and their lifestyle in order to "discover, collectively, a higher realm" (McFarland 2009).[34] As an integral part of the scene and the house band for the tests, the Grateful Dead also reached for this higher realm through the music. In the words of Dennis McNally,

> I tend to think of the Grateful Dead as shamans onstage…they weren't entertainers although hopefully they were entertaining. They were, on a good night, trying to get to heaven. Trying to cross into what is sacred space. Playing for them was a sacred space. And the audience was part of that (McNally, Interview 1).

Phil Lesh viewed this quest as a positive force in the world, writing,

> The fervent belief we shared then, and that perseveres today, is that the energy liberated by this combination of music and ecstatic dancing is somehow making the world *better*, or at least holding the line against the depredations of entropy and ignorance (Lesh 2005:69).

In their search for sacred space and liberated energy, the Grateful Dead took many musical risks. At times, these could lead to dead ends. When successful, however, the band and the audience together created a space where many felt they lifted the music to a higher level of the cosmos. Rabbi and Dead Head, Mark Sokoll, comments,

> When [the Dead] nailed it, you felt like you'd been privileged to be at the top of the mountain, and had the revelation…there were

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[34] *Ibid.*

> times when they really took us collectively to the top of Sinai. It isn't Moses going up and leaving us at the bottom to figure things out. They took us all to the top of the mountain (Sokoll, Interview).

The Acid Tests fostered this environment of exploration and equality and planted it deep within the Grateful Dead ethos. Even as the performances changed over time with new band members and fans, larger venues, expanded repertoire, and higher fidelity musical equipment, the Grateful Dead retained the notion of freaking freely with an audience of equals in the moments of shared musical space.

Enter Alice D. Millionaire[35]

As an additional stone in the arch, Owsley Augustus Stanley III, known to most as Owsley or simply Bear, found his way to Kesey, the Pranksters, and the Grateful Dead. Bear, "a man isolated from others by intelligence and personality to the point of extreme elitism," personally revolutionized LSD manufacturing processes and greatly affected live sound engineering (McNally 2002:117). Having already experimented with LSD, Bear attended a party at La Honda; Kesey's charisma and chaotic environment launched Bear to new heights. In an interview with music journalist David Gans, Bear related his experience,

> Kesey was the kind of guy that reached out and took your knobs, and tweaked them all the way to ten. All of them. And the whole scene was running at ten all the time. It was almost as sudden, and

[35] "Alice D. Millionaire" is a Grateful Dead song from their early repertoire. The title referenced the *San Francisco Chronicle* headline when Owsley was arrested for the first time, which stated "LSD Millionaire Arrested." (Scully and Dalton 1996). Ironically, Owlsey had not profited greatly from his endeavors.

> as different, as discovering psychedelics themselves for the first time, at another level (Bear 1991).[36]

His experience with the pranksters and Bear's perpetual demand for excellence led him to begin producing his own high-quality LSD. "With a fanatical concern for purity of both heart and chemistry" (McNally 2002:118), Bear approached this activity as an alchemist. According to Bear, "The basic tenant of alchemy is that the universe is mental, that there's a being which is nothing but mind, pure mind, and that all we experience, is the creation of this mind" (Bear 1991).[37] Consequently, Bear's LSD earned a reputation for purity and strength and shaped minds across the Bay area and beyond.

LSD led Bear to Kesey. Kesey led Bear to the Grateful Dead. The Grateful Dead led Bear to "freak out" at an Acid Test and push a wooden chair across a wooden floor for hours. Then, after mentioning to Phil Lesh his desire to align himself with the band, Bear became the Grateful Dead's first soundman. As usual, Bear approached this task with a refined, methodical attention to quality and detail. He considered sound engineering an art form and defined art as a "way of creating something yourself, as a man, which can say something about either the physical, the nonphysical or both" (Bear 1991).[38] Through the lens of alchemy, Bear understood all matter as "vibration…energetic…and made of

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[36] Gans, David. "Bear." pp 299.
[37] *Ibid,* pp, 302.
[38] *Ibid*, pp 295.

fields" (Bear 1991).[39] With this understanding, Bear approached sound as a three-dimensional entity, as a "sculpture" with a palpable shape (Bear 1991).[40]

As the soundman, Owsley, feeling that the available technology held back the musical experience, recruited sound engineer and designer Tim Scully. Together, these men assessed and altered the available equipment. They worked in a time when electric music was still very new and therefore unexplored. Bear commented,

> We were constantly changing things, wiring stuff, trying to find out how to make it do whatever it was that everybody on their own knew but nobody could communicate about. It was not something that could be defined (Bear 1991).[41]

According to Phil Lesh,

> Bear's ideal was musical sound undistorted by artifacts present in the sound-reproduction system – entire signal path from pickup through preamp through power amp to speaker. Only the vibrating string and the vibrating air had purity…everything else was compromised and must be made transparent (Lesh 2005:77-78).

For several years Bear and Scully designed and built new speaker cabinets and electrical circuitry that could stand up to the loud screaming music the band produced in that era. Their work helped the band push the limits of the sound.

After a period of development, the system design hit a dead end. Then sound engineer Dan Healy entered the scene. After hearing the Grateful Dead play and helping to fix one of their speakers on the fly, Healy told Garcia that he could further improve their sound. Garcia challenged him to realize his ideas. Healy took the challenge.

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[39] *Ibid,* pp 297.
[40] *Ibid*, pp 314.
[41] *Ibid,* pp 317.

Healy knew that the Grateful Dead would soon be playing at the Fillmore Auditorium in San Francisco. He raised money and rented as much equipment as he could from two different sound companies. Then he convinced the "old lady" in charge of renting the Fillmore to let him in several days before the actual show. Healy narrates,

> I set up all of this equipment…In those days there weren't any standards, so I had to modify a lot of the equipment so that it would all connect together…So that's what I did during those few days. The Grateful Dead came and played. [A]nd…instead of these two little teeny speakers, one on each side of the stage, there [was] this huge pile of speakers. And it worked incredibly well. And a whole new idea was born (Healy, Interview).

For Bear, Scully, and Healy "it was…obvious that the sound had to be part of the music" (Healy, Interview). To the sound engineers, the equipment was the vessel through which the music traveled. So, they collaborated with sound engineers and designers Ron Wickersham, John Curl, and Rick Turner, who had all worked with the Grateful Dead in the past, to found a sound design and production company. To convey their approach to the equipment itself and its relationship to the music, they called the company Alembic. Bear explains,

> I thought it should be called the Alembic, because the Alembic was the vessel in which chemical verification takes place. First everything breaks down and then it's built back up. It's distilled into the right thing. That's what we were trying to do, we were trying to take all of the technology and all of the experience and put it into a vessel (Bear 1991).[42]

Their ongoing search for clear, undistorted vessel culminated in 1974 with the development of the Wall of Sound, a PA system consisting of "604 speakers…26,400 watts of power from fifty-five McIntosh 2300s. The music

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[42] *Ibid,* pp 326.

came through nine separate channels, through a differential summing amp, to a four-way crossover network, then to the power amps, the speakers, and out into the hall" (McNally 2002:470). The Wall hovered ominously and dwarfed the band on stage. Lesh described playing in front of it as, "piloting a flying saucer. Or riding your own sound wave" (McNally 2002:471). The design of the Wall solved the distortion issues found in other sound systems of the time. It fulfilled Bear's dream of a coherent, clear sound and it gave control to the musicians themselves instead of having a soundboard in the audience. This new fidelity not only led to better sounding performances but also to higher quality recordings.

The Wall of Sound was so elaborate that the ever-expanding road crew had to build two complete Walls that leap-frogged one another across the country: while the band played in one city, another road crew set up the second Wall at the next venue. Unfortunately, erecting the Wall was too labor intensive and expensive to finance and sustain. The crew ballooned and the organization was soon supporting hundreds of people. Consequently, the band not only discontinued the Wall but also declared a hiatus from touring that lasted a little over a year. During this time the tape trading scene flourished.

When they returned in 1976, several of the members of the extended touring mechanism, including Bear, had moved on to other projects. But the foundation for excellence had been laid. Taking lessons learned from the Wall, the sound crew continued to push the limits of their equipment and the development of sound engineering as an industry. Bear's quest for quality and purity shaped and defined the Grateful Dead's sound throughout their career.

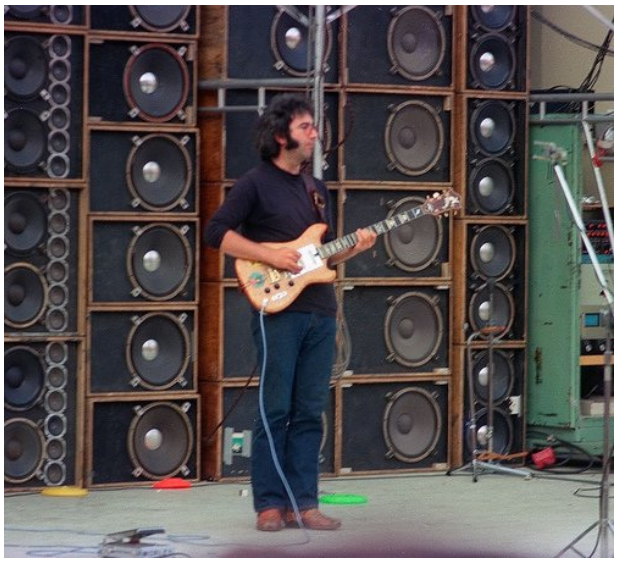

Figure 1.2 July 7, 1974. Hollywood Bowl, Los Angeles, California. Jerry Garcia (top) and Phil Lesh (below) in front of the Wall of Sound. Photo courtesy of David Gans.

The Insider-Outsider Club

During this time, the greater music scene of San Francisco formed outside of the mainstream music industry of the time that concentrated on big business, major record labels, AM radio, and Top 40 charts. Since this environment did not support the emergence of the new, organically–grown music scene in San Francisco, those within it created their own version of the industry. Sound engineer, Dan Healy, narrates,

> The original San Francisco music scene was so small that everybody knew everybody…There [were] maybe two hundred of us in this music scene. And we all played in the same places. In those days, there was a sort of mainstream; AM radio was king…The Top 40 was the music scene… And if you weren't inside that, there was no possible way that you could either get…records or get gigs anyway. So…we did our own gigs right from the very beginning by discovering that there was an old 1930s ballroom called the Fillmore Auditorium that was mostly dark and people rented it for wedding ceremonies and graduations…We discovered you could rent [it], so we rented it. And we put on our own gigs there. And it turned out that audiences came…People came to hear us…It didn't start big; it started small. There were nights when there [were] maybe twenty people there, but little by little it got larger and larger and larger. And so what happened is that…a scene started forming outside of the mainstream. We had our own little organization and our own little community…we were all outsiders. So we, the outsiders, we had our own insider-outsiders club (Healy, Interview).

From this insider-outsider's club of the San Francisco music scene came a particular sound and a number of bands that played music together at locally organized events. The Grateful Dead was one.

Several organizations and individuals served as the architects of the scene and its identity. Influential pioneering artists such as Alton Kelly and Stanley Mouse designed and produced the stunning visual icons of the decade. They

constructed a landscape through swirling, psychedelic images and bright colors utilized to advertise musical events and create the bands' visual identities. The Family Dog, an early production group who mixed cowboy, Victorian, and psychedelic motifs, "established dancing as the medium for music presentation" (McNally 2002:93).[43] Savvy businessman Bill Graham, "ingenious and indefatigable as a promoter," played an integral role in the design and implementation of musical events of the era (McNally 2002:113).[44]

1967 in San Francisco opened on January 14th in Golden Gate Park with "A Gathering of the Tribes for a Human Be-In." Influential cultural personalities of the time such as psychologist Timothy Leary, the poets Allen Ginsberg and Gary Snyder, and activist Jerry Rubin gave speeches and led chants. San Francisco bands including the Grateful Dead and Quicksilver Messenger Service played to a crowd of 30,000. It was here that the militaristic political scene at Berkley mingled with the peaceful vibe of the hippies, and here that Leary uttered

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[43] The Family Dog's inception was rooted in its rock and roll venue, The Red Dog Saloon, in Virginia City, Nevada. The three founders of the venue, Mark Unobsky, Don Works, and Chandler "Chan" Laughlin utilized red drapes, Victorian clothes, pistols, and go-go dancers to construct an atmosphere of the "bad guys saloon at the end of the street…[where everyone was] in a grade B movie" (McNally 2002:93, quoting Laughlin). The Family Dog later opened the Avalon Ballroom, a celebrated venue run by Chet Helms and Bob Cohen that helped to form and establish the San Francisco music in the late 1960s.

[44] Over the years, Bill Graham became omnipresent within the music scene in San Francisco. He worked to create a musical empire through a business mindset. Graham worked together with the Family Dog when first renting the Fillmore Auditorium, but quickly took complete control. Graham served to promote the musicians and organize gigs in California, New York, and elsewhere. He even produced a festival tour that traveled across Canada by train that included The Dead, Janis Joplin, The Band, Mountain, Buddy Guy Blues Band, Traffic and others. The Dead and Graham retained a close relationship throughout their career. One mainstay of this relationship occurred every year at the Dead's New Year's Eve concerts where Graham dressed as Father Time.

the iconic phrase of the decade "Turn On, Tune In, Drop Out." After this "meeting of the minds," the San Francisco scene grew. Soon mainstream American media took notice as Time Magazine romanticized the youth of San Francisco, coining the term "hippie," and established the area as a Mecca for youth around the country. In the summer of 1967, coined the Summer of Love, thousands of youth filled the city to its bursting point. This influx happened too quickly to allow the gradual enculturation that had been occurring in the city for several years prior. It stretched public infrastructure and resources to their limits and led to issues with drug addiction and healthcare. At the end of the summer, those who had been originally labeled as hippies by mainstream news held a funeral in Golden Gate Park, marking the death of the hippie. But even as its founders pronounced the movement "dead," people from around the country continued to arrive, drawn by promises of music, drugs, and free love.

Unfortunately, however, by 1969, the tide changed drastically. Drug policies had changed; LSD was illegal. As the result, Ken Kesey had already fled to Mexico and Owlsey had been arrested. The hippie aura of peace was shattered at Altamont's Music and Art Festival, where the Hell's Angels served as security and stabbed a fan to death while the Rolling Stones played. The San Francisco band The Jefferson Airplane became Jefferson Starship and unsuccessfully tried their hand at gaining mainstream success. Musical icons Janis Joplin, Jim Morrison, and Jimi Hendrix died from overdoses of drugs and alcohol. For many, this was the end of an era.

For the Dead, however, this was just the beginning. They transitioned into the 1970s smoothly, chasing improved sound and better music. Bucking the recording-centric industry, they pioneered their own model based on revenue from touring. Instead of the live show being an advertisement for the album, the album became an ad for the live experience. They consistently performed over eighty nights a year, founded their own record company, ticketing service, travel agency, and corporation. Even with this massive infrastructure, the Grateful Dead did not adhere to standard hierarchies and instead became "a horizontal, not vertical, hierarchy, with the band at the center. The crew was the next layer out. More than a million people occupied the succeeding layers [as fans]" (McNally 2002:214).

The Bubbling, Massive Cauldron

Before the hiatus, the band, the music, the crew, and the equipment had expanded exponentially. Mickey Hart joined the Dead as a second drummer bringing with him a strong technical foundation and an interest in world music. Robert Hunter partnered with Garcia as the main lyricist. With his storytelling narratives, Hunter incorporated Americana images and gambling motifs along with mythological figures and legendary characters to weave together Grateful Dead folklore. The musical repertoire billowed. According to musicologist Graeme Boone, "Pentatonicism [remained] a central component of their early musical universe, especially Jerry's" (Boone, Personal Email). Yet in the late 1960s "the blues focus of the earlier, Pigpen-dominated years g[ave] way

increasingly as the band compose[d] new, artier tunes…[with a] kind of invented mixolydian tonality" (Boone, Personal Email). In 1968, Phil Lesh's composition colleague, Tom Constanten joined on organ for several tours adding an avant-garde eclecticism to the band's sound. After Constanten left in 1970, the band shifted into country-western and bluegrass motifs, harkening back to Garcia's musical foundation. This sound was captured on two of the Dead's most commercially successful albums, *Workingman's Dead* and *American Beauty*. John Perry Barlow, a long-time friend of Weir's, became the band's second lyricist. Keith Godchaux and his wife Donna joined the band on keyboards and vocals, respectively. For some time Keith and Pigpen shared the stage. After Pigpen's sad death from complications due to alcoholism in 1973, Keith took over the keyboards alone.

Rock Scully had become the band's manager. Bob Matthews and Betty Cantor Jackson joined the sound and recording team. Lawrence "Ramrod" Shurtliff had arrived at the band's house at 710 Asbury on a Harley, "wearing a chain with a lock around his waist…[and] said 'Name's Ramrod -- Kesey sent me -- I hear you need a good man'" (Selvin 2006:1). Ramrod started out as the band's truck driver and later became the leader of the road crew, the President of the board of directors of Grateful Dead Productions, and one of the noble few who stayed with the crew the entirety of the Dead's career. Steve Parish, later to become Garica's personal roadie and close friend, joined Ramrod. Over the next few years several others joined the road crew and sound engineering team such as Jim Furman, Dennis Leonard, Kidd Candelario, and Candace Brightman. Eileen

Law ran the business office and communicated with fans through newsletters. By 1974, when the hiatus began, and in 1976, when the band resumed touring, the "Grateful Dead" had matured into an entity much larger than the original five musicians. Surrounding this entity was the fan base.

The audience had grown steadily since the band's inception. And as it grew, the audience became active participants in the live concerts. Early on, the band established itself as "a dance band." Weir even stated that the Grateful Dead "felt that they weren't there to put on a show, [but they] were there to play and the people were there to put on the show'" (McNally 2002:207). Through attentive listening and dance, the audience melded into the group mind. Each individual added a small piece to the larger movement of the crowd. Phil Lesh commented,

> When a large crowd is present…the experience of the group mind becomes much more intense, and much larger-scale; see how the entire wildly dancing audience behaves like waves in the ocean: whole groups of dancers rising and falling, lifting their arms or spinning rapidly in synchronized movements, darting swiftly though the crowd or languidly undulating in place – manifesting the same sort of spontaneous consensus seen in flocks of birds, schools of fish or clusters of galaxies (Lesh 2005:69).

Many of the fans felt this connection to the band and the other people in the audience during the concert, often describing the feeling to being part of a whole in constant motion. OBIE, a long-time Dead Head and tape collector, explained,

> And by the time you're twenty minutes into the second set, people are all attuned. And it's one big movement. It's like a centipede on its back with its hundred legs…going around in unison…It's a swirling, bubbling massive cauldron. And there's nothing like it that I've ever experienced in my life (OBIE, Interview 3).

The emphasis on improvisation provided the same feeling of spontaneity and group creation developed during the Acid Tests. Neither the band nor the fans

knew exactly what would happen next, yet "The knowledge that any moment a tiny hint could turn the whole show in a different direction had the effect of keeping listeners aware and alert to musical subtleties" (Poltis 1998:59). This intense listening brought the audience closer to the band and their fellow fans. OBIE continued,

> Basically everybody is focusing...on the note. Everybody is here *right* now…[During the show] people would get into the same breathing rhythm, especially if you were signing along with them. You would be forced to be *breathing* the same *breaths* they were breathing. And so, at the end of the song everybody would be at that *same spot*. It's very, very powerful. Where as most bands you don't get that (OBIE, Interview 1).

Phil Lesh and the other members of the band treated this intense relationship between the band and their audience with respect and responsibility. Lesh writes,

> To make music for dancers like this is the rarest honor — to be co-responsible for what is really the dance of the cosmos. If, as some savants of consciousness suggest, we are actually agreeing to create, from moment to moment, everything we perceive as real, then it stands to reason that we're also responsible for keeping it going in some harmonious manner (Lesh 2005:69).

According to this notion, the band and the audience had to actively work from note to note and, song to song, in order to build a reality based on harmony among the participants. This led to musical moments situated in time and space where the sum of the band, crew, audience, venue, and moment in history collided to form unique works of art referred to as the concert experience.

As the Grateful Dead continued to play through the 1970s, they molded a common shape to the concerts. The audience listened for every detail and nuance, and made records of set lists and song histories. As they complied data, the fans began to see patterns and forms emerge; certain types of songs regularly appeared

in specific places within the night's musical trajectory. OBIE refers to this as the "format." For many fans, this structure provided a sense of ritual. The opening songs set the mood for the evening. The long drum solo and atonal jamming in the second set known as "drums" and "space," respectively, allowed for deep mediation. Many fans utilized the format to construct the concerts as "rituals of controlled drug use" (Sperling, Interview). They would ingest LSD or mushrooms before the concert at the optimal time for the high to peak at specific moments in the concert's shape. OBIE related,

> Once people developed [their understanding of the format], you were able to take your sacraments and create the show around it. You were being able to time it. And it pretty much didn't change form show to show…So you could work with that…You would guess what song would be coming up next. Because there [were] limited choices. And when they surprised you, the whole place would go wild (OBIE, Interview 2).

Not everyone interacted in the musical space through drug use, dance, or ritual, however. Rob Eaton, a Dead Head since the early 1970s, purposely attended the shows without ingesting any mind-altering substances in order to feel the purity of these "ineffable" moments.

> When it worked and when it was really happening, your hair would stand on end – and it was like you could cut the air with a knife – and I'd go straight because I wanted to feel the purity of that energy which was something you couldn't get anywhere else… When it all worked it was like better than [any] drug you could ever take. It was the purest form of bliss and good feeling (Eaton, Interview).

Others did not approach the concert in a serious fashion at all. As stated by Grateful Dead scholar Peter Sawyer, "for some participants, going to Grateful Dead concerts engendered some of the deepest experiences of their lives, while

for others, shows were simply a place to party" (Sawyer 2003:4). Each participant discovered and developed their own form of participation be it dancing, taping the concerts, feeding people in the parking lots, providing drugs, handing out free artwork, or simply listening as an avid fan. Bear appreciated this complexity and understood the audience as having "a presence of every kind of person, every different level of engagement and disengagement…like a reaction vessel that has all the pieces of whatever can be made, and it makes something but it doesn't use all the pieces all the time" (Bear 1991).[45]

The Traveling Gypsy Caravan

Many Dead Heads point to the late 1970s as their favorite performing years of the Grateful Dead and specifically regard 1977 as the "zenith" of the Dead's musical progression (Effros, Personal Communication). The music and the concerts held a power that the fans could physically detect in the air. The intensity of the music, the clarity of the sound system, and the energy of the crowd merged into a majestic experience. Part of the "magic" stemmed from the risk of improvisation, which at times led to enlightenment and other times led to dead ends. Mark Sokoll commented,

> The Dead were imperfect. And it was something very powerful about that because it meant…you waited for…the real unspeakable, ineffable moments of great joy of passion and purity, but they wouldn't come every time. There was no guarantee (Sokoll, Interview).

[45] Gans, David. "Bear." pp 313.

Due to the improvisatory, organic musical approach of the band and their interaction with the audience, each concert held the potential to reach this level. Because of this power, avid fans attended as many shows as possible.

For many dedicated Dead Heads, the annual calendar was structured around the Grateful Dead's touring schedule, further ritualizing the shows as part of touring seasons. By the late 1970s and the 1980s, the band had defined a yearly schedule consisting of about 80 shows, divided into several smaller tours that included several multi-night runs at one venue. When the Dead came to town for several nights in a row, Dead Heads attended each night "because it's going to be different every single night" (Sokoll, Interview). Those outside the scene were often confused by the desire to see the same band night after night, but Dead Heads knew that each show held the kinetic potential for musical enlightenment. Eaton explains,

> Now people would say to me, "Why do you have to see 400 shows?" And I'm like well I didn't…[But] it wasn't about seeing every show. It was about not missing the show where that happened [see Eaton's quote on page 51]. So if I went to all the shows on the tour I know I wouldn't miss that moment whereas if I only went to three or four shows it inevitably would mean my friend would go, "Dude, you missed the show the last night. It was the show of the tour man." I didn't want that to happen because I knew what that meant. (Eaton, Interview).

As Dead Heads traveled alongside the band, an infrastructure developed within the parking lot. Here, fans exchanged clothes, jewelry, stickers, and food in order to make enough money to get to the next show. In addition to commodities, Dead Heads traded stories, artwork, copies of set lists, tapes, and newsletters, often distributing these items for free, as a "labor of love" to the

scene. Some rode the highways in large vans packed with friends; others hitchhiked. For many, "tour was the focus" of their lives (OBIE, Interview 2). Dylan Rodas, a Dead Head and tape collector recounted,

> There is nothing like driving to Oregon in my VW to watch the Dead play and just following these masses of strangers to the next place. We had no money and people helped us. And we fed them and they fed us and somehow we made it to the next spot…And I wouldn't trade it for anything (Rodas, Interview).

Within this scene, Dead Heads could distinguish between those on tour and those "visiting…[as] temporary residents" (Sokoll, Interview). The visitors attended one or two shows at a time "donn[ing] the monastic robes of Deadheadism, namely their tie-dyes and concert tickets and bumper stickers, and dipped into the marginal atmosphere of the show and then back into their more 'straight' lives the next day" (Simon and Shank 2000:68). The permanent residents considered the road their home, the music their comfort, and the scene their world.

Expansion of the Cloud

Road worn, Keith and Donna Godchaux left the band in 1979. Brent Mydland took Keith's place at the keyboards, and also reintroduced the organ sound absent since Pigpen's departure, though the sound of his Hammond organ was distinctly different then Pigpen's Vox. The Dead began to play in stadiums and large arenas to accommodate the growing audience. The scene expanded out from the performance itself into the parking lots and the surrounding cities. Concerts began to draw tens of thousands of people. The fans camped near the venue for several days encasing the event. For the first two decades of the Dead's

performing years, the fans developed a set of values that defined the idealism of the Dead Head scene. These included generosity, a feeling of being part of a larger family, a responsibility to others, and a desire to participate with the music and the creations of the scene. Dennis McNally commented,

> The audience expanded in what I refer to as an organic way, namely it was one to one…You would run into a real person who was a Dead Head…who was a fanatic who would do nothing but listen to Grateful Dead. And if you liked them and hung out with them, you gradually got inducted. And as you got inducted, among other things, and you like the music, you also learned that you were part of family and that you have family obligations and you had to treat each other nicely and, by and large, people learned that this was something different (McNally, Interview 1).

After the release of *In the Dark* in 1987*,* however, the fan base expanded so quickly that it became difficult to transmit and inculcate these values. The album attracted mainstream attention due to "Touch of Grey," the Grateful Dead's first and only Top Ten hit. In addition, the band produced several videos for the recently founded television venue MTV.

Many of the new fans remained oblivious to this familial responsibility. Some even traveled within the scene without attending the shows, instead latching onto the wider drug culture and the nomadic lifestyle. The presence of new fans resulted in a chaotic situation where tens of thousands invaded cities without tickets, camping in one place for several days at a time. Eventually city officials complained about the population influxes that came with the Grateful Dead. Local officials consequently requested that the band provide for the tens of thousands of Dead Heads while they camped in the city. This was beyond the

power of the band and eventually Grateful Dead Productions had to ban all camping and vending at and around the venues. McNally explained,

> Our environment was completely overloaded to the point of toxicity…[therefore] making the music unable to be played…And it finally reached the peak where in the summer of 1988 or 89, the folks at Giant Stadium in NJ said,…"You can't come unless you ban this stuff." And they pointed out, if [the Grateful Dead is] going to do…two shows…we would have to provide city services to 10,000 people for four days. The day before, the two days [of shows], the day after…[This meant] sewage, porter-potties, food, security, police services, medical services. [But] we're not a city: we're a stadium…Jerry Garcia is not the mayor of a traveling counter-cultural city. He wants to play guitar. So we said no more (McNally, Interview 2).

The band continued touring for several years after this decision; the fan base and the scene continued to expand. Within the stadiums, elaborate light shows and huge crowds accompanied the music in an environment very different than the ballrooms of the 1960s San Francisco scene. The cauldron continued to bubble.

Mydland remained with the band through the 1980s until his tragic death from a drug overdose in 1990. To replace him, the band hired Vince Welnick and Bruce Hornsby; Hornsby viewed his place as transitory and only played briefly with the band before leaving Welnick to play alone. During this period, the band and fans began to notice a serious decline in Jerry Garcia's health. A chain-smoking diabetic with a taste for heroin and junk food, Garcia had already survived a serious coma in 1987 that forced him to relearn the guitar. The fans could see "a 50 year old man who look[ed] 70. It [was] clear that this work [was] consuming him. One man carrying the weight of thousands of deadheads whose way of life depend[ed] on him continuing to create music. [Fans could] see his eventual collapse coming in the not too distant future" (Carr 2003:19). Garcia

spent the last years of his life in and out of rehabilitation centers, trying to kick his drug habit and get his sleep apnea under control. He died from a heart attack at the Serenity Knolls treatment center in 1995. With his death, the live music of the Grateful Dead ended.

Hearing Photographs, Seeing Sounds

Though the ritualized event of the concerts ceased with Garcia's ascension, the musical axis continued to rotate on tape. As discussed in the following chapters, the tapes circulated among fans throughout the band's career as cultural currency and artifacts that bound fans together. When the band stopped performing, the tapes increased in importance. The recordings of the live shows, made by both the band and the audience throughout the Dead's career, preserved access to the live performances and transitioned the original use value of the live concert into new unique objects analogous to photographs. OBIE commented,

> With the recording, it's like looking at a photograph of yourself when you were small, and you start looking in the background. And it might be out of focus, but it actually brings your memory back. So it allows you to recreate the feelings you had (OBIE, Interview 1).

Like photographs, the recordings are situated in time and space; each unique recording related to each unique manifestation of the music within the history of the Dead. Referring to this type of uniqueness as aura, Walter Benjamin writes,

> It is significant that the existence of the work of art with reference to its aura is never entirely separated from its ritual function. In other words, the unique value of the "authentic" work of art has its

> basis in ritual, the location of its original use value (Benjamin 1936:IV).

The tapes retain the music, the sounds and center of the ritual event; the music retains a piece of the aura of the concert itself. For OBIE,

> [The] music gave us something where we could feel…camaraderie… We were all joined together by our love of the music…[E]very show was full. We were all surrounded by brothers…And the *music*, the tapes, was a way of going back and revisiting those moments (OBIE, Interview 2).

The recordings function like aural photographs; they "stir the viewer [so that] he feels challenged by them in a new way (Benjamin 1936:VI). Listening to the tapes, Dead Heads returned to the axis. OBIE illustrates,

> For a long time, I thought I was the fish going up in a DNA-like helix and that was where intelligence was. And the whole concept of reality was based on where you were in this helix. And in our state, you [were] at this high point and the higher you got, the more spiritually free, the more satisfied…The more spiritual, [the] closer to the top of enlightenment. And there were times at Grateful Dead shows I thought I could actually see the sky above the water. And when I throw in one those tapes of those shows and I'm in a comfortable mood…I can almost be that fish again (OBIE, Interview 3).

In a recent interview, Grateful Dead sound engineer, Dan Healy conveyed the same message,

> [A photograph] is not a real living document, but…it triggers the ability to fill in all of the gaps…and for a moment you can be back there**…**That's the analogy and that's what the tapes were. The tapes are even a better version than a photograph…[I]t does take you back. You go put on a pair of earphones and an old tape and…you will go there (Healy, Interview).

By recording the concerts, the tapers paved an aural "yellow-brick road" (Healy, Interview). The act of recording, examined in the next chapter, proved to be an

essential part of the preservation and continuation of the Grateful Dead experience. As the tapes spin, the axis rotates.

COLLECTING STORIES
MYTHS AND LEGENDS

LEGENDARY TAPERS MEET

I remember exactly where I met Louis Falanga. That was under…the George- Washington Bridge. It was the Hell's Angels Boat Live, the first Jerry Garcia- Saunders one. And they'd actually advertised it in the Voice…They were going to go up the Hudson [River]… and they planned to stop under the George-Washington Bridge and play towards the shore because there was a little park there. Not that any of them knew anything much about rivers or logistics. I mean…rivers have currents. You can't really stop a…boat under the bridge and expect to play to the shore. What they wound up doing was circling...round the middle of the river but [we] couldn't hear them…I was down there with my 110 and a set of AKG microphones…and I'm walking around – walking around uselessly mind you because you can't hear anything to record. Louis saw me, and walked up to me, and said hello, and struck up a conversation. That's how I met [him]. And he's still probably one of my oldest friends, longest running tape buddies. I could actually…probably have recorded because a Hell's Angel saw me walking around with this thing too. [He] figured I was…the film or sound crew and asked if I wanted a ride out to this boat, and I told him no. There were a few things about it that didn't seem like a great idea. Sooner or later they'd figure out really I wasn't part of the crew. JERRY MOORE, INTERVIEW

MENKE'S MARATHON WEEKEND

Now here's a marathon. Now remember when you filled cassettes in the old days, it was a real time activity. If you're going to fill a ninety-minute tape, it's going to take ninety minutes. Well my friends who I dealt with, who live around here, who seriously wanted the music, had to prove it by buying a six-hundred-dollar Nakamichi [tape] deck. And I had five from my friends, one for me, and my Nak Dragon for playback. It was a Labor Day weekend, and…my friend Mike and I went to a stereo store over in San Bruno…We bought seven hundred Sony blanks, ninety-minute tapes, because those were the brand of cassettes we were using. And at the time Sony had a rebate if you bought so many tapes. So what you had to do was send the proof of purchase and the wrapper around the tape. So we opened up the seven hundred tapes; we stuffed it in the case box…and they sent us one hundred and thirty blanks, which Mike and I split although the tapes belonged to the six people. So on the Friday after work, I started copying tapes for me and my friends. Didn't get a whole lot of sleep that weekend, but when I went back to work that Monday morning, all 700 blanks were filled…I worked hard. I mean I did the ridiculous. I mean not many people can say, "I filled up seven hundred tapes on the course of a three day weekend."

BOB MENKE, INTERVIEW

Figure 1.3 October 27, 1984. The first day tapers were officially allowed to bring in their gear and record the Grateful Dead. Photo courtesy of David Gans.

CHAPTER TWO
ICE-PETAL FLOWERS REVOLVING: THE MASTER RECORDINGS

The sounds of the Grateful Dead slipped through the fingers of the musicians, out through their instruments, amplifiers, and PA systems, vibrating the air, the floor, and the audience. With a focus on improvisation, the Dead offered a new interpretation of the material with each concert. Some fans consider their improvisations magic, enlightenment, or an enactment of a higher power. Others simply called it good music. Either way, their unique performances incited within the fans a desire to capture, preserve, and re-enact the experience; emerging recording technology offered a means.

Beginning in the late 1960s, tapers within the Dead Head scene diligently worked to transform the concert experience into tangible, repeatable, and exchangeable artifacts that contained within them the power of the Grateful Dead; "the pure master tape being worth its weight in gold" (Carr 2003:8).[46] But the act of taping was not passive. Tapers made decisions regarding their equipment and their recording process. In the words of Albin J. Zak III, "Sound recording *is* a kind of magic, conferring on the recordist the power to capture temporal phenomena, to make permanent what is by nature fleeting" (Zak 2001:1-2). Tapers labored to capture the experience, to translate not only the sounds but what many call "magic" and what Benjamin refers to as the "unfathomable, the

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[46] Mark Katz discusses the "tangibility" and "repeatability" of recorded sound in his book *Capturing Sound: How Technology Changed Music*. I rely on these notions throughout this thesis.

mysterious, the 'poetic?'" (Benjamin 2004:253). Taper Jimmy Warburton discusses this desire,

> I wanted to take home the bottle. Lightning in a bottle. It's what we did. We'd get the music, bring it home, and see what [we] got. …You take the magic home with you (Warburton, Interview).

The tapes, however, though related to the original concert, will never serve as the concert itself. Highlighting this notion, taper and sound engineer Rob Eaton negated the idea of capturing lightning in a bottle and instead emphasized tapes as a historical preservation of the music, which, to Eaton, was only one piece of the experience,

> It's like having a puzzle but you only had half the pieces…you can sometimes sense that there's something going on but you don't get the same feeling…You can hear the crowd start to build and you feel the band follow that and everyone's sort of on the same plane. You can *hear* that on the tapes, [but] that energy [has]…moved on somewhere else. It's done…It doesn't *live* on the tape (Eaton, Interview).

Yet, according to Zak, though the energy at the live event dissipates, the recording can "become infused with energy imparted from the interactions of human personalities, embodied now in the form of an artifact with powers of its own," (Zak 2001:20). Returning to Benjamin, "this [transferal of energy] is something that a translator can reproduce only if he is alas – a poet" (Benjamin 2004:253). It follows that each translation then serves as a new work of art with a new aura, a new unique translated artifact shaped by the original aura of the event and produced by poets known to the scene as tapers.

Early Tapes

Early in their career, the Dead broadcast their concerts live over the radio; some of the earliest tapes stemmed from these broadcasts. Fans would encourage friends to record the broadcasts while they attended the shows. Others constructed elaborate taping rigs in their own homes. For example, when the Boston Concert Network broadcast the Boston Dead shows live on the radio, OBIE set an automated electrical timer designed for Christmas Tree Lights in order to turn on and record the show from his cassette deck at home while he attended.

Sporadically, commercially sold Grateful Dead vinyl bootlegs would appear in cities such as New York, Boston, and San Francisco. Swiftly appearing and disappearing, bootleggers often peddled their product in the street. Lucky Dead Heads would encounter and purchase these bootlegs, and often make cassette copies for their friends and other collectors. But these LPs were rare, and thus motivated fans to participate in the scene by making their own recordings. Taper Jerry Moore commented,

> I wanted to have Dead tapes to listen to. Good ones. And since they weren't immediately dropping in my lap, I started out making them myself (Moore, Interview).

Individual tapers had to hone their technique and develop their own way of capturing the music by seeking out and procuring recording equipment suitable to the task. Rob Eaton related,

> I started collecting tapes in the early 70s when there weren't that many tapes to collect…someone would have a bootleg [or]…some guy would have a cassette [that] he taped…I think my first show I taped was in '77…[I was] still in high school. I hot-wired a little

> cassette deck that you had in school, the little ones that you push. And I rewired the microphone jacks so I could put a bigger microphone on it. That was my first attempt at taping…It was very crude…And things just blossomed from there (Eaton, Interview).

Over the Dead's career, the number of tapers steadily increased. Taping equipment and techniques evolved. Tapers made decisions regarding their process knowing that the tapes contain an "authenticity [that] does not [only] rely on the presence of a unique instance [i.e the concert] but [also] on a unique arrangement of elements" designed and implemented by the taper (Zak 2001:19). These elements, including the location of the taper and microphones within the venue, the recording medium, the recording device, the levels set by the taper, the audience, and the music all shaped the translation's "precise details of timbre and articulation [which] can be essential properties of a musical work" (Zak 2001:22, quoting Gracyk).

Watching the Meters

Tapers had to adjust to the specific characteristics of the Grateful Dead's sound and performance style. The Grateful Dead, consisting of at least five members at a time, created contrapuntal music that spanned several registers. Jerry Garcia's virtuosic guitar solos filled the high register. Phil Lesh's powerful bass counterpoint and the labor of two circling drummers all threatened to saturate the tape, distorting the recorded sound. This created a particular challenge when setting recording levels. Tapers worked to determine the levels early in the show. Once they found the right volume, they tended to leave it alone for a smooth

consistent translation, making adjustments only "if things got out of hand" (Menke, Interview 2).

Techniques differed, each with their own resulting characteristics. Low levels allowed room for the bass and the drums but often resulted in low-volume tapes lacking high-end resolution. High levels, in contrast, caused heavy saturation, distortion, and a "muddy" sound in the recording. Dead tapers had to leave room for what Dead Heads refer to as "Phil Bombs," powerfully executed bass notes that, due to the power of the Dead's sound systems, had a tendency to vibrate the room and everyone in it. Dead Heads valued and wished to capture the power of Phil Lesh's playing, yet, as their name suggests, these "bombs" could drastically distort the recording, resulting in thick muddy tape hiss that overpowered the entire sound of the tape. Taper Bob Menke purposefully placed his levels slightly lower than most other tapers in order to translate these moments more clearly. Menke comments,

> I remember [Phil] hit this chord that reverberated in the LA Forum in '77. And I…watch[ed] my levels go from about -20 [almost to the top]…and then just slid[e] back down. It was a sustained chord…if I had been as loud as some people were, I would have pinned it. It would have been distorted (Menke, Interview 2).

Tapers adjusted to their equipment, the dynamics of the band, the performance spaces, the music, and recording technology as it evolved over the years. In the words of Jerry Moore "things are malleable, [so you] work with the circumstances you have" (Moore, Interview).

Electrifying Sound

As the first link in the taping process, microphones were crucial. Functioning as a transducer, they provide the path of sound travel and convert music into electrical signals through a vibrating membrane. Brand, pattern, and position of the microphones all affect the nature of the recording and "introduce some coloration or changes to [this] signal" (Dwork and Getz 1999:42).[47] Sound, as dynamic energy, interacted with the pick-up patterns of the microphones generated a signal, or a language, specific to the location of the mic stand within the venue. The size and shape of the venue itself and material of the space therein affects the direction and quality of sound and therefore determines the nature and timbre of the resulting artifact. Tapers preferred specific performance venues due to their effect on the recording. Bob Menke commented,

> My favorite venue was a flat open field. That way…the sound never bounced back…Frost Amphitheatre at Stanford wasn't a flat open field; it was like a bowl with the stage at the bottom. But it was all lawn, so the sound never bounced back off of that either. It was a beautiful venue, the best one. People [liked shows at the Greek Theatre] because they were always three days instead of two in Stanford. But…The Greek was a concrete bowl and the sound could bounce around in there (Menke, Interview 2).

In the late 1970s, Grateful Dead tapers started to pay particular attention to the microphones they chose; some even upgraded to high-end units costing thousands of dollars. According to Rob Eaton, "As a taper, you get the bug and you wanted to get better gear and better mics" (Eaton, Interview). Individual brands acquired a reputation of producing a certain timbre; recordings made with Sennheiser

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[47] For a thorough examination of microphones see Dwork and Getz 1999.

microphones, for example, were known to emphasize the high end, (Dwork and Getz 1999:44) therefore sounding "hot" or "tinny" (Menke, Interview 2). In contrast, Nakamichi microphones, especially the CM700s, held a reputation for having good bass response. Preference within the taper scene regarding microphones spanned a wide spectrum and resulted in a range of "color" for the captured sound. There was no single ideal, but rather a connoisseurship of differences.

The Infamous Tape Flip[48]

The specific characteristics of cassette tapes shaped recording techniques. Though tapers primarily used sixty and ninety minutes cassette tapes to offer a "better envelop," or "better representation" of the music of the Grateful Dead than a [studio] record, they were still much shorter in length than the concert itself (McNally, Interview 1). Therefore, each taper had to make decisions regarding the management and timing of their tapes. Ultimately they desired to produce complete musical documentation.

Tapers developed individual techniques by monitoring the tape length and factoring in their knowledge of the Grateful Dead's performance patterns. Many tapers, desiring a full historical document, kept the tapes running throughout the show, even recording banter and tuning between songs; they chose to "waste tape, not music" (Barry 1991:22). Certain tapers attempted to save tape by only

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[48] Information for this section stems from ethnographic interviews and an article from *Relix* Volume 8, Number 1, February 1991 article "Authorized Recording of the Dead: Tape Management."

recording selected parts of the performance, pausing in between songs. Some even stopped recording during the extended drum solos and long, atonal free-form jams known as "drums" and "space." These tapes, adequate for personal use, were insufficient for collectors with an archivist mentality, a fact that often incited arguments within the trading scene.

As noted in the previous chapter, by the late 1970s, fans began to notice patterns in the concerts. Dead Heads networked through fanzines and newsletters to compare set lists. Although no two performances were the same, certain songs appeared regularly in particular, somewhat predictable locations within the set. Sociologists Gary Shank and Eric Simon referred to this knowledge as "set list grammar." According to Shank and Simon, the pillars of the first set consisted of an opener, a folk-blues song, a folk-cowboy song, a bluegrass-Dylan tune, and a closer (Shank and Simon 2000:61). Openers, going-into-drums songs, drums, out-of drums, ballad-closer-set-up songs, and closers configured the second set (Shank and Simon 2000:62).[49] As the band worked to prevent repetition, these song forms flowed in and out of their repertoire, constructing larger patterns across several nights or tours. Utilizing first-hand knowledge, fan networks, and a well-developed "taper grapevine," tapers knew what songs had been played on previous nights of the tour, allowing them to speculate and predict upcoming songs (Barry 1991:22).

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[49] These positions and the discourse surrounding them created a cultural form of speech that communications ethnographer Natalie Dollar refers to as "show talk." For more on this form of cultural enactment see Dollar 1999.

In addition, some songs such as “Dark Star” or later versions of “Playing in the Band” evolved into vehicles for extensive improvisation, often lasting twenty or more minutes with each manifestation. Certain songs spontaneously melded together through improvised jamming and segueing that could continue for an entire set. Other songs were frequently linked, forming what is known as song suites. Commonly performed suites included “Scarlet Begonias” into “Fire on the Mountain” and the majestic “Help On The Way” into “Slipknot” into “Franklin’s Tower.” These long musical forms did not easily adhere to the ninety-minute cassette tape, with forty-five recordable minutes per side. So tapers used these taper grapevines and their own cultural knowledge of the Dead’s performance structure in hopes of preventing a tape flip during a song, extended suite, or song-set. Ill-timed tape flips or tape changes broke the recorded image of the music and affected the future listening experience. Therefore, when nearing the end of a side, a taper will flip the tape in between songs and rewind to the beginning of the second side. If rushed, he may not take the time to rewind. Not rewinding, however, limits the length available on the second side, so some tapers switched to a fresh, fully rewound tape.

However, a taper might not wait for the tape to come close to the end of a side. For example, if a taper heard the band tuning for a song such as “Dark Star” or “Help on the Way,” with ten or even twenty minutes still available on the tape, he might anticipate the length of the song and flip the tape before it started. “Keep[ing] a diligent eye on stage” and an ear to the music, tapers developed the

skill to recognize patterns and make decisions regarding the timing of the flip (Barry 1991:23).

Location, Location, Location

Because sound moves in space, the placement of the recording device within the venue was an important component of recording. Each venue was different, containing within it unique "sweet spots" that produced translations with minimal crowd noise and a clear and balanced presentation of the instruments. Due to the dynamic nature of the crowd and the Dead's sound system the "best place to make a tape changed [from] night to night, room to room, minute to minute" (Moore, Interview). Many tapers agreed, however, "Wherever you're recording, there is always a great recording area, and that's usually halfway between the soundboard and the stage" (Brown 1990:16). Some tapers and tape traders refer to this spot as the "Mouth of the Beast." The location of the microphones is so important it often trumped the quality of the equipment. When asked what factors make a good tape, taper Barry Barnes replied,

> Like real estate, it's location, location, location. So even if you have less than fabulous recording technology, if you're in the right spot, you can make a very listenable recording…When I was at the second run of the Laguna Seca shows…in '87, I was in the sweet spot. And I had this small Sony recorder, the D3, and this single one-point stereo microphone, the Sony ECM-939…It's a killer recording. Unbelievable. I mean the bass is there, Phil is there, and the space and the cymbals are clean and crisp and so forth, not because of the technology but because of where I was (Barnes, Interview).

In order to get a good location, tapers had to arrive at the general admission shows early, often well before the doors opened. This meant waiting in

line for long periods of time outside the venue in order to enter within the first wave of people. Once inside tapers claimed their territory and waited for the crowd to fill in around them. In order to secure recording locations, tapers moved "in packs." Rob Eaton explains,

> We ran in packs…We all knew each other. We'd share hotel rooms or share car rides…We were always there waiting for the [door to] open because we wanted the prime spot…Back in the general admission show days you wanted to be in front of the soundboard…You wanted to be front and center…so we had to wait in line to get those spots…You'd be there all day long waiting to be the first guy in, and then you'd run to the spot…It was kind of territorial. It got heated at times when people were chatting…into your gear…[but] we took care of each other. We all kind of set up around each other and…created our own little oasis within the oasis (Eaton, Interview).

The tapers needed to claim this territory in order to limit the crowd noise in the recording. Unfortunately, tapers developed a bad reputation among Dead Heads because this approach often meant bullying those around the microphones and insisting that they stop clapping, talking, and hitting the microphone stand. Yet, at times this bullying was necessary as the "mic stand [was often] a beacon for drunks to steady themselves on…[therefore tapers] [had] to be vigilant about [their] stuff and not be afraid to push people away" (Francis 2009:1). Some tapers chose not to police other fans. Taper Bob Levensohn explained,

> I had a…small tape recorder…and a little stereo mic…I'd wear a little mic on my headband so I could dance at the same time and get into the music…And people talked on my recording. Most of [the tapes] reflected [the crowd]…because…I wanted everyone to enjoy the music or the show. I didn't think it was my point to tell anyone to be quiet (Levensohn, Interview).

Due to the extensive crowd noise on Levensohn's tapes, traders consider them to be of lesser quality and less valuable.

In most cases, soundboard recordings lacked all evidence of an audience. For this reason alone, many collectors prefer soundboards, despising those in the crowd that yelled, clapped, whistled, and sang along near the microphones of tapers and wishing to hear the music and only the music.[50] But the audience formed an integral part of the live event and their presence inevitably impacted the recordings. Crowd reactions and appreciations filled the tapes, documenting the interplay between the band and the audience. Knowing this, some fans purposefully imprinted themselves onto the recordings, yelling signature sounds or phrases during quiet segments of the concert. When heard on the tapes, this interaction shapes the unique aura of recordings and for some fans, enhances the recorded experience.

The Secret World of Taping

There is evidence that the band was not only aware of the tapers but actually supported them. During the August 6, 1971 show, Bob Weir spoke directly to a taper, actually giving advice,

> Hey—you down there with the microphone, if you want to get a decent recording, you've got to move back about 40 ft. [The crowd cheers.] Sounds a lot better back there (Weir 1971).[51]

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[50] Occasionally, in some of the most intense live moments, audience sounds were captured via the band's vocal microphones and seeped onto the soundboards. The Wall of Sound system specifically featured a dual-vocal-microphone setup wired to cancel ambient, stage, and audience sound.

[51] This statement can be heard at 6:35 on the first track of disc one of the recording gd71-08-06.fob-SonyECM22p.miller.xxxxx.sbeok.flac16.

Yet, from night to night, tapers were not sure if they would be allowed to tape; often it depended on the specific taper, crewmember, and moment. According to the Grateful Dead's publicist Dennis McNally, the band did not want to police their audience, so the decision regarding taping resided with the crew,

> Since it wasn't *required* for [the band] to deal with it, they didn't really think about it, [so] the policy varied. If you had annoyed a crewmember and he saw you taping, he might bust your chops and take away your tape, and/or if he liked you, he might let it go. It just varied from night to night (McNally, Interview 1).

The first time taper Jimmy Warburton attempted to tape, a Grateful Dead roadie caught him. The same roadie "attacked" him at a subsequent show, taking his tapes. At the same show, a different crewmember happily returned them. Jimmy relates his story,

> Back in '74, they used to attack us…Boston, my first gig that I tried to record, I got my mike wire cut. The same guy attacked at the Dylan stadium in Hartford a month later…He was behind me. He took my tapes out of my bag and I chased him out of the crowd…[Later] I went up to Danny Rifkin…the manager for the Dead, and I explained to him what happened. He goes, "Oh, we told that guy to stop doing that," and he brought a box of tapes out and he says, "Hey take what's yours" (Warburton, Interview).

Tapers worked within venue regulations as well, creatively sneaking equipment past door security and disguising equipment during the show. Unbelievably, taper Marty Weinberg hid his large recording machine behind his back under a large coat (Getz, Dwork, and Dyke 2001:12). Louis Falanga related his strategies,

> In Winterland…we [would]…wrap [the deck] in a flannel shirt, put it on the bottom of the backpack and put a ton of clothes above it…They just didn't have the time to rip the whole backpack apart, and you'd get it in…Another friend of mine named Art…used to buy a bag of Chinese food and put the deck under the Chinese food and walk in the door with it (Falanga, Interview).

After Falanga moved to San Francisco, he hooked up with fellow taper Bob Menke, and worked as a team. At times, this meant sacrificing one recorder in order to sneak in the other one. Falanga relates,

> Bob and I [taped] at the Keystone, [where] they guarded the door…They finally…caught up with us…telling us we couldn't tape anymore…As soon as we walked in, they'd recognize us and they took our backpacks away right away. [But] there was a curtain…[A]s people were going in showing their IDs we would kick one of the backpacks under the curtain and pick it up on the other side. And that worked for a while. And then one time the owner of the Keystone…took our deck away, [but] we had a second deck that we pushed under the curtain because we knew they were going to take one deck away (Falanga, Interview).

Rob Eaton recalled sneaking in equipment using a wheelchair,

> I had a friend borrow a wheelchair. [He] sat on it, had the blanket over this thing that had the mikes and cables like he was a cripple. And I had a mike stand sort of attached to the handles in the back…looking like it's part of the thing. And he could just roll right in the back early. And then he'd get in there, and he'd get the prime spot (Eaton, Interview).

Tapers had to "think fast on their feet…[and] be alert," often tricking a venue staff member or bribing someone at the door (Moore, Interview). During the show tapers had to stay alert and aware of the crowd around them while searching for possible crewmembers. Louis Falanga recounted his experience,

> One time at the last [shows] in '74 in October… I brought my deck and I recorded all five nights. The Friday night show, [between the second and third set] I'm sitting there, and I've got the tape deck to my head. I'm laying down to see how it came out and some guy comes over and [is] pushing me like, "let me hear, let me hear"…I looked over, and…it was Ramrod…He was getting ready to cut my recorder with the tape. I didn't know what to do, but I thought really fast. And I said, "Hey this guy's trying to steal my tape recorder!" and the rest of the crowd said, "Hey get out of here man," and started booing and shit. He cut my wire. I had to splice [it] back…By the time the commotion was over, he still wanted the

> tape, [but] by that time we had switched it for a blank tape. I gave my friend Eddy the [real] tape (Falanga, Interview).

Ironically, as more and more tapers started appearing at the shows, they could work more freely in the open. In fact, the band began informing the venues that they allowed taping. Yet, the venues still prohibited the activity, and the members of the band's crew actively prosecuted the tapers when they discovered them within the audience by cutting cables and confiscating tapes. Therefore, for almost two decades [i.e before the implementation of the taper's section, discussed below], most tapers did not use microphone stands; instead, they either attached their microphones to poles or simply held them in the air. Several tapers discussed their methods:

> When you did Winterland…there was no mic stand; you'd be busted with it. You hand-held the mics….[With] The Dead or any band…you're holding onto the microphones (Falanga, Interview).

> I used to put the microphone on the cane that I walked in with. I was mobile. I could walk anywhere and just raise the cane. It was always general admission back then: dance crowd. (Warburton, Interview).

> Back then I usually managed to get the mic up on some sort of curtain rod pole. Or if you were in some place like the Beacon Theater or the Palladium, although that came later – around 74, 75, 76, hand holding the mic and having good seats was really the bottom line (Brown 1990:16).

> The best you could do [was] to get your mics over you, holding [them] in a pair, mount[ed]…on a broomstick handle…in a Y-pattern [or] V-pattern. And just hold them on there…It was pretty makeshift in the beginning (Menke, Interview).

Tapers also utilized balconies and ledges, taping their microphones in place. Most often, however, they patiently and vigilantly stood looking much like "the Statue of Liberty" (Brown 1990:17).

Forming Communities within the Scene

When taping first started, a single show might have one or two tapers, but "over the years more and more people started showing up…[and] [b]y the time [of] the '76 and '77 shows, you started to see more poles and little clusters of people" (Brown 1990:17). "Tapers" formed a specific group identity within the larger scene of Dead Heads. Over time, tapers connected and formed communities and taper "families" that worked together to preserve the music. Taping "was a social network" (Eaton, Interview), and as tapers interacted and compared their recordings, friendly competition ensued. Rob Eaton commented,

> Early on it was about who's going to make the best tape, 'I'm going to make the best tape. I'm going to have the best mics, and I'm going to be in the best spot'…That was one of the reasons we did it…We're crazy [Laughs] (Eaton, Interview).

Within this environment of friendly competition, tapers formed deep, long-lasting relationships. They helped one another, sharing blank tapes and batteries, and exchanging recordings. Taper Charlie Miller related,

> [The first show of a tour] was almost like…the Grateful Dead…were playing at your family reunion…Not that seeing the Grateful Dead was secondary; it's just an added surprise to the whole thing. You know, icing on the cake. So you go meet all your friends, give hugs and talk and hand someone a box of tapes that you made them from the last shows you taped…It's a matter of working together. And there's always somebody that shows up late and needs to stick their stand over by you or something, so it's kind of family (Miller, Interview 1).

Tapers would claim territory as a group, delineating those who claimed the spot and those who carried equipment. Barry Barnes explained,

> We'd have runners…I'd let somebody carry all the gear, and then I'd take a tarp and I'd run in and lay [it] out…and try and get it as close to the front and the middle [of the lawn] as possible…There'd be six or eight or ten of us, some of us tapers, some of us not…There'd always be a large group (Barnes, Interview).

The act of taping provided certain Dead Heads with a specific identity within the scene. Recording technology not only preserved the music, but helped to form families and larger networks that identified as a group and took care of one another.

Small Machine, Large Impact

In 1979, Sony revolutionized amateur recording with the release of a small, portable, durable, high-quality cassette recorder known as the D5. It cost less than most recorders on the market at the time and was small enough to easily smuggle past venue staff. Thus the D5 quickly became "the work horse of the tapers" (McNally, Interview 1).

Individual tapers and larger taping networks increased. With this increase came more master recordings and therefore more low-generation tapes within the larger Dead Head scene. When asked what made the D5 better, Barry Barnes replied,

> It was a…portable, professional unit, and it was a very small size…It was built like a tank, so it was very, very solid…[Sony] continued to update it and took advantage of Dolby and…metal taping…ma[king] it a quality unit (Barnes, Interview).

As an "act of devotion to sound," (Perlman 2003:352) tapers began "tweaking" and customizing their machines. Some tapers permanently screwed

down their record button, forcing the signal to continually pass through the machine therefore saving a few precious seconds when flipping the tape resulting in more complete recorded documents. Others adjusted the placement of the erase head or added an additional head in order to lower the noise floor and decrease tape hiss (Dwork and Getz 1999:40). These modifications improved fidelity and raised the bar for better quality recordings.

Support and Segregation

As taping culture grew, tapers infused the crowd with many more mic stands, tape recorders, cables, and battery packs standing precariously amongst dancers, party goers, and intense listeners all gyrating with the music. Viewing their work as valuable and worth protecting, tapers often had to fight back against the crowd around them; if "anybody walk[ed] near their tapes or was speaking, [then] they'd be yelling or shushing…or whacking [others] in the ankles with a tripod" (McNally, Interview 1). Despite this spatial conflict, the tapers and the greater Grateful Dead audience lived in harmony for almost two decades mostly due to the valuable tapes produced. Yet, as the band and the scene transitioned into the 1980s, this symbiotic relationship was threatened along with many other elements of the experience. According to Dennis McNally, "the number of tapers grew so significantly, and, since their preferred spot was right in front of the soundboard, it reached the point where [sound engineer] [Dan] Healy literally couldn't see the stage. And the audience couldn't see the stage" (McNally,

Interview 1). The taper's infringement on the enjoyment of the performance began to out weigh the benefits of having recordings.

As the band's sound engineer, Dan Healy spent countless nights at the soundboard, usually near the tapers on an island within the audience. Because of this, the band often appealed to Healy to "deal with the tapers" (Healy, Interview). For a long time, Healy negotiated with individuals, confiscating equipment only to return it to the owner after the show or a few days later, yet he knew that, "no one was going to stop [taping]" (Healy, Interview). As a sound and recording engineer himself, he was also concerned that attempts to police the activity would actually decrease the quality of the tapes and the preservation of the music (Healy, Interview). For the most part, Healy served as a mediator between the tapers and the band's organization.

One night, however, an interaction with a fan caused Healy to get involved more seriously. He related,

> This one night, this young boy and girl, [they] were maybe 14 years old, came to me at the mix board crying, and they said, "We waited all day and all night in line to get tickets and this guy came [and] told me that he wanted to put his microphone there, and if I didn't leave he'd beat me up." And that was the straw that broke the camel's back (Healy, Interview).

So there was a band meeting. According to McNally the band hated the idea of policing the fans in any way. "They didn't want to be cops," but they had a decision to make (McNally, Interview 1). The musicians and the organization understood the importance of taping the shows, and they were well aware that the tapes produced and reproduced Dead Head culture, increased their fan base, and strengthened the relationship between the band and their audience. The Dead

agreed that a serious effort to police the activity using metal detectors to search all fans at the door would have "destroyed the ambience of the show" (McNally, Interview). But, despite their vital role in the scene, the tapers had become a serious problem within the audience. Reluctantly, the organization agreed that "segregation" was the only solution (McNally, Interview 1). The band's organization determined that all tapers and microphones needed to go in one place away from the general audience that did not obstruct the view of the stage.

In 1984, the band initiated a taper's section separated from the audience and located behind the soundboard. This historic and revolutionary decision had several functions and ultimately both positive and negative repercussions. For Healy, this meant tapers within the section held "taper rights" and tapers found outside of the section could be reprimanded without guilt (Healy, Interview). For the tapers, it meant they could bring in more equipment, network easily, and actually help one another more efficiently during the show. For McNally, the taper's section was a clear statement about the relationship between the band and their fans. McNally stated,

> The fact that the band trusted its audience enough to allow taping was such a statement of empowerment not just for the tapers but for all Dead Heads. It said you're family…You're not customers. You're not cows with wallets. This is family (McNally, Interview 1).

This decision empowered the audience, which grew exponentially and the music spread "radically" (McNally, Interview 1). Many new tapes were created and shared, "turning on" new fans and satisfying old ones. Arista, the band's record company at the time, "had a minor heart attack" upon hearing this decision

(McNally, Interview 1). But empowering the audience to record did not disrupt record sales or the band's fan base; in fact, according to Healy, "it's the other way around. It enhance[d] [the fan base] because [the] people that love you so much that they come to record you…are the first ones in line to buy your records when they come out" (Healy, Interview). Sociologist Lee Marshall goes so far to argue that tape collectors "actually provide ideological support for the recording industry, helping valorize musical commodities;" therefore unofficial recordings actually enhance the music industry and the dialogue surrounding it (Marshall 2003:1).

Due to the shared space and resources, many tapers celebrated the implementation of the section. Barry Barnes commented,

> I loved it. I loved it…I'm a geek in it, so I loved to hang out with that equipment. At the same time…I so enjoyed sitting there…[and] putting up my own mic stand even though the quality of my gear wasn't [great] and my microphones [weren't] as fancy and fantastic (Barnes, Interview).

Close proximity allowed them to work together in new ways. For instance, tapers "daisy-chained" their recording devices together by running cables from the output of one recording device to the input of another. This technique provided tapers with lower quality microphones the opportunity to make better recordings by "patching" into other, higher quality recording equipment within the section. It also allowed some tapers to arrive without microphones at all, relying on the

others to capture the signal and send it through to the recorder.[52] Barnes continued,

> I enjoyed making my own recordings, still do, but a bunch of the time I would patch out of somebody else's, so that made it nice. I'd have a master copy of a show that was made through Schoeps or Neumanns or some wonderful sounding microphone set, so I like[d] the taper's section. I liked the guys (Barnes, Interview).

During the 1980s, taper Charlie Miller, utilized a rig containing four microphones feeding into one mixer; this set-up often attracted attention. So much attention that, in an interview, Miller recalled counting thirty-two tapers chained together, all sharing the signal from his microphones (Miller, Interview 1).

Negative repercussions did eventually surface, however. Certain tapers still fought for territory, this time with their fellow tapers. Older, veteran tapers complained that many of the "newbies" arrived with arrogant, hostile, and entitled attitudes. Many tapers expressed concern about the number of tapes produced, feeling as though many "masters" were low quality and actually diluted the "pool" of recordings (Dwork and Getz 2000:44).

Breaking Out of the Ghetto

Corralled behind the soundboard, some tapers lamented the lack of freedom to record from anywhere in the venue and felt that the location produced low quality tapes. To escape what some call the "taper's ghetto," courageous

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[52] In retrospect, some tapers now complain about this, stating that those who never set up microphones should not call themselves tapers at all.

tapers chose to return to stealth modes of taping in order to produce high quality front of board tapes (often labeled FOB). Bob Menke commented,

> The taper's section legitimized what we were doing. But…behind the soundboard…was not the optimum place for sound. So a lot of people still went down in front, got their spot in front of the board, and made the tapes from there…[T]he taper's section…made the front of board audiences even more valuable. They received and deserved their legendary status [because the tapers] were willing to go down there and risk being busted (Menke, Interview 2).

Many of these tapers utilized the taper tickets to get their equipment in the door. Once inside the venue, they worked from within the crowd. In order to avoid detection, many tapers altered their equipment to make it smaller and less noticeable. Menke continued,

> We adjusted. We had a guy who was six feet seven inches tall. We put mics in a hat and had him stand down in front…A friend of mine who is an engineer…figured out how to build a power supply for the Nakamichis and he machined a screw-on thread with a BNC connector on the end of it. So the Nakamichi mics ended up being about two inches long and they were the thin end[s] of the barrel. So we had the Nak 700s but in very tiny microphones, about the size of your index finger…[We] would run a chord down to the power supply box, and the output of the power supply box went into the microphone input of the deck. So, that's how we managed to stay under the radar…There were so many people in the taping section. Those guys who chose not to, they're heroes and legends now (Menke, Interview 2).[53]

Rob Eaton related a similar story with a slightly different strategy involving a fake head to deter venue staff and band crew regulating the crowd,

> My friends…would get one of the ambisonic heads…that looks like a head but it's ambisonically built…The microphones [were]

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[53] As will be discussed in Chapter Four, a group of sound engineers known as the "The Mouth of the Beast Project" or MOTB currently works to honor these tapers by locating, preserving, and disseminating recordings produced in front of the sound board and in the "mouth" of the PA system both before and after the implementation of the taper's section.

> inside of the ear canal to replicate human hearing. And then the microphone [cables] would come out of the neck…If you put it on a stand and had a bandana on it,…it [looked] just like a tall person down in front, [like] a hippy, not moving [laughs]…[And] he could be like 6'5" 6'6." He could be just above the crowd (Eaton, Interview).

Stealth tapers often worked in teams in order to help one another create the "oasis within the oasis." Individuals within the group shared responsibilities of running the equipment, watching for crewmembers, and forming a barrier between the audience and microphones.

The Switch to Digital

The recordings represent not only the time and space of the performances but the history of recording technology itself. When digital technology appeared on the scene in the early '80s, it created new challenges and techniques for tapers as well as a new language within which the music could be translated.[54] Instead of moving magnetic particles on a strip of tape, digital recorders converted sound into 1s and 0s by sampling slices of the waveform and converting the information into data. Digital playback reconstructs the waveform by connecting these "bits." Early machines proved to be very crude, taking only a small portion of the actual sound, thus resulting in a lack of "warmth" or "fullness." The first DAT machines also required a car battery to power them, adding to their expense and inconvenience. Rob Eaton comments,

> The very first digital deck I ever saw was a friend of mine, Jeff Silverman…He had the first…14-bit PCM deck… It's…really

[54] For an extensive outline of the digital technology first available to tapers see Dwork and Getz 2000.

> crude digital. The converters were not that good, how it handled the noise floor [and] the noise shape. The dithering was not very good. All the low level detail was pretty nasty, but still it was digital so it was kind of like, "Oh wow!" You had to have…a couple of car batteries to power it…It wasn't portable. It was a BETA-MAX video deck and…a processor…[It was] two pieces. So it needed enough AC current to run it [and] you had to convert AC to DC. It was a pain in the ass, but it was the first one I saw (Eaton, Interview).

Over time the sampling rate improved as the technology evolved, and some tapers did choose to switch to digital. Discussed in the next chapter, benefits included longer tape length, and most importantly, the ability to make a perfect copy of the master recording, a fact that greatly affected the tape-trading scene and hierarchies within it that had resulted from the decrease in sound quality that occured when making analog copies. The high startup price of digital recorders as well as the residual costs of blank digital tapes, paired with the initial crude quality of the audio, however, prevented many from transitioning. Therefore, tapers continued to make analog tapes until 1995 when the band stopped performing. [55]

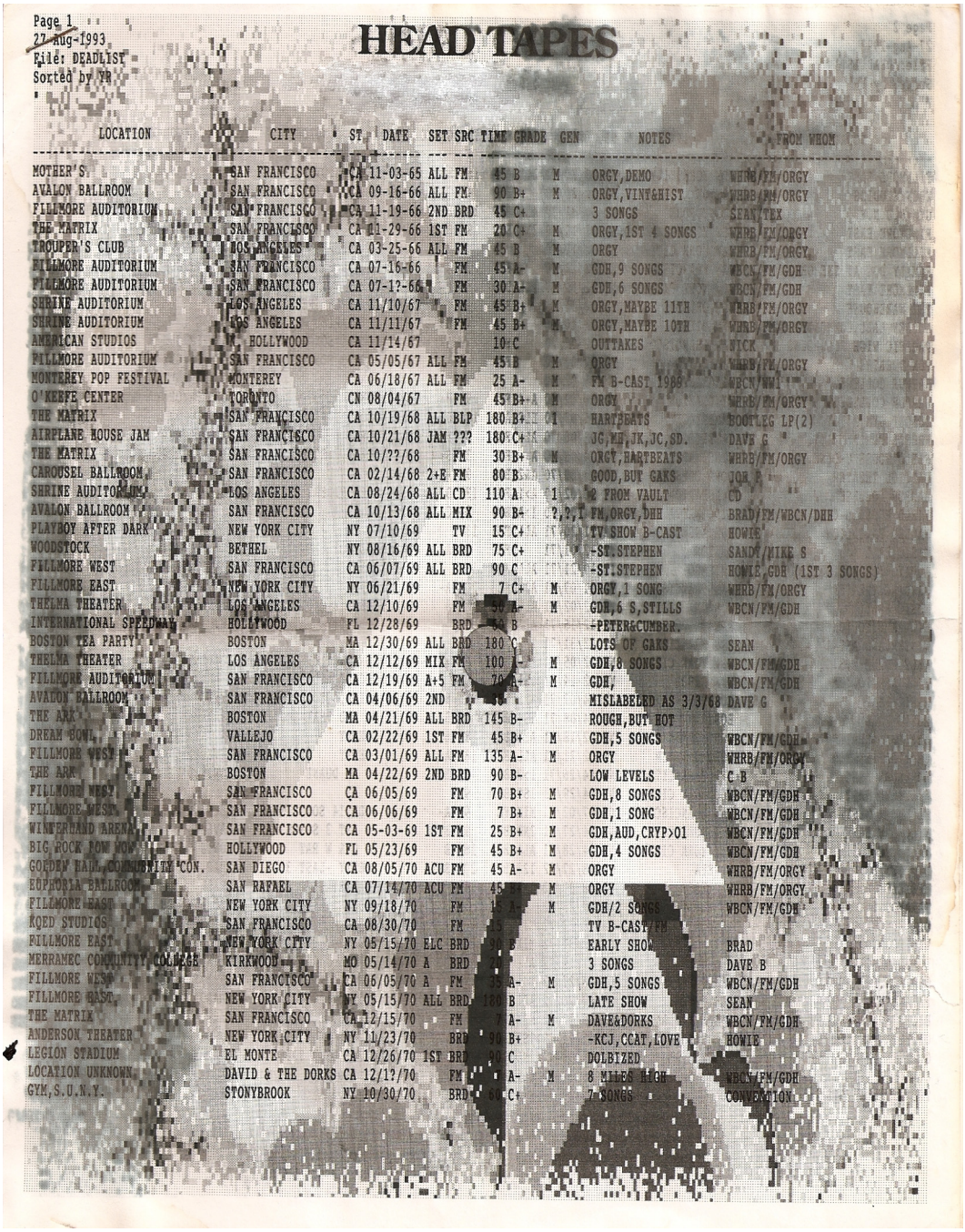
Conclusion

The tapes, created through a range of hardware, tactics, and personal endeavors, became historical documents of the scene, serving as "both artworks and historical witness" to the Grateful Dead and their music (Zak 2001:23). The tapes provided a narrative that made the ephemeral tangible, the moment repeatable, and the magic accessible long after the Dead's last notes rang in the

[55] Hard disk digital recoding, which offers extended recording length and ease of editing, was developed much later, after the demise of the Dead.

halls, ballrooms, and stadiums across America. As translations containing the music and remnants of the translator itself, the tapes "represent[ed] more than the expression of their creators' talent, ideas, emotions, and influences; they also captured…[t]he performative acts of all those involved in the record-making process" (Zak 2001:20). Those now listening to the tapes are, "thereby challenged to form an appreciation of the panoply of diverse skills and talents required to bring the work into being" including the band, the organization, the fans, the tapers, and recording technology (Zak 2001:22).

Within the larger Dead Head scene, tapers emerged as a distinct subculture, a smaller scene within. They operated individually, and collaborated in networks, in order to improve recording technology and capture the performances. As technology evolved, tapers constantly updated their techniques and adapted their understanding of the musical language of the Dead to fit the unique circumstances of the music, the venue, and the equipment. As the relationship with the band evolved, tapers became a respected and integral element of the scene, going so far as to earn rights and territory. Through all of the changes, the tapers kept the ice-petals revolving and transformed the concerts into talisman, cultural currency, and exchangeable commodities. The recordings became precious objects, each with a "name, a personality, a history, and even a tale attached to it" (Mauss 2000:24). As a result of their efforts, the music continues to circulate and became cultural currency with an elaborate system of exchange created and defined by those within the scene itself.



Page 1
27-Aug-1993
File: DEADLIST
Sorted by YR

HEAD TAPES

LOCATION	CITY	ST	DATE	SET	SRC	TIME	GRADE	GEN	NOTES	FROM WHOM
MOTHER'S	SAN FRANCISCO	CA	11-03-65	ALL	FM	45	B	M	ORGY,DEMO	WHRB/FM/ORGY
AVALON BALLROOM	SAN FRANCISCO	CA	09-16-66	ALL	FM	90	B+	M	ORGY,VINT&HIST	WHRB/FM/ORGY
FILLMORE AUDITORIUM	SAN FRANCISCO	CA	11-19-66	2ND	BRD	45	C+		3 SONGS	SEAT/TEX
THE MATRIX	SAN FRANCISCO	CA	11-29-66	1ST	FM	20	C+	M	ORGY,1ST 4 SONGS	WHRB/FM/ORGY
TROUPER'S CLUB	LOS ANGELES	CA	03-25-66	ALL	FM	45	B	M	ORGY	WHRB/FM/ORGY
FILLMORE AUDITORIUM	SAN FRANCISCO	CA	07-16-66		FM	45	A-	M	GDH,9 SONGS	WBCN/FM/GDH
FILLMORE AUDITORIUM	SAN FRANCISCO	CA	07-1?-66		FM	30	A-	M	GDH,6 SONGS	WBCN/FM/GDH
SHRINE AUDITORIUM	LOS ANGELES	CA	11/10/67		FM	45	B+	M	ORGY,MAYBE 11TH	WHRB/FM/ORGY
SHRINE AUDITORIUM	LOS ANGELES	CA	11/11/67		FM	45	B+	M	ORGY,MAYBE 10TH	WHRB/FM/ORGY
AMERICAN STUDIOS	HOLLYWOOD	CA	11/14/67			10	C		OUTTAKES	NICK
FILLMORE AUDITORIUM	SAN FRANCISCO	CA	05/05/67	ALL	FM	45	B	M	ORGY	WHRB/FM/ORGY
MONTEREY POP FESTIVAL	MONTEREY	CA	06/18/67	ALL	FM	25	A-	M	FM B-CAST 1968	WBCN/WW1
O'KEEFE CENTER	TORONTO	CN	08/04/67		FM	45	B+	M	ORGY	WHRB/FM/ORGY
THE MATRIX	SAN FRANCISCO	CA	10/19/68	ALL	BLP	180	B+	C1	HARTBEATS	BOOTLEG LP(2)
AIRPLANE HOUSE JAM	SAN FRANCISCO	CA	10/21/68	JAM	???	180	C+		JC,MJ,JK,JC,SD.	DAVE G
THE MATRIX	SAN FRANCISCO	CA	10/??/68		FM	30	B+	M	ORGY,HARTBEATS	WHRB/FM/ORGY
CAROUSEL BALLROOM	SAN FRANCISCO	CA	02/14/68	2+E	FM	80	B		GOOD,BUT GAKS	JOE B
SHRINE AUDITORIUM	LOS ANGELES	CA	08/24/68	ALL	CD	110	A	1	2 FROM VAULT	CD
AVALON BALLROOM	SAN FRANCISCO	CA	10/13/68	ALL	MIX	90	B+	?,?,1	FM,ORGY,DHH	BRAD/FM/WBCN/DHH
PLAYBOY AFTER DARK	NEW YORK CITY	NY	07/10/69		TV	15	C+		TV SHOW B-CAST	HOWIE
WOODSTOCK	BETHEL	NY	08/16/69	ALL	BRD	75	C+		-ST.STEPHEN	SANDY/MIKE S
FILLMORE WEST	SAN FRANCISCO	CA	06/07/69	ALL	BRD	90	C		-ST.STEPHEN	HOWIE,GDH (1ST 3 SONGS)
FILLMORE EAST	NEW YORK CITY	NY	06/21/69		FM	7	C+	M	ORGY,1 SONG	WHRB/FM/ORGY
THELMA THEATER	LOS ANGELES	CA	12/10/69		FM	50	A-	M	GDH,6 S,STILLS	WBCN/FM/GDH
INTERNATIONAL SPEEDWAY	HOLLYWOOD	FL	12/28/69		BRD	45	B		-PETER&CUMBER.	
BOSTON TEA PARTY	BOSTON	MA	12/30/69	ALL	BRD	180	C		LOTS OF GAKS	SEAN
THELMA THEATER	LOS ANGELES	CA	12/12/69	MIX	FM	100	[illegible]	M	GDH,8 SONGS	WBCN/FM/GDH
FILLMORE AUDITORIUM	SAN FRANCISCO	CA	12/19/69	A+5	FM	70	A-	M	GDH,	WBCN/FM/GDH
AVALON BALLROOM	SAN FRANCISCO	CA	04/06/69	2ND	[illegible]	[illegible]			MISLABELED AS 3/3/68	DAVE G
THE ARK	BOSTON	MA	04/21/69	ALL	BRD	145	B-		ROUGH,BUT HOT	
DREAM BOWL	VALLEJO	CA	02/22/69	1ST	FM	45	B+	M	GDH,5 SONGS	WBCN/FM/GDH
FILLMORE WEST	SAN FRANCISCO	CA	03/01/69	ALL	FM	135	A-	M	ORGY	WHRB/FM/ORGY
THE ARK	BOSTON	MA	04/22/69	2ND	BRD	90	B-		LOW LEVELS	C B
FILLMORE WEST	SAN FRANCISCO	CA	06/05/69		FM	70	B+	M	GDH,8 SONGS	WBCN/FM/GDH
FILLMORE WEST	SAN FRANCISCO	CA	06/06/69		FM	7	B+	M	GDH,1 SONG	WBCN/FM/GDH
WINTERLAND ARENA	SAN FRANCISCO	CA	05-03-69	1ST	FM	25	B+	M	GDH,AUD,CRYP>01	WBCN/FM/GDH
BIG ROCK POW WOW	HOLLYWOOD	FL	05/23/69		FM	45	B+	M	GDH,4 SONGS	WBCN/FM/GDH
GOLDEN HALL COMMUNITY CON.	SAN DIEGO	CA	08/05/70	ACU	FM	45	A-	M	ORGY	WHRB/FM/ORGY
EUPHORIA BALLROOM	SAN RAFAEL	CA	07/14/70	ACU	FM	45	B+	M	ORGY	WHRB/FM/ORGY
FILLMORE EAST	NEW YORK CITY	NY	09/18/70		FM	15	A-	M	GDH/2 SONGS	WBCN/FM/GDH
KQED STUDIOS	SAN FRANCISCO	CA	08/30/70		FM	45			TV B-CAST FM	
FILLMORE EAST	NEW YORK CITY	NY	05/15/70	ELC	BRD	[illegible]	B		EARLY SHOW	BRAD
MERRAMEC COMMUNITY COLLEGE	KIRKWOOD	MO	05/14/70	A	BRD	[illegible]			3 SONGS	DAVE B
FILLMORE WEST	SAN FRANCISCO	CA	06/05/70	A	FM	35	A-	M	GDH,5 SONGS	WBCN/FM/GDH
FILLMORE EAST	NEW YORK CITY	NY	05/15/70	ALL	BRD	180	B		LATE SHOW	SEAN
THE MATRIX	SAN FRANCISCO	CA	12/15/70		FM	7	A-	M	DAVE&DORKS	WBCN/FM/GDH
ANDERSON THEATER	NEW YORK CITY	NY	11/23/70		BRD	90	B+		-KCJ,CCAT,LOVE	HOWIE
LEGION STADIUM	EL MONTE	CA	12/26/70	1ST	BRD	90	C		DOLBIZED	
LOCATION UNKNOWN	DAVID & THE DORKS	CA	12/1?/70		FM	[illegible]	A-	M	8 MILES HIGH	WBCN/FM/GDH
GYM,S.U.N.Y.	STONYBROOK	NY	10/30/70		BRD	[illegible]	C+		7 SONGS	CONVENTION

Figure 1.4 OBIE's H.E.A.D. Tape List. Courtesy of OBIE.

This is a sample of a collector's list organized by date, venue, minutes of music, quality, and source. The background of the list depicts the eye of illumination, an indication of the power and esoteric meaning that OBIE attributes to the music.

CHAPTER THREE
SEARCHLIGHT CASTING: GIFTING, TRADING AND COLLECTING

Long after the last note of the live performances, the music of the Grateful Dead continued to ripple out from the band, flowing from magnetic particles, available for endless playback. Dead Heads became familiar with the clicking of the machine and the blanket of hiss that enveloped the Dead on tape. They trained their ears to filter through poor translations and connect to the music months, years, or even decades after the original performance. Because of the tapers' efforts and recording technology, the aura of each concert, captured in its unique time and space, "cool[ed] and solidifie[d] on tape, where it c[ould] be easily collected…put on a shelf," and shared with others (Carr 2003:15). As fans reached out into the scene in search of recordings, a social structure based on exchange emerged.

The tapes served as exchangeable artifacts that inducted new members into the world of Dead Heads. By reproducing tapes, Dead Heads reproduced culture. Through the circulation of recordings, Dead Heads produced one aspect of the material culture surrounding the band. Among items such as T-shirts, band merchandise, ticket stubs, stickers, and newsletters, the tapes functioned as sound objects that bound the scene together. Dead Heads shared these tapes with their friends in a conscious effort to spread the music and initiate new members into the Dead Head scene. By circulating the music, tape traders and collectors forged new relationships between Dead Heads and became evangelists for the band. They created a network that defined a particular type of fan and fandom able to

connect to the music and other fans independent of the concert experience. When asked how tapes affected his role in the Dead Head scene, long-term tape trader Noah Weiner replied,

> I qualify the type of Dead Head I am by the fact that I'm a Dead tape collector. All of the wonderful people, and great discussions about the Dead, Jerry, etc…all came as a result of tapes (Weiner, Personal Email).

Traders had to be patient and diligent as tapes drifted across the country. Hunting for new tapes, waiting weeks, months, even years to find a specific recording, playing a new tape for the first time, sharing copies with others, and discussing the virtues of one recording over another all added to the thrill of collecting and the nature of the scene.

By listening to the recordings, tape collectors "reactivate" the original aura of the Grateful Dead in live concert, extending the event into the present. Walter Benjamin writes, "[B]y permitting the reproduction to meet the beholder or listener in his own particular situation, it reactivates the object reproduced" (Benjamin 1936, II).[56] Therefore, recordings, as valued objects, were not simply "hoarded and treasured…kept for the sheer pleasure of possessing them," (Mauss 2000:23), but played back time and time again, used to re-enact the musical journeys of the Dead and their fans. Dead Head Mark Sokoll explained,

> It wasn't about the physical setting of the concert. It was where the music could take you at the concert…I find listening to the music now, I can travel. And it's not just travel[ing] back to Providence where I saw them perform it or Cleveland where I saw

[56] In this statement, Benjamin is referencing reproductions that, for him, lack aura. As in the previous chapter, I am arguing that these recordings actually contain a translated version of the aura of the original.

> them perform it, but travel[ing] to those liberated places where the music took me then and still takes me (Sokoll, Interview).

The tapes transmitted the history of the Grateful Dead's musical trajectory and cemented a path between the performance and the listener. Through these artifacts, the music of the Dead reached a population that far surpassed those in attendance.

Instead of placing a cash value on tapes through a commercial bootleg system, Grateful Dead tapers and tape collectors consciously designed alternative systems of exchange. They were morally opposed to buying and selling these recordings. Dead Heads endowed this system with a "principle of the exchange-gift" distinct from "the market where money circulates, of sale proper, and above all of the notion of price reckoned in coinage weighed and stamped with its value" (Mauss 2000:46). Collectors derived the value of the tapes from the unique experience of the concert and the power of live Grateful Dead music. Dead Heads self-regulated the system as they compared and ranked recordings according to the aesthetics and logic of the scene; this regulation developed into a value system that considered the musical performance within the history of the Grateful Dead, the quality of the recording within the limits of technology, and scarcity of the tape.

Tapers and collectors fashioned a multi-faceted social system based on exchange and developed relationships with other fans within the larger Dead Head scene and tape subculture. In one form, the tapes radiated out from a core of tapers, expanding in all directions in overlapping circles as gifts, powerful talisman to be enjoyed and shared. Alternatively, tapes functioned as cultural

currency, or capitol within regulated, restricted, linear hierarchies. Operating within these social systems, tapers and collectors extended themselves out into a "web" of trade, a "technologized social [musical] life" (Taylor 2001:20) defined and regulated "not [by] individuals but collectives that impose obligations of exchange and contract upon each other" (Mauss 2000:5). Once in circulation, the tapes liberated the music from the confines of the concert hall and enabled it to expand from the axis of the live performance into rotation within the homes, cars, and everyday lives of fans.

Listening to Cultural Knowledge

Each tape represented a unique translation of a unique event. Dead Heads compared and ranked these recordings according to ascribed cultural knowledge. In his book *The Audible Past*, Joseph Sterne defined listening as "a directed, learned activity…a definitive cultural practice. Listening requires hearing but is not simply reducible to hearing" (Sterne, 2003:19). For Grateful Dead tape collectors, listening entailed critiquing the sound quality of the recordings in relation to available technology and within the context of Grateful Dead performance and Dead Head tape trading history.

As an avid tape collector, Dick Latvala, who eventually became the Grateful Dead's official archivist, took extensive notes on all his recordings. These notes, now accessed through an online archive, provide insight into a form of listening immersed in the historical context of past performances. Writing in

1978 about his copy of the 1969 performances of July 2nd and 3rd, Latvala first noted the extremely poor quality of the tape,

> I was practically going to erase this after the first hearing, but now after two hearings I feel it would be a loss even though the quality is most unbearable. (I guess, as I get more involved with this crazy business, one comes to keep a lot of shows that are terrible quality!) (Latvala 1978).[57]

He went on to describe why this tape has value, and why it should be preserved as part of the Grateful Dead's history,

> [However], I, like [taper] Rob [Bertrando], feel that this is one of the more amazing shows in Dead history. I don't know any other tapes with "Mountains of the Moon" and "Dupree's Diamond Blues" and never has "Green Green Grass of Home" been seen before. It also must mark the first appearance of "Casey Jones," which is really done in an unusual way. As for the long jam, it was very unusual, starting out with unique material within the "Other One," that I can't remember hearing elsewhere. The jam continues into a decent "St. Stephen" and then devastates us with powerful, tasty, and exciting trips within "The Eleven." "Lovelight" also sounds extra special, with everyone playing especially fine; in fact it just might be the best version of "Lovelight" that I know of (Latvala 1978).[58]

Latvala noted the importance of this rare set list and the unique qualities of these particular song renditions. He valued this recording's musical content over its production quality by placing it within the context of the Dead's performance history, as well as defined the quality of the tapes through a unique lens of cultural knowledge and Dead Head aesthetics.

As discussed in the previous chapter, the microphone, recording device, recording levels, and physical location within the venue all affected the sound

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[57] This notebook page can be found at <http://www.dicklatvala.com/notebooks/pages/690602notes.jpg> (accessed February 2, 2009).
[58] *Ibid.*

quality of the tape. Collectors also considered the set list and the "completeness" of the recording as related to the number of sets, the total run time of music, the timing of the tape flip, and the amount of tuning and banter between songs. Dead Heads placed extra value on the tapes that contained premier versions of songs or improvisations that explored new spaces in the music. Because of these variables, many collectors developed a personal grading system, creating lists of their collection that rated the comprehensive quality of each tape.

As tapes surfaced and circulated, traders and collectors positioned them along the spectrum of quality and value. They organized them first according to date, venue, and city, using this standard information to associate the recording with the original live event. When the information was available, traders also identified the taper, the recording equipment, the distance from the master, referred to as the "tape generation," and the lineage of the recording as it was transferred from one recorded medium to another, such as reel-to-reel to cassette. They also distinguished the nature of the recording by labeling tapes according to their source. Sources included vinyl bootlegs, radio broadcasts (labeled as FM), audience recordings (labeled as AUD), and the band's soundboard (labeled as SBD).[59]

Personal experience and individual notions of quality also affected collecting and trading. Many collectors searched for recordings of shows they

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[59] The distinction "SBD" could indicate several different recording processes and/or sources. The band made recordings of the house mix through the output of the soundboard. Sometimes, the sound engineers allowed fans to patch into this output. The band also used mic splitters to run cables from the stage to an alternative mixing board used primarily for recording the event, allowing the band's recording engineer to adjust the levels independently from the house mix.

attended, persistently seeking out the recording of their first show, or a particularly meaningful concert. Others looked for shows with set lists that included their favorite songs, rare segues, or extended improvisation. Some collectors sought out a particular sound that defined their favorite tours or years. Some preferred audience tapes for the inclusion of the crowd reaction and the atmosphere of the venue; others coveted soundboards due to their rarity within the scene, clarity of vocals, balance of instruments, and a lack of undesirable audience noise such as clapping, talking, and whistling. Dead Heads carried these tapes with them as they attended shows across the country, migrating alongside other fans and the scene.

Sharing the Arm Band

As tapes circulated, several types of exchange structures developed. The willingness of individuals to make copies for others, often referred to as the split between "sharers" and "hoarders," was one major distinguishing factor in these varying economies. John Dwork, co-editor of *The Deadhead's Taping Compendium: A Guide to the Grateful Dead on Tape*, explained,

> Two conflicting philosophies…have determined the growth of the tape trading scene since day one. There are those who believe that withholding information (in this case, music on tape) bestows power and there are those who believe that sharing information bestows power (Dwork and Getz 1998:hiii).

Many tapers and collectors freely produced and shared copies with other Dead Heads, spreading the music as much as possible. This generated an informal economy with a circular flow where "brothers" took care of one another by

reciprocally gifting tapes. Many Dead Heads felt strongly that this type of open sharing was vital to preserving the spirit of the music itself. Dwork continues,

> The sharers…have always found that prosperity comes not from denying others what they want, but from spreading the wealth. Sharing the music allows for the good times to continue. Let's not forget this. There is a great joy also to be gained in the act of sharing. Passing the music on makes the circle complete—we give others the opportunity to find joy, which was given to us when we received the tapes. Ultimately, the music is meant to be shared (Dwork and Getz 1998:hiv).

By sharing the music, Dead Heads enhance the scene, preserve the power of the live Dead, and strengthen their relationship with the band.

Taper and collector, Jerry Moore, adamantly advocated open sharing. For him and other sharers, recording technology allowed the *duplication* of these precious sound artifacts, and, by sharing *copies*, the collector was able to spread the music *without depleting his own collection*. Referencing anthropological studies of gifting and their application to tape trade, Moore stated, "When giving away the arm band, you get to keep the arm band" (Moore, Interview). Instead of actually giving away the material artifact, the collector gives away a copy of the music and "transfer[s] [the] aura" of the master recording to each subsequent copy (Zak 2001:19).[60] Tape trade therefore offered a special structure for gifting: tape traders could adhere to a "social code of rules" mandating exchange without having to fight the natural, human "acquisitive tendency [where individuals] love to possess and therefore desire to acquire and dread to lose" (Malinowski

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[60] It is important to note that analog copies of recordings decrease in sound quality. Therefore, tapers can share the music with others without losing their own collection, yet the recordings they share are even farther from the original source and are of lower cultural value. This will be discussed in depth below.

1953:96). Crucial to the nature of circulation and social structure, collectors could acquire, share, and reciprocate without depleting or diminishing their own artifacts.

A collector aligned himself with others who possessed and collected tapes by advocating and engaging in a culture of sharing. Within this system of exchange, sharers placed other Dead Heads in debt by giving away reproductions of the music. Recipients repaid this debt by sharing with others or acquiring new tapes from another source and sharing copies back to the original giver. Taper Jerry Moore stressed that his generous giving always brought more tapes back to him, demonstrating anthropologist Marcel Mauss's notion that by giving, "a good warrior can thus receive more than his hand can hold" (Mauss 2000:70). Moore was able to share the music, increase his collection, and cultivate kinship ties. By "giving away the arm band," he provided valued objects for others without losing his own possessions; by engaging in "gift exchange" he acquired and shared an "abundance of wealth" (Mauss 2000:12).

One type of gift within this exchange economy, referred to as "blanks and postage," involved established collectors who offered copies of recordings to new collectors without asking for music in return. Within this form of exchange, a new trader, adhering to strict specifications regarding material and packaging, sent blank tapes and a self-addressed stamped return envelope by mail to the gracious collector, who then made copies and returned the tapes to the sender.[61]

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[61] For a clear and detailed description of a commonly referenced site in regards to blanks and postage mailing regulations see <http://www.mcnichol.com/bnp/>. I wish to thank Alex Bushe for sharing this information.

This type of sharing allowed new traders to build their collections from scratch, and use this cultural currency for future trades. Cognizant of their own struggle when they first began to acquire tapes, many established traders felt it was necessary to help provide the seeds that enabled traders to begin their collections. Many times the recipients of these gifts became the ones offering blanks and postages, attempting to expand the generosity of the established collector out to others.

Occasionally these musical gifts could be of considerable value. Certain collectors offered copies of their entire collection or their highest quality tapes. Similar to blanks and postage gifts, these offerings connected traders together and encouraged the receiver to give back to the scene. In the first volume of *The Deadhead's Taping Compendium*, tape trader Harvey Lubar described receiving such a gift after encountering taper Marty Weinberg,

> At [Marty Weinberg's] suggestion, [my friend] Mark and I both bought cassette machines and he copied his entire collection (sixty to seventy hours) for us. Needless to say, we were floored. All he asked in exchange was for us never to sell the tapes and to start lots of new people out in the same way he had helped us (Dwork and Getz 1998:22).

Many tapers and collectors were known for this level of generosity. In fact, according to anthropologist Bronislaw Malinowski, within a gifting economy, "A man who owns a thing is naturally expected to share it, to distribute it, to be its trustee and dispenser," and it is the men of "higher rank" or with "higher value" that are especially expected to spread the wealth (Malinowski 1953:97). Tapers provided the core of these gifting circles. Those who received gifts then reciprocated, often giving more than they received.

OBIE, an avid tape collector, also received such a gift. Every Friday, OBIE would purchase twenty to thirty blank cassettes from a local warehouse. Several weeks in a row, he encountered another man, named Howie, who was also buying blanks. The facility would only sell a certain quota of blanks per day. One day OBIE and Howie simultaneously arrived to find one remaining box. Howie inquired about OBIE's use of the tapes and suggested that they split the box. When OBIE explained that he recorded Dead concerts off the radio and made copies of tapes when he found people who had them, Howie offered OBIE a gift of thirty "killer quality tapes." OBIE related,

> Nobody had the same quality. [Howie] had been friends [with] Bill Kreutzmann, so he was getting tapes right from the source. These things were just spectacular, and they turned out to be great shows (OBIE, Interview 2).

The high quality gift from Howie inspired OBIE to share openly with others, offering copies of the thirty tapes and more to all who were interested. OBIE continued,

> If I found anybody, I would give them at least the thirty tapes [received from Howie]…It got to the point that once I got a couple hundred tapes, I would guarantee almost anybody that I could…double the amount of tapes they had if they traded with me. There was no retribution…[Howie] set me up…I didn't have to work for it. I didn't have to beg people. I didn't have to be nice to certain tapers, so I had a different attitude in it (OBIE, Interview 2).

This open, continuous sharing also earned OBIE respect and prestige. He was able to utilize the act of sharing as a way to further solidify his presence in the trading scene. By purchasing extra blanks and offering copies to others, he paid

"tax" on high quality recordings and forged relationships with others who possessed high quality collections. OBIE explained,

> I wanted in, I [was] willing to throw blanks at the problem. I just wanted the recordings and [other traders] wanted to tax me. I [was] willing to pay that tax, but bump it up. I [was] willing to treat [them] righteously, [just as] I wanted to be treated righteously in the thing. I [was] willing to put in a good faith effort in the beginning. And then whatever I [got], you [could] have too (OBIE, Interview 2).

Moved by Howie's generosity, OBIE then referred to him as "Saint Howie," and followed his example of generous gifting.

Translating Translations

Through gifts, tapers and collectors spread their wealth without reducing the value of their own valued possessions.[62] Yet, the objects they shared, though related to the objects they possessed, were not exactly equal. Similar to the transfer and translation from the live concert to the tape, the act of making a copy diminished the aura transferred from the master recording.[63] Each subsequent

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[62] Certain collectors would argue that by reducing the rarity of a recording, the value of each copy depletes. Many within this trading scene, however, view sharing as more important than retaining the rare value of a single recording. They also point out that the master recording, with its close relationship to the original, retains high cultural value no matter how many copies are made.

[63] This is an adaptation of Benjamin's notion of aura. For Benjamin, aura is related to distance. So, through the lens of Benjamin's writings, as copies are made and shared, the distance between the public and the original work of art decreases and therefore the aura diminishes. I argue that the aura remains contained within the recording yet diminishes as it is covered by tape hiss. With generation loss, the essence of the recording becomes hidden and the cultural value decreases. Because this decrease in sound quality distances the copy from the original, for Benjamin, generation loss could actually imply an increase in aura when defined as distance.

copy was one generation removed from the original resulting in decreased sound quality and increased tape hiss.[64]

Making copies evolved into an art form.[65] Ideally, the original would be played back through the machine on which it was recorded. If this method was unavailable, the playback device had to be adjusted to assure maximum quality when generating a copy. Taper, collector, and professional sound engineer, Rob Eaton, elaborated,

> Every time I played a tape, I would adjust the head azimuth, so that I had maximum frequency response because every tape deck's different. So if I'm taking someone else's tape and putting [it] into my tape deck, I want the heads to be in the same position on the oxide that they were in the deck that was recorded, which means that I get the most high frequency response. I get the better image…[This is] the proper way to make copies (Eaton, Interview).

Similar to making the masters, tapers and collectors had to pay attention to the recording levels on the copy, taking care to make the music loud enough without saturating the tape. Essential to analog technology, Dolby and other noise reduction systems were used to decrease hiss on the tapes. These systems actually altered the sound into a compressed format *specific* to the system. To retrieve the

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[64] Analog recording is affected by the speed of tape, the size of the magnetic particles, and the size of the gap between the two poles of magnets. Though analog tape can capture low frequencies easily, high frequencies can be difficult to capture because of issues regarding the speed of the tape as it moves across the record head. Dynamic range in analog recording is affected by the width of the tape and the amount of particles. If a signal is "pushed" too far in volume when making a copy, the magnetic particles resist and the analog tape becomes saturated, gradually increasing in distortion as the levels increase. During the recording process, the magnetic particles move. This Brownian motion can actually be heard in the form of tape hiss. As subsequent copies are made, this hiss compounds, adding "generation loss" and decreasing sound quality.

[65] For a clear explanation of making a quality copy, see Rawson 1986.

music and transfer it to the copy accurately, this format had to be converted back through the same system in order to recover the full, recorded image. Otherwise the music, upon playback, sounded "flat," often missing the high end. Because members of the trading scene disagreed on the virtues of such noise reduction systems, collectors and traders had to label tapes clearly when making copies.[66]

Individual reproduction processes greatly affected the larger trading scene as traders replicated copies and dispersed them within the exchange system. Eaton commented,

> [M]aking bad copies…really degraded the pool down the line, and it still happens to this day. One bad copy gets into circulation and gets spread around…to all these other people. So I was really anal about the copies. My friends were too. The really hardcore tapers were technically minded as much as we were rabid [laughs] (Eaton, Interview).

Despite the precision of the process, recordings inevitably acquired tape hiss and therefore decreased in quality with each subsequent copy. Tape collectors referred to this process as "generation loss." They endorsed low-generation tapes, those close to the master, as higher quality recordings and assigned greater value to them within the exchange system. High-generation tapes, those far from the master, were recognized as lower quality recordings because they often sounded as though the music was far away, underwater, or buried behind a curtain of tape hiss. This technological limitation of reproduction became an organizing force within the tape trader scene, dictating status and forming hierarchical tiers within the larger system. OBIE explains,

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[66] For an explanation and comparison of various types of Dolby and other noise reduction systems, see Dadey 1987.

> Everybody of course had to have first or second or third gen[eration]. If you had a fifth gen[eration], [Those with better tapes would say,] 'No, we don't want to trade with you'…So groups would form of people with two or three…gen[eration]s. Now if you didn't have friends that were in that, you'd be in a lower group that traded the fourth and fifth gen[eration] (OBIE, Interview 2).

Distance from the master proved to be such a tangible factor in the quality of recordings that certain traders would not accept tapes of unknown or high generation. Eaton relates,

> Anything that got three generations down, especially if it wasn't done properly, I wouldn't take. I wouldn't take it just to take it. Some people took stuff just to have it, say they had it. But if I couldn't listen to it, I didn't take it…I always want[ed] to be able to play it and enjoy it (Eaton, Interview).

Some collectors argued that the ability to refuse high-generation tapes was a luxury. Many took what they could find, especially fans living in the middle of the country away from the taping centers in San Francisco and New York, where the Grateful Dead played most often. No one denied, however, that the process of making copies affected the transferal of aura and, in return, transformed the original master tape into an especially valuable commodity. The master tape achieved a lofty, elevated status.

Turning on the Searchlight

As tape trade evolved and matured from physical, personal centers of exchange to geographically dispersed environments, it developed into an elaborate exchange system. Dead Heads communicated through the mail and sent boxes of tapes, letters, and updates from the road. Through this correspondence,

they shared much more than the tapes; they engaged in each other's lives, distributed artwork related to set lists and tape labels, and exchanged their perspectives on the power and impact of the Grateful Dead's music.

In the early days of tape trading, tapers and collectors actively looked for other Dead Heads with tape collections. Depending on whom they encountered, they acquired certain recordings, built collections, and circulated the music back into the Dead Head scene. Most exchange stemmed from the tapers themselves, who were seen as the ultimate patrons of the economy and the source of master recordings. Tape collector and sound engineer Adam Egert commented,

> You really needed to have something to give [collectors] to get [high quality] tapes, and it was usually tapes…So it was the tapers who were sort of trading with each other…And then if you had a taper friend maybe you got some tapes from them and then you were able to trade those to some people to get other tapes (Egert, Interview).

The music rippled out from the source as tapers networked with one another and shared copies with their friends and other Dead Heads. Not everyone shared freely, however. Certain individuals hoarded their tapes, sharing only with those they deemed "worthy." Others refused to give gifts, and only traded for tapes of equal quality. Many tape collectors had to actively search and perpetually participate within the trading scene in order to locate, obtain, and share recordings. Adam Egert explained, "the question [was] who you were…where you were with regards to …your involvement with the trading world, and what concert[s] you had [in your collection]" (Egert, Interview). Some Dead Heads collaborated, named their exchange groups, and handed out business cards or placed them on college bulletin boards in hopes of building local networks of

exchange with other traders. Collectors who were not tapers produced their own seed currency, often referred to as "trade bait," by making cassette recordings of commercial bootlegs. When they found one another, collectors exchanged collection index lists with potential trading partners, looking for both new tapes and upgrades of old recordings that were incomplete, full of hiss from generation loss, or worn from hours of playing.

The Grateful Dead's live performances also served as a center for the circulation of recorded music. Tours functioned as "giving seasons" when Dead Heads interacted and shared music along with other goods. The venue parking lots provided a space where collectors established and maintained relationships with other Dead Heads. As gifts, tapes flowed like water between friends and "brothers." Traders actively sought other traders who possessed equal or higher quality tapes by advertising to one another, handing out copies of their tape lists, or playing tapes through their car stereos. OBIE, a fervent Dead Head and avid tape collector, designed a background graphic for his list depicting the Eye of Illumination. To other Dead Heads, the statement was clear: this music could lead to enlightenment.

When away from the concerts, tapers, traders, and collectors connected with one another through classified ads in music publications. One such publication, *Dead Relics* (later renamed *Relix*), was launched in 1975 and positioned itself as a fanzine specifically geared towards Dead Heads and the taping subculture within the scene. It featured articles covering the musicians, recent set lists, and concert and equipment reviews. Perhaps most significantly,

Dead Relics included free classified ads where tapers and collectors offered gifts "in kind" and posted requests for specific shows, eras, or types of tapes.[67] Similar publications appeared later, such as *Dupree's Diamond News* and *Golden Road*, providing multiple avenues into the social web of tape trade. These publications enabled trading circles to expand geographically. Individuals supplied by various patron tapers or established collectors networked across exchange groups and spread tapes farther and wider than before. During the band's touring hiatus from October 1974 - June 1976, these ads served a crucial function in the scene. Without the live concerts to provide new Grateful Dead music or a center for trading, the ads created an alternative exchange space for fans to network and acquire recordings.

Food Chains and Hierarchies

> [E]arly on in my Dead Head world…[I was] at the low part of the food chain that was sort of spoon-fed certain things by people that were not necessarily part of the overall big trading world…[or] actually touching the sources (Egert, Interview).

As tapers and collectors networked, trading circles overlapped. Tapers who possessed coveted master tapes formed the core of these circles. Despite certain tapers, such as Jerry Moore, who operated with a free sharing mentality, stratified trading circles materialized within the scene Certain tapers used the high cultural value of their collections to their advantage and perceived their position to be on the top tier of trading hierarchies, which, in their view, justified control over the flow of their recordings. These "hoarders" refused to share without receiving

[67] For sample classified ads see Figure 1.5 on pp 120.

"equal" quality recordings in return. They operated under the assumption that reproduction decreased the ascribed value and rarity of their own collections, both of which they wished to maintain. For Benjamin, this behavior prescribes a "cult value" to the recordings; a value preserved through retaining distance, mystery, and control over an original work of art. Benjamin celebrated the loss of cult value that occurs with replicating of art. Sharers also celebrate this loss of cult value when recordings are made available to the scene, citing that the cultural value of the *music* remains even when the rarity of a recording is diminished.

Dedicated traders who wished to climb the stratified hierarchies sought high quality recordings and the systematic removal of intermediary traders and tape generations between themselves and the tapers. At times, they strategically acquired personally less-desirable tapes to entice future trading partners. As a result, the top tier within the trading hierarchies also included collectors who had acquired high quality "trade bait." Often exchange groups were centered geographically or regionally as people met in person or through friends; cities and regions maintained their own hierarchies and trading circles. San Francisco and New York functioned as strong taping and trading centers due to the band's frequent live performances and the large populations of Dead Heads in those cities (Dwork and Getz 1999:29-30). Eventually these circles began to overlap as tapers and traders contacted one another by mail, in publications, at music stores, outside tape warehouses, and at shows. Overlap led to higher circulation of recordings and a proliferation of copies.

As a collector, Dick Latvala ascended the social hierarchy by sending letters to well-known tapers on both coasts of America. In doing this, Latvala acquired low-generation recordings and used this highly valued cultural currency to build his collection one trade at a time. Some of the "biggest names" in taping and their tape networks coalesced around his intense networking strategy. Bob Menke, a "legendary" taper in the Bay Area since the early 1970s, explains,

> Dick was a Dead Head from the very beginning; he was at the Human Be-In in Golden Gate Park in '67…He wanted to collect all the best tapes he could get his hands on, [so] he sought out and befriended all the very best tapers he could find. There's a list of us that he sent letters to and offered inducements to be his friend and trade tapes with him…So this group of people…knew each other through Dick and by reputation depending…Steve Rolfe was one of Dick's chosen friends. He was from the Boston area. Barry Glassberg [was] from New York City. Bob Wagner comes from New York, but he's lived in so many places while he was going to college and seeing shows…He lives in the Bay Area now. I traded with them…in the mail…[W]e sent reels back and forth; the quality was maintained in the trades (Menke, Interview 2).

As Latvala amassed master tapes and traded extensively, he rose to the top of the hierarchy, and was able to assemble the Dead catalog in one place and bridge gaps between networks across the country.

In order to retain the unique aura, cultural value, and social power associated with their collections, certain tapers and traders shared only sparingly and begrudgingly. Some traders even accused these hoarders of cutting music out of long improvisational jams or adding fake tape flips when they made copies. With this act, hoarders shared while guaranteeing the worth of the master recording as the original and singularly complete recording of the live event. Many tapers and collectors worked against this dynamic by distributing as many

complete low-generation copies as possible; those dedicated to the cause of sharing even actively attained "hoarded" material in order to distribute it freely.

Refusing Trades, Declaring War

Within the trading economy, each taper and collector had a choice whether or not to engage in trade. Individual collectors, especially hoarders, "[sought] out the best possible partner[s]…This affair is a serious matter, for the association one attempts to create establishes a kind of…[kinship] link between partners" (Mauss 2000:28). The choice led some to refuse trades, a serious declaration within this exchange system, for, "to refuse to give…is tantamount to declaring war; it is to reject the bond of alliance and commonality" (Mauss 2000:13). Taper Bob Menke, who had a reputation for only trading tapes of the highest quality, comments,

> So I wasn't a real active tape trader like some folks were. I basically traded with friends, but they were pretty well connected ones. And they cared about the quality of what they were doing. It worked out that way. We were like-minded when it came to that. There were so many people that just wanted a tape, didn't matter how it sounded. All they ever had to offer in trade was stuff… I couldn't listen to anyway. [Refusing trades] wasn't a positive way to influence people and win friends, but I stick to my guns when it came to that (Menke, Interview 2).

Some traders consider this "refrain from giving, just as to refrain from accepting, [as a loss of] rank" (Mauss 2000:41), that refusing to engage in an exchange "is to show that one is afraid of having to reciprocate, or to fear being 'flattened' (Mauss 2000:41).

In contrast, refusal could have demonstrated the collector's confidence in the quality of his own collection so that, "In certain cases, [to refuse is] to proclaim oneself the victor and invincible" (Mauss 2000:41). Adam Egert first experienced this type of hostile behavior when he met a serious collector in the early 1980s; through this encounter Egert quickly understood that the tapes were not simply recordings but forms of cultural currency within a social, power economy. Egert relates,

> We were going to be traveling across the country…to see some shows…and we stopped at [a friend of a friend's] house…to get a couple of tapes…to travel with. And I remember going in there and seeing…his wall and his closets…There were a good 2,000 [or] 3,000 tapes…[T]here were whole tours, even going back for years and years and years. I was like, "Man, I want to get that stuff." And then I remember saying…to him, "Dude, man, when I get back I've got to come hang out with you. Do you mind if I copy some of this stuff?" And he's like, "No way! You can't copy this. What do you [have] to trade?" I'm like, "What do you mean what do I [have] to trade?" And I said, "Listen, I've got my tapes in the car, I'll show you." And I brought in this box of tapes, a big suitcase…He's like, "Dude, I've got all this," and he goes, "You probably have really high generation. I've got stuff off the masters. What are you talking about? You don't have anything for me. Don't even bother me." And he was…really condescending about it, and I learned at that moment that this existed (Egert, Interview).

Here again we see the "cult value" of the tapes, the perceived need to keep the aura hidden by those worthy enough to hear them, manifested as hierarchies in trade. Though this type of refusal was not uncommon, many other traders were more generous in their approach. They viewed trading as an avenue to share "gems" with other Dead Heads and made copies even for those without equal currency.

The Social Hieroglyph

Concepts of regulation developed that were structured on the notion of balanced trade, which required equal currency for equal currency, equal tapes for equal tapes. For some serious collectors, active engagement in the *trading* world was necessary in order maintain the quality and breadth of their collections as tapes proliferated and the subculture evolved. Egert explained,

> There was always a lot of trading going on, but if you were not…actively getting the best of what you could get and actively trading with these people, you were not increasing your collection to anything that would be considered decent (Egert, Interview).

If a collector chose to engage in this balanced trade, he had to learn and participate in the trading structures developed and regulated by the traders themselves.

According to Karl Marx as explained in his article "The Fetishism of Commodities and the Secret Thereof," a product becomes a commodity in the act of exchange. He argues that by examining the exchange of commodities, the culturally ascribed value of the artifacts becomes clear. In a trade, "It is value…that converts every product into a social hieroglyph" (Marx 1978:322) the mechanisms within this culture of trade demonstrated the ranking of commodities and defined aspects of cultural value and aesthetics. Value in exchange relates to Benjamin's notion of "exhibition value," the value added when a work of art is made available to the public.

With tape trading, the "portions" for exchange are determined through the quality of music, quality of recording, scarcity of tape, and current technological

standards. Tapes must be produced in an exchangeable format including copying techniques, recording medium, and packaging. Without following these regulations, tapes may lose their use value due to inadequate noise reduction or poor quality tape brands. Cassettes could be damaged in the mail rendering them unplayable. In addition, all trades must be balanced and fair. Tape trader Noah Weiner elaborates,

> The over arching rule of the Dead trading community would have to be "All things equal." When making a trade, everything had to be done in balance. At the simplest level, even someone outside of the community could look at this and think it makes sense. If you were going to trade tapes, you would agree on the number of tapes (5 for 5, etc…). Dead tape traders—at least the ones I gravitated to—would also make sure the brand/type of tapes matched. And if for some reason they didn't, balances would be restored via compensation (Weiner, Personal Email).

This compensation could come in many forms, ranging from tape length and quality to the process of making and mailing copies. Through this process, we see the cultural determination of proportion and begin to understand the "social hieroglyph" of exchange. As Marx claims, value derives from not only the physical properties of these commodities but also the social understanding of worth ascribed to these properties (Marx 1978:321). Weiner continues by highlighting technical stipulations and cultural preferences,

> There were no firm rules to this balancing act going on beneath the common sense X tapes for X tapes rule. It could be things like 5 90-minute XLII-S's = 6 or 7 XLII's, or more subtle. This could even spill over into balancing a certain number of 100-minute tapes with 90-minute tapes. There were also rules about agreeing to set the recording levels to a certain number; Dolby OFF; ways to pack the bubble envelope, etc. (Weiner, Personal Email).

Noah highlights aspects that affected the exchange value of a tape including the specific brand, type, and length of tape as well as the use of noise reduction systems.[68] Traders prescribed and adhered to these rules. Individual notions of value, such as a preference for soundboard tapes over audience recordings or preferring one show over another due to the set list or its relation to the trader's history, also affected this "balancing" of commodities.

Essential to long-term trading, collectors eagerly searched for exchange partners with large collections of equal or superior quality to their own. Weiner relates,

> I count myself very lucky to have bumped into Paul [another trader] when I did because I valued (coveted) [*sic*] his tapes very much. Interestingly, he could probably say the same things about me and my tape collection back in those days, otherwise it would have been hard for us to enter into all the trades we did. Another demonstration of the over arching balance rule. Guys like me and Paul could trade for years because we were very well matched. Tip the scale a little, and we might have traded only once (Weiner, Personal Email).

Because copying occurred in real-time, it might take years for two individuals to share their entire collection. As Noah describes, trading partners often remained in contact with one another in order to share their collections over time and continuously trade as they each received more tapes from other partners. Commodification of recorded music provided a main pillar in the overall architecture of circulation; collectors entered the world of traders in hopes of

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[68] In fact, several traders mentioned in interviews that due to an informal agreement within the Dead Head trading scene, tape collecting actually kept Maxell in business for many years. For more on music collectors and their relationship to tapes and brands, see Heylin 1994.

finding specific, personally meaningful shows, massive collections, or rare gems. As the social hieroglyph and the value of certain tapes shifted, these trading structures ebbed and flowed, influenced by Grateful Dead performance history, tape availability, and perceived technological quality.

Festivals of Exchange

When the band was not touring, groups of tape collectors would gather to produce, and then trade, tapes. Certain trade circles orchestrated "taping parties" where they engaged in balanced trade involving the entire group, matching box of tapes for box of tapes. Those within the groups presumably occupied the same tier within the stratified hierarchy of trade. Rob Eaton described,

> We would have taping parties…You'd bring a little case of cassettes and then they'd bring a case of cassettes and that guy would bring a case of cassettes and that guy would bring one. We'd just open them all up and string our decks together and tape for two days. Spinning, just spinning tape. And then we'd pack them all up, and we'd all have these tapes, and he'd have those tapes, and that's how it started. That was kind of the fun of it…the social aspect of it (Eaton, Interview).

OBIE related a similar type of gathering, one he referred to as "hotel parties,"

> When the band wasn't touring, what we would do, is we'd get ten or fifteen of us together. We'd all chip in; we would get a hotel. We would bring a bunch of power strips and we'd actually bring our cassette decks, some headphones, and we'd just hook them up. People would bring a box of ten tapes and you'd get ten people—there's a hundred tapes. So that's ninety minutes of tape; that's one hundred and fifty hours. And we'd just sit there and bring multiple decks and we'd all trade our ten tapes to everybody else and we'd all leave with forty or fifty new tapes (OBIE, Interview 1).

According to OBIE, these hotel parties substituted parking lot trade, allowing the scene to keep trading when the band was between tours. OBIE continued,

> We'd do what we would normally be doing at the parking lot in the show, except we wouldn't go to the show. We no longer needed the show because this is the stuff that we used to do *at the lot*…that's what the hotel parties were about. Standard business networking like anybody else does (OBIE, Interview 1).

These gatherings offered a way for entire exchange groups to engage in trade all at once, much like the festivals of exchange described by Mauss and Malinowksi. At these gatherings, trade groups defined and maintained their relationships by sharing their most prized artifacts. Through this exchange, individuals demonstrated their trust in the group and their connection to one another.

These gatherings were also venues at which oral traditions surrounding Grateful Dead culture circulated. As they traded tapes, they compared notes regarding the concert experience, the placement of this show within the history of the Grateful Dead, and the quality of the recordings. OBIE explained,

> I was an archeologist. That was the easiest way to look at it. And …other people…were out on the dig with me. We'd share our notes much like any researchers. And if it came up [that], "this show's great," [or] "this is the best recording I have," we'd take each other's word for it. Then we'd compare it, we'd write notes, and things like that on it. They were like study partners (OBIE, Interview 1).

While the concert experience and the touring lifestyle was the original seed for this culture, trading eventually evolved into a self-sustaining scene that continued even when their muse pulled off the road for months at a time.

Digital Trade: Re-shifting Hierarchies, Re-shaping Circulation

The development of digital audio technology reshaped the existing social hierarchies within tape trading: Digital Audio Tape, or DAT, provided perfect copies without generation loss and resultant diminished quality of analog copies. When DAT technology was first made available in the mid 1980's, tape hiss from previous analog technology became more noticeable and less and less desirable. OBIE joked,

> We didn't know: hiss was on everything. We thought the Grateful Dead always played with a line of snakes behind them. [When] you're listening to the tapes, that's what it sounds like. [Made you think] "Wow, they always have a lot of snakes at their shows." But [DAT tapes] started sounding better (OBIE, Interview 2).

In the world of Grateful Dead tape trading, this digital technology challenged previous hierarchies built on tape generation and created new ones. Those with digital equipment shared perfect copies among themselves and considered their tapes and collections to be far superior to analog technology. Those without DAT machines hoped to get as close to someone with digital technology as possible, though now they did not have to get as close to the actual taper. This concept revolutionized the trading world by restructuring heirachies and foreshadowed the extensive access to perfect high quality digital copies that would come with the digital age and Internet exchange. Yet, in the 1980s and early 90s DAT technology and DAT tapes were too expensive to become the standard form of trade. Therefore, with DATs, a technological elitism emerged and carved another hierarchical tier in stratified trade. OBIE encountered this elitism when DAT technology first entered the scene,

> The DAT people, due to the heavy investment…were more elite traders…It cost a couple of thousand dollars to get set up in that

> and then [to buy] the tapes themselves. It was difficult. Whereas cassettes were two bucks a piece. Four bucks you could get a show (OBIE, Interview 2).

Despite the price, many tapers and tape traders shifted into the DAT trading scene. This meant that many more high quality tapes were available to all traders. As a result, more traders had perfect copies of the master recording or copies of low generation cassettes made from the "perfect" DAT. DAT machines helped to reduce the lineage between source and listener. In addition, digital recording played a crucial role in the unauthorized widespread release of high quality official band recordings known as the "Betty Boards."[69]

Do Not Circulate

Within this elaborate exchange system, some tapes were shared with the inscription "do not circulate." These tapes were often distributed from members of the band's organization who shared their own soundboard copies with friends, asking that others not spread them throughout the trading scene. Though the band did not begin officially releasing archival recordings until 1993, there was a sense that these tapes were valuable and should be preserved. Dick Latvala, once hired as the band's official archivist in 1985, shared precious recordings freely with his friends. In return, he asked that they not distribute copies. David Gans released some of these gems through his syndicated radio show "Grateful Dead Hour." Gans had access to the band's collection of tapes that were kept in the Grateful

[69] The next chapter will discuss the release and impact of these high-quality, professional recordings.

Dead Productions storage facility known as the Vault.[70] In general, however, these precious recordings moved through elite circles of traders, and were circulated "in family." Marcel Mauss describes this type of object,

> [There are] objects of consumption and for common sharing…And on the other hand, there are precious things belonging to the family…The latter type of object is passed on…solemnly… In reality these pieces of 'property' are *sacra* that a family divests itself only with great reluctance, and sometimes never (Mauss 2000:43).

Because some traders used these tapes to gain power and trade bait, those outside these select trading circles often accused those in possession of "do not circulate recordings" as being "Deader than thou," a label meant to shame and criticize these individuals. Yet, those who shared "do not circulate" tapes provided valid explanations. If someone obtained a tape in a questionable manner, they refused to share it with the public. In the case of certain soundboard recordings, traders felt a desire to respect the tape's unique value and maintain its commercial value in case the band decided to officially release it. Though "brothers" close to the original source protected one another by not making copies, these recordings circulated from one person to the next; every individual knew at least one person they trusted to "not circulate" their copy. As these precious objects moved farther from the source, they eventually crossed the threshold where someone distributed them freely without guilt. Overall, this regulation enhanced the mystery surrounding tape trading and added to the thrill of seeking new tapes and new

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[70] The Vault is the name given to the warehouse built by the band to house their collection of tapes. This large facility included extensive security measures against fire and robbery. Several official releases by Grateful Dead Productions have taken the name to label the release such the "View from the Vault Series."

trading partners; one might always discover hidden relics that had not yet made their way into wider circulation.

Conclusion

Distinct from bootleg culture, this elaborate form of non-commercial tape trade was unique to the Grateful Dead and their fans. Tape exchange created a social network that included open sharing and free dissemination of music alongside highly developed rules of exchange. Tapes circulated as powerful artifacts and cultural currency that allowed the Dead's music to live outside of the live concert experience and allowed fans to re-access and re-activate that experience. Commodified value was determined by a set of parameters including musical content and technological quality. When we understand this value set, we understand the standards by which fans judged the Dead's music and the process through which fans engage in the Dead's performance history. Technology helped to construct this network, yet, as discussed in Chapter Four, the evolution of technology into the digital age reshaped the mechanisms of communication and exchange that first initiated the scene.

Figure 1.5 Set Lists. Courtesy of Julie Postel.

These set lists exemplify the artwork and careful documentation by fans in the scene. Julie acquired this when she became a co-caretaker of "Mikel," a free fan-generated Grateful Dead newsletter produced and circulated by Mikel. I wish to thank Julie for sharing this with me.

EXAMPLES OF CLASSIFIED ADS[71]
Figure 1.6

Seeking Serious traders for hiQual GD shows Ventura RFK Buffalou Saratoga

Eastcoast taper needs hiQual tapes to complete 86 Spring Tour collection Exch lists

Ease me in Maine Deadhead needs tape collection

Have 130+ hrs GD want Qual GD esp Phil singing

Help! Am new! Desperately seeking Cipollina tapes Will send blanks

Hey now DC DH looking for tapes to following shows: Hampton Col 5/4/79; Hartford Civic Ctr 3/14/81; Orpheum Thtr 9/18/82; RFK St 7/6/86; Capitol Ctr 9/13/87 & 9/6/88; RFK 7/12/90 6/14/91 & 6/20/92; Capital Ctr 3/17/93; RFK St 6/26/93 Will provide blanks

[71] All sample advertisements come from various *Relix*. The names and addresses have been omitted.

INTERLUDE
LADY IN VELVET: BETTY BOARDS AND THEIR IMPACT

In 1987, the trading scene unearthed a treasure trove. Known as the "Betty Boards," these recordings were of such high quality they actually transfigured listening practices, and with their dissemination, transformed trading structures. Upon the unauthorized release of these recordings, rumors of their illustrious, powerful depiction of the Grateful Dead sound shrouded the tapes in mystery. Their name resonated with collectors, and their reputation ascended to legendary status. Betty Cantor-Jackson recorded these treasures while serving as the main recording engineer for the Grateful Dead from 1967-1984.

Seduced by the Dead

Betty entered the Grateful Dead scene through the velvet-covered saloon door of the Family Dog, a production company and art collective within the larger San Francisco art and music scene that actively cultivated a Victorian-cowboy atmosphere and encouraged dancing and playful, rebellious activity. The Grateful Dead enticed Betty to join their sound crew upon meeting her at San Francisco's Avalon Ballroom, a venue run by Bob Cohen, Chet Helms, and the rest of Family Dog from 1966-1968. Betty had already studied and tried her hand at sound engineering and recording techniques. Bob Matthews, a member of the Grateful Dead's sound team, convinced her to record with him, admittedly because he wanted her to "become his old lady" (Dwork and Getz 1998:6). Immediately Betty established a strong presence on the sound crew. With an impeccable ear

and infallible instinct, she soon became the main recording engineer for the Grateful Dead in 1967 and continued in that role until 1984.[72]

In the beginning of Betty's career, recording technology was still in a developing stage. There were no manuals or classes. Betty and the rest of the sound crew had to trust their instincts to learn the technological capabilities of their machines. Betty's skill in this field soon became apparent. Betty commented,

> [I learned by] watching it, trying it out, listening to it. Lots of listening, because that's where I come from—being a listener. I pay attention to what I hear. That's really my particular niche in this whole thing. There a lot of people a lot more technical than me and I glean that from them (Cantor-Jackson, Interview).

Using the talents of the entire crew, the Grateful Dead pioneered new recording techniques. In 1968, the band, Betty, and the rest of the sound crew began recording *Aoxomoxoa,* the band's third studio album. The project began smoothly in San Mateo, CA at Pacific Recording where Bob Matthews worked at the time. However, around Christmas of that year, after the band had finished most the album, Ampex designed and constructed the first sixteen-track recording machines in the world. Fortunately for the Dead, they installed one of the first two ever made, referred to as the Prototype #2, at Pacific Recording. The band consequently re-recorded *Aoxomoxoa* to take advantage of the power and mixing abilities of sixteen-track recording. The space of the multiple tracks allowed the Dead to highlight the subtleties of their ensemble. The drum and bass guitar

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[72] Some sources list Betty's years with the Grateful Dead as 1967-1985. However, in an interview printed in the second volume of *The Deadhead's Taping Compendium,* Betty dates her departure in "83-84."

tracks were given room to "breathe" without saturating the sound of other instruments. Vocal harmonies could be layered, and instruments could be miked separately. This created more "space" in the recording and allowed the engineers flexibility when mixing the final sound.

The band was so pleased with the capabilities of sixteen-track recording, that they confiscated the machine and used it to record *Live Dead* in 1969. They re-installed it first at the Avalon Ballroom and then at the Fillmore Auditorium, a music venue run by promoter Bill Graham. For a week, the band performed for live audiences while Betty and Matthews recorded the concerts on the Prototype #2. With this project, the band laid claim to the first live sixteen-track recordings ever made.

To successfully produce and mix the album from live material, the band recruited Ron Wickersham, an Ampex employee. Wickersham designed and built a splitter box specifically for this project that allowed the band to send three independent channels from each microphone on stage: one to the monitors, one to the PA system, and one directly to the Ampex machine. Using the splitter, Betty had complete control over own mixing board, her recording levels, and her placements of instruments on tracks. With this separation, the recording emerged independently from the room and the house mix. These developments revolutionized live recording. Both the PA system and the recording consol could be adjusted according to their own specifications and characteristics, therefore freeing each component from compromise when recording. From this point on, Betty ran her own board when recording live, hence the term "Betty Board."

As McNally states, the Grateful Dead "had found their souls onstage, and *Live Dead* was the proof" (McNally 2002:299). Fortunately for the band and tape collectors Betty enjoyed the challenge of the live setting, where she performed what she termed "guerilla recording" (Cantor-Jackson 1999).[73] Betty comments,

> The thing about the live situation, if you're hearing it, there's nothing I can do about it because it's happened already, it's history. If you're hearing it, it's already history. To anticipate, that gave me a challenge; I liked that. "Okay, I've gotta be on": it keeps you awake (Cantor-Jackson 1999).[74]

When located on stage, she listened to her mix through headphones inserted into ear protectors, the type used on airplane runways. In most cases, however, she placed her board elsewhere in the venue, isolating herself and her mix in order to monitor the recording through speakers of varying sizes. While recording *Europe '72* Betty recorded on a sixteen-track tape machine "mounted on an aircraft pod inside a sound truck" (Scully and Dalton 1996:225).

In the studio and live performance, Betty expressed strong opinions on both the music and the band's sound. In his book *Living with the Dead,* Rock Scully recalls Betty's critique of Bob Weir during the recording of the band's fourth studio album *Workingman's Dead*: "Weir, I don't care what you think is gonna happen when you pull that string, just believe me, it *ain't* – so tune up, fucker!" (Scully and Dalton 1996:192). After completing the recording for the album in 1970, the band resumed touring and Betty remained in the studio for mastering. Left to her own devices, Betty worked towards her personal sense of

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[73] Getz, Michael M. and John R. Dwork. *The Deadhead's Taping Compendium: An In Depth Guide to the Music of the Grateful Dead on Tape.* Vol 2. Henry Holt and Company: New York, 1999, pp 11.
[74] *Ibid*, pp 7.

aesthetic quality; for this occasion, that meant altering the process itself. Betty relates,

> When [the band] was out of town I just went down and did it…I was there by myself …[The studio mangers] wanted to [use] their normal…formula…[to] master a record…And I sat there, and I listened. And I said, "You know, I really don't like that. And it's kind of on me this time." I had nowhere to look. I have to like it or I can't present it. And if I'm the only one here, I have to do something that pleases me…And I completely changed how it was mastered…changed the EQ, changed everything, and said, "That's the way I want it"…When they got home from the road and we played it…everyone's mouth dropped open (Cantor-Jackson, Interview).

Due to Betty's demand for high quality according to her own sensibilities, the band decided to have her do the mastering from that point forward.

Similar to Bear, Betty's concept of sound included visual and spatial dimensions, along with aural. She felt that "the music was…not just something to listen to," and "liked to have [the] speakers, or whatever [she was looking at], just black…because the image came into [her] mind with the music" (Cantor-Jackson 1999).[75] With her recordings, she labored to recreate every dimension of the live setting; she wanted the music to "surround without having to come from all different places" (Cantor-Jackson, Interview). She emphasized this point in an interview with *The Deadhead's Taping Compendium* stating, "I want you to be inside the music; I don't want stereos playing at you, I want you to be IN [*sic*] there, I want it around you" (Cantor-Jackson 1999).[76]

When first entering a venue, Betty would walk around the room and "feel the hot air move" to get a feeling for the space and its acoustics (Cantor-Jackson,

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[75] *Ibid*, pp 11.
[76] *Ibid,* pp 11.

Interview). For several projects, she placed microphones on the stage and out in the hall, utilizing the dimensions of the room and the audience to create space and ambience in the recording. Specifically, when recording for what would become *Dead Reckoning*, Betty used sixteen-tracks for stage microphones and sixteen tracks for room microphones. For each set, she reserved a single track to record the SMPTE time code.[77] When mixing these two sets of tracks together, she "timed the room" and used the time code to delay the stage microphones in order to blend the two recordings. Betty explains,

> I timed the room…[using] headphones by putting the stage in one ear and the room in the other and time delaying the stage to meet the room at the point in which it felt like one big space to me in my head. That was the right time so that's what I did…I put it where it seemed to meet – for the proper perspective – the proper haloing – the proper vision – [the] whole picture (Cantor-Jackson, Interview).

Betty captured the sounds of the music that moved throughout the building, and mixed them with a delayed signal from the stage microphones therefore using time to create a sense of space.

Though Betty used multi-track recorders, and often used multiple machines, she also monitored her work by recording through her Nagra reel-to-reel recorder onto two-track tape. The band and the crew listened to these tapes in order to critique their work. According to Betty, "[Jerry] would show up and listen to the tapes from the gig the night before. We'd all hang out and [he'd] get a

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[77] SMPTE timecode, developed by the Society for Motion Picture and Television Engineers, labels individual frames of video, film, or audio to provide a reference for editing and synchronization among multiple recordings on video or audio tape.

cappuccino and listen to the tapes, or get a haircut. I did that for years. I cut his hair for years" (Cantor-Jackson, Interview). Betty described the tapes,

> All that stuff, all the live stuff [was] just raw, straight up, no effects, no compression no nothing. [The space in the mix comes from] placement, placement of microphones on stage, placement of microphones in the mix. And I just really kind of make them wide, real wide…where left and right is and therefore you really know where the instruments are. I don't like putting things in a somewhat panned position…I really like to know where things are really clearly. You can put it all together in your brain (Cantor-Jackson, Interview).

Betty's tapes provided the band and the engineering crew feedback on their performance. Her two-track recordings were also used to determine which songs would be mastered for the official releases using the multi-track recordings.

At first, while honing her skill, Betty attempted to accommodate the diverse feedback from the band and the sound crew. In her words, she later "woke up to reality" and elected to focus solely on her own perceptions of the recorded sound (Cantor-Jackson 1999).[78] When successful, the recording provided the space for her to actually "walk between the instruments" (Cantor-Jackson 1999).[79] She "mixed for an audience of one," hoping to produce a recording so that everyone "gets to be in the sweet spot" (Cantor-Jackson, Interview). Betty liked the sound to be "full," "fat," and "pumping" with lots of kick drum and bass. Her concept of music within the dimensions of time and space, and her subsequent recording and mixing techniques resulted in hi-fidelity audio recordings ranked among the best tapes of the Grateful Dead ever produced.

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[78] Getz, Michael M. and John R. Dwork. *The Deadhead's Taping Compendium: An In Depth Guide to the Music of the Grateful Dead on Tape.* Vol 2. Henry Holt and Company: New York, 1999, pp 8.
[79] *Ibid*, pp 11.

Reviving the Sounds

After leaving the band's organization in 1984, Betty stored her two-track monitor tapes, her "Betty Boards," in her basement. Unfortunately, the basement flooded. Equally unfortunate, Grateful Dead Productions (GDP) neglected to pay Betty royalties for her work as promised. Several years after the flood, she was forced to move out of her home. When packing up her basement, the moving company haphazardly threw the water-damaged reels in boxes and old Grateful Dead road cases and moved them to a storage unit where they sat for an extended period collecting dust and mold. Having still not been paid the promised royalties for her work with the Dead, Betty was unable to pay the storage fees and in 1987 the storage facility divided her belongings into lots and auctioned them together with her other possessions. A high percentage of the people who attended the auction did so as professional buyers, completely unaware and mostly uninterested in the reels or the music they contained. A few present, however, showed up exclusively for the tapes. As a result, these valuable cultural artifacts were bought by an assortment of Grateful Dead collectors and individuals outside the scene.

One set of reels was purchased by two Pink Floyd tape collectors who graciously gave them to a "shining, lively Deadhead couple" living "deep in the Sonoma Hills" (Dwork and Getz 2000:32-34). Rather discreetly, the couple gathered together a small group of Dead Heads armed with recording equipment and hundreds of blanks tapes in a multitude of formats. Their mission was to

digitize and widely disseminate the recordings in order to spread the music and restructure trading hierarchies. First, they contacted Bob Menke. Menke was not known for sharing freely, yet he still owned a crucial piece of equipment, a Nagra reel-to-reel recorder capable of playing the tapes. Next, they enlisted Dougal Donaldson, a collector who had just acquired a Sony PCM-501ES digital processor. Using these two machines, the couple converted these tapes to a digital format that could be duplicated without generation loss. Over the span of seven weeks, in a "little hand-built house…powered by a few solar cells in the day and a gasoline-powered generator by night," the small militia of Dead Head tapers, traders, and collectors cleaned and copied "forty-seven full shows and pieces of twenty-three others," producing several branches of copies off the master reels, processed through, "1 Technics 1506 reel-to-reel tape deck, 1 Sony PCM-501 ECS digital processor, 1 Panasonic VHS hi-fi VCR deck, 3 BETA hi-fi VCR decks, 1 other VHS hi-fi VCR deck, and 2 cassette decks" (Dwork and Getz 2000:36-37). After this joint effort, each soldier acquired a full set of these recordings and proceeded to make these tapes available within the scene.

Defeating Demons

The Betty Boards presented a new image of the Grateful Dead on tape. In a 1987 article in *Dupree's Diamond News* entitled, "Seek and Ye Shall Find," John Dwork wrote, "Until you hear things of this quality it is really quite impossible to appreciate the subtle nuances, the sometimes delightful interplay between band members" (Dwork 1987:6). For Dwork and "those…who find

tremendous inspiration in this *older* music," the Betty Boards were "a dream come true" (Dwork 1987:6). No one had heard tapes of this fidelity. In addition, few had heard any recordings at all from many of the shows within the collection. Therefore, with the release of these tapes, many early Grateful Dead shows that were considered lost to history suddenly returned to the scene.

With their dissemination, the Betty Boards had a profound influence in the established trading hierarchies. These digital recordings offered a perfect image of the original digital master copy. Even after transfer to analog cassette tape, the Betty Boards retained their power and cultural value due to their high quality; obtaining a Betty Board meant obtaining prized cultural currency that could be used to reciprocate gifts or acquire previously unattainable recordings already in circulation. Their dissemination impacted existing hierarchies and provided new traders with valuable cultural leverage. Upon hearing about the impact of her work, Betty replied,

> I'm glad they got out there… We've overcome. The demon has been driven back. I love it…It's extremely rewarding for me to hear that, that it got out there and somebody can appreciate it (Cantor-Jackson 1999).[80]

A smaller batch of Betty Boards was discovered in 1990 and returned almost immediately to the Grateful Dead official Vault, bypassing the trading scene entirely. According to an article in *Dupree's Diamond News*, the collectors that discovered them felt that returning the tapes was "a moral issue…[T]he band should have them" (*Unbroken Chain* 1990:6).

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[80] Getz, Michael M. and John R. Dwork. *The Deadhead's Taping Compendium: An In Depth Guide to the Music of the Grateful Dead on Tape.* Vol 2. Henry Holt and Company: New York, 1999, pp 17.

Spinning Tapes

The original batch of Betty Boards (BBDs) circulated from one collector to another. By 1996, however, nine years after the original release, the quality of many versions had degraded due to poor reproduction techniques, Dolby complications, and generation loss. In response, an anonymous trader stepped forward. This benefactor possessed the original PCM recordings and decided to re-seed copies into the trading world. Under the name the Unindicted Co-Conspirators, a group of "lunatics" worked to spread this seed using Grateful Dead Internet newsgroups and tape trees. Their original post on rec.music.gd (r.m.gd) read,

> An extremely kind taper/archivist…is seeding a hefty set of the original Betty Boards on DAT, sixty-two shows from 1971 through 1980. These DAT tapes come from a source close to the original tapers (bless them!), and the tapes have no analog tape generations in their pedigree. About twenty…lunatics…have decided to tree these BBD's so that our fellow tapers, and would be lunatics, can share in this fortunate event. [81]

These "lunatics" referred to their project as "What Became of the Betty Boards" (WBOTB), and, through rec.music.gd, they promoted these recordings.[82] They wrote,

> A lot of the Betty Boards in circulation are hi-gen[eration] and fragmented. Even many of the DAT copies out there are actually copies of old analog tapes. Given the quality of what was in

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[81] This statement comes from the initial WBOTB post on rec.music.gdead and can be accessed at <http://www.nii.net/~obie1/deadcd/betty_board_info.htm#Terrapin%20Station%20BBS>

[82] The role of rec.music.gd and other Grateful Dead online posting sites will be explored in the next chapter.

> general circulation, most folks have never really heard a Betty Board…You don't just get to hear the clang and hiss of a cymbal, but [you get] to hear the wood striking the metal disk, the clang and shake and wobble of the hissing cymbal.[83]

As the anonymous donor distributed small batches of recordings, the Unindicted Co-Conspirators numbered them and organized tape trees. In a tape tree, a "seeder" complies a list of other traders, makes five copies of a recording, and mails them to the top five people on the list. Each of these people makes five copies and so on down the line.

The Unindicted Co-Conspirators purposefully utilized this project to demolish existing hierarchies by reserving slots specifically for new traders in most of their tape trees. In fact, they included slots for everyone, writing

> Over the next several months, there will be twenty or so people posting tape trees and/or tape pyramids of these Betty Boards right here on rec.music.gdead. Some DAT trees. Some analog trees. Some newbies trees. Some oldies trees. Some mixed. Some swaps. Some blanks & postage. Some European. There are also several face-to-face trees up and running. Our point is to make hi-quality copies of these shows available to regular old Bozos and Bolos like you and me. No authoritarian trips. No hierarchy…Friends are spinning copies for friends. We offer them to the community. Y'all come![84]

Backlash from elitist traders quickly ensued. They argued that the hierarchies should remain in place and that new traders should be forced to receive high-generation copies. This way, the experienced collectors who use their cultural currency for leverage could continue to do so. The Unindicted Co-Conspirators

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[83] This statement comes from the initial WBOTB post on rec.music.gdead and can be accessed at <http://www.nii.net/~obie1/deadcd/betty_board_info.htm#Terrapin%20Station%20BBS>

[84] *Ibid*

adamantly disagreed with this position and consequently waged war against the elitists by organizing several "newbie-only" trees. In their view, "There's a power…in a batch of Betty Boards…that must sound for every man."[85]

The project lasted several months as tape trees branched out in various media formats through several Internet news groups. Several months into the project, The Co-Conspirators grew concerned that the scale of distribution might bring unwanted attention from Grateful Dead Productions. They asked the trading scene to be discreet yet continued to relentlessly spin copies of tapes. Because of the anonymous donor, the hard-working Conspirators, and endless branches of tape trees, the Betty Boards re-emerged on the scene. Such tape trees were crucial to the destruction and reshaping of trade hierarchies that resulted from computer networking. By casting their net into the wide network of Dead Heads online, sharers circumvented established boundaries and planted seeds that spread farther than ever before.

The Missing Link Completes the Unbroken Chain

Several years later another batch of Betty Boards surfaced. Consisting of over 200 reels, this batch illuminated an entire era of the Grateful Dead. The fabled path of their discovery, restoration, and return to the Grateful Dead Vault has been twisted and gnarled over many partial retellings. To discover the truth, I sought out Rob Eaton, a Dead Head, taper, and professional sound engineer, who

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[85] One of the Unindicted Co-Conspirators rewrote the lyrics to Joe's Hill's Wobbly song. The full re-written lyrics can be found at <http://www.nii.net/~obie1/deadcd/betty_board_info.htm#Terrapin%20Station%20BBS>

was an integral force in the discovery of these recordings. In hopes of accurately conveying his perspective, this account will include a large portion of our interview.

The story begins when Eaton's friend connected him to a mysterious man living in the woods of northern California who had been housing a large portion of Betty's tapes since he purchased them in the auction nearly a decade before. Eaton explains his initial connection to the tapes,

> It was through a friend who said, "I know this guy and he says he's got these tapes and he wants to sell them." It was after Jerry died and [the man with the tapes] thought, "OK, now that Jerry's dead maybe I can get my million dollars for this." You know one of those kinds of guys looking to cash in. So I went up to see him. I was in LA working on a record (Eaton, Interview).

Eaton flew north to meet the seller and investigate the collection. Eaton continues,

> I flew up to Petaluma on a really weird weather night, heavy rain and thunder and was brought up to this little barn up the Mountain of Tamalpais and he swung this door open in this barn. It was like midnight, and in it [were] these road cases that said "Grateful Dead" on the side all just sort of moldy and sitting there. And I opened them up and it was just tapes, reel-to-reel tapes, just thrown in there. And the box is moldy and…torn – just a mess (Eaton, Interview).

The tapes proved to be in poor condition. Eaton could not "even read the box[es], and the tape[s] [were] just silt and mold…[He] didn't think you could possibly play [them]" (Eaton, Interview). Eaton refused to pay anything for the recordings, especially without knowing what was on them or if they were playable. So he negotiated a plan. Eaton explains,

> And so I said, "Look…I don't even know what's here. I can't tell you what you have. I can't tell you what it's worth. I don't even

> know if these tapes will play." So he gave me five of the worst working [reel-to reel] tapes. So I took them…to Dick [Latvala]'s house because Dick lived in Petaluma, and we sat up there all night long (Eaton, Interview).[86]

At Latvala's house, Eaton first worked to clean the silt and mold off the magnetic strips of the reels. He rubbed both sides of each reel twice with a piece of cotton covered in an alcohol solution that would not damage the tape or erase the music. Without labels, the tapes remained shrouded in mystery as he prepared them for playback. Then, one by one, he played the recordings, and reactivated the sweet sounds of the Dead captured by Betty. Rob continues,

> The first tape I put on was this great Garcia-Saunders tape, which turned out to be from '73 that no one had ever seen before. [It] just sounded phenomenal…And there was this one reel from 4-2-73 that we had never heard, and it was just like, "Wow this is going to be something" (Eaton, Interview).

With this small taste of the larger collection, Eaton flew back to his home in New Jersey. He knew that the man in Petaluma wanted at least a million dollars for the tapes, and Eaton knew that they were rare, valuable gems. So he further negotiated. Eaton continues,

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[86] Eaton and Latvala had a close friendship ironically stemming from Eaton's professional work with the band Duran Duran in 1984. One of the studio technicians had previously worked for the Grateful Dead while they recorded *Go to Heaven*. This tech knew that Eileen Law, who ran the Grateful Dead office and mediated between Dead Heads and Grateful Dead Productions, had a daughter named Cassidy who loved Duran Duran. The tech solicited Eaton to send something to Eileen. Eaton gladly mailed a record and poster signed to Cassidy. This sparked a relationship between them. After receiving a set of digital copies of the original batch of Betty Boards through his connections in the taper networks, Eaton offered to duplicate for the Grateful Dead Vault. Eileen consequently connected him to Latvala. By the time Eaton had acquired these five tapes many years later from the mysterious man in Petaluma, he and Latvala had a deep friendship based on long discussions regarding the Grateful Dead, the Vault, and the recordings.

> I said, "Look…the only way to really know what you have here is to restore the collection, then you can put a value to what it is. You can't put a value to…a bunch of tapes [without knowing what is on them]; I don't even know what's…here" (Eaton, Interview).

At first, the man resisted. Eaton knew that the collection included very rare and very high fidelity tapes from a coveted period in Grateful Dead history, so he offered to execute and pay for all the restoration work himself. Eaton relates,

> I really thought it was important that the stuff get archived. [The man who owned the tapes] was very nervous as you might imagine. He was very territorial about it, [so] it was all on my dime. At the end of the day I finally convinced him that we should do it. And he would send [the collection to me piece by piece] (Eaton, Interview).

Shipping these valuable "relics" across the country and back was a special challenge due to the distance and the delicacy of the reels themselves, so Eaton improvised and restored the tapes in small batches. He continues,

> I built these special shipping cartons. And I'd send them [using] FedEx and he'd fill it with tapes and send it back…I sent him back …all the tapes restored in new boxes, labeled with what they were, and he'd send me back another batch of tapes…I don't think I left my house for two months (Eaton, Interview).

After cleaning and restoring the magnetic tape, Eaton added new metal reels, labeled the boxes, and catalogued the collection. He gladly donated his time and money, and over the process, the tapes continued to prove extremely valuable. Eaton describes,

> The collection was really unique….Half of it was Garcia-Saunders from '73 and 4 and 5. It was just nothing anybody had ever seen. And all the Academy of Music tapes from the Dead in '72, which no one had ever heard a tape of. Really bad audience tapes [were] the only thing[s]; nothing was in the Vault. So I knew it was really important (Eaton, Interview).

Fearing that the recordings might be lost forever if a benefactor did not emerge to provide funding to purchase the tapes, Eaton made digital copies before returning the original reels. The man, however, anticipated this possibility and forced Eaton into a contract prohibiting the distribution of copies. Eaton related,

> [He] drew up this contact that I was liable for 100,000 dollars in liquefied damages if I released the contents of the collection without his written authorization. And I wasn't allowed to keep a copy according to this thing. All the copies had to be in his possession. Of course I'm keeping a DAT master of everything I'm doing. [Laughs] I'm not that stupid…I was a Dead Head and…protecting the music was my first and foremost thought. Legally I wasn't really that concerned with it (Eaton, Interview).

Eaton's friendship with Latvala and relationship with Grateful Dead Productions again came into play. Grateful Dead Productions had missed previous opportunities to secure these tapes by not paying Betty for her work. Because she had purchased and built most of her own equipment, and she had not received payment for these expenses or her work, Betty had moved the equipment and the recordings out of the band's studio and into her home. The band never paid her and therefore the recordings never went into the Vault. In addition, Grateful Dead Productions did not attend the auction. Upon discovering Eaton's project, they actively sought to acquire this batch. They hoped to use the material for official releases of live concerts. Rob recounts their involvement,

> So, because I was sort of in with the Dead office at the time, they found out that I had these or that I was doing it or that I did this project. They wanted to get a hold of the guy. So I got them in touch with this guy who wanted a million dollars. They just told him to fuck himself. So [The Grateful Dead office] came back to me, and they go, "Look, we know you're smart. We know you probably kept a set of DATs. What would it take to get that set of DATs from you?" And I said, "Well, first of all, I signed this contract (Eaton, Interview).

The Dead office argued that the band, and *only* the band, owned the music itself. They consequently perceived the contract null and void in relation to their own office. Eaton continues,

> Hal Kantor…[who] was Grateful Dead's attorney…had a conference call with [me] and Cameron Sears who was one of the people in the office at the time. Hal said to me, he goes, "First of all, he can't claim rights to what's on the tape…He has rights to the actual physical tapes but what's on the tape is our rights, not his" (Eaton, Interview).

This line of reasoning would surface again in 2005 when Grateful Dead Productions reacted to a public archive housing both audience and soundboard recordings available for public download. This dispute, discussed in full in Chapter Four, differentiated between recordings made by the band and those made by the audience. Ownership and possession of the audience recordings was delineated to the fans. Soundboards remained available only through streaming technology, providing access but not possession. Soundboard circulation within other channels of exchange was not mentioned or regulated. Though details of the laws and regulations regarding ownership and possession of Grateful Dead recordings continues to fluctuate as technology changes, the band and their organization have not wavered in their support of the non-commercial exchange of audience-made recordings.

Freed from the bonds of the contract, Eaton copied his DAT recordings made from the originals and gave them to the Vault, but not without compensation. He made an invoice itemizing his expenses and an hourly rate similar to his salary in a professional studio. Grateful Dead Productions paid him

these billed costs and more, securing their rights to his work. In return, they prohibited him from distributing copies because they planned to commercially release the material. Eaton stated, "when the horse is out of the barn…you can only do so much" (Eaton, Interview). Finally, these legendary recordings, including material from 1971, 1972 (including Europe and The Academy of Music), 1973, and 1976 returned "home" to the Vault. The mystery man slipped back into oblivion. As planned, some of the material has been released; Dead Heads around the world hope that more releases of these pristine recordings will follow.

Conclusion

Betty Cantor-Jackson's scrupulous demand for excellence shines through her recordings. Her aesthetic sense and technical expertise produced tapes of unequal quality, preserving some of the best Grateful Dead shows ever performed. Her cutting edge techniques in multi-track and studio work had already proven to be high quality; with her two-track recordings, fans can access the band's experience monitoring their own music.

Benjamin writes, "content and language form a certain unity in the original, like a fruit and its skin, the language of a translation envelops its content like a royal robe with ample fold" (Benjamin 2004:258). Betty's translations enclosed the sounds of the original aura in thin skin. With the mass dissemination of copies of the Betty Boards came a power to re-activate this aura and an avenue to re-shape and counteract established hierarchies within the trading scene.

Unveiled, the Betty Boards revitalized the trading scene, translated and preserved the powerful sound of the live performance, and entombed the Grateful Dead in soft, transparent, lustrous velvet. The unauthorized release and aftermath of these recordings foreshadowed the legal issues that would arise as new technology continued to shape the trading scene and exchange exploded on the Internet.

COLLECTING STORIES - ATTENDING TO THE MUSE

"I spent most of last week in 1977." Asa Effros, Tape Collector

"In more of my stoned moments I imagined that it was as though the music was playing all the time and it was simply when they came out on stage that you could hear it…I was at Winterland at the time and I looked up at the ceiling and I had this sort of flash. I wasn't hallucinating. It was just this sort of imaginary thought that the music was sort of rumbling around up there all the time; it's just that at moments you could actually hear it. And…when they played it wasn't as though they were presenting something to you, they were simply permitting you to see it or hear it. But…you were part of that process, that there was a loop from you to them and back. From you to their ears and brains and through their nervous system through their fingers and their instruments and into their sound systems to you. And it was a complete loop."
Dennis McNally, Grateful Dead Biographer and Publicist

I don't have any musical sense, but I do know what a bouncing VU meter looks like." Jerry Moore, Taper

I had a dream I guess you could call it. An epiphany shall we say…I had a flash of – I heard the Grateful Dead once in my head. And I…finally went, "Oh, that's what it's supposed it sound like! Ok." So…you could call that an epiphany I guess…And this was early on…This was when we were working on Anthem of the Sun…Something zapped me and I knew what it was supposed to sound like. So then the next question was how can I share this with other people. This sound is so great I've got to figure out how to get it out to the audience. So I guess step one was getting involved. Step two was getting a clue. And then step three began how to manifest it.
Dan Healy, Grateful Dead Sound Engineer

We had a standing joke back in the days. We'd be somewhat less than straight at the shows. And you come out, and you're still affected by what you took. And if you go home and listen to the tape, it had that same sort of fantastic sound that you heard while you there. Not as loud, but since you were still tripping, you heard it the way you did when you were at the show. Now we had this standing joke about – because once you slept it off, it just sounded like another tape. So, after the shows we used to have these discussions about how we could dose the tape deck, so that it would always sound like that.
Bob Menke, Taper and Tape Collector

"A Dime-a-dozen habit is one of the worst kinds."[87]
Asa Effros, Tape Collector

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[87] Effros is referencing the music sharing online server, dimeadozen.org. This site offers "all types" of music, often hosting over three-hundred new "seeds" a day.

CHAPTER FOUR
THE TRANSITIVE NIGHTFALL OF DIAMONDS: DIGITAL TECHNOLOGY AND INTERNET EXCHANGE

Even after the death of Jerry Garcia and the consequent demise of the band, the tape trading scene continued to thrive, and, in the words of Timothy Taylor, "With each historical technological breakthrough, each technological shift, there [were] changes in social organization" (Taylor 2001:4). The social structures of the trading scene shaped and were shaped by technology and its use. It is therefore "important to understand technology not as a mechanical imposition on our lives but as a fully cultural process, soaked through with social meaning that only makes sense in the contexts of familiar kinds of behavior" (Lysoff and Gay 2003:2, quoting Ross). Digital recording technology revolutionized reproduction, distribution, and editing techniques. Electronic media, computers, and the Internet served as a bundle of technologies "imbedded in [the] cultural systems and social institutions" of exchange, "which, in turn, [were] reconfigured by those same technologies" (Lysoff and Gay 2003:8). The new technologies provided more efficient avenues of collectively archiving information and sharing recordings that did not rely on geographic proximity. Ironically, these same technologies led to new social patterns with less one-to-one personal contact and more anonymous sharing.

Digital music files, powerful objects comprised of ones and zeros, flow through invisible online tunnels. As tapers and collectors digitize their collections, rare gems surface, assert their presence within the emerging opus of the Grateful Dead, and replicate by the hundreds, or thousands, in a matter of

days. Traders exchange full tours, years, and decades of Grateful Dead music at a time. Collectors measure their treasures in terms of terabytes. New representations of the same shows emerge daily, coloring and shading the band's history.

For Dead Heads, especially those within the trading and collecting scene, virtual gathering sites each became, "a locus for the activities of its members and a place in which they share their common purpose" (Lysloff 2003:40). As the technology advanced, tape collectors could exchange "equal" recordings on a mass scale. Overtime, as a result of these mass reproduction and dissemination techniques, sharers devised standards regarding the preparation of recordings for online distribution. Therefore, "To an ever greater degree the work of art reproduced bec[ame] the work of art designed for reproducibility" (Benjamin 1936:IV). The "gene pool" of tapes widened, and the "Mechanical reproduction of art change[d] the reaction of the masses toward art" (Benjamin 1936:XII). The collector's frame zoomed out from a single show to entire eras of performance, and sound engineers stripped away noise from previously recordings, polishing the sound and unveiling the aura captured within.

Spinning Webs

In addition to personal interactions and mail trade, Dead Heads utilized computer networks as early as the1970s on virtual posting sites housed at universities and research centers. The dialogue that occurred on these sites added to the collective cultural knowledge of the scene and patched together the history

of performances and the recordings that previously only existed in hard copy. Dead Heads circulated timely information related to the performances, such as ticket sales, rides to shows, and recent set lists. They also archived historical and cultural data regarding the studio recordings, the history of the band, and personal testimonies. Tape traders and collectors utilized the computer lists to organize trades, identify mislabeled tapes, and standardize copying and sharing techniques. This digital interaction expanded and consolidated Dead Head social networks, and as computer network grew more sophisticated, Dead Heads adapted the technology and their use of it to meet the needs of the scene.

The first public Dead Head computer list was launched in 1973, originally located within the Stanford Artificial Intelligence Lab. A user with the alias "pmartin" organized this list for "Dead tix, etc." The number of names receiving information through the list grew, and followed pmartin out of Stanford two years later. In the late 1970s, he combined his efforts with two men at MIT, Gumby and Gregor; pmartin's list became the "West-Coast bifurcation" of their operation (Getz and Dwork 2000:54).[88] In the 1980s the list of names grew exponentially, reflecting the expansion of the fan base during this time. As a result, Gregor and Gumby split each coastal-based list into two separate lists based on content. "Dead-Heads" maintained a business-like atmosphere, limiting posts to set lists, tickets, rides, and other tour logistics. "Dead-flames," also known as "Jerry's Breakfast," covered a wide scope of material, including Jerry's morning meal

[88] Of particular note, the MIT lists functioned among a mere sixty hosts found on the ARPANET, a precursor to the Internet.

(Getz and Dwork 2000:54). These lists and posting sites laid the foundation upon which Dead Heads constructed their virtual identity.

Starting in 1979, Usenet functioned as an alternative virtual social structure. Usenet was organized into newsgroups with computer bulletin boards on which users could post and read articles. Dead Heads on Usenet gravitated to net.music, which was dedicated to general music discussion. As the fan base grew in the 1980s, the Dead Head presence on net.music engulfed the virtual group. After Usenet denied a request for a new group specifically dedicated to the Grateful Dead, Dead Heads initiated a collective effort to flood the general music message board and increase their presence to an unmanageable degree. Usenet was forced to respond to their efforts with net.music.gdead (later to become rec.music.gdead), the first band-specific branch of Usenet. Gumby later created a gateway from Dead-flames into rec.music.gdead that linked the lists and increased access to the Usenet group. Meanwhile pmartin maintained the West Coast list. Ironically, the original coastal-specific MIT lists finally merged in 1988 in Austin, Texas when pmartin and Gumby, who were both working for MCC in the same building "realized that [they] were sitting 100 feet apart, attempting to figure out which list to put each new arrival on" (Getz and Dwork 2000:55).

The maintenance of the lists started to change hands beginning in 1989 when the gateway moved to the University of Virginia under the care of Marc Rouleau who "put all previous list-maintainers to shame with his enthusiasm, expertise, and consistency" (Getz and Dwork 2000:55). Rouleau left Virginia in

1993. Eric Simon and Mark Kraitchman of the University of California, Berkeley took over Dead-flames and Dead-Heads respectively. The computer processing and Dead-flames gateway to rec.music.gdead remained at the University of Virginia until 1994 when operations moved to the University of California, Berkeley. For some time, archives were maintained of these posting sites using anonymous FTP sites, open to the public and serving as a means to compile the historical information. Tape collectors used this information to verify set lists and compare recordings. Starting in 1987, much of this data was published annually in the Grateful Dead reference guide, *Deadbase*. Unfortunately, most of these virtual archives have since been lost in cyberspace.

In addition to these large, public bulletin boards, Dead Heads gathered on commercial computer networks such as the Well and AOL. David Gans, Mary Eisenhart, and Bennet Falk opened the Grateful Dead conference on the Well on March 1, 1986. The list quickly blossomed, but proved to be geographically limited due to existing technology that required users from outside of the Bay area to connect via long distance calls. Meanwhile, Dead Heads all over the country were implementing their own smaller newsgroups and bulletin boards for specific functions, including organizing tape trades via traditional mail.

As the computer networks grew and increased in efficiency, the virtual social structure intertwined with established exchange groups. Many of these digital lists organized themselves around a patron taper who provided source tapes and controlled the flow of music. Depending on the sharing philosophy and attitude of these patrons, reproductions of tapes either extended to a small closed

circle or a large open pool. Some of the groups, such as BUDD (Bountiful Universe of Digital Dead), limited their focus, discussions, and trades to one type of medium, in this case DAT tape. Other groups were less regulated and featured a range of formats and lineages.

List organizers adopted names and designed visual logos to associate the gathering sites with the Grateful Dead and distinguish them from other Dead-related sites. Because of the virtual nature of these networks, the names and logos helped to shape a physical, tangible identity for the group and its members. The names referenced the musicians, the characters and mythology of the songs, the act of collecting, and the Dead's performance history. The logos depicted this connection with cultural icons and visual metaphors. The Mouth of the Beast Project (MOTB), a current Internet-based collective of sound engineers who work to digitize and disseminate recordings is a prime example. The "mouth of the beast" refers to the space of the concert venue right in front of the stage, in the heart of the sound system; MOTB specifically digitizes recordings made in this location both before and after the implementation of the taper's section behind the soundboard. MOTB's logo displays a dragon eating it's own tail, a reference to the Wall of Sound, the particularly beastly Grateful Dead sound system of the early 1970s.[89] GEMS, another Internet editing group, mark their work with a shining diamond. Jerry's Kids, an Internet exchange group, employs the iconic

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[89] As examined in Chapter One, the size and internal complexities of the Wall of Sound required an extensive crew. The band had to continue touring and increasing their venue size to accommodate for the price of the labor to construct and maintain the system. The larger venues mandated a larger Wall and a larger crew. In essence, the beast was eating itself. A sample MOTB logo can be found in Appendix A.

handprint of Jerry Garcia's strumming hand with his missing middle finger, which he lost as a child in a wood-chopping accident. Taking this notion one step further, another more exclusive group named Jerry's Missing Finger links the search for recorded relics of the Dead with esoteric knowledge and enlightenment. OBIE, a member, describes their logo,

> [The logo] is the picture off the back of the dollar bill, [OBIE makes a triangle with his hands to show a pyramid] and… in the eye of illumination, where the eye is, there is Jerry's Finger—just sort of hovering above the Jerry hand with the eye right there (OBIE, Interview 1).

These linguistic and visual symbols tied the identity of these groups to the live music, the trading scene, and the history of the Grateful Dead. Often the groups use the logos to identify members of the group in real-life. OBIE relates,

> We actually…have [the logos] printed up….[on] hats [and t-shirts]…[for] when we go out, and we meet each other in public. We don't know what we look like—we're Internet people. We see the shirts. So…whenever I go out to a music event, no matter who[m] it is, I have a Jerry's Kids shirt for the occasion. I've got like fifteen of them. Tye-dyes for every color. All black for when I go to punk shows (OBIE, Interview 1).

In the expanding world of online networks, where identity and communication are reduced to the computer screen, these logos distinguished one group from another and provided an additional avenue to proclaim association with the music, the recordings, and each other.

Even with these attempts to forge group identities, membership was dynamic. New members joined, participation fluctuated, and conflicts arose. The administrators, who often paid the network fees, reserved the right to regulate the group. OBIE commented,

> So there are the public groups and there are private groups. [The private] groups are controlled by control freaks who set the groups up because they're the people who are willing to pay for [and] do the work to have the server—[to] set it all up and have the administration, which is actually a lot of work. [But they do it] because…they want to be able to control who's on the list (OBIE, Interview 2).

These administrators monitored trading habits and voiced disapproval when necessary to enforce group norms and mores. Members of the list would have to adhere to these regulations or face consequences. OBIE continued,

> If you say something bad about them or if you want to do something your way, they will give you the ever-popular statement, "if you want to do that why don't you start…your own list" (OBIE, Interview 2).

When a group of "taping pirates" decided to break away from the nautically themed "CDead," they called themselves the "Ship of Fools."[90] This type of multi-layered reference interacted with the symbols and themes of the music of the Grateful Dead and enhanced the folklore of exchange groups and the trading scene.

Early computer networks and the Internet become yet another avenue for Dead Heads and tape collectors to exchange ideas and music. Mediated through the computer, the pace of dialogue between individuals and among the group quickened. This mass-scale communication added to the overall organization of the scene, regulation of trade, and the ability to disseminate the Dead's music.

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[90] This is a reference to the Grateful Dead's song of the same name.

Mason's Children: Building Walls, Constructing Hierarchies[91]

As the Dead Head taping network extended its complex infrastructure to this new social form, older conflicts and cultural differences persisted. One major schism, the split between sharers and hoarders, continued online. When writing about virtual sociality, ethnomusicologist Renee Lysloff states "[T]he *quality* of these interactions, however mediated they might be, still depend on the embodied humans that give rise to them" (Lysloff 2003:31). Sharers used the networks to spread music even further while hoarders reinforced their hierarchies. Tape trader Noah Weiner, related,

> I recall in the first weeks of my getting online and looking to build on my then forty-fifty tape collection reaching out to some guy who had thousands of hours of music, and he sent me back an e-mail that read like some sort of Zen proverb. I was completely baffled and asked for clarification (or even some decision on our trading together) and never heard back (Weiner, Personal Email).

This type of refusal, received through email, reflected the established hierarchical trading networks offline and reinforced a trader's right to choose partners.

Every Internet service had at least one gathering place for Grateful Dead fans and tape collectors. For tape collectors and traders, "It didn't really matter which on-line service you chose, because the key was reading people's posts, and entertaining offers" (Getz and Dwork 2000:57). But as the computer networks grew larger and more interconnected alongside the evolution of the Internet, the social system of Dead Heads utilizing these networks became more stratified and access to high quality recordings varied between groups. Those with a superior

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[91] Hunter, Robert. "Mason's Children." *Box of Rain: Lyrics 1965-1993.* New York: Penguin Books, 1993.

reputation attracted other tapers and collectors of the same caliber. Public websites functioned as screening grounds—gathering places where individuals could search for, and choose, new trading partners. Individuals were rewarded for thoughtful comments regarding recordings or live shows, a willingness to learn, and efficiency when receiving and reciprocating trades.

Certain patrons regulated their lists by requiring sponsorship for new members. The sponsor, an established member of the group, would nominate a new collector, explain why the individual was worthy of being "brought up" to the group, and call for a vote. OBIE explains,

> Certain people bring you up…And we vote on it. One person saying no, [is] like a blackball. So it's like any other secret organization (OBIE, Interview 1).

Older members mentored new members, explaining collective expectations and rules of conduct. Upward mobility within highly stratified lists provided access to higher quality and rare tapes. These lists organized small ceremonies to celebrate this advancement in the hierarchy. OBIE describes this process,

> It's gotten very Masonic [in] how it works; there's inner groups within inner groups. You have to go into the basic group and then you work your way up. And there [are] little rituals. And I've worked myself so far up that, in the [most recent group I joined], I was presented a fez (OBIE, Interview 1).

These ceremonies reinforced the hierarchies and cultural values of the group and added to the mystique of tape collecting. These groups provided a virtual location that transcended geographic barriers where hierarchies remained based upon sound quality, access to rare and low generation recordings, and efficiency in trade. Individuals worked their way up within the social structure, earning their

place within closed, elite circles who exchanged the most rare, highest quality recordings and information. The computer simply provided a pathway for these established hierarchies to extend their arms geographically farther, to find new members, and to increase the speed of communication. It also provided alternative pathways to climb up within the stratified circle; if one list blocked a collector, he would find another list. As the Internet became more sophisticated and online groups increased, the trading scene slowly shifted its main interactive sphere to the computer, requiring less and less face-to-face interaction or mail correspondence.

"In and out of the Garden He Goes:" Cultivating Seeds and Reaping Tapes[92]

As the network lists provided access to larger pools of traders and tape collectors, Dead Heads designed and implemented mass tape distributions through the mail known as tape trees and tape vines. For both trees and vines, an individual posted an offer on a newsgroup or virtual bulletin board to "seed" copies of a recording. The seeder then organized a mailing list based on the responses. For a vine, the seeder mailed one master copy to the first person on the distribution list. That person copied it and mailed the master along the vine. Everyone on the vine theoretically received the same quality copy. The recipient at the end, known as the anchor, mailed blank tapes or an alternative show back to the seeder. For a tree, the seeder sent five copies to the top branch of the list. Each of the recipients then made five copies and mailed those to the next branch.

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[92] Hunter, Robert. "St. Stephen." *Box of Rain: Lyrics 1965-1993.* New York: Penguin Books, 1993.

This type of sharing could multiply a recording to over two hundred people within two or three tape generations. After the development of DAT, the seeder engineered the top branches to be digital when he could, therefore spreading more perfect or low generation copies out into the scene.

According to *The Deadheads's Taping Compendium*, the first computer-based group to popularize tape trees appeared on the Well. In 1990, just after keyboardist Brent Mydland died, Dan Marsh, Jeff Loomis, and Al Emmanuel opened the "Tree Conference," a tape-specific Dead Head conference on the Well. The goal was to circulate every Grateful Dead show just after it was performed starting with Vince Welnick's first show. To increase efficiency, the tape offers on the Well were eventually organized according to tour structure; multiple, consecutive performances from the same venue would be treed together (Getz and Dwork 2000:56). The consolidation of recordings according to tour structure and the regular, efficient availability of tapes foreshadowed future Internet-based trading structures. One collector admitted that this efficiency led him to disengage with other avenues of exchange, stating,

> I had contacts but once the Well started up, basically I didn't have to trade with anybody because I knew that every tape would come up on the Well. So I've kind of, like, gone into a cocoon since 1989 (Getz and Dwork 2000:56).

In-person exchange and one-on-one mail trades continued, but these mass mailings developed a new, less personal form of circulation. The computer mediated the relationship. Early online interactions consisted of only text communication. Now, in the first decade of the 21st Century, Dead Heads share pictures, videos, and blogs; individuals can hear and see one another in real time.

But when the first tape trees sprouted, computer communication was much more limited.

Recordable CD technology entered the market in 1990. As CDs slowly entered the trading scene, traders and collectors organized less-expensive digital trades. Traders began to digitize their analog tapes and circulate perfect copies of the digital translations. OBIE explained,

> Now with the download culture you don't see it, but before you could download or FTP, even though the music was digital you still had to send it out some way. And of course the easiest way to do that was to burn CDs. CDs at that time would cost a dollar a CD, and it would take 20 minutes to burn. So it was an hour of your time and three dollars, without postage, per show (OBIE, Interview 2).

The expense was much cheaper than DAT trade, and the total transfer time for a single show was faster than the real-time copying from cassette to cassette.

Initial CD technology was unstable, however, and created different issues for traders, especially when engaging in "blanks and postage" exchange. OBIE continued,

> People would trade. They'd send their blanks, and it was like, "Dude half way through it didn't burn." And at a buck a CD it's like who would pay for the CDs? So sometimes nice people would send four CDs in case one of them went bad because in the early days a lot of them went bad (OBIE, Interview 2).

Many traders maintained that digital transfer technology was unstable. These individuals continued to use cassettes long after CD technology first appeared. Yet, due to the virtues of digital reproduction, many Dead Heads shifted to CD trade and increased vining. Vines provided an efficient structure for CD trade

with the seeder only making one master copy that traveled along the length of the vine.

Traders learned quickly that vines could break easily if one trader neglected to send the master copy to the next person. The vine was only as strong as its weakest member. So, the original, geographically based vines were revised according to reputation. OBIE related,

> Hopefully [the seeders] would create a list based on geographic proximity, so it should only take a day or two in the mail. Shortly, we figured out that this didn't work out because there would be dead zones, certain people that were less quick than others. So then it became a merit based thing where people who we knew would be basically [a] twenty-four hour turn around—[where] they'd get it in, they'd burn it to their hard drive, they'd check it, they'd send it out the next day—they got moved to the top of the list. So a lot of times things would bounce around to either side of the US, but it would go quicker than ones that seem geographically closer (OBIE, Interview 2).

This revision demonstrated only one of the constant adjustments on the part of Dead Heads in regards to technological capability and trader habits.

Sharers tapped into this increasingly elaborate web of computer networking and tape harvesting in order to circumvent the power dynamics that had controlled trade in the past. Cross-pollination brought "do not circulate" recordings out of closed exchange circles and into open forums. The recording's currency value, based on rarity, was erased the moment it was treed. Therefore, upon acquiring a high quality recording, individuals had to decide whether to offer it out to the entire scene as a public tree, to share it through private circles, or to retain the rarity and only offer it as trade bait in one-on-one exchanges. The computer network extended the reach of individuals within the trading scene.

Hoarders could find other hoarders with highly valued commodities to exchange and sharers could proliferate a recording by the hundreds in a matter of weeks using a tree. With the possibility of musical dissemination through the Internet, this differentiation only increased.

Binary Aura

While digital technology has the capability of generating perfect copies, in the early years of this technology, the transfer from analog to digital resulted in a minimal translation of the analog image. Digitization translates the information captured on magnetic particles to binary code; in this translation, much of the recorded aura of a particular performance can be lost. Similar to creating a master tape, translating a master digitization is an art form. The music, "a continuous waveform of sound," is translated into a, "a series of discrete numbers" that are then decoded to a new analog wave upon playback (Lehrman 2008:4). In digital form, the binary code can be replicated perfectly *ad nauseam*. The translation process itself is crucial to the nature of the circulating digital recordings because the raw digital file functions as the starting point for edits, enhancements, and reproductions.

An analog-to-digital converter samples the waveform many times each second and records the volume level or amplitude at each moment as a number within an available range. The range and the speed at which the samples are taken vary among machines and determine the fidelity of the translation. The analog-to digital converter reads the amplitude and translates it to the closest

number within the range. This shift, known as the quantization error, can be heard as noise. The wider the range means the more numbers available and results in smaller shifts, less noise, and higher fidelity. The converter groups the samples into digital words comprised of binary code expressed in ones and zeros, referred to as bits. The more bits in a word, the better the signal-to-noise ratio of the converter.

The higher the sampling rate, and the more samples within a second of sound, the more accurate the information. The Nyquist Theorem states that accurate sampling of waveforms requires at least two samples of each wave; to accommodate the range of human hearing, the sampling rate must be at least twice as high as the highest frequency a human can hear. The converter assumes consecutive samples to come from the same wave cycle. If the sampling rate is too small, consecutive samples measure two different wave cycles; this actually changes the information and results in an inaccurate translation to binary code. This inaccuracy can be heard as white noise or unwanted frequencies in the digital version. Human hearing extends to 20 khz, so a sampling rate of at least 40 kHz is required to sample each audible wave cycle twice for accurate conversion.

When Dead Heads first began digitizing their recordings in the early 1990s, converters used 8-bit words and sampled at a rate of 44.1 kHz. The word length limited the dynamic range of the output to 50 decibels.[93] This sampling rate accommodated the Nyquist Theorem and has actually remained as the regulated rate of mainstream CD manufacturing. As the technology developed,

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[93] As a comparison, this is much smaller than the dynamic range of a symphony orchestra, which is 96 decibels.

sound engineers discovered that an increase in the word length improved the digital sound and fidelity of aura converted to binary code and an increase in sampling rate accommodated for harmonics in the music. However, the recordings that circulated for most of the 1990s remained in the minimally translated 8-bit state. The 8-bit translation replicated throughout the trading scene, but it only conveyed a portion of the aura captured on tape. Because of this, the master recording, with its close relationship to the aura of the live performance, retained its power and cultural status.

For the first time, Dead Heads had to mark new boundaries in the recordings in order to place tracks on CDs. Though this process enhanced listening convenience, it also inserted an additional layer to the translation. This act was particularly relevant to the music of the Grateful Dead, who often improvised and segued from one song into the next, at times playing two songs simultaneously. Tape collectors transferring their recordings made culturally informed decisions regarding this transition, marking a boundary that defined each song as a separate entity. This could be placed at the first reference notes of the second song, when the second song has overtaken the first only slightly, or when the entire band lands on the downbeat of the second song together for the first time. They also tracked the file according to tuning, jamming, and banter. Some editors placed these segments on their own separate tracks; others combined them with music either before or after the songs. "Drums," "Space," and the jams in between could be tracked together or separately. Each source tape

approached the notion of tracking in a new way, so individual editors and archivists made personal and aesthetic decisions.

Because of early digital editing software characteristics, tracking digital audio presented a new challenge and incited a debate within the Dead Head scene of collectors and archivists. Jay Serafin, a well-known trader and valuable contributor, digitized a multitude of his recordings and seeded them to an FTP site, GDlive.com.[94] While tracking a file, he followed the "waveform theory," breaking the audio when the waveform crossed zero. This works well in analog, but in the digital realm, boundaries already exist around digital words, which are, in essence, complete packets of information. When tracks were cut in the wrong place, the editing software filled in the digital words with data. This was heard as white noise. Tape collectors referred to the noise as "sound boundary error" or "SBE." Through Internet networks, collectors and archivists asked Serafin to change his method, but he believed in the theory and refused. Discussed below, this debate was immortalized when the scene standardized file names for mass distribution.

Invisible Currents

Internet technology continued to evolve and instigate new forms of exchange that would again decrease personal interaction by providing online exchange of music. FTP, standardized file transfer protocol, offered a virtual conduit. First introduced in April 1971, FTP was greatly improved in the 1980s.

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[94] FTP is standardized file transfer software. On FTP sites, users can download directly. Their role in the Dead Head trading world will be discussed below.

In line with the explosion of the Internet, FTP increased its standardized security measures in 1994. By this time, tired of burning spindles of CDs, more and more Dead Heads began sharing digital music files via FTP. To increase efficiency, FTP users had to reduce the file's size. Mainstream file sharing adopted MP3 technology, a form of compression that preserved only slices of the digital information and erased the code in between. Upon playback, the erased information was not recovered; instead, the software made new connections between slices. Dead Heads with an archival mentality adamantly rejected this technology and turned to forms of "lossless compression," mainly SHN (Shorten) or FLAC (Free Lossless Audio Codec). SHN and FLAC files can be converted back to the original pre-compressed digital file. The online Dead Head trading scene standardized the use of lossless formats in order to condense and share recordings without erasing any of the digital audio, resulting in Internet transfer capability and more compact storage.

Individual collectors transferred the music from their CD collections to their computers. Most used exact audio copy (EAC), a free so-called audio grabber, to capture the data from the CD and transfer it to the computer's hard drive. The EAC file was then compressed to SHN or FLAC and loaded onto FTP sites for sharing.[95] These collectors regulated traffic on their sites and granted access to other traders through log-in passwords that constructed personalized, layered-access gateways for other collectors. With this shift, completely virtual

[95] This process is documented in the text files that circulate with the digital music files; the lineage reads CD>EAC>SHN.

trading circles came into existence, further shifting trade into a sociality mediated by the computer.

The Revolution

In 2000, one Internet trading list, The Music Never Stopped Project (TMNSP), launched a project that would revolutionize music trading not only for Dead Heads but also for all online music sharing.[96] Their name, referencing the Grateful Dead song, The Music Never Stopped, foreshadowed the permanent, public, Internet library for which their work would lay the foundation. The revolution began when one member, under the alias Raoul Duke, decided to donate one physical copy of his entire CD collection, comprised of over 2,000 CDs, to the group on the condition that the recordings would be prepared for online exchange and shared via virtual pathways.[97] Responding to the donation, TMNSP mobilized and implemented what became known as the "SHN it up initiative." This initiative would lay the foundation for the digital flood of music yet to occur on the Internet. The standardization set for this project would become the standard for all Grateful Dead digital exchange and eventually ripple

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[96] Dead Serious, an exchange group prior to TMNSP, possessed most of the wav files donated to the project. TMNSP was also affiliated with Ship of Fools due to the dual-membership of many individuals.

[97] The alias Raoul Duke referenced the fictional character created by Hunter S. Thompson. Thompson developed the character throughout many of his novels, starting with *Hell's Angels* and culminating in his autobiographical account in *Fear and Loathing in Las Vegas*. Raoul Duke serves as the narrator and anti-hero, who breaks the law but in a socially acceptable, and arguably a social beneficial, manner. Thompson also used the name as a pseudonym and author surrogate to discuss his own criminal behavior and to communicate through less formal channels of journalism.

out into the entire online music-trading scene. Anticipating that recordings would multiply by the hundreds across various exchange groups via the Internet, members of TMNSP required identification of specific recordings, documentation of transfer history, and a format to verify accurate reproduction. This standardization was necessary in order to retain the aura of the recording even as it rapidly distanced itself from the taper and his trading circle. For Benjamin, a reproduction lacks aura because it loses its sense of authenticity within time, space, and history. He wrote,

> Even the most perfect reproduction of a work of art is lacking in one element: its presence in time and space, its unique existence at the place where it happens to be. This unique existence of the work of art determined the history to which it was subject throughout the time of its existence. This includes the changes which it may have suffered in physical condition over the years as well as the various changes in its ownership (Benjamin 1936:II).

TMNSP documentation standard fought to maintain the history of each recording. Documentation has only become more meticulous since this initial wave.

The designated process involved several steps. To "SHN up" a CD, its contents were first grabbed by EAC and compressed to a SHN file using a particular set of hardware and software regulated by TMNSP. A text file was then generated, containing details from the show itself such as the date, venue, set list, special guests, the names of the tapers, the microphones, the location within the venue, and the recording device. In addition, the file documented the lineage and transfers from one recording medium to the next and a history of all sound edits such as patched material, pitch correction, or equalization. Online Grateful

Dead trading sites such as etree, Lossless Legs, and GDVault now require this text document to accompany all circulating recordings.[98]

For the purpose of mass distribution TMNSP assigned 32-digit "check sums" to each file. These elaborate algorithms, used in many forms of computer file transfer, analyze the binary information in a digital file and produce a check sum specific to that file. Using this algorithm, transferred files can be compared to the original and "checked" for accuracy and completeness. This checking system prevents the duplication of glitches and incomplete transfers.

Each recording was also registered to db.etree.org, commonly known as etree, an online database designed by tape collector Tom Anderson. Upon registration, the recording is given a SHN-ID, a number specific to the recording and its history of transfers and edits. If a particular source is edited and re-seeded, it obtains a new ID. This number allows tape collectors to compare their own collections against others and determine if they already possess a certain version; this comparison became crucial as numerous collectors flooded the Internet with new digitations. Since its inception in 1999, etree has become the authority on circulating the opus of Grateful Dead, Phish, and other "trade-friendly" bands.[99] Due to the shear number of Grateful Dead recordings, Dead traders and collectors strongly encourage the registration of a recording before it is seeded into the online trading pool thus providing a means of comparison between the seed and already circulating sources. Current procedure on etree involves administrators

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[98] For sample text files, see Appendix B.
[99] Etree requires that bands officially sanction trade before allowing it to occur on their site.

assigned to band-specific collections who filter and approve new seeds in order to prevent duplication and encourage seeding only upgrades to sources already in circulation.[100]

Due to the precise nature of this process, organized and regulated by Matt Vernon and other members of TMNSP, many members withdrew their involvement over time or stopped altogether because they were reprimanded for incorrect procedures. Out of the original TMNSP, a small exchange group initially comprised of six or seven tape collectors, labeled as Jerry's Kids, took over the initiative. Each of these members had already begun transferring and sharing their personal CD collections through individual FTP servers. Vernon knew that these men would devote the time and energy to properly SHN-up Raoul Duke's CDs and their own collections according to the specifications of TMNSP. The group eventually grew to include around thirty members. In order to expedite the process, Vernon assigned each member certain shows and years. Their work was compiled onto hard drives and sent to a steward at the University of Sweden, referred to as TOL, who connected the hard drives to the Internet four at a time. Jerry's Kids provided access to this material to other exchange groups and the general trading scene through tol.etree.org.

For efficiency, the drives were re-organized by year of recording. CDead, a larger exchange group, was so pleased with this project that they collected money and donated more hard drives to be filled by Jerry's Kids. This establishment of relations among exchange groups allowed room for the

[100] Upgrades include lower generation, re-digitized, and re-mastered recordings.

collection to grow and created the possibility of compiling the entire circulating opus of recorded Grateful Dead into one location.

According to Matt Vernon, "it became clear that [they] needed a way of naming the…computer directories" (Vernon, Interview 1). Even within the meticulous design of the SHN it up initiative, a naming standard had yet to be established. Most files were labeled with some form of the band name and the date of the recording. Sifting through the files on TOL required opening the text file. Vernon wanted to be able to scan the drives quickly, so he developed a naming format that has since become the standard within etree trading. The Vernon format consists of the band name (abbreviated to two letters), two digit year, two digit month, two digit day, format (SHN, FLAC), various qualifiers regarding transfers, the name of the taper, name of the seeder, and the last five digits of the etree SHN-ID. An example file name result would be: gd73-07-01.fob-SonyECM22p.kaslow-todd-motb.88528.sbeok.flac16.[101] In this example, "gd" represents the Grateful Dead. The recording was made on July 1, 1973 in front of the soundboard (fob) using a Sony ECM22P recorder. Harv Kaslow and Craig Todd taped it, and Mouth of the Beast (MOTB) digitized, edited, and seeded it. The last five digits of the SHN-ID are 88528. The recording is a FLAC file seeded in 16-bit format. Sbeok refers back to the conflict regarding digital audio and tracking. As Jerry's Kids loaded files onto TOL, they checked for sound boundary errors and labeled recordings either "sbeok" or "sbefail." Current

[101] See Appendix B for the text file connected to this recording.

sound editing software prevents these errors, but the naming standard has remained the same.

The "Golden Age of TOL" lasted several years facilitating twenty-four hour access and an ability to download a show in a few hours. Collectors and traders added to the collection as they digitized analog tapes and prepared the digital files for mass reproduction. TOL set the standard and brought together several exchange circles.

Though TOL was a public collection, there were varying levels of access. Like any other computer network, users needed permission to use specific parts of the server. Access through etree was limited because only a certain amount of connections could be made a time. Because of this certain individuals were given personal gateways and therefore were never denied connection. This stratified access created conflict when one group discovered that they could not download everything housed on TOL. In reaction, they requested exclusive access to the drives they had donated. The traders who ran TOL refused. At that point, members of the denied group contacted the University of Sweden pretending to be lawyers from Grateful Dead Productions and scared the University into shutting down the operation. With that decision, TOLs trading infrastructure collapsed. Thankfully, this power play occurred after the collection was moved to a fully public Internet library.

"Lay[ing] Down the Spear"[102]

The users and creators of TOL had desired a back-up for this collection, a way to preserve the hours, weeks, and months spent filling drives, naming files, and registering individual sources. After three years of work on the project, Matt Vernon, acting on behalf of Jerry's Kids, approached Archive.org, a public Internet archive, requesting that they serve as a "permanent steward of the collection" (Vernon 2005). Vernon writes,

> Around fall 2003, I contacted Brewster Kahle, the vision behind the Internet Archive, [and asked] if the Internet Archive would be interested in backing up the contents on tol.etree.org. Enough time and money had been expended by so many people that we thought it best to try to implement a contingency plan in the event TOL experienced a catastrophic hardware failure or was no longer available. The Internet Archive's vision of "building a digital library of Internet sites and other cultural artifacts in digital form … [to] provide free access to researchers, historians, scholars, and the general public" was an ideal match considering the pivotal role of the Grateful Dead in live concert recordings (Vernon 2005).[103]

Brewster Kahle agreed and interpreted the band's public policy on online sharing, discussed in the following pages, to be in support of the collection. The collection then moved to a completely public infrastructure that enabled collectors free access to the circulating opus of digitized Grateful Dead music. Another separate group of Grateful Dead tape collectors and archivists, known as the Grateful Dead Internet Archive Project (GDIAP), entered metadata, standardized song names, and built an infrastructure for searching the collection by date, song, venue, taper,

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[102] Mauss, Marcel. *The Gift: Forms and Functions of Exchange in Archaic Societies*. Trans W. D. Halls. New York: W. W. Norton & Company, 2000, pp 82.

[103] For more information regarding the Grateful Dead's impact on taping and taping trading within the larger live music scene, see Whitman 2005.

or editor. They continue this work today seeking to construct additional search parameters, such as band banter.

The Grateful Dead collection, a part of the Live Music Archive (LMA) on Archive.org exists today only because of the elaborate social networks of Dead Head tape collectors. Numerous individuals and groups worked together to transition from analog tape and CD trade to online exchange. Ironically, with this shift, the social aspect of previous trading networks on and off the computer nearly disappeared. Through Archive.org, anyone interested in the recordings could reap the work of TMNSP, Jerry's Kids, CDead, GDIAP and all the other individuals and groups who helped with the project *without making contact with a single human being*. With instant, free, and consistent access, collectors could, "go online and help [them]selves" (Barnes, Interview). OBIE, a long-term collector, trader, and member of Jerry's Kids, compared the open access and the convenience of Archive.org to online grocery shopping, stating,

> People don't even know who[m] their getting this stuff from. They see it on a list, and go, "I want this." It's like picking something, ordering, doing your groceries through Peapod. Where…you're shopping for what you want (OBIE, Interview 3).

Though Archive lacks the familial feel of previous FTP sites, it does excel in its main function: to share verified quality recordings with the largest possible audience. In fact, OBIE considers Archive less of a social site and more as a place for new listeners to discover the Grateful Dead and old listeners to have permanent and portable access. He explained,

> It makes me happy when I hear people talking about finding something on Archive.org…I just want to make it so some kid in Sri Lanka can walk into some sort of [Internet] library and just

> download a show and go, "Wow. This is incredible." Or for somebody who knows about the show to be able to [say], "I can go anywhere in the world that has Internet access and be able to call it up and listen to it like the radio" (OBIE, Interview 3).

Individual tapers, traders, and collectors have responded to Archive in diverse ways: some have enthusiastically embraced the site while others reject it categorically. Certain established traders complained about the ease of use and availability. They felt that new traders should have to enter the social tape scene and harvest a collection organically. Others celebrated the Archive and its unprecedented ability to preserve and disseminate the music of the Grateful Dead.

The Solomonic Decision

When Archive.org first decided to house and protect this collection, they contacted Grateful Dead Productions (GDP) who never responded to them (Vernon, Interview 1). But, in January 2000, Grateful Dead Merchandising (GDM), had publicly released a statement regarding online trade that included,

> The Grateful Dead and our managing organizations have long encouraged the purely non-commercial exchange of music taped at our concerts and those of our individual members. That a new medium of distribution has arisen—digital audio files being traded over the Internet—does not change our policy in this regard.
>
> Our stipulations regarding digital distribution are merely extensions of those long-standing principles and they are as follow[s]:
>
> No commercial gain may be sought by websites offering digital files of our music, whether through advertising, exploiting databases compiled from their traffic, or any other means. All participants in such digital exchange acknowledge and respect the Copyrights of the performers, writers and publishers of the music.

> This notice should be clearly posted on all sites engaged in this activity.
>
> We reserve the ability to withdraw our sanction of non-commercial digital music should circumstances arise that compromise our ability to protect and steward the integrity of our work.[104]

Under the stipulations of the policy, Archive.org functioned freely for two years. However, in 2005, GDM took interest in the site due to the abundance of soundboard recordings freely available for public download. GDM requested that the collection be removed from LMA. Brewster Kahle and Archive.org complied.

Angered by the removal of these recordings many Dead Heads turned away from Archive.org permanently. Various members of the band and the organization spoke out against the removal. Most notably, John Perry Barlow, Grateful Dead lyricist and co-founder of the Electronic Frontier Foundation, a civil liberties group that works to defend rights related to digital technology, adamantly disapproved of the decision. He highlighted the contradiction to Grateful Dead's previous support of non-commercial exchange stating, "They might as easily put a teaspoon of food coloring in a swimming pool and then tell the pool owner to get it back to them" (Barlow 2005).[105] Anger increased across the scene and fans began circulating a petition to boycott all Grateful Dead Merchandise. According to Matt Vernon, who had remained a curator of the Grateful Dead collection on LMA, GDM's main concern related to the extreme accessibility of commercially-releasable soundboard recordings. They feared that

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[104] Among other places, this statement can be found at <http://biodtl.home.att.net/policy.htm> (accessed August 12, 2008).
[105] "Grateful Dead Tunes Taken Offline. http://www.p2pnet.net/story/7164 (accessed May2, 2009).

if soundboards spread throughout the scene, presumably the sale of official releases would decrease.[106]

In response, Matt Vernon and several others met with Grateful Dead Productions and together they reached a compromise. Dennis McNally, the band's publicist, relates the decision,

> Although it was not handled well, in the end they made a very Solomonic and wise decision about Archive.org …The Solomonic decision was that there's two kinds of tapes. There's the band's tapes, which are obviously soundboards, which leaked out...And there's audience tapes. And the audience tapes are the audiences then and forevermore, and that's what you can download at Archive.org to this day. Soundboards you can stream (McNally, Interview).[107]

In addition, any officially released soundboard recordings were taken down from LMA, which forced fans to purchase the official release if they wanted to hear the show. Archive.org also changed their protocol regarding the Grateful Dead collections. Anyone can upload music to LMA for other bands, but Grateful Dead recordings are now filtered through a small committee of curators who prevent duplications and regulate access.

With this decision, the band demonstrated their continued support of audience recording and non-commercial trade. Simultaneously, they claimed ownership of band-made recordings and the right to control the flow of soundboard music. Fortunately for Dead Heads, Grateful Dead Merchandising did not apply their decision to all online exchange. Collectors consequently

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[106] This notion, in line with marketing tactics, actually contradicts what most traders feel is their moral commitment to buy any and every official release by the band.

[107] The initial compromise before the meeting was to audience recordings stream only and to close access to soundboards entirely.

turned back to one another. FTP exchange continued. Traders offered blanks and postage trade and vined hard drives that contained entire tours or years of Grateful Dead music. One group attempted to find a new virtual home for the complete circulating opus that included both the audience and soundboard recordings. They named their group "Built to Last," referencing both the Grateful Dead song of the same name and their intended goal. Unfortunately, without the immense infrastructure of Archive.org, this collection did not last. With one year left to upload, Built to Last went offline.

Meanwhile, the collection on Archive.org remains, and it grows to this day. The small committee in charge of the collection scours the Internet for new sources. According to *Deadbase*, the Grateful Dead performed 2,318 shows. The multitude of items on Archive demonstrates the amount of tapers at these shows and the upgrading and re-mastering work that continues within the trading scene. The number of recordings on the Grateful Dead LMA collection increases almost daily; as of May 12, 2009, the number was 6,688. It remains as the definitive collection of the circulating opus even if a portion can only be streamed.

With Archive.org, recorded Grateful Dead moved beyond esoteric collecting and trading. Raoul Duke, TMNSP, Ship of Fools, Jerry's Kids, CDead, and GDIAP and others all made the transition possible. Under Brewster Khale's vision and the resources of Archive.org, this collection has established a permanent home, accessible to all who wish to experience the power of the Dead's music.

Electronic Spider Webs

After the fallout from the Archive conflict, collectors and traders looked for alternative avenues for exchange. BitTorrent technology, released in 2001, provided that pathway, a pathway that revived the social nature of trade due to its requirement of a *network* of traders in order to function efficiently. In contrast to Archive.org, where users connect to central server, BitTorrent technology operated through virtual relationships among user. Instead of actually housing the shared files, BitTorrent facilitates users to locate the desired recordings on other user's hard drives. With BitTorrent exchange, an individual sharer creates and seeds a small torrent file, which contains metadata identifying the sharable files, to a torrent server or computer, called a tracker. Individuals, called peers, can search a range of torrent tracker sites to locate the torrent that describes the files they desire. Once the torrent file is located, peers download and run the torrent in a range of client applications. The tracker coordinates a connection with other peers who are seeding and downloading the same file. Once established, the connection functions independently of the tracker. A single seed transmits from one peer to another via the BitTorrent peer-to-peer file sharing protocol by circulating the file bit by bit in random order. The peer computer complies the bits and reconstructs the file described by the torrent after receiving the entire file. When torrent files are first posted on well-known tracker sites, they often incite what is known as a swarm, where tens, hundreds, or even thousands of peers are simultaneously webbed together to download and share the same file. As each

user obtains pieces, these bits are shared with other peers; the more users in the swarm, the more efficient and faster the transfer. This bandwidth swarm allows for files over a gigabyte to be downloaded in less than an hour, or even in minutes, based on the size of the swarm. Once the transfer is complete, the peer becomes and remains a full-fledged seeder as long as they continue to share the file. In this way, torrents function "as occasions for voluntary and obligatory exchanges" (Mauss 2000:19). Alex Bushe, a collector and trader, described it as a spider web. He stated,

> It's looks sort of like a spider web if you were to visualize it or like a bicycle wheel with all the spokes. It's like everybody from wherever is all sucking off of the middle and sucking off of each other too…Napster was centrally based. It had one computer server where everything was coming from. So to download from Napster, [the file] had to be on that computer, and then you, in addition to millions of others…access[ed] that system…For BitTorrent … everyone is contributing the way that they can [with] the speed that they have from their Internet. So it's more of a community thing (Bushe, Interview 2).

As the transfers complete, the swarm dies down. Those who entered the swarm near the end may be left with an incomplete file and no seeders. Waiting for the file to be re-seeded is reminiscent of waiting for recordings in the mail. Individuals describe the same type of endorphin rush upon obtaining the complete file as others have described when receiving tapes in the mail.

If no one is seeding a particular file, traders can organize mail or FTP exchanges. Bushe, however, feels this is unnecessary due to the extensive online networks of Grateful Dead traders. He instead waits for the show to be re-seeded, or re-mastered, which, according to Bushe, always happens if you wait long enough. He stated,

> I haven't really traded for Grateful Dead audio in a long time because [there's] so much available online. You don't really need to trade through the mail for it. It's sort of pointless to because if you wait, whatever you're looking for eventually will be made available. It works on a cycle. It's not exactly a specific cycle that you can follow, but it moves in a circular way. Things come back around (Bushe, Interview 2).

Because torrents require peer seeders, the exchange of one recording relies heavily on communal involvement. Individual collectors make torrent files available to peers through the tracker and the more bandwidth made available to BitTorrent, the more efficient the exchange. To contribute to the swarm and share multiple recordings at a time, certain serious sharers even house their own collections away from their homes at other locations with higher bandwidth.

Culturally enforced notions of balanced trade impact this type of exchange in the form of share ratios: the amount of music downloaded should equal the amount uploaded. Torrent servers with log-in pass codes regulate this ratio and encourage traders to share back more than they receive. Bushe explains,

> There's ethics in it too. You have to make sure you upload as much as you download. It's really not fair if you don't because then you're…not giving back at all. Even if you're not putting up new music…you at least contribute from what you're downloading…If you let people download as much as you're downloading…then you're feeding to the community instead of just leeching from it (Bushe, Interview 2).

A share ratio of 1.0 denotes equal exchange. A ratio of less than 1.0, meaning the user takes more than he receives, is regarded as "selfish" and understood as a debt to others (Rodas, Interview). In order to maintain a high ratio, an individual trader must actively participate by seeding torrents linked on the tracker. One strategy is to connect to new seeds early in order to transfer the file and begin

sharing it back before the swarm and the web of exchange builds. Adamant sharers, such as Dylan Rodas, who retains a share ratio well above 1.0, emphasize communal responsibility and the value of reciprocity within the larger scene.

When asked how this type of trading compared to previous analog-networking, OBIE replied, “It's like fast food compared to a sit down dinner with family” (OBIE, Personal Email). He added that though the community still lingers in some form, “Many people do not want the community anymore, they just want the music” (OBIE, Personal Email). In fact, OBIE and others regard many BitTorrent users as “trolls,” claiming that the younger generation of traders feel entitled to this music without having to work for it, without having to make personal connections, and without having to appreciate it in a way that requires patience and mutual respect. Younger traders have been known to complain when a taper takes longer than a day to prepare and seed a file. Analog traders used to have to wait months or even years to obtain a recording. Though digital sharing now occurs quickly, it still takes time and a “labor of love” to digitize and SHN up a file. Not all “newbies” exude this sense of entitlement; many express a love of the music and gratitude to those working to share it.

BitTorrent exponentially increased trading efficiency and the mass dissemination of recordings. The social infrastructure, organized by the torrent trackers, facilitates simultaneous exchange among hundreds of users. These users choose whether or not to engage in the textual dialogue of the site. They decide how much bandwidth they will offer to others. Public sites such as bt.etree.org provide a free sharing atmosphere. Private torrent trackers enclose exchange

circles within their own dictated boundaries. Certain torrents retain records of these transactions, a somewhat dangerous proposition in lieu of the continually changing copyright laws pertaining to online sharing. Others function anonymously with encrypted peers. Live Grateful Dead file sharing enjoys protections from the band, yet many of these torrents host sharing of other bands as well. If indicted for copyright infringement, collectors lose all of their music, not just the specific illegal file. Because of the constant threat of legal repercussions, torrent trackers regulate their seeds and several torrents habitually erase all records of exchanges.[108]

BitTorrent changed music trading for the Grateful Dead trading scene and all other online music sharing. With it came a paradigm shift where collectors can obtain recordings quickly, individual files can replicate efficiently, and the trading scene can function across thickly developed trading webs. These virtual sharing networks actually function similarly to offline exchange as peers connect to each other within this complex social structure. The torrent tracker merely facilitates the location of files, much like classified ads. BitTorrent sharing protocol, with its ability to connect one seeder to many, has increased sharing

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[108] A recent legal case in Sweden regarding the non Grateful Dead related torrent tracker, Pirate's Bay, recently concluded in April 2009. In January 2008, a consortium of intellectual rights holders and the International Federation of the Phonographic Industry (IFPI) charged four individuals involved with the tracker with the promotion of copyright infringement. Torrent seeds on their tracker contained copyrighted material, but Pirate's Bay relied on the fact that torrent trackers never host or exchange the actual copyrighted material. After a year of legal processing, they were convicted as accessories to the crime against copyright even though the actual exchange was peer to peer. After the trial, IFPT requested that internet service providers block Pirate's Bay. ISPs have refused to do this as it contradicts their belief in a free and open Internet (http://www.thelocal.se/18940/20090418/).

efficiency and speed. BitTorrent has created a perpetual festival of exchange in which individuals share recordings, historical documents, and dialogue as they comment on torrents and critique new seeds.

Softly Hoarding

Old forms of trade still exist through mail exchange and exchange parties. Now instead of tape decks and boxes of cassettes, traders bring computers and hard drives, connect them to one another and create local networks for rapid filesharing. Technological elitism, as with the shift to DAT, has evolved into a differentiation between PCs and Macs. OBIE explains,

> PCs can't read a Mac formatted drive…A Mac can read a PC formatted drive but it can't write to it. So trading with a Mac person is a one-way thing. That's why when we have these [trading] parties and somebody brings their Mac, it means that they're just there to suck down data because they already know that they can't give any data to anybody there because we're all trading on PCs...Once you put something onto a Mac format drive as opposed to leaving it on a more universal drive, you're immediately dealing with just a sub-set of the trader groups (OBIE, Interview 3).

This technological distinction created a split between traders. Music files on Mac drive function as particular currency exchangeable only with other Mac computers.[109] OBIE calls this practice "soft hoarding," claiming that some Mac traders use this feature on purpose, excluding others by defining their trading circles through technological capability.

[109] This distinction does not affect online sharing because files hosted online are standardized for any hard drive.

"Soft Hoarding" comes in several forms. Digitized recordings not yet prepared for mass reproduction may live in purgatory for long periods of time. They circulate on FTP sites and hard drives without text files or SHN-ID and remain within inner circles of trade.

When a torrent is seeded into the virtual trading pool, hundreds or thousands of collectors retrieve it in a matter of days. As more and more copies are made, the rarity evaporates and the commodity value decreases. Because of this, individual traders can "burn" their rivals who hoard recordings. Through "burns," precious "do not circulate" recordings enter public trade. Almost instantaneously, hundreds of collectors will "swarm" to the new torrent. These seeders operate from a strong moral belief in sharing as reciprocity. In the words of sharer Dylan Rodas, "You got it for free, share it for free" (Rodas, Interview). When this happens without "authorization," arguments ensue reprimanding the seeder for harming his "brothers." Often, however, the seeder is far removed from the original owner and the closed circle of exchange. This logic of retaining recordings out of loyalty to a "brother" can be used by anyone, even advocates of open sharing.

In *The Deadhead's Taping Compendium,* co-editor John Dwork acknowledges the decrease in wealth resulting from mass dissemination, yet he sees the exchange through the lens of a sharer. He writes,

> Interesting, however, is that the value of the tape often decreases over time as the music on it is disseminated. But, as the tape is copied, more people who hear it may fall in love with it, and in turn the music [as a whole] becomes more valuable. As our personal taping experience evolves, our tape collections may become more like to childhood stamp collection in that what was

> of high value to us becomes less important...Ultimately, the tapes are only the medium, and the real value lies with my attachment to the music they contain (Getz and Dwork 1998:Hiii).

The magic remains in the music. It is the commodified value of the recording, the physical tape, CD, or torrent file that decreases with replication, not the cultural value of the sounds. Even with mass reproduction, the recordings still function as a portal to the experience, a record of the event, and a reactivation of the Grateful Dead's aura.

Polishing Diamonds

Digital editing software has led to a new wave of trading where the original masters are altered to improve sound. New sources and upgrades including re-digitizations with a higher bit rate, lower generation or shorter lineages of the same source tape, and pitch corrected versions of previously seeded digitizations appear daily on the Internet; "diamonds fall from the clouds of delusion."[110] These alternative versions, each one a small reflection of musical matter, either obscure the original or polish the recording, bringing forth the aura buried within the tape hiss. Digitizing and editing recordings has become yet another art form within this scene.

In the 1990s, the standard bit-rate of analog-to-digital conversions shifted from 8-bit to 16-bit. Years later, MOTB campaigned for 24-bit conversions and this standard was adopted. Edits are made in 24-bit and then "dithered" down to 16 for easier file transfer. Sampling rate increased from 44.1 kHz to 96 kHz.

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[110] Hunter, Robert. "Dark Star." *Box of Rain: Lyrics 1965-1993.* New York: Penguin Books, 1993.

44.1 kHz accommodated all frequencies a human ear can hear. But sound, especially musical harmonics, contains frequencies that humans cannot detect. If the sampling rate does not allow space for these frequencies, "aliasing" occurs and the waveform "folds over" and creates unwanted noise. A sampling rate of 96 kHz provides this space.

The sound becomes malleable in the digital realm. With manipulation, "technical reproduction can put the copy of the original into situations which would be out of reach for the original itself" (Benjamin 1936, II). Speed and pitch fluctuations from tape can be adjusted. Digital pops and clicks from the conversion process can be eliminated. MOTB actually filters and equalizes "problem frequencies" within the recordings. These residual frequencies from the recording process mask and muffle the sound of the music. Adam Egert, an MOTB engineer explains,

> If you listen to a raw tape, in the audience, you're going to hear ringing around some of the vocals, you'll hear muddy sound on the low end. The bass is there, maybe a lot of bass, but it's just not tight. It's muddy. And it serves to maybe to veil the other great qualities that are inside the recording…because there's harmonics around everything, so you get all these harmonics that radiate outwards in both directions in frequency from that center frequency of the note…What we do through EQ [equalization] is to find those very, very intensely problematic frequencies that are tight, and very, very, very precise [and extract] that one frequency [to] unveil the vocals…It's really cleaning up the overall sound stage to reveal the music that you really want to hear (Egert, Interview).

In this way, MOTB strips the noise added in the translation process. They tighten ample folds and reveal aspects of the Dead's music that were previously inaccessible on these recordings.

Adam Egert discussed a new digitization technique where the analog tape is translated into a wide DSD file. Egert claims that DSD technology captures a more complete image of the aura on tape. DSD editing tools are too expensive for home use so these raw files are archived and then converted to 24-bit for editing. When asked why MOTB is using this translation technique, Egert responded "We're technologists here, so we're trying to set ourselves up for what we believe the coming of the messiah will be" (Egert, Interview). For MOTB, the messiah, the holy messenger, will provide a way to retrieve and disseminate the aura of live performances captured on the master recordings.

With better editing software, editors now create "matrix recordings," sound files that combine an audience tape with a soundboard recording. Reminiscent of Betty Cantor-Jackson's work for *Dead Reckoning,* when she placed microphones throughout the room, matrix recordings contain the ambience of the venue and the sound of the crowd coupled with and the clarity of instrumental and vocal sound from the soundboard recording. When an editor creates a matrix file, he consciously makes decisions regarding the mixing levels in order to best reproduce the live concert experience. For instance, a song may start with a high level of audience recording, and then pull in the listener with higher levels of soundboard precision as the song progresses. Matrix files represent a new form of recordings, one that presents new opportunities to bring the listener closer to the event. The open circulation of soundboard recordings away from Archive.org makes the exchange of matrix files possible.

Other sound editors go further, increasing the bass frequencies, or highlighting the high end. Archivists argue against this type of alteration. In the words of Benjamin, "A real translation is transparent; it does not cover the original, does not block its light, but allows the pure language, as though reinforced by its own medium, to shine upon the original all the more fully" (Benjamin 2004:260). Disapproving archivists feel that too much editing blocks the light, and veils the aura, presenting a false representation of the concert experience. Presently, these editors are asked to document their process and register their work under a new SHN-ID in order to clearly communicate the decisions made in the translation.

More Music Than Minutes Left to Live

Within this new paradigm, a continuous stream of digital music floods the Internet. Long-term taper and collector Louis Falanga referred to this flood as "Christmas everyday" and admitted to checking several trackers every two to three hours (Falanga, Interview). Many collectors already possess "more music than minutes left to live," yet they continue to acquire (OBIE, Interview 1). In fact, "Recording collecting has long been described (affectionately for the most part) as an illness or an addiction" (Katz 2004:10). When asked how online accessibly affected his own collecting, Noah Weiner commented, "the image of that monkey in the science lab hitting the lever that produces another injection of cocaine over and over and over and over again comes to mind" (Weiner, Personal Email).

One particular "disease" within the scene of Grateful Dead tape collecting is known as the "completist mentality." These traders strive to collect every show, every source, and every SHN-ID. Fully aware of the Sisyphean nature of this quest, one torrent site now labels inferior seeds as "OCD" files with an animated icon of a stick persistently rolling a boulder up a hill only to watch it roll back down.

Jerry's Missing Finger

Missing tapes still surface. Audience recorded relics are found in basements, closets, and attics. Family and friends of the band still uncover gems from the board. Recent discoveries make the news of the trading scene. The son of Keith and Donna Godchaux discovered the missing Vault recordings in his grandmother's houseboat. Now known as the "Houseboat Tapes," the band originally had loaned these recordings to Keith to learn the material when he first joined the band. Roadie Kidd Candelario gave Rob Eaton a box of unlabeled tapes collected from road cases by Candelario at the end of tours. According to Eaton, Candelario planned to bulk erase the tapes and reuse them but he never did. They turned out to be soundboard masters from the Fall of 1979. Only recently, the coveted missing tapes of the Grateful Dead's 1972 concert at Vanderbilt surfaced. Before their appearance, the set list for that show had yet to be verified. These valuable recordings made their public debut through Sirius Radio and now circulate freely. In the words of Eaton,

gems still exist, “There’s still these stories of the guy who [say], “Jerry gave me this tape” (Eaton, Interview).

Conclusion

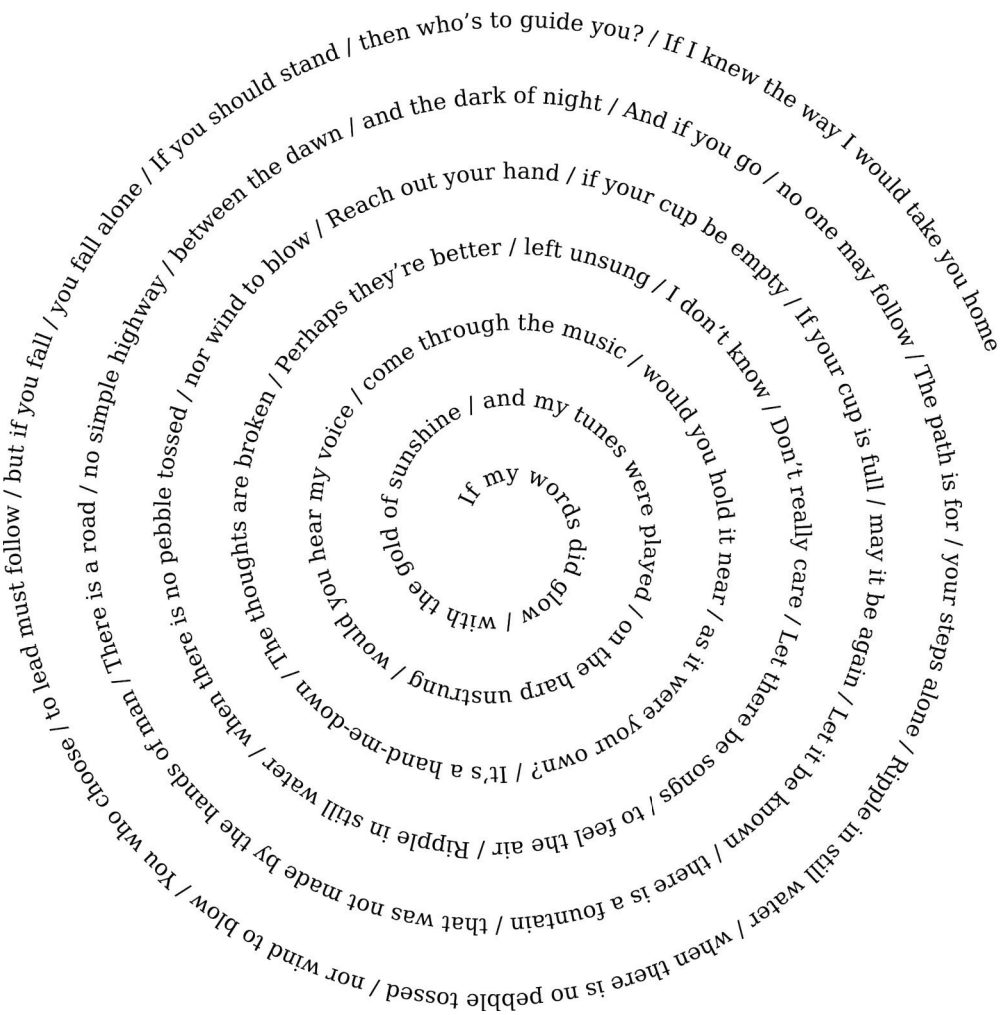
Well before the music industry entered online distribution, Dead Heads circulated music on the Internet. They designed databases, standardized formats, and implemented trade networks. Technology changed rapidly, and the social network of exchange incorporated and re-shaped the technology. Even though the venues of exchange moved from the parking lot to the virtual domain, sociality remains; the circulation of recordings still create, and function due to, social relationships based on a passion for, sometimes verging on obsession with, the music of the Grateful Dead.

Within this transitive nightfall, Dead Heads listen with new ears. The contextual web in which they hear the music has been supplemented by thousands of available recordings. The light of the Dead’s aura shines brightly, reflected through and across diamonds of various clarity and ornamentation. The aura lives after the band’s passing spread among thousands of CD spindles, computers, hard drives, and personal and public libraries. This replication still serves to benefit the organization, advertise the music, and increase the fan base. In an age of copyright revision and online regulation, the Grateful Dead scene challenged the concept of music ownership. These changes were supported by the band, enacted

by the fans, and inspired by the music itself. In the words of the Dead, "Shall we go? You and I? While we can?"[111]

[111] Hunter, Robert. "Dark Star." *Box of Rain.* New York: Penguin Books, 1993.

RIPPLE[112]
BY ROBERT HUNTER
Figure 1.7



[112] Hunter, Robert. "Ripple." *Box of Rain: Lyrics 1965-1993*. New York: Penguin Books, 1993.

CONCLUSION
LET THERE BE SONGS TO FILL THE AIR[113]

The Grateful Dead, and the scene surrounding the band, transcended the popular concepts of a rock and roll band in the second half of the twentieth century. The group pioneered a business model that expanded into an elaborate cultural phenomenon based on live performance that incorporated the audience as equals and included the acts of taping and tape trading. As a result, the Dead had a profound impact on the music industry, sound engineering, and the developing discourse on the ownership of music. Many aspects of the band that were once distinctly counter-cultural are now increasingly mainstream. Other bands have since followed their model with a focus on live performance, an implementation of taper's sections, and the open support of the non-commercial exchange of live recordings.

Through the acts of recording, cataloging, and trading the band's live concerts, an active subset of fans claimed and performed their identity as Dead Heads while producing historical artifacts of the scene. This culture exhibits a unique relationship between a band and their fans, while also demonstrating the power of sound technology and the ability to collect recordings. In his book *Capturing Sound: How Technology Changed Music*, Mark Katz discusses this power, stating,

> Record collecting involves more than music. Collecting is about the thrill of the hunt, the accumulation of expertise, the display of wealth, the synesthetic allure of touching and seeing the sound, the

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[113] Hunter, Robert. "Ripple." *Box of Rain: Lyrics 1965-1993*. New York: Penguin Books, 1993.

> creation and cataloging of memories, and the pleasures (and dangers) of ritual. Record collecting represents a relationship with music that helps us, in some part small or large, to articulate and, indeed, shape who we are (Katz 2004: 11).

The identity of Dead Heads, and in particular, those who engaged in taping and tape trading, was marked by an often fanatical willingness to attend every live performance, collect every recording, and immerse themselves in the music and material culture of the band. Audience-based recording and a complex structure of tape trading extended the impact of the music far beyond the concert experience.

Many fans' lives have been shaped by their encounters with the Grateful Dead, both live and recorded, and they mark their personal passages and life transitions in relation to the band's history, music, and lyrics. As time passes, individual fans continue to build and change their relationship to the music, each fan with his own individual attachments to songs, performed versions, and specific concerts. Rabbi Mark Sokoll discusses this evolution, drawing an analogy from traditional Jewish culture and the study of Torah. He stated,

> So many teachers of Torah have said this…you study it every year…because your life, our life, has changed. So you approach every story with whatever new life experience you've accumulated in the meantime (Sokoll, Interview).

Sokoll's reflection is drawn from his experience of this concept in 2002 when he attended a concert of the Other Ones, a band comprised of the four living members of the Grateful Dead with guitarist Jimmy Herring, and keyboardists Rob Barraco and Jeff Chimenti. Sokoll attended the concert with his son. He continued,

> Being in Alpine Valley for me was the first night, laying on the lawn with my son…It was like, "Wow, this is like L'Dor V'Dor, generation to generation. And my best friend is no longer alive. The guy, Lenny, who I went to so many shows with and spent so much time, on his death bed, I am sitting there singing lyrics to him from "I Know You Rider." So when they played it that night, it was very emotional…life, death, friendship, birth, son. It was, in that sense, a very intense - it was great. It was an unbelievable experience (Sokoll, Interview).

Each fan has his own evolving relationship to the music and to the tapes, his own distinct identity tied to the music and the evolution of the Grateful Dead. Adam Egert reflected,

> If you went to a Dead show, you go to one car and you hang out with certain people and they're having a certain experience and they're listening to '74 Dead and they're drinking beer, right? And throwing a football around. And you go to the next car down and they're listening to '68 Dead and they just finished taking mushrooms and they're listening to the Dead low on their radio but they have a drum circle going on. You go to the next car and there's somebody selling veggie burritos and they're making money. And you go to the next car – and as you keep going down the line, there's some repetition in the experience yet there's something very individual about it. And yet if you ask the same exact question to each one of those different car loads of people you would get a different answer each time you went, and I think you're going to find as you keep broadening your scope of inquiry, you will find that, that same model holds true [for the taping and trading scene] because what's important to me in this thing is different than what's important to OBIE and what's different in its importance to Bob or Glassberg, you know what I mean? They all have different things (Egert, Interview).

Taping itself became an art form, a creative extension of the musical experience. Trading evolved into elaborate social networks based on exchange. Digital recording technology expanded higher quality sharing through the ability to produce flawless copies. Via the Internet, individual recordings now ripple out in all directions disseminating from a complex digital stream. Tapers continue to

digitize and share their art. Lost tapes surface. The history of the Grateful Dead flows from a host of tributaries into fans' collective memories. Music, text files, and dialogue document the cultural phenomenon of the band and the scene and leave a record of the efforts of the tapers, engineers, and archivists. The social and communication structures of the scene have since thickened into even more elaborate webs.

Even the live music continues in new forms. This past March of 2009, Bob Weir, Phil Lesh, Bill Kreutzmann, and Mickey Hart resurrected the live axis of the Dead and toured with guitarist Warren Haynes and keyboardist Jeff Chimenti. Even at the price of $100 a ticket, their concerts continue to sell out.

Unfortunately, current copyright laws threaten this free, non-commercial exchange of music. The Recording Industry Association of America (RIAA) and the International Federation of the Phonographic Industry (IFPI) strive to regulate the distribution of recorded sound. But the legacy of the Grateful Dead, and their trust in their audience, exemplify an alternative approach, an approach that generated an immense, loyal fan base, a fan base that continues to replenish itself and labor towards the free exchange of live music. Adam Egert explained,

> There's a whole new crew of people who are doing this stuff, and I guess one of the interesting things is that as waves of these people come and waves of these people go, there's plenty of people lined up behind them to replace them to continue that work, much like an ant colony. A certain worker ant dies, they carry the body off and somebody else steps right into the place and picks up right where they left off in building the colony or protecting the Queen, whatever their job is right? That's it. And it is it's own whole environmental world. And in essence, I really believe that it is just the replacement of what was there originally, which was tour when the Dead was really the Dead. [The current scene] might not look

> exactly like it, but it is the parking lot, it is the taper's section, it is the hotel rooms, it is tour (Egert, Interview).

The scene surrounding the Dead and their music still flourishes. Individuals and groups continue to improve the preservation, exchange, and collection of the live recordings of the Grateful Dead. Grateful Dead Productions continues to support the scene and tape culture within it. The Grateful Dead celebrates an afterlife. The axis continues to spin.

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APPENDIX A
A SELECTION OF VISUAL CULTURE

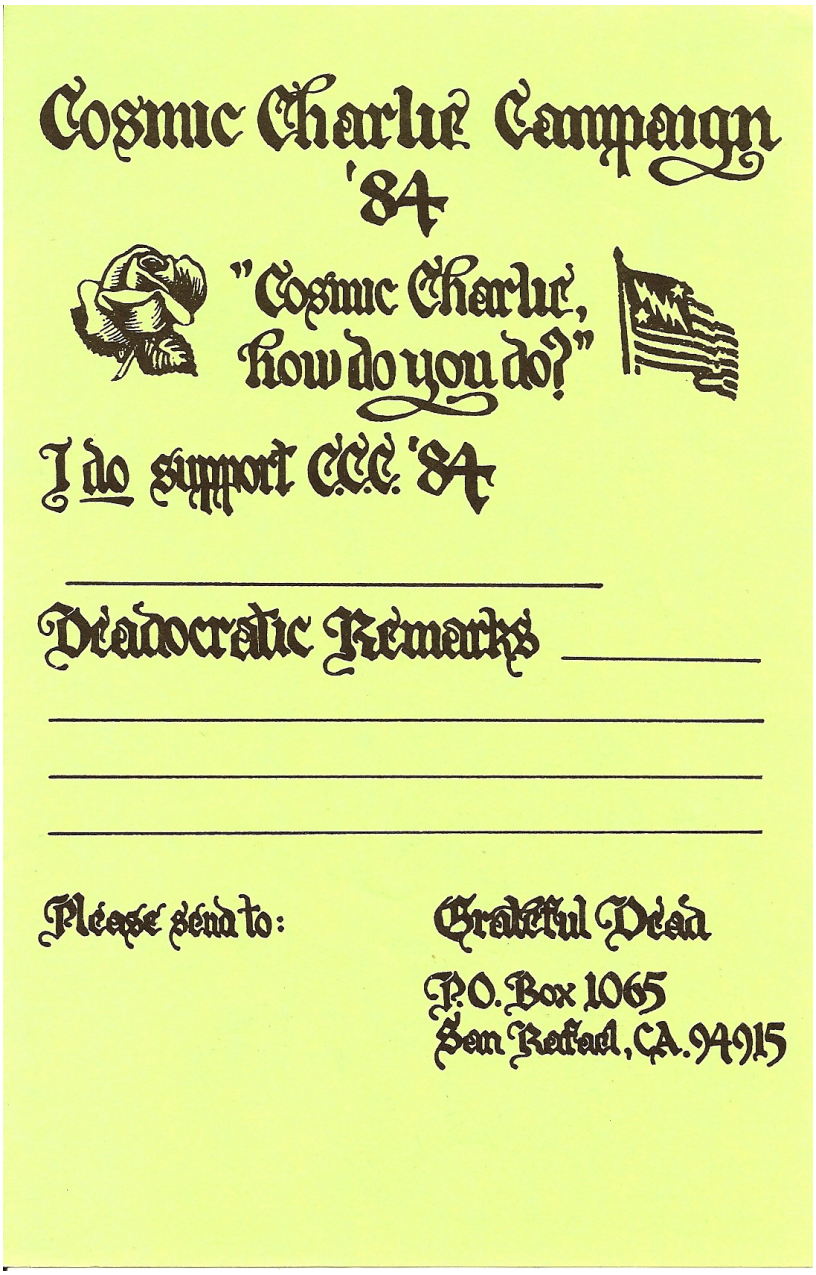

Figure 2.1 Cosmic Charlie Campaign Flyer. Courtesy of Sunshine Fred.

The Grateful Dead stopped playing the song Cosmic Charlie in 1976. Dead Head and tape collector, Sunshine Fred, and his friends distributed these flyers. According to Fred, he and his friends "knew it wouldn't work," but these flyers gave them a way to interact with the music and others in the scene.

Figure 2.2 Jerry Moore's Tape Labels. Courtesy of Jerry Moore.

These four labels offer a small sample of the artwork by tapers and collectors found on tape labels. The text on the top right label highlights Moore's sharing philosophy: "Sincere words are seldom, and sweet words are rarely true. The wise never speak of their learning, yet the learned never admire their own wisdom. We have no need to hoard; the more we give away the greater our abundance. There are ten thousand roads to heaven."

Figure 2.3 A small piece of Bob Levensohn's Grateful Dead tape collection. Photo by author.

Levensohn graciously allowed me to take pictures of his collection. He made most of these tapes while dancing using a cassette recording attached to his belt and a microphone on his headband. Levensohn labels his cassettes with meticulous detail.

Figure 2.4 Bob Menke's recording, playback, and digitization equipment. Photo by author.

Bob Menke graciously allowed me to photograph his collection and equipment. Menke started taping and collecting the Grateful Dead in 1971. He now possesses one of the largest known Grateful Dead tape collections including recordings on various formats such as reel-to-reels, cassettes, DATs, CDs, and hard drives.

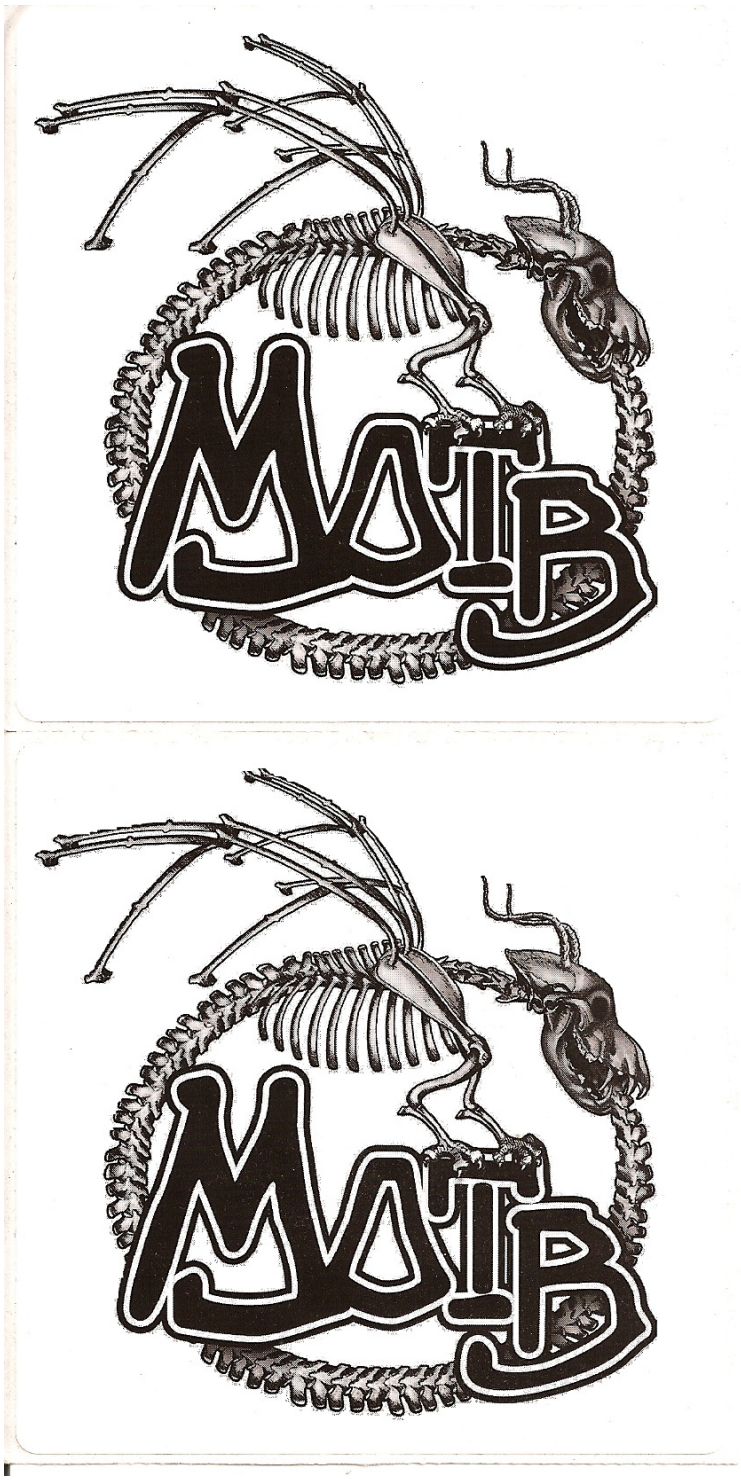

Figure 2.5 Mouth of the Beast stickers. Courtesy of MOTB.

The co-founders of MOTB, Derek McCabe and Adam Egert, gave me these stickers in the parking lot of the "Dead Heads for Obama" concert in Pennsylvania in October 2008.

APPENDIX B – SAMPLE TEXT FILES

Sample One - MOTB
gd73-07-01.fob-SonyECM22p.kaslow-todd-motb.88528.sbeok.flac16

MOTB Release: 0055 16/44.1
Release Date: 2007-11-16
Band: Grateful Dead
Date: 1973-07-01
Venue: Universal Amphitheatre
Location: Universal City, CA
Source: FOB Audience Recording
Media: MAR = Unknown, R1 = Maxell UD 35-90

Lineage: Sony ECM-22P > Sony TC-770 > MAR > ?? [Dolby Encode] > R1

Transfer: R1 > Technics RS-1506 > TEAC AN-300 [Dolby Decode] > Grace Design Lunatec V3 [Pre-Only] > Korg MR-1000 > DSF [1-bit 5.6448 MHz Stereo] > Korg AudioGate > WAV [24/96]

Taped by: Harv Kaslow and Craig Todd
MAR > R1 Copy by: Rob Bertrando
R1 Provided by: Barry Glassberg
Transfer by: A. Egert
Mastering by: J. Waddell

Set 1
d1t01 - Mississippi Half-Step Uptown Toodleloo
d1t02 - Me And My Uncle
d1t03 - Sugaree
d1t04 - The Race Is On
d1t05 - Brown Eyed Women
d1t06 - Looks Like Rain
d1t07 - Don't Ease Me In
d1t08 - Big River
d1t09 - China Cat Sunflower >
d1t10 - I Know You Rider
d1t11 - Around And Around

Set 2
d2t01 - Playing In The Band
d2t02 - Row Jimmy
d2t03 - El Paso
d2t04 - Loose Lucy

d3t01 - Truckin' >
d3t02 - The Other One Tease > Drums > The Other One >
d3t03 - Space Jam >
d3t04 - Wharf Rat >
d3t05 - Me And Bobby McGee
d3t06 - Casey Jones

Mastering Notes:
-- Edited, mastered and downsampled to 16/44.1 on the GEMS Edit Station.

Notes:
-- d2t02 - Cut in Row Jimmy at about 1:15; missing most of second verse and part of the subsequent chorus. No known patch source currently circulates.
-- d3t02 - Only the first verse of The Other One was performed, but preceded by an extended instrumental prologue.

FLAC FINGERPRINTS:

gd1973-07-01.motb.0055.d1t01.flac:25f913a5cf20415094548e7b52f53537
gd1973-07-01.motb.0055.d1t02.flac:3bf6d8099a02eb999495fe1e81a4b386
gd1973-07-01.motb.0055.d1t03.flac:7ddc48ec8150f0e1bbb2aea6946f718d
gd1973-07-01.motb.0055.d1t04.flac:3c08fef8003f7cc3d857bfd1f0c848fe
gd1973-07-01.motb.0055.d1t05.flac:68487509a97911096b84145c994348b0
gd1973-07-01.motb.0055.d1t06.flac:6c5a8a98f5ffa1b40c59396bf900fe77
gd1973-07-01.motb.0055.d1t07.flac:d6940ca1dd165a46be0b90f0d62c3518
gd1973-07-01.motb.0055.d1t08.flac:625b555471e96e1c65ff774bdf01bab2
gd1973-07-01.motb.0055.d1t09.flac:0e8855d3c89c13b9f37f0657a8b39dbc
gd1973-07-01.motb.0055.d1t10.flac:74b638d57df164f25ac90ae24792e6d1
gd1973-07-01.motb.0055.d1t11.flac:16b6b82b39fdfc32a98986edbe62cb94
gd1973-07-01.motb.0055.d2t01.flac:895475804e5dcfeeabf556dc5ede7be5
gd1973-07-01.motb.0055.d2t02.flac:6742b451be29be680fc128e83f60d53c
gd1973-07-01.motb.0055.d2t03.flac:ea5e679cd344269bf72532055a7ac178
gd1973-07-01.motb.0055.d2t04.flac:61fa1e251a59bab1648902a1020c6a83
gd1973-07-01.motb.0055.d3t01.flac:dc693279ed9f949cfe8baf07a7f756a6
gd1973-07-01.motb.0055.d3t02.flac:bc8495b60385e7664a0128f2b643d31b
gd1973-07-01.motb.0055.d3t03.flac:eb24a24bd008140865b563458fbe09f3
gd1973-07-01.motb.0055.d3t04.flac:6da90ba3e3459d9ef255c2645fc2ecdf
gd1973-07-01.motb.0055.d3t05.flac:cf586041dca98e8d0e76f50da52e9a25
gd1973-07-01.motb.0055.d3t06.flac:5e3a0564b91306bd9abd14d741c4ea89

MD5 CHECKSUMS:
47cd115ecf17e6f7bd9f8128588bae7b *gd1973-07-01.motb.0055.d1t01.flac
1f8ab99d00133944264c259d93716387 *gd1973-07-01.motb.0055.d1t02.flac
0285a0a98824ec8be4dbbe7f64a85d93 *gd1973-07-01.motb.0055.d1t03.flac

```
7a99f9097a635168288ce0d00c5b1efb *gd1973-07-01.motb.0055.d1t04.flac
75518c2e026b8f4db662a84cba1e84d5 *gd1973-07-01.motb.0055.d1t05.flac
d6a9df1b11fc85e3ef9ae201f1dfcd16 *gd1973-07-01.motb.0055.d1t06.flac
4bed2028a3c4d7af80a0cf333f9ccaf0 *gd1973-07-01.motb.0055.d1t07.flac
bdda8bf742ce85713f080af75c4a93d6 *gd1973-07-01.motb.0055.d1t08.flac
41044f467be2457dabf0e0152786a03b *gd1973-07-01.motb.0055.d1t09.flac
c7e186b812a3f737530326f03a709301 *gd1973-07-01.motb.0055.d1t10.flac
bbbac665887396d55248fab69ecec711 *gd1973-07-01.motb.0055.d1t11.flac
bd4c9c1c16b129d45501516054ee2cea *gd1973-07-01.motb.0055.d2t01.flac
e1b78f6d823bb64f77176d94f0fd4dd4 *gd1973-07-01.motb.0055.d2t02.flac
b07ee9a36331eb28fef9f4e65715761f *gd1973-07-01.motb.0055.d2t03.flac
a3d13d0cd3a5d3ff47f9a411d84b53e2 *gd1973-07-01.motb.0055.d2t04.flac
78aac84d93254f4fe991b7ec62f7cb6d *gd1973-07-01.motb.0055.d3t01.flac
d2ab2ad30556fdbdf06b0dabc530d326 *gd1973-07-01.motb.0055.d3t02.flac
0f147f096e07d57a4515234ea46633c3 *gd1973-07-01.motb.0055.d3t03.flac
3e39172087394b10cbb609a65fdb815f *gd1973-07-01.motb.0055.d3t04.flac
1ca1f4dfa80c1a40c261443ca834a5b4 *gd1973-07-01.motb.0055.d3t05.flac
cc8d97aecf661fcd0e750cc86bb384b3 *gd1973-07-01.motb.0055.d3t06.flac
```

SHNTOOL OUTPUT:

```
   length     expanded size   cdr  WAVE problems filename
    8:08.45       86189084   ---   --   ---xx   gd1973-07-01.motb.0055.d1t01.flac
    3:42.45       39266684   ---   --   ---xx   gd1973-07-01.motb.0055.d1t02.flac
    7:17.27       77150348   ---   --   ---xx   gd1973-07-01.motb.0055.d1t03.flac
    3:21.03       35463500   ---   --   ---xx   gd1973-07-01.motb.0055.d1t04.flac
    5:04.24       53682092   ---   --   ---xx   gd1973-07-01.motb.0055.d1t05.flac
    7:16.32       76985708   ---   --   ---xx   gd1973-07-01.motb.0055.d1t06.flac
    4:17.44       45438332   ---   --   ---xx   gd1973-07-01.motb.0055.d1t07.flac
    4:45.38       50363420   ---   --   ---xx   gd1973-07-01.motb.0055.d1t08.flac
    4:58.01       52569596   ---   --   ---xx   gd1973-07-01.motb.0055.d1t09.flac
    8:47.20       93009884   ---   --   ---xx   gd1973-07-01.motb.0055.d1t10.flac
    5:08.24       54387692   ---   --   ---xx   gd1973-07-01.motb.0055.d1t11.flac
   25:41.20      271879484   ---   --   ---xx   gd1973-07-01.motb.0055.d2t01.flac
    8:44.38       92523020   ---   --   ---xx   gd1973-07-01.motb.0055.d2t02.flac
    4:47.57       50760908   ---   --   ---xx   gd1973-07-01.motb.0055.d2t03.flac
    8:07.41       86003276   ---   --   ---xx   gd1973-07-01.motb.0055.d2t04.flac
    7:53.04       83446652   ---   --   ---xx   gd1973-07-01.motb.0055.d3t01.flac
   13:10.61      139499516   ---   --   ---xx   gd1973-07-01.motb.0055.d3t02.flac
    9:36.18      101648780   ---   --   ---xx   gd1973-07-01.motb.0055.d3t03.flac
    8:56.63       94698620   ---   --   ---xx   gd1973-07-01.motb.0055.d3t04.flac
    6:00.54       63631052   ---   --   ---xx   gd1973-07-01.motb.0055.d3t05.flac
    6:37.10       70054364   ---   --   ---xx   gd1973-07-01.motb.0055.d3t06.flac
  162:22.69     1718652012 B                    (totals for 21 files, 0.5580 overall
compression ratio)
```

Sample Two – Betty Board
gd1973-03-22.sdb.bettycantor.deibert.83397.flac16

Grateful Dead
March 22, 1973
Memorial Auditorium, Utica, NY

Most of Set I and some of Set II. missing 2nd Encore.

10" Betty Board Reel > PCM501ES analog out >
Fostex D5 optical S/PDIF out (Jace's Tape) > disk
Transferred by Tim Deibert 6-10-2002

Disc 1 of 2: [71:20]

Set I
1. Tuning (1:58)
2. Promised Land (3:37)
3. Sugaree (8:43)
4. Mexicali Blues (4:11)
5. They Love Each Other (6:18)
6. Looks Like Rain (8:04)
7. Deal (5:50)
8. Beat It On Down The Line (3:50)
9. Bird Song (13:12)
10. Jack Straw (4:58)
11. Fire Aisle Banter (2:03)
12. Box Of Rain (5:10)
13. You Ain't Woman Enough (3:18)

Disc 2 of 2: [55:17]
1. The Race Is On (3:37)
2. Row Jimmy (8:44)
3. El Paso (4:18)

Set II
4. ...Other One -> (1:33)
5. Eyes -> (15:13)
6. China Doll (7:48)
7. Sugar Magnolia (8:40)
8. E: One More Saturday Night (5:19)

NOTES:
* Sound Forge 6.0 volume raised to +2.4dB.
* Sound Forge 6.0 peak normalization @ 99%.
* Middle reel of show unplayable due to mold and water damage.

notes from trailmix 3-15-07:

Ü Project WBOTB <ht tp://personalwebs.oakland.edu/~crouch/wbotb.htm>

Ü these shns were decoded to wav, SBE's fixed (by set), then encoded to flac16 (level 6). The process was repeated and resulted in identical wavs.

Although the original shns were created in 2002, they are not in circulation and do not exist in the database (which is why these shns were converted and fixed).

length	expanded size	cdr	WAVE	problems	filename
1:58.66	20970972	-b-	--	---xx	gd1973-03-22d1t01.shn
3:37.24	38335292	---	--	---xx	gd1973-03-22d1t02.shn
8:43.32	92332508	---	--	---xx	gd1973-03-22d1t03.shn
4:11.28	44342300	---	--	---xx	gd1973-03-22d1t04.shn
6:18.35	66760620	-b-	--	---xx	gd1973-03-22d1t05.shn
8:04.05	85389404	---	--	---xx	gd1973-03-22d1t06.shn
5:50.21	61789436	---	--	---xx	gd1973-03-22d1t07.shn
3:50.44	40675532	---	--	---xx	gd1973-03-22d1t08.shn
13:12.14	139741772	---	--	---xx	gd1973-03-22d1t09.shn
4:58.14	52600172	---	--	---xx	gd1973-03-22d1t10.shn
2:03.67	21854828	---	--	---xx	gd1973-03-22d1t11.shn
5:10.72	54853388	---	--	---xx	gd1973-03-22d1t12.shn
3:18.51	35047196	---	--	---xx	gd1973-03-22d1t13.shn
3:37.54	38405852	---	--	---xx	gd1973-03-22d2t01.shn
8:44.45	92539484	---	--	---xx	gd1973-03-22d2t02.shn
4:18.50	45629484	-b-	--	---xx	gd1973-03-22d2t03.shn
1:33.06	16418844	-b-	--	---xx	gd1973-03-22d2t04.shn
15:13.16	161090876	---	--	---xx	gd1973-03-22d2t05.shn
7:48.25	82614044	---	--	---xx	gd1973-03-22d2t06.shn
8:40.21	91777436	---	--	---xx	gd1973-03-22d2t07.shn
5:19.38	56361004	-b-	--	---xx	gd1973-03-22d2t08.shn
126:33.53	1339530444 B				(totals for 21 files, 0.5047 overall compression ratio)

```
  length     expanded size   cdr  WAVE problems filename
   1:58.66      20970476    ---   --   ---xx   gd1973-03-22d1t01-fixed.flac
   3:37.24      38335292    ---   --   ---xx   gd1973-03-22d1t02-fixed.flac
   8:43.32      92332508    ---   --   ---xx   gd1973-03-22d1t03-fixed.flac
   4:11.28      44342300    ---   --   ---xx   gd1973-03-22d1t04-fixed.flac
   6:18.34      66759212    ---   --   ---xx   gd1973-03-22d1t05-fixed.flac
   8:04.05      85389404    ---   --   ---xx   gd1973-03-22d1t06-fixed.flac
   5:50.21      61789436    ---   --   ---xx   gd1973-03-22d1t07-fixed.flac
   3:50.44      40675532    ---   --   ---xx   gd1973-03-22d1t08-fixed.flac
  13:12.14     139741772    ---   --   ---xx   gd1973-03-22d1t09-fixed.flac
   4:58.14      52600172    ---   --   ---xx   gd1973-03-22d1t10-fixed.flac
   2:03.67      21854828    ---   --   ---xx   gd1973-03-22d1t11-fixed.flac
   5:10.72      54853388    ---   --   ---xx   gd1973-03-22d1t12-fixed.flac
   3:18.52      35049548    ---   --   ---xx   gd1973-03-22d1t13-fixed.flac
   3:37.54      38405852    ---   --   ---xx   gd1973-03-22d2t01.flac
   8:44.45      92539484    ---   --   ---xx   gd1973-03-22d2t02.flac
   4:18.50      45628844    ---   --   ---xx   gd1973-03-22d2t03-fixed.flac
   1:33.06      16419356    ---   --   ---xx   gd1973-03-22d2t04-fixed.flac
  15:13.16     161090876    ---   --   ---xx   gd1973-03-22d2t05-fixed.flac
   7:48.25      82614044    ---   --   ---xx   gd1973-03-22d2t06-fixed.flac
   8:40.21      91777436    ---   --   ---xx   gd1973-03-22d2t07-fixed.flac
   5:19.39      56363372    ---   --   ---xx   gd1973-03-22d2t08-fixed.flac
 126:33.54    1339533132 B                    (totals for 21 files, 0.4864 overall
compression ratio)
```

Sample Three – Matrix
gd1971-08-06.96668.matrix.seamons.sbeok.flac16

Grateful Dead
Hollywood Palladium
Hollywood, CA
August 6, 1971

Jerry Garcia - Lead Guitar, Vocals
Ron "Pigpen" McKernan - Organ, Percussion, Vocals
Bill Kreutzmann - Drums
Phil Lesh - Electric Bass, Vocals
Bob Weir - Rhythm Guitar, Vocals

Matrix

SBD (shnid=96541):
Recording Info:
SBD -> Master Reel -> CD

Transfer Info:
CD -> Samplitude Professional v10.02 -> FLAC
(3 Discs Audio / 2 Discs FLAC)

All Transfers and Mastering By Charlie Miller
charliemiller87@earthlink.net
March 19, 2008

Patch Info:
(FOB) Sony ECM-22P -> Master Reel supplies:
The Other One (1:25 - 2:19)

Notes:
-- Set 2 is seamless
-- WRS Prelude tease after Me And My Uncle
-- Master Reel transferred to CD at the Mastering Plant in L.A.

AUD (shnid=94261):

MR > R > CD > EAC > WAV > FLAC

MAR (Harvey Kaslow)* @ 7 1/2 ips. > R @ 7 1/2 ips. (Will Boswell via Rob Bertrando) Maxell UD tape > CD --- R copied @ 7.5 ips using a Revox A-77>A-77 --- Mastered to cd by Matt Smith --- Playback info: R > Akai GX625 > apogee mini me (24/96) > apogee mini dac (monitoring) > Lynx One soundcard > wavelab 5.0 (dithered to 20/44) > CD > EAC > WAV (shntool confirms no sbes) > FLAC (TLH)

* Recorded By Harvey Kaslow and Craig Todd
(FOB) Sony ECM-22P condenser mikes into a Sony 770 portable 7 " reel deck.

[missing El Paso; shnid=88816 provides Me and Bobby McGee]

Thank you to Charlie Miller for the SBD transfer,
to Harvey Kaslow and Craig Todd for recording the show,
and to Rob Bertrando, Will Boswell, and Matt Smith for the AUD transfer.

Matrix by Hunter Seamons using Final Cut Pro (FLAC>AIFF>Final Cut>WAV>FLAC)
January 3, 2009

Set I
---
d1t01 - Introduction
d1t02 - Bertha
d1t03 - Playing In The Band
d1t04 - Loser
d1t05 - Mr. Charlie
d1t06 - El Paso
d1t07 - Cumberland Blues
d1t08 - Brokedown Palace
d1t09 - Me And Bobby McGee
d1t10 - Hard To Handle
d1t11 - Casey Jones

Set II
---
d2t01 - Saint Stephen
d2t02 - Truckin' ->
d2t03 - Drums ->
d2t04 - The Other One ->
d2t05 - Me And My Uncle ->
d2t06 - The Other One
d2t07 - Deal

d2t08 - Sugar Magnolia
d2t09 - Morning Dew
d3t01 - Turn On Your Lovelight

Notes:

1) There is about a minute cut in the AUD near the end of Lovelight. There are gaps in the AUD between songs.

2) While the primary AUD did not have Me & Bobby McGee, it did have a significantly longer crowd intro and outro than shnid=88816.

3) The right channel of the AUD was low during the last two songs. This was adjusted.

length	expanded size	cdr	WAVE	problems	fmt	ratio	filename
0:47.21	8340236 B	---	--	---	xx		gd71-08-06d1t01.flac
8:56.72	94719788 B	---	--	---	xx		gd71-08-06d1t02.flac
6:02.65	64009724 B	---	--	---	xx		gd71-08-06d1t03.flac
8:03.34	85281212 B	---	--	---	xx		gd71-08-06d1t04.flac
5:12.73	55208540 B	---	--	---	xx		gd71-08-06d1t05.flac
7:07.12	75351068 B	---	--	---	xx		gd71-08-06d1t06.flac
7:07.55	75452204 B	---	--	---	xx		gd71-08-06d1t07.flac
5:59.62	63473468 B	---	--	---	xx		gd71-08-06d1t08.flac
8:11.07	86628908 B	---	--	---	xx		gd71-08-06d1t09.flac
7:48.30	82625804 B	---	--	---	xx		gd71-08-06d1t10.flac
5:29.15	58070924 B	---	--	---	xx		gd71-08-06d1t11.flac
12:48.22	135526988 B	---	--	---	xx		gd71-08-06d2t01.flac
7:09.60	75816764 B	---	--	---	xx		gd71-08-06d2t02.flac
3:59.30	42230204 B	---	--	---	xx		gd71-08-06d2t03.flac
7:49.16	82769276 B	---	--	---	xx		gd71-08-06d2t04.flac
3:14.04	34231052 B	---	--	---	xx		gd71-08-06d2t05.flac
6:25.06	67928156 B	---	--	---	xx		gd71-08-06d2t06.flac
5:48.69	61549532 B	---	--	---	xx		gd71-08-06d2t07.flac
6:59.09	73932812 B	---	--	---	xx		gd71-08-06d2t08.flac
11:33.32	122320508 B	---	--	---	xx		gd71-08-06d2t09.flac
26:52.19	284401532 B	---	--	---	xx		gd71-08-06d3t01.flac
163:26.38	1729868700 B					0.5885	(21 files)

APPENDIX C – SELECTED INTERVIEWS

For all interview transcriptions:
Katie Harvey – Boldface type
Interviewee – Regular type

Page References

216	Dan Healy	November 12, 2008
235	Dennis McNally	October 22, 2008
243	Dennis McNally	October 31, 2008
252	OBIE, Interview 3	March 21, 2008
275	Adam Egert	November 1, 2008

Dan Healy
Grateful Dead Sound Engineer
Interview: November 12, 2008
Conducted by Phone

Notes: I first met Healy in November 2008 at a Dark Star Orchestra show where he was mixing the house sound.[114]

TRANSCRIPTION:

Ok great. I want to make sure that I'm going tape the interview – is that ok?

Yes. It's Ok. I understand. Of course you are. Some day you're going to have a famous interview with me.

That's right. That's what I'm doing right now. [Laughs]

That's what it's for. Let me just tell you something: when it comes to me talking – I know that's a legality – but when it comes to talking, there's nothing I can – would ever say that I'm not prepared for the entire world to hear.

That's good.

I say what I mean and I mean what I say. As much as I possibly – I mean as much as anybody possibly can. No one can do that for everything. Anyway, why don't you give me a little outline of where you want to go. And then I'll take you off in some directions, ok?

---

[114] Dark Star Orchestra (DSO) is a Grateful Dead cover band known for replicating Grateful Dead shows "note for note."

Well – my outline for the interview was first I wanted to talk to you about how you got involved in working with audio – I know how you – I know the story of how you got involved with the Dead, but I was interested in how you got started in kind of working with sound – and then –

Is your version the Wikipedia version or what?

Well, there's several versions out there.

Duh.

Do you want to say it then?

No that's ok because it doesn't really matter because what really matters is that I got involved with them.

I mean my understanding is that you helped –

Go ahead –

You helped – you knew Quicksilver Messenger Service and you were at a show with both the bands and you helped with the equipment and then mentioned to them that their vocals needed improvement and so they said go for it.

Yea – that's the short version but that's an accurate example of the short version of it, yea. Jerry invited me. Jerry came to thank me at the end of their set. He came and shook hands and introduced himself and said, "Hey, thanks for pitching in and giving me a hand." I went to a Quicksilver Messenger Service show – I lived on a Houseboat in the North Bay of California – of San Francisco Bay in a town called Larkspur which is in Marin Country, and the houseboat next to me was the Quicksilver Messenger Service. But I also knew John Cipollina prior to that just from living around there, right? So I had a job at a recording studio and I also knew about electronics, which we'll get to in a minute. So those guys – nobody had any money you have to understand. I was eighteen. If you were playing music and your amplifier broke, you could stop the show because no one had spare equipment or any of that kind of stuff. Usually the way it worked in those days is if there was another band playing you'd bum an amp off of someone else's if you were lucky. So these guys were always hitting on me to fix their equipment because we were next-door neighbors. And we hung out. And they conned me into doing it for free. So, fine. So, John was always after me – you know I never did hear them play – John kept saying, "You've got to hear us play. You've got to hear us play." So this one night they were headlining after – the opening band was the Grateful Dead. And so when John and I arrived the Grateful Dead was in the middle of their set and the music had stopped and it was,

"Is there a doctor in the house?" And John ratted me out, so I went to the stage and I switched some stuff and I got it to work and I didn't know what to do so I just walked backstage and sat down and the Grateful Dead finished their set and when it was over Jerry came up to me and introduced himself and shook my hand and said, "Hey I want to thank you for being a friend and being helpful and pitching in."

And so I wound up going off up into the dressing room and bullshitting with Jerry the rest of the night and never did hear Quicksilver play, not that night I mean. And that's when I mentioned - Pigpen was singing and there w[ere] these two little teeny speaker cabinets. You have to understand in those days, music and sound were not really integrated. I mean the music - and the players had their instruments and their guitar amps but the sound system that they sang through and stuff was usually - in those days they were called public address systems, and it was usually one or two microphones. I mean you know – you've seen the Elvis Presley movies and the Buddy Holly movies and stuff right – so you can see there were no microphone stands around the drums and all that stuff right? So in those days, there was no sort of intercoralary or interconnection or symbiosis between sound and the music.

So I noticed that the sound sucked and I mentioned it to Jerry and he basically challenged me to come up with – to manifest a better idea if I had it. So I went to a – they were going to play at the original Fillmore in San Francisco and they were to play there again in a couple of weeks and so I went out and raised a bunch of money, which you can use your own imagination about. And I went to two different sound companies, and I rented all of the equipment I could rent from them with the money I had. And then there as an old lady that ran – it was owned by what was called the Fillmore Corporation and there was a building down the street. I think somebody owned the whole block or something. But anyway, this one office you go into, and you talk to the lady, and you could rent the Fillmore Auditorium for 200 dollars a night. But there were no shows for the couple of nights before the Grateful Dead played there two weeks later, so I conned the lady into letting me go in there a couple days ahead of time. And I set up all of this equipment. And in those days there weren't any standards, so I had to modify a lot of the equipment so that it would all connect together and stuff. So that's what I did during those few days. The Grateful Dead came and played and there was, instead of these two little teeny speakers, one on each side of the stage, there's this huge pile of speakers. And it worked incredibly well, and a whole new idea was born.

That's pretty much the – you know – from then on it became – it was – it became obvious that the sound had to be part of the music. And up until that point it really wasn't. If that gives you much of a description. But anyway that's a longer version of how I got hooked up with the Grateful Dead.

So you want to know how I got involved with sound?

Yea.

I was always a – in the old school, in Walt Disney Comic Books, there was a character called Gyro Gearloose, that's way before your time probably, but he was like the crazy nutty inventor. I think you would call them geeks today. OK? Only – yea – I guess geek, but they were technic geeks that also did technical stuff too – that had a lot of wiring stuff going on and that kind of stuff.

So I was just born that kid. And I grew up in a family - my parents were musicians and my grandparents were musicians - so I grew up in a musical family. So I knew music, and I loved electronics. And I loved sound. And I had always dreamt up – you know when you're young – when you're young you don't really have any sort of defined idea. I mean think back to when you were eight years old. I mean you know – you could think of all the things you could do but you don't really know. You think you know, but you don't know. And actually you get to be my age, you still don't know [laughs]. You leave a trail of stuff behind you. At any rate, I was – I grew up in a little town in Northern California. In those days it was a lumber and timber industry, and so – and it was the story - it's like if you grew up in West Virginia, and you grew up in a coalmine town. I mean you got out of high school, and you got married, and you got a job in a saw mill or lumber mill or in the woods, and that was your life. That was what you did, right? And by the time I was in the sixth grade I knew that wasn't going to happen. So the rest of it was just waiting until I was old enough to get out of town. And I wanted to – I was fascinated by – I used to have – there were no radio stations but late at night you could get AM radio stations. And that was before FM radio stations – I mean they existed but they weren't popular – that didn't happen for a long time – in the '60s. So I had a little radio and my mom would come into my room and yell at me to turn off my radio set. So I would put my radio under my covers and I'd turn it on and then – and I could read – it had a little light on the dial – I could read - I could read books and stuff and listen to the radio. So I was always that kind of kid. I loved music. I loved listening to music and listening to the radio and I always knew that somehow someway that was going to be part of my life.

All through high school I was the guy that always did the sound for the school plays and the dances and the prom and all that. I was that guy, ok? And so, when I got old enough to leave home I went to San Francisco. This was in the early '60s. And by 1963/64 I started meeting some other guys – well first of all I was living on this houseboat and I got to know people – that there were other people that had come to – that somehow gravitated there that were like me – they had a good [home] that didn't offer what they – what could ever possibly satisfy their dreams. So we all sort of like lemmings, we all kind of left and somehow – I mean it happened all over this country. In my case it happened in San Francisco along with a bunch of other people. And we all sort of migrated to San Francisco and somehow stumbled into each other. And the original San Francisco music

scene was so small that everybody knew everybody. Like I knew all the people in Jefferson Airplane. I knew Jimi Hendrix. I knew Janis Joplin. I knew Tracy Nelson. I knew all of the Charlatans. There w[ere] maybe 200 of us in this music scene. And we all played in the same places. In those days, there was a sort of - mainstream AM radio was king. And it was like the top 40 was the music scene. And they had this "we have the top 40," disc jockeys yapping and screaming and playing. And it was all pretty much [money] oriented. It was all pretty much controlled by others – by groups of people outside. And if you weren't inside that there was no possible way that you could either get your records or get gigs anyway.

So we got gigs – we did our own gigs right from the very beginning by discovering that there was an old 1930s ballroom called the Fillmore Auditorium that was mostly dark and people rented it for wedding ceremonies and graduations and that kind of stuff, you know. And so we discovered you could rent, so we rented it and we put on our own gigs there. And it turned out that audiences came. You know people came to hear us. You know, it didn't start big, it started small. There were nights when there were maybe 20 people there, but little by little it got larger and larger and larger. And so what happened is that we – a scene started forming outside of the main stream, and that's kind of – that's why we had our own little organization and our own community because none of us were in the mainstream, we were all outsiders. So we – the outsiders – we had our own insider-outsiders club so to speak ok?

That's why it was possible to know everybody because there wasn't that big of a scene to begin with. Then little by little it just got bigger and bigger and bigger. I got involved when I first left this little town in Northern California. When I still had a home there that I inherited from my Dad that's my sort of – in the 80s I owned a radio station and that was the studio for the radio station. I sold the radio station but I kept the building, so I still have that. It's up in the Redwoods, and actually it's on a river called the Eagle River. And it's a fantastically beautiful place…I left there – the lumber thing has long since gone away because all the trees were used up and stuff. So it's now mostly pot growers and stuff. [Laughs] I went to the city, and I got my first job in a recording studio. In those days they didn't – you couldn't take classes – there were not audio courses or recording classes or anything like that, and most of the recording studios – all the older generations engineers who were sort of my parents generations – they were all WWII veterans and stuff and so they were trained in electronics by what was called the signal core…which is like the sound and communications part of the military. And so those guys all got out of the service and they got jobs as engineers in radio stations and TV stations and recording studios and stuff.

And so my first job – if someone didn't mentor you, which wasn't that easy either in those days to find someone to do that, then you had to sort of find a way in. So my first job was at a studio called Commercial Recorders. And I worked there as a janitor for free, just so I could hang out and after hours I would clean the place,

empty the trash cans and vacuum the carpets and clean the restrooms and stuff like that just so I could go and have a studio that I could hang out in. And I lived in my car. I slept in my car. And it was pretty lean times, but it was the only way I knew of to get a start in the area I wanted to go to. I didn't really want to. There weren't any really formal college courses or anything that would have taken me in that direction at the rate and the direction that I wanted to go in and so I just selected to sort of do the school of hard knocks version. And I hung out, and worked, and watched, and eventually the day came when I had an opportunity to fill in for one of the engineers, and I did a recording session. By then you have to remember I spent my whole life playing around with all this stuff so I wasn't completely a neophyte about it. So I did a recording session and was successful, and I began doing sessions. And that's how I got the job and how I got into sound. And from there I ran into Quicksilver and I ran into the Grateful Dead and then quit my job – actually I kept it for a while but then pretty soon the Grateful Dead just sort of eventually absorbed me – all of my time that is to say and that was the beginning of all of that.

Your head's probably spinning by now?

No it's great – it's great to place how – because it seemed like when you entered into the Dead from what I think of and from what I know that you already knew what you were doing and then the Dead gave you an avenue and a space to work out….

A direction. A direction and a base. Yea. That's a good way to characterize it. Yea and another thing is that Jerry Garcia had one really amazing talent, better than his musical talents and that was – I always wanted to see him be a movie director because the talent that he had, that he wasn't even aware of, is he had this ability to get people to come out of themselves and do their very best artistic and creative work without feeling afraid or ashamed or guilty. He had a way of getting up – of welcoming you to take to your best shot at something without fear of failure. So he was like an artist enabler of the first degree. And I don't even think he saw that in himself. But others saw it, and I certainly saw it. Because there were times when I'd be – I'd say, "I'm not sure about this." And he'd say, "Go for it Healy. Go for it." You know? And a lot of times it meant a lot of money and stuff like that. I mean there were things in the studio because I did a lot of studio work and I designed a lot of equipment and I innovated a lot of methods for recording and stuff like that that had never even been done before. It started with the *Anthem of the Sun* that I created ways of combining different live shows and stuff. In those days, I mean, man, the recording world by today's standards was like the Flintstones. Ok? It was really not flexible and really didn't account for any of the multitudes of the things that we do today and really my generation created and re-wrote the book and reinvented the whole way of approaching all that and the Grateful Dead was pretty much the leaders in that field because myself and the others that were involved with me were enabled by the Grateful Dead both spiritually and financially. The Grateful Dead put

millions and tens of millions of dollars into sound equipment and stuff into research. And not all of it was fruitful. And some of it - but the fact remains that today that a lot of what's commonly practiced was invented by us, so – nobody knew any of this was going to happen. We were sort of like the rebel without a cause generation except for we weren't without a cause; we were just rebels. We weren't necessarily bad people. And we weren't vandals. And we weren't – we weren't going to turn out to be mass murderers or evil people of some kind. I guess you never know when you're born who you're going to turn out to be. Are you going to be Charles Manson? Are you going to be Jerry Garcia? Or are you going to be Derek Daniel Healy? So I guess part of us should all thank our lucky stars that, for whatever sequence of events, we didn't get misguided or twisted and wind up being destructive in society instead of constructive in society. So I think that was one of the things that was discovered is that we could play music and create these musical ideas and create this sound equipment and play music and play it hard and we would work and play as hard as we wanted to and it left good behind instead of destruction. We left a wake of happiness instead of sadness. We left music behind. We left songs behind. We left sound equipment behind, rather than a trail of disaster and destruction. And I think that alone is a lot to be thankful for. If you make it through your life, no matter what you do, if you make it through your life at least achieving the ability to add instead of take away no matter how important it is or how well learned you are or how - what a large footnote you are in history or what a small footnote you are in history or no footnote or THE note in history, the act of what you're doing is best when you turn out to be someone that contributes. And I think that was one of the things that really glued us together is that all of our lives we had been told that we were – you know I had always been told I was a bad seed, voted least likely to succeed. I got fired from menial jobs and was told by employers, "You're never going to make it," and that kind of stuff. But I never believed in that. I always knew there was something inside me that just – but I hadn't found it yet. I'm talking about in tougher years – little jobs you get when you're 13, 14, and 15 and 16. And so I didn't know what was leading, but I never bought into the fact that I was bad guy. I don't care – even my teachers. I was always the guy that was the least likely to succeed guy, the guy that the teacher always used as the example of the fuck up. Although I didn't go to the office – I wasn't sent to the office anymore than anybody else, but for some reason – I'll tell what the word is – the word is precocious. Do you know what that word is? It means knowing too much for your age.

That's one of the meanings of it. Look it up at dictionary.com. But usually the way it's used is a precocious child is a child that is ahead of their time. OK? And like all people that are ahead of their time - I mean all down through history you've seen - you know of stories of people who have paid all kinds of dues just simply for being ahead of their time, right? So a lot of that was just that standard riff right – but when we all sort of ran into each other and there's where I believe in a higher power because I don't believe in coincidences. I believe that there's a higher power that somehow cast all of us misfits together and who turned out to

fit. And transformed us from misfits to fitting adults. Misfit children to fitting adults. And I don't – coincidences like that don't happen. There's a reason why even though I wouldn't begin to tell you or even guess why or how or what for. The best I can do is something that you can already do yourself which is look back over time; I mean aside from that, I mean who knows why anything happens, you know. But my gratitude for what has happened is certainly something I testify to because I was – in a funny way and also in a strange way was one of life's lucky lotto winners. Not so much monetarily, but in terms of creativity and stuff like that. I always had – I always had my own and to this day I don't – I create on my own – I don't have to – I'm one of the ones that's here to entertain or to do stuff for others. I'm not an audience. I'm an entertainer. That's not a value judgment; it's just a position. It's like, you have to look at it like a circle, and it's just a different dot around the circumference of a circle. We all have – we all play some role in life and in society and on this planet, even though probably none of us can really define what it is. And maybe it's not really important to define what it is. But that part of it really has a lot to do with it. So I – we are getting really off into the philosophical stuff right now but one of the things that you have to understand is that a lot of why the Grateful Dead became known in history had to do with a lot of philosophical stuff. It wasn't great music. It wasn't great personalities. It wasn't some great, organized effort. We never thought that anything was ever going to come from this. We just kind of did it day to day and we never believed that it would – we didn't think it was going to last five years let alone 50 years or 30-40 years. So we never were one of the kinds of people that – that part of our organizational life was definitely represented by some other dot in the circle if you know what I mean. I mean we were like dummies when it came to stuff like that. We never thought that anybody would ever do anything but go "oh ok that's cute. Move on." That's kind of how we sort of thought. So amongst each other we shared our art because we had a likeness and friendship but it never ever occurred to us that anybody on the outside would actually notice it so we didn't do it for those reasons. Otherwise, if I'd been aware of that I would have done things a whole lot different, so maybe that would have spoiled it. So maybe everything is right that way even though from a pragmatic business point of view we were dismal failures. And that's just a fact. But if we had not been maybe a whole bunch of the good stuff that came out of it might not have happened. There might have been some bean counter saying, "No you can't spend money on this," and then something wouldn't have happened. So definitely the philosophy is what drew us together – had to do with what drew us together and what happened was a result of throwing us all together in a big pot and stirring us up, and it was more like that. We didn't know anything more than the audience than you know right now what to expect or what was going to happen. We were just doing it.

So as an entertainer in this world, what was your philosophy as the man behind the board?

I had a dream I guess you could call it. An epiphany shall we say. That had to do with – I'll try to not be as long winded about it. I had a flash of – I heard the GRATEFUL DEAD once in my head. And I went – I finally went, "Oh – that's what it's supposed to sound like!" Ok so I realized – you could call that an epiphany I guess. Then it was – and this I early on – so then it was – and this was when we were working on *Anthem of the Sun.*
…….

I – somehow I was imbued with – something zapped me and I knew what it was supposed to sound like. So then the next question was, "How can I share this with other people? This sound is so great. I've got to figure out how to get it out to the audience." So I guess step one was getting involved. Step two was getting a clue. And then step three began how to manifest it. Right? So once I heard the sound in my head, then it was like – for one thing, working in a recording studio, I knew about, I knew about the possibilities or the flexibilities of what you can do with sound. And everybody else, all the other members of the GRATEFUL DEAD and all the other bands in those days – they all played guitars and stuff but they didn't know anything about sound or recording or nothing. In fact that's why I got involved. Obviously I was one of the missing pieces of the Lego set, if you will. One missing piece of the vine. Because I did have – I knew about that. I knew music, but I knew most about the sound part of it. So I had a notion of what it was supposed to be like. Part of that notion was, "Can I create a situation where if you were in the audience, and you bought a ticket, and you walked into a concert hall, a little place, a big place, or wherever, [you] sat down or stood up or wherever you were, could I create a situation where if you close your eyes - and in your dream world you could pick the nicest room you want to sit, the nicest living room you could imagine and the nicest most comfortable chair you could imagine with your nicest most best friend you could imagine and on the other end of the room was the world's most fantastic incredible stereo and you could push a button and turn it on and just hear this music that blew your socks off?" That was my model. And then it was like, "Can I do, is it possible for each and every person that comes to the concert? Can it be done? And if so, what do I need to do to make it happen?" So that was really the nexus of what I was all about. And through immense support of the Grateful Dead particularly Jerry Garcia both financially and spiritually I – and many others, I by no means can take credit for any more than the part that I did – but – most of the people – I created, I sort of see myself as a person that knew what it was supposed to sound like. I had many that helped me with the wherewithal, that believed my dream with me. They had, in their piece of the pie, contributions that were either some kind of mechanical or technical aspect of the sound in one way or another that helped facilitate the dream because we all realized that we were all sort of going toward the same dream. For instance, Jerry believed. When I said, "I know," he believed me, and he never questioned me right to the end. He never questioned me. "If Dan says that's what it is, that's what it is." And he and I used to have a joke between [us]. You know I used to say "you don't tell me how to mix and I don't tell you how to play" so we had a great mutual respect for each other's creativity and art. So

there was that kind of spirit [that] really opens you up. You're no longer inhibited. You'd be amazed what people can do just by believing in them. That's one of that things that America represents. The golden ring. Going for the gold. Going for the goal. Those are the ideals that make me really soar. The fact that being able to just go – take your best shot – and know that it's ok. I mean that's – there are a lot of parts of this world that you're not allowed to open you mouth without getting shot, sadly. And I'm sad to say that it's true. And politics is not my thing. I didn't mean to get into politics. But the point is, is that through a combined effort - and as we progressed we got more, we attracted more and more audiences - but I would learn how to make a nightclub sound good and by the time I'd get that down it'd be like "Hey we can't play these nightclubs anymore because there's twice as many people outside who need to get in." And then we'd have to move to a bigger size venue and I'd be like, "Ok I have to start all over again." So then we'd get – I'd finally get that down and then "ok this place is not big enough, these size venues aren't not big enough. We got to move to bigger ones." Until it became Giant Stadium and Madison Square garden and Englishtown and Watkin's Glenn and the hugest biggest concerts ever known. It was a continual, a never-ending challenge. And we never ever stopped researching. We never stopped. In fact, to this day with Dark Star Orchestra - last night I experimented with new equipment and new ideas I have never done before. So I guess you never really stop. I think I would either feel sorry for or be suspicious of people that felt that they had finally gotten to where they were going. You know what I mean? I can't imagine that as a philosophical concept. I don't think you ever get there. I think as soon as you get to where to you think you're going you notice that there's another door, you go, "oh ok." And then you have to open that and go through that one. So again, that's my philosophy. But that has to do with what motivated me and I think that I speak pretty much for all of us along those lines. I doubt if any of the Grateful Dead would disagree with anything that I've said. We all obviously had our differences. We were family. We lived together. There were times we wanted to punch each other out. There were times when we did punch each other out. But nothing - when it came to the music, you leave your troubles in the dressing room and you get on stage and it's music – that's all there is to it. And that's another really good healthy thing to know about – music is more important. The whole is bigger than the sum of its parts. You've heard that axiom a billion times. And it's really true. There's a lot of the clichés are clichés but the way they got to be clichés is because they're true, you know, so.

Next.

Anthem of the Sun.

What about it?

Well, I'm just really interested in - because I've been working digital studios and reading about what you were doing in an analog studio, but I'm really

interested in how you were taking these multiple takes and running them – because a big part of my project is the Grateful Dead on tape – how is that being –

The Grateful Dead on what?

On tape. On recording.

Got it.

….

And so from what I understand, when you came onto the project with *Anthem of the Sun*, you had this massive amount of tape that you had to merge into one show or one experience, one…

That's very true. A seamless. Phil Lesh likes to call it a "seamless performance." That's his way of characterizing it. Yea. And I'll tell you why because we had - you have to know a little bit about what the equipment was like in those days. I mean I'm a digital guy nowadays. I'm not – nowadays digital recording has proved and advanced to a point of where the sound quality is acceptable, more than acceptable. It is exquisite if you do it right. And I was ready for this 25 years ago. I was the first person to have a computer at my mix booth that I used in my equipment, and that was back in the early '80s. I had the first Mac computer going there. And we used it for programming. We used it as a device to collect data and to calibrate. Without getting too technical, but when we did *Anthem of the Sun* most recording studios had stereo, two-track tape recorders. And you went in and you played your song and sang it. Like all the people before us, they just, like Elvis Presley and Buddy Holly and that whole generation, they just went in and performed their songs live, and that was it. You didn't overdub anything. You didn't mix anything. And not only that, but you went home. You were sent away after you played your song. It was like, "Go home." And the engineers and the producers and all those people did it. So there was definitely a barrier between those two. It was like the same thing I was describing about the gigs and the Top 40 and the in crowd and our crowd. It was the same sort of thing going on there. But the equipment itself was really kind of broadcast equipment. Mostly mono and some of the more deluxe studios had stereo tape. But all the old original records from the first generation of rock and roll, those are all mono records. They're recorded in mono. A lot of them with just one microphone. A lot of the – Bill Haley and the Comets and those kinds of guys, if you do a little bit of research into the sort of early rock and roll, it was mono with one microphone in those days, and that was left over from big band era from the 30s and 40s where the Glen Miller Orchestra would do a live radio broadcast with one microphone and they worked on the placement of the instruments and the arrangements. That's why you always hear talk, when you talk about music of the big band era, they always talk about arrangements because the secret was the

arrangements, the way to make a 30 piece orchestra to play a song so that one microphone could pick it up and send it down a phone wire to a funky radio station who transmitted it and you're listening to it in a 1930s car radio and it sounded good! You've got to hand it to them. I mean they had that shit down really good.

But our kind of music - we weren't professional musicians. Just like I was a do-it-yourself engineer, Jerry was a do-it-yourself guitar player. Krutzmann was a do-it-yourself drummer. So we couldn't perform the whole show without blowing - without fucking up to be honest with you. Not to be crude or __ about it, [just] most candid about it. So what we did was – a guy – I don't know if you know who Owsley is, but Owsley made, he took a stereo tape machine and he took, he put together two stereo tape machines and there was – are old enough to know, to remember 8-track cartridges that people played in their cars and stuff? You've seen them haven't you?

Yea. And I've been working with a reel to reel so I kind of know how that – like the playback head and the record head and all that stuff works also, so.

Yea ok, so there used to be these cartridges, and they were called 8-track cartridges, and this was mostly in the 60s. And you got them in your cars. And so whenever you release an album it was also released – not only did you get a vinyl album, but they also release with the same little, a little miniature version of an album cover on these 8-track cartridges. You've seen them around, you just don't know it. At flea markets and stuff, there's boxes of them.

No I've seen them. I've definitely seen them. One of my roommates plays them.

There you go, all right. So before there were 8-track cartridges, there was what they called 4-track cartridges. So Owsley took the heads, tape heads, from the record head and playback head from a 4-track cartridge machine, and he bolted them onto a reel-to-reel transport. And then he took two stereo electronics from two different stereo tape machines and put them together and created a 4-track channel recording machine on quarter-inch tape, ok? He built the machine, but he never used it. And I found it, and so I took it on the road with us. And so I started recording all the different gigs. And so what happened is that when we were doing *Anthem of the Sun*, the original producer that was assigned to us by Warner Brother records, kind of, he bowed out. He bowed out because the band just drove him nuts because we wanted to do stuff that wasn't – he was from that school of you play your song and then leave the studio and we were like, "No, no, no, we want to do this over again and we want to do this. Can you splice this? Can you make this sound like this? Blah Blah Blah Blah." And it went on like this. And he just finally threw his hands up and said, "I'm out of here." So I was working my own stuff in the studio, but I was doing live sound for the Grateful Dead, so they said, "Dan you've got to come and bail us out, our producer walked

out on us." So I said, "OK." So I took this machine and we went and did a whole bunch of gigs. One of them was called the Great Northwest Tour. And one of them was at a place called Kings Beach, which is on Lake Tahoe in California. And I don't remember exactly all the places, but there were maybe a dozen different gigs that I recorded, and so what we did was - the sound of the recording and the equipment that we used and the microphones and stuff weren't always the same. So when you're splicing tape, the way it works is that you can splice something, the same as editing on a computer when you're editing sound. I mean if you're editing car horns honking to garbage cans rolling down flights of stairs, it's going to change from one to the other. Now that's an extreme example, but the point is, is that if you want to make something seem like it's all from one thing, then it has to have the same equality sound characteristics and stuff. And so we, because I was sort of a novice and because we didn't always have the same equipment and because we didn't always set up the same and because we didn't always play it the same and because everybody wasn't always in tune the same, and for a multitude of reasons you couldn't just splice the tapes. And so what we needed to do is, we needed to take the best parts of each song from whatever – like we'd pick a song like *The Eleven* and we'd listen to *The Eleven* from all the nights that we had, we'd pick the one that had the best playing on it and the best sound and stuff. And then we took Dark Star and all the different songs and so what that meant was each of these songs had, we from, they weren't all from the same show so the tapes weren't contiguous. Not only were they not continuous, you couldn't splice them because they didn't sound the same and match level-wise and stuff like that. So what I did is, I created a mechanical device that would enable me to synchronize the two performances and then we would take faders and cross fade from one performance to another and it became seamless. And what I did was I literally would crawl inside – the studio machines were big, huge, big – are you familiar with the big Scozal ??? Ampex machines and stuff like that?

Only in photographs. I've never been in a room with them. But they're huge.

Only in photographs. Ok. Well they were big enough to get inside of, ok? Sort of. I would crawl underneath them, and I would put on these earphones. And I would get these two machines going at the same time. And I would start them at about the same place. And then I would rub my hand on – there's a thing – the vice that pulls the tape through the machine is called the capstan. And the capstan has a motor and this runs at a very accurately regulated speed to maintain perfect speed of the tape. But it had a – one part of it has a fly-wheel, but if you put your thumb on the fly-wheel, obviously it would slow down. What I would do is start the two machines from two performances, and then I would rub my thumb on the fly-wheel. And I put on a pair of earphones; I'd put a mix of one of the tapes in my left ear, and a mix of the other tape in my right ear. And I would – the machine that had the performance that was ahead of the other one, I would slow it down until it got to the place where they were perfectly synchronized and then

someone else would do a cross fade. And that would turn two different shows into one show. There's some pretty heavy technical crap there, but – I created that because there were no other ways. You couldn't load it into the computer and change it all around – any of the stuff you can do today which I dearly love. I mean today the computer studio that I have has equipment and a computer quality that if there – if you can think of you can do it. There isn't anything you can think that you can't figure out a way to do. That's how incredibly deep it is. But compared to the old days, it was. This is like a miracle. This is like a dream come true. [These are] things we dreamt of years before that now everybody can do it on their laptop and at home. But in those days it was just being in the studio that was a big deal and just having the equipment. Having two tape machines side-by-side was a big deal in those days. Anyway by doing this – a sequence of all these, matching the speeds and the places and creating these cross fades, we did the whole second side of *Anthem of the Sun* which is at best not that great sounding but it's live. It's a document. It's more of a significant musical document than it is an audiophile's dream, which it certainly isn't. But it certainly is a significant musical document. It was the birth of – ok – we never went back to the straight studio world – that was it. Once we got out the straight studio word and started doing it ourselves, it was like why would we go back? My involvement [in] the studiowork of the Grateful Dead, that was the beginning of that part of my career. I wound up doing it wearing both of those jackets.

Is your ear hurting yet?

No it's great. I just have a clarification for the tapes for *Anthem*. You were using a four-track recorder at the performances from my understanding, how were sparcing up the instrumentation on the tracks?

You know I don't remember but probably the vocals were one track. And probably the drums were one track. And probably there was a stereo mix of the guitars and bass on the other two tracks. That would be my guess.

And were you consistent from tape to tape or was that another consideration you were having to deal with?

I probably wasn't consistent from tape to tape because there were times when I didn't have enough mixers to go around. All of this stuff was begged, borrowed, and stolen, figuratively speaking. If I – you couldn't always bring enough equipment. Just the fact that I would take a whole table full of equipment instead of one microphone blew everybody away. And we'd go to these places to record and they would just scratch their heads and go "what's going on here." And I was also responsible for the speakers and sound equipment and stuff like that, so I had a lot going on which was fun and interesting but it's difficult to remember exactly how I did things, but I think you could probably boil it down to basic logic. Obviously you want the vocals on one track, and obviously you probably want drums on another track, and obviously maybe the bass is on a third track and

maybe the two guitars were on a fourth track and it was based on pragmatic logic. And the maximum –

So you were – the two tape machines side by side, were they both 4-track playback machines and then you were running them into a two track stereo master or like how?

No. Here's what happened. By the time I had all of these recorded – it took over a year to record *Anthem of the Sun* because after the original producer ran out of the studio screaming we sort of realized we had to start over again. Not really so much start over again, but we had to pick up where he left off, only we didn't have the studio, we didn't have the record company wherewithal, so we had to come up with our own ways of doing it. But in San Francisco, the very newest machine in the world was an 8-track, was on one-inch tape, and the Kingston Trio owned it. There was a studio called Columbus Recording and the name of their production company was called Trident, for three, for the Kingston Trio, for productions. We got to use their studio and they had just got this brand-spanking – the very new – it was made by 3M. It was an 8-track, it was the very first – probably one of the very first five in the world. And the Kingston Trio had one because they were still pretty popular in those days. And they had one of these 8-tracks. So what we did, I would transfer four of the tracks onto four of the tracks of the 8-tracks, then I would play that back and start the – because I only had one of these 4-track quart-inch machines. And then I'd put the next performance on the quarter inch 4-track and I'd start it and start the 8-track with the first 4 on it and I'd run them together. And so we would stagger them back and forth and back and forth. You dig what I mean? We'd go first four, second four, first four, second four, first four, second four, first four, second four. And then we would just simply cross-fade them when we went to the final two track mix. And that's how that worked.

Wow.

Yea, wow was right. And I figured that – I figured out. I figured out how to make it work, and I'm the one that did that. I actually – nobody – I had no help, nobody suggested it, nothing. It was like how are we going to make this work? And that's what I came up with. And for the time it probably couldn't have happened any other way. So there you go. And we wound up with incredible recording studios. But that's how it started. It was because of the 8-track we were able to do, to take these two 4-tracks and make a composite, so called seamless performance. That's very interesting. That's some real pioneer work there. That's like covered – wagon stuff.

And then the Dead had one of the first 16-track recorders right?

That's correct. MM1000 was the model of it. And you talk about big. I mean it was – it weighted as much as a Volkswagen. It was a pretty big machine. And it

was very exciting and a very big deal. And that was 2-in tape. And then the same machine got turned into a 24-track. And then after that we started – then the Studors got real popular so we bought a Studor 24-track. The we bought a second Studor 24-track and by then we had – this is in the late 70s/early 80s. By then we had adapted video synchronizing equipment to run the tape machines so that you could have two 24-tracks running in-sync with each other so you could have the equivalent of a 48-track machine. And that's how we did that. And we did – and then when I did the sort of last frontier thing the Grateful Dead did was the Radio City Music Hal and Warfield – *A Reckoning*, *Deadse*t and *Recking* records. I had five tape machines synched together. I had two 24 tracks and I recorded everything on the stage. And then I had three 4-tracks that I had stereo microphone-stands located in the auditorium, in the room, out in the audience in the Warfield and Radio City Music Hall and those were all synchronized together. So when we mixed it down, I made the mix of the first forty-eight tracks but also I could blend in, you could move forward in time, I could take the machines that contained the information of the microphones out in the room.

It was very sophisticated called MS Stereo. It was a matrix kind of stereo, it was a complicated mathematic extrapolation of a way to record stereo and thought to be the mathematic equivalent of how your ears are able to perceive. You can hear something but your eye doesn't tell where it is – you can point to it and know. It's considered a - the most real version of stereo micking. So I had these in different places in the room, but I could move them forward in time or backwards so – because the sound takes – there's a delay going out to the audience but I can cause these machines to run in synch only ahead of the two 24-tracks so that I could bring the audience up to the stage. So when I mix them all together, you heard the sound in the room as well as the sound in the audience kind of simultaneously. And it was really far out. Very far out situation.

Wait so those, the recording you're discussing right now was – where did that – that was just for you? That was? Did that become – that was for only the Radio City?

No – we did 12 shows I think at Radio City and 12 shows at the Warfield in San Francisco.

Ok and that's when you did this set up.

And we recorded them all with that process and we then picked the best songs from each show and mixed them down and that began those two records. And one more there was an acoustic set and an electric set. You know Rhino Records and other record companies and stuff have bastardized and reshuffled so much stuff that it's really difficult but what you need to do is you need to find yourself an original record pressing of the original release of *DeadSet* and *Reckoning*, it's a 2-record set. And listen to it. And you really get blown away. Listen to it through a good pair of earphones and it will just blow you away. Ok. So there's

a lot going on in there. There's a tremendous amount of meat to wrap your teeth around, your ears around.

At shows where there wasn't already a pre-planned release of the recordings, were you recording everything?

Yes, it was sort of archival. And I did – it was at least stereo mixes. And then the last ten years I did ADAT digital tapes, or I did 24-track mixes, I mean tapes of everything. And they exist and now I guess Rhino Records owns them so who knows what's going to happen.

Why do you think – what do you mean they bastardized them? Do you think they are going in changing the recording?

No, it's just a normal procedure from the industry. In order to get people to buy something it will be the blah blah blah with two set songs or that kind of stuff or different blend or something like that. It's just marketing bullshit. It comes down to bean-counter stuff. It comes down to businessmen greed. I'm not real sympathetic to that part of the business. That might be one of my shortcomings.

I'm going to shift completely. I wanted to talk to you about the formation of the taper's section.

…

Why that was made?

I'll give you the dissertation on the taper's section. There are people - and I'm not one of them, and in fact I'm vehemently not one of them - there are people that believe that every nuance of every note should be recorded as though it were the holy grail. And I'm a proponent of the one that got away. Like what if we all just went and heard the concert and the only thing you had from that concert is your memory of hearing it, right. See, I'm that guy. That's the romantic guy in me, ok. For me, being able to play it back takes the romance out of it, takes the fun or the enjoyment or the excitement. I can't think of the right word to say but I think you get my drift. It's like Paul Simon's song, Kodochrome. That's what that's about. It's about being there and seeing it. Witnessing it. There doesn't need to be tape. There are people for some reason who absolutely object to that and believe that every nuance – I mean they would record sound checks and everything if they could. And so people began bringing their tapes, their machines. In the '70s when cassette machines came out, people would start – that's when it started happening. People would bring machines and bring microphones and record. And of course record companies always hated that because they believed it disrupted record sales. It actually - it turns out it's the other way around, it enhances it because people that love you so much that they

come to record you, they are the first ones in line to buy your records when they come out.

Some reason because I was out in the audience where my mix board was, they became Dan's tapers. And it was only because they were in the same part of the place. It had nothing to do with me. I didn't invite them there. I had nothing to do with it. But in the end, I went through years of grief with record companies, with some of the band members, with all kinds. It was an unending pain in the ass to me, ok? So what happened was, people would just be randomly spaced around the room recording. But then by the 80s, our concerts were so sold out, that a lot of the places we played had assigned seating, so people would wait in line for hours to get tickets and stuff like that. And so what happened was one night – and it was always like, "Dan," the record company always saying, "Dan you've got to stop this." And some of the band members who bought into that were like, "Dan you've you make this stop happening." And my answer was, "why me? If you want it to stop, you make it stop," because no one was going to stop it anyway. We tried for a while, so people just snuck teenier machines in and that effect was that the tapes were shittier sounding. But there were still tapes out there. It was just one of those things you can't control.

But what happened, this one night this young boy and girl were maybe fourteen years old came to me at the mix board crying and they said, "We waited all day and all night in line to get tickets, and this guy came and told me that he wanted to put his microphone there. And if I didn't leave he'd beat me up." And that was the straw that broke the camel's back. I went nuts over that. By then it's like, "OK, I am going to get involved now." So I threaded out to the tapers that if I – that – what happened is I created the taper's section behind my mix board. OK? Because I knew that I – I tried a little bit to stop it and I even had some heavies beat –not literally beat people but get heavy with people. I confiscated people's machines, and told them they were never going to get them back. I always gave them back. In the end I'm a softy. But they didn't know it at the time. And I'd hold them for a few days and let them talk me into giving them back and stuff like that. When I saw that it wasn't going to happen, I saw that it was also becoming a problem in assigned seating, that created the taper's sections. The function of the taper's section is – it had two functions: 1) If you were in the taper's section, you had taper rights. 2) If I caught you out of the taper's section, it was karmically clean for me to kick your ass. And throw your ass right out. At least having them in the taper's section took away a problem in the audience at large.

And so there were - the band I'm playing with right now – Rob Eaton was one of the tapers, ok? [Laughs] So there you go. In fact, he was a big fan – a fan of mine – that's how I got to spend a couple a tours with these guys is that their sound mixer injured his back really seriously on tour.

…

What do you think was the draw and power of GRATEFUL DEAD in live experience and do you think that the tapes give access to that experience?

I know for sure they do. Here is an analogy. A metaphoric analogy. Five years ago when you were at a party somewhere – a beach party or some celebration. And you were somewhere with a bunch of friends and there were some photographs taken. And you look at that photograph and, no, it doesn't really take you back there, but, yes, in a way it does because you look at that and then your mind does the rest. It goes and pulls out of the files all of the experience that you had at that time, the good you felt, the bad you felt, the tastes you tasted, the hot you felt, the cold you felt. The experience comes back to you. So no, it's not a real living document, but yes, it triggers the ability to fill in all of the gaps and for a moment you can be back there at that party. Is that not true?

Yea totally true.

That's the analogy and that's what the tapes were. The tapes are even a better version than a photograph. Even though a picture is worth a thousands words, a tape is worth a million words. Here's a quote for you – if a picture's worth a thousand words, a tape is worth a million notes. You can quote – maestro Healy said that. That's a direct quote from the maestro. OK, and yes it does take you back. You put on a pair of earphones and an old tape, and if you're somewhere where you're not distracted by any other thing, you will go there. All right. The yellow-brick road.

Dennis McNally
Grateful Dead Biographer and Publicist
Interview: October 22, 2009
Conducted by phone

Notes: This is the first of two interviews. I wish to thank David Maxwell from Donate for Life for putting me in touch with Dennis McNally.

TRANSCRIPTION:

I thought maybe we could start with the tapes and the taper's section. I have a couple quotes and I was hoping we could talk about them in relation to the tapes. You have a great paragraph on how the Dead's stage was not a conventional performance space and more of a living room. And I'm kind of wondering how you feel that interacts with the tapes. If you feel like the recordings allow access to that or if that is more - was more of a lived environment.

I'm not sure of the distinction you just made there but to me it's like this. Because of the Acid Tests the Grateful Dead had – by the time they were done they'd even figured this all out, but a lot of this was instinctive at the time. They had developed a paradigm, which was based on improvisation and which was based on a notion that the audience was the show, and they were merely the soundtrack. Very different approach to – and that the audience was in effect a part of the band. Very different attitude from any other musician, ever. And although that's hard to accept that they would then go out and play a 50,000-seat stadium and you'd think, "Well, you know, obviously they're entertainers." And there's the band onstage, and there's the audience. And they're entertaining the audience. And it's hard to believe, but certainly that was the band's approach. Within the context of their playing by committing absolutely to improvisation – again as I said, it became – it became – instead of the normal performance, what you got – in more of my stoned moments I imagined that it was as though the music was playing all the time and it was simply when they came out on stage that you could hear it. Somewhere up in the – I was at Winterland at the time and I looked up at the ceiling and I had this sort of flash – I wasn't hallucinating – it was just this sort of imaginary thought that the music was sort if rumbling around up there all the time it's just that at moments you could actually hear it. And that you – when they played it wasn't as though they were presenting something to you, they were simply permitting you to see it or hear it, but that you were part of that process, that there was a loop from you to them and back. From you to their ears and brains, and through their nervous system, through their fingers, and their instruments, and into their sound systems to you. And it was a complete loop.

So the tapes were essential on any number of levels. The decision to permit taping was genius, and completely random and serendipity. And was there for

reasons that had nothing to do with the consequences. The classic example of unintended consequences. In this case, totally marvelous ones. Well, not totally marvelous. Then they had their consequences. The first consequence, the first reason, when the band formally allowed taping, which was about ten years after people really started taping – well twelve years – thirteen years – the first tape that I know of the audience – where the audience – it wasn't the audience actually, it was the sound guy at Fillmore East – those very famous shows, 2-13-70, and those shows circulated because there was a sound guy at Fillmore East who taped it for himself, and you know – secretly, the band didn't know about it. And it's been passing around ever since. By the early '70s people were starting to smuggle small cassette players. Technology aided them and eventually you had the Sony D5 that was the workhorse of Dead tapers from – I don't know when it came out – late '70s to the end. And the band, since it wasn't required for them to deal with it, they didn't really think about it, which is they rarely thought about something they didn't want to unless pressed, and the policy varied. If you had annoyed a crewmember and he saw you taping, he might bust your chops and take away your tape and/or if he liked you, he might let it go. It just varied from night to night. Finally, the number of tapers grew so significantly and since their preferred spot was right in front of the soundboard, it reached the point where Healy literally couldn't see the stage. And the audience couldn't see the stage. So there was a band meeting.

And the band just said all right, the only simple thing to do is, you'll pardon the expression, segregation. We've got to get these mic stands in one place where they don't bug everybody and that's obviously behind the soundboard where you can't see anyway. Thus it became. That was in 1984. The reason they did it was quite simply because they didn't want to be cops. They didn't feel – because the music was different every night, the idea that by having a tape of a live show would stop people – and because they didn't make a living selling records fundamentally although they made records – but it wasn't their orientation. They made the decision based on the fact that they hated the idea of being cops and frankly by then with the D5 the only way that you could really effectively, much less now which is impossible, but then the only way that you could effectively stop taping would have been to have a metal detector and run everybody through a metal detector on their way out or in or both. You know, it's nuts. It would have destroyed the ambience of the show, but what – so they did it just because they didn't want to be cops. 99 percent of their reasoning. The record company had a minor heart attack, but the record company by the early '80s hadn't had a studio album for the Grateful Dead in four years and didn't have much impact on the band and just sort of shrugged and went "Oh God," and waited to see what happened. And of course what happened was the band's audience grew enormously in that period from '80-87 and then of course in particular after the *Touch of Grey* album. But it grew enormously well before the *Touch of Grey* and the reason that it grew is that tapes were a far better representation because they were ninety minutes. Some were between sixty and ninety minutes. They were a better envelope for the band's music than a record. And of course CDs came in

‘84, but it was a while before that became the standard. And tapes in the late ‘70s and the early ‘80s were the best way to learn about the Grateful Dead. And the thing is until *Touch of Grey*, the band, the audience expanded in what I refer to as an organic way, namely it was one to one. Or it was – it was a real person, and you would run into a real person who was a Dead Head – happened to me – who was a fanatic who would do nothing but listen to Grateful Dead, and if you liked them and hung out with them, you gradually got inducted. And as you got inducted, among other things, and you like the music, you also learned that you were part of family and that you have family obligations and you had to treat each other nicely and by and large people learned that. This was something different. This was something special. And this was not – you know – it just wasn’t another rock and roll show. And that’s very powerful mojo. I mean that – you know – and it be- – and among the other things you realized when the band said you could tape, they were empowering those tapers to be sort of intervening – another layer of the process of being part of this family – it gave you a role. It got very complex because of course at times that role was, “Hey, I’m a taper, I’m more important than you because I serve this cause.” And some of the tapers are really obnoxious frankly. Anybody walks near their tapes or was speaking, you know, and they’d be yelling or shushing you or whacking you in the ankles with a tripod because, you know, “Hey man, we’re doing important stuff here.” They have very limited senses of humor sometimes. But they served this incredibly valuable function and the result was that people – that it spread – it spread radically. It – the band trust – the fact that the band trusted its audience enough to allow taping was such a statement of empowerment not just for the tapers but for all Dead Heads. It said you’re family. You’re not customers. You’re not cows with wallets. This is family. And – so the role of the tapers in an anthropological sense was as sort of – I tend to think of the Grateful Dead as shamans onstage – they weren’t exactly – they weren’t entertainers although hopefully they were entertaining. They were on a good night trying to get to heaven. Trying to cross into what is scared space. Playing for them was a sacred space. And that the audience was part of that. And – but you can only do that eighty nights a year, and, when you weren’t doing that, then you had tapes and you listen to the tapes and rapidly you discover with some interesting exceptions that by and large the Grateful Dead’s attempts – they had some – a few great records, most of which were live, and but you came back to the tapes, and again a system of ethics. The first tape I ever got, as an example, I had been going to Dead shows for six years. I had a bunch of records. I just hadn’t gotten around to being that fanatical, as it were. And I went to a show, a big stadium show – way the hell, a long way from the stage – terrible show. It was in Santa Barbara in 1978, Warren Zevon opening. He was drunk and lousy, and the audience didn’t boo him, they just turned their back on him. And he was abusing the audience; it was fascinating. And the band played – and you know – played so-so, as they tended to do that year in my experience, and these guys next to me were taping. And I thought to myself, “Well, gee it would be very interesting to have a souvenir of my experience.” That’s really the way I thought it. And I turned to them and I said, “Gee, you know, I’d love to have a copy. Could I give you some money?” Well

they thought I was trying to set them up. I instantly realized, "Oops big faux-pas." And said, "I'm sorry, I'm sorry. No. No. No. Didn't mean to offend. Never mind." And after a while I gave them my address and said, "Hey, if something comes up, let me know." And they were also from San Francisco where I was living and still live. And I don't know, a week or two later. It wasn't in the mail – they wouldn't even take the – mail me anything. They came – somebody stopped by my apartment building and put a note in my mailbox that said, "If you want a copy of the tape, buy some blanks and mail them to such and such and we'll mail you back your tapes." And they did, God Bless them.

And eventually, the next year – I was an odd Dead Head in that I moved to San Francisco to go to Dead – really a considerable part was to go to Dead shows – but I didn't know any Dead Heads. And I didn't feel obligated to bond, because I went to the show – there's two major aspects of every Grateful Dead show that people experience. One was the music. The other was the social aspect; it was the community. It was a legitimate viable, breathing community. And eventually I became very deeply part of it. That's how I met my wife and most of my friends and so forth. But for a considerable time – I got to San Francisco in '76. Went to my first show in San Francisco that New Years. Went to a bunch of shows in '77 and '78, but really didn't connect with my first - except for the people who had turned me on to the Dead, but they were back East, so I first really connected with a Dead Head who was of course a maniacal taper – still is. A big name defense attorney in Manhattan but what he really is is a taper, and will always be a taper especially now that he's transferred them all – all those tapes he made to CDs. And we met on a bus going to a show and then I started getting tapes from him and then eventually I was working with Dick Latvala and getting all of his tapes and on and on and on. I just gave you a half and hour answer to a probably three minute question so I hope I'm not boring you.

No this is great.

That'll – there's the answer to that question.

OK – so, I mean I guess related to all of this – once the band was realizing the value of the tapers even though I guess as you said they were sort of pushing into creating the section – how do you think this interacts with what they were doing – they were recording for themselves also and the official release side of things – I mean do you feel that this informal economy has hurt that?

I'm sorry this informal economy has what?

Has hindered what the band could be doing with its own official releases or do you feel like it's two different realms?

You in the end, although it was not handled well – in the end they made a very solomonic and wise decision about Archives.org I mean on the things that was

appealing about tapes was that it was very – it encouraged contact. You know – you talked to people and you related – there as the mail – it was – it created community. When all of your stuff is up on Archives.org and guys are downloading on a continuous basis, they're communicating with their computer, but there's not a whole lot of communication otherwise going on. I'm a little – shall we say I'm a little old and – old-fashioned about my community and virtual community not so much. But that's just my hang-up. The solomonic decision was that there's two kinds of tapes. There's the band's tapes which are obviously soundboards which leaked out because Dick was a very sharing guy although probably he shouldn't have -- but a little too late to worry about that. And there [are] audience tapes, and the audience tapes are the audience's then and forevermore and that's what you can download at Archives.org to this day. Soundboards you can stream. The value of those soundboard tapes, especially with a very judicious amount of polishing by the engineers, is indicated by the incredible sales of Dick's Picks, which went on for years, and, which the band, you know – the band's economy did quite nicely by it thank you very much. Paid my salary and a few others and Grateful Dead Productions. Pardon me – so part of the late nineties and well into the 21st Century. Now that it's been taken over by Rhino, there's different style and I don't - I have less information because I don't work for Rhino. If you ask, "Did tape trading cut into the band's profits, the answer's probably a little but overall going back into the early – you know late 70s and early 80s, it far more extended them because it added – it brought in Dead Heads – it created new Dead Heads. The way to be a Dead Head is not listening to the records but listening to the tapes. And talking about this with people and getting a sense of what an unusual and exciting thing this is. This sort of gypsy caravan called the Grateful Dead. So on the whole, nah, I don't think so. Not especially. That's why it's so ironic – again the first priority for the band was not making money.

That, when in 1988, after Touch of Grey, and we were having enormous problems with the number of people who were hanging out in the parking lot, we first banned …We had to ban camping, overnight parking – that was the euphemism – and vending. And a lot of the vendors, who felt mightily entitled that – stunned and offended at the idea that the band could decide that they weren't allowed anymore. And one of the rationalizations – one of the objections was, "Oh the band wants to sell their T-shirt. Their crummy T-shirts. We have much more interesting T-shirts." Most of their T-shirts were more interesting mostly because they were illegal, not because they violated the band's copyrights but everybody else's. All those very clever take-offs on Fed-Ex – all those adds – "When you absolutely, positively have to be at the next show." And "Deadopoly: The Game of Dance." All this stuff. Well of course they were clever because they were what I call double-boots – because they took from the Grateful Dead's copyright and they also took from Monopoly and let me tell you something – Parker Brothers has much better and tougher lawyers than the Grateful Dead ever did. But anyway, the punch line to all of this is of course that's nonsense, I mean the band – yea we lost a lot of money. We knew it with what was going on in the

parking lot and nobody gave a rat's butt. But what we cared about, what we did was all those vending – of course the camping and the vending created the scene or prolonged the scene to the point where we were getting thousands of people in the parking lot who didn't even have tickets so the people with tickets couldn't even park. It was an overloaded environmental situation. Our environment was completely overloaded to the point of toxicity. And we had to clarify to guys to – community is great but your sense of community is reaching the point where it's making the music unable to be played because we were getting summons saying you can't come. We love you. We like you to come. But as long as you allow camping and vending, it's impossible. And it finally reached the peak where in the summer of 1988 or '89, the folks at Giant Stadium in NJ said, what I just said, you can't come unless you ban this stuff. And they pointed out, if you're going to do two maybe three shows here, any shows. If we allow the normal, the way it's been going, we would have to provide city services to 10,000 people for four days: the day before, the two days, the day after. What do you mean by city services? Well sewage, porta-potties, food, security, police services, medical services. I mean, we're not a city, we're a stadium. You're not – Jerry Garcia is not the mayor of a traveling counter-cultural city. He wants to play guitar. So we said no more. And the ven – the camping was easy to eliminate because you know – you've go to leave. Go. Bye. And vending, we never really got control of, but we managed to disperse it enough so we could live – for the next six years – most of the time most shows went reasonably well [un]til the last tour where everything sort of fell apart. So, yea. So there.

OK. Yea. Kind of shifting gears, I wanted to ask you about your writing process. And how – just kind of maybe how you were dealing with the massive amounts of information that you had and how did you know when to stop and start writing?

Well, the highlights of it was that I got invited to be the biographer in very late 1980, and I spent three and half years. I had a half time job, so I was able to. And I researched – you know I was doing interviews [with] a lot of the people [the] band knew before they became the Grateful Dead, the background and all that. Then in '84 I became the publicist and I tried to do both, keep working on the book and be the publicist and it was impossible. The attitudes of being the historian and the publicist are different. And besides that being the publicist for the Grateful Dead was a sixty to seventy hour a week job. I mean it was way-full time and I finally crashed in January of '85, after six months of trying to do both, I woke up and said, "You know, I can't do both." So I put the book on the back burner and I got out a little notebook and I took notes. Anything funny or interesting happened, I wrote it down. And kept doing that really until '95. And then '95, Jerry dies. I spent another two years trying to hold Grateful Dead productions together from my point of view. And in '97 I stopped and the thing about too much information is - it's true of everybody, it's true – at some point everybody who's trying a book, especially a research type book has to say you know I could do this another year. It's time to write. You can't just. You have to

stop sometime and that is just one of those decisions you just have to make. I have enough to tell the story well. I know I can, yes I could get more information. There's five people that I haven't talked to – or a hundred. But you know, enough. So I stopped. And spent four years really researching everything all over again. I went back to band members. By now, for instance, I had done an interview with Danny Rifkin, who was the band's first manager in like 1981. He didn't know me and didn't trust me. He gave a very short and inconsequential interview. In 1999 or whatever it was, by then he's known me for 20 years. We had – I watched his daughter grow up, he knew my daughter well and loved her a lot and my wife etc, etc. And he gave me a total six hours of interview. Much better memories than I ever imagined. Got some wonderful stuff out of him the second time around. So anyway – then I sat down and wrote. I had a vision of the structure of the book from 1983.

I had a kind of a what the zen people call a satori or at least it was a crystallization of what basically by and large turned out to be the final structure although little things changed and obviously how things fit together, once you're writing and once you're up close to it you just see how things fit together better. But the overall notion of alternating between descriptions of a year – of what I was seeing as a kind of a not fictionalized – because it wasn't fiction, it was what I like to think of as hyper-real. A weld – each little fact was, it wasn't literally real because a story I might tell about in describing a song – that might be from 1974, but the incident of the person in the audience is wigging out at that time might be from '79 – ok, so what – how important is that? Taking them together – communicates something. And I had all that. I had the most wonderful experience. I had to drive up 100 miles north of San Francisco to deliver something to Dan Healy. I could have Fed-exed it. Thank God I didn't. But I wanted an excuse to take a drive. And about halfway there – I almost drove off the road about five times – because halfway there I suddenly realized that I had the structure and I pulled out a notebook and I held the notebook on the steering wheel and I scribbled out notes for the next few miles. And I realized yea ok – that's how I will tell the story. So I had the structure in my mind for many, many years of alternating between history and the present – the present as I was living it, which was the 80s and 90s synthesized. And that solved the number problems because of course the Grateful Dead were like a chameleon from 1965 to 1975 – every year there was something radically new in their experiences – radically new – in their experiences, in their music, in the sound system – all this good stuff. And then from 19 – you know the late 70s to 1995, the shows had the same shape. The tours got to be very systematized. The relationship of the band members didn't change a lot. And in order to tell that – you can't just say and then they did another tour, and then they did another tour, and then they did another tour. You treat it all as one big tour. And that's what I tried to do.

OK. OK.

OK.

So again kind of shifting. Your book focuses on Neal Cassady as a really important figure. I've read the *Electric Kool-Aid Acid Test* and that focuses on Ken Kesey, and I agree with you. But I was wondering if you could expand a little on Neal's role within the creation of the community and who the Grateful Dead [were] and how they fit into American culture.

Well, Neal – you have to pair Neal with the Acid Tests because that was their experience. The Acid Tests, again, they came out of the Acid Tests with a fundamentally different notion of how to be a band and how to relate to your audience. And that all rested on improvisation. Neal improvised life. Neal had a spiritual practice, which involved driving and being completely crazed by everybody else's standards. And they felt that he was a little closer to the godhead than anybody else they knew. They learned – they saw – hanging out with him in particular during that period – during the period of the acid test – they were seeing a holy madman – a holy fool is the name of one of the biographies of Neal. The Holy Fool – No I guess it's the Holy Goof. That too. And they just knew him to be some kind of inspiration. And then of course just before – he died in February of 1968 – just before he died he had spent a number of weeks at the Dead house at 710 Ashbury Street, and he stayed in Bobby's room. Now Bobby – Bobby had reacted to LSD, which he quit at that point a year and half before. He had only done it for about a year – by going almost completely silent. He really – he did enough acid. And there was Neal who never stopped talking. And Bobby just sat there and listened. So that when word came [of Neal's death], at the same time, coincidently he's working on a song which came to be called "The Other One" he writes about cowboy Neal at the wheel. And then finds out that Neal's dead, there's a real inspirational sort of contact point there. And that's what Neal did for – it had it's best expression in having – in that song. But it applied to all of them, though. I mean every member of the band would spend the rest of their lives saying this is the guy who moved me, who changed me. And there you go.

Dennis McNally
Grateful Dead Biographer and Publicist
Interview: October 31, 2008
Conducted by phone

Notes: This was a follow-up interview from our first interview a week prior.

TRANSCRIPTION:

Ok Well where we stopped last time I was asking you how the Dead fit into American culture, the large question.

Well again, historically they are part of a lineage that goes back to Thoreau, to the – when so-called bohemianism which is to a say a group of people who get skeptical about conventional rules whether they're social like going to church every Sunday and/or worshiping the Christian God and/or sexual behavior - pardon me, normal - conventional sexual behavior. Or what Blake Rimbaud called the systematic derangement of the senses. You know, drinking too much or drinking a lot and/or smoking various substances, or doing psychedelic drugs in general. All that originated as a reaction to industrialization in the 1830s and '40s and you have everything that happened in '60s whether it was communal living, political strife over racial issues and sympathy for the underdog and that started whether it was with Henry David Thoreau who I might add was one of those odd – I mean he was politically there and men – certainly he was skeptical about everything – created his own reality – did not – he violates all the rules about bohemianism because he didn't drink or screw around or any of that stuff – I mean you know, certainly the founding father of an alternative life that has endured in America since the 1840s – Mark Twain – you could make a long, long list and it goes right to – to the 1950s, the so-called Beat Generation which Jerry Garcia saw himself as the youngest Beatnik. He was hanging out in that neighborhood of San Francisco where those folks were associated – called North Beach – in the 1950s – he was a young art student. And his teacher was a Beatnik. And he was hanging out at City Lights Books and going to the poetry readings on Grant Ave and that's why I became the band's publicist – well eventually publicist – but biographer because he read my Kerouac book and went you know, "This guy sees where I came from," and that's exactly kind of what I thought, that they were all connected. And that's – the Grateful Dead was simply the next step in that. It isn't universal or lifelong necessarily. It's not about – necessarily about eternal voluntary poverty the way Thoreau did it. But it's all about making your own rules and Jerry did.

And is that what you were referencing when you – I think I had mentioned last time the interview where you said that the '60s opened a space for the Grateful Dead.

Well no – specifically there what I was saying was that obviously the '60s were – a lot of things came to head then. You had a historical situation in which you had a depression in which people suffered very terribly. They came together to fight and succeeded and also suffered over World War II and in the aftermath of WWII. And then thirdly you had this major Cold War – this sort of second war, an unspoken war, which created an atmosphere of ideological – of what was called McCarthyism in which people were expected to conform. So you've got this entire generation that…had been poor and then fought a war and they wanted peace. They wanted peace in the sense of they wanted to come home to the suburbs where they were able to move because of that war because of the GI Bill of Rights which brought millions of people up one social class. People who were working class urban people in the – born to that in the '30s – like my father for example – where they go to college after the war, get a mortgage – get a white collar job instead of a blue collar job – and they were willing to pay for that among other things by the stereotype image that we know from those '50s TV shows like Leave it Beaver in which you had your perfect family and everybody stayed home and behaved themselves. That was the idea. And the Beats got up and said well that's not the whole of life. And then the…had a Civil Rights Movement that the image only applied to white people and you had a civil rights movement starting and it all came to a to head in the 60s in part because of the War in Vietnam which suddenly – all of the varieties – all of those things – there was a domino theory – the Soviets and the Chinese were our mortal enemies for life – that went away too – but in the '60s you have all that and you have prosperity so that it was possible – so that because – a lot of people were suddenly able to see that some of things that their parents and their eldest siblings in the '50s had bought weren't true. It wasn't so necessarily that among other things that black people didn't fit in America and it wasn't necessarily so that the only – you had to avoid all political entanglement and you should simply shut up and do your job and make your living for your family. And they started asking questions. And the war – you know increased even more and then the Civil Rights Movement picked up steam. And the end result – and there was prosperity so that for instance you could drop out and live a pretty simple life pretty easily. When rent is ten dollars – when five people could get together and get an apartment in the Haight-Ashbury for like seventy-five dollars and the rent fifteen bucks a head a month – it's pretty easy to scratch up fifteen bucks - and food's pretty cheap, you can concentrate on something else other than making a living. And that's why the '60s opened up for the Grateful Dead. And they decided on a way of celebration and going your own way but not fighting about it. They weren't interested in the political side of it – in the formal political side of it. Even though they supported Vietnam anti-war demonstrations at times. They played for the mobilization against the war – but they basically said let's walk away. Let's just – if you want to be in conflict, that's your business but that's not what we're up to.

…

OK – and you think throughout the – like I'm also thinking about the '80s – I mean do you think that Grateful Dead – do you think that they – how do you think they interacted as America was changing and as everything was being different – especially I think in the book you mentioned that the Dead kind of offered an alternative to what was going on in America during Reagan administration – maybe you could speak to that a little.

I said what happened in the Reagan administration was that greed got enshrined. The – you have a President in Carter in the late 70s – you take down - the Press and the Democratic Party take down – impeach a president successfully – or actually they would have been successful except that he resigned, which had never happened before. And in the aftermath of that, you elect a very ethically righteous politically inept President in Jimmy Carter. And then the Iranians screw him and combined with the Reagan people who make a deal with the Iranians who make sure that the prisoners aren't released until after the election which should have had Reagan impeached a long time ago, but anyway. And the end result is you coast into the' 80s and everybody decides to lay back and snort fat lines and that's it for Civil Rights and you know the general drift of what the '60s and early '70s had been about. And over that, Reagan saying greed is good. We're going to cut taxes for the wealthy, which we're still living. And, you know, the only thing we're going to do for people on the bottom of the pyramid is, "oh it will trickle down to you." And as a result in the middle of all that Dead Heads who were that group of people who always – there's always some people who are not going to buy into the prominent you know the reigning paradigm and they sort of went "No, I don't think so – I'm dropping out and I'm going to follow this band," and as a result, it was a perfect time for the band to – it grew enormously. Between '80 and '90 – it's just stunning the size of the crowds. People were attracted to it – and they were attracted to because a – there was genuine community. And b – there was celebration. And it worked.

OK. I'm going to change gears a little – in one of your interviews you said that your greatest challenge was being a publicist for the Deadheads – not just the band but for the Deadheads also – could you elaborate on that?

Well it's one thing to be the publicist for six guys who are reasonably cohesive and who aren't – you now they're not misbehaving – at least not in public. And they get together and they start shows on time and they play them well or not -- up to your opinion. And then they go home. But increasing over the course of the '80s you had many fans and – the big thing is we had the hit in "Touch of Grey" and the result - to that point we've always had – the people had joined – had become Dead Heads and my phrase for that – they'd become Dead Heads organically which means they knew somebody. And that somebody played them a tape and turned them on to what was going on. And they learned not merely that oh this music's interesting and I like to listen to it. They also learned that there's ways to act. And then in 19 – you know suddenly there's this hit on the radio and there's people going down to the show and they don't know anything. They're

just curious. They've heard it on the radio – it's interesting music so they figure they'll stop by and in the process you had thousands – and they go and they discover there's this party going on in the parking lot, which with a thousand people is manageable. Suddenly you've got 5,000 people and that's not manageable. And they hadn't gotten their lessons about behavior. And they're eighteen and most eighteen, nineteen-year-olds are, you know, not particularly super responsible nor interested in being super-responsible and you had problems. And that's just inevitable. It's like any sports crowd – it's like whatever. And people in crowds in general are not really at their best. And the result is that I'm being forced to rep – I have to represent them and it's impossible to represent a million people because inevitably there's going to be a butthead in one every thousand – that's a great batting average , one every thousand. All it takes is that one person to make everybody else look bad. And you know – and that happened from time to time and there were some horrible incidents – police stuff and what not. It was very difficult. It was very, very difficult – from the time of Touch of Grey to - the most difficult was the last tour. It was a stretch. You can't defend people who trash up the neighborhood, pee on the street, whatever. And of course in some places just the fact that they looked different was enough to get people all scared. And then you had some few people that really did misbehave. So, as I said, it was a challenge.

Kind of flipping the question to the other side, I was hoping you could talk about what behaviors were being learned –

I'm sorry what – say that again –

What behaviors were being learned when it was growing organically, which I think ties to the end of your book when you were talking about the philosophical underpinnings of the community?

In general the – in general it involved - the appropriate behavior was from the paradigm that we were – we that is all Dead Heads together - were family of sorts, and that family – inside a family you have a certain amount of res[pect] – hopefully if it's a healthy family, you have a certain amount of respect and that respect involves treating each other decently and treating the environment decently and being aware among – if you're smart – that for some people – there's an old Hell Angel's expression that you should only break one law at a time. And if you're a Dead Head, you've already broken a law. There was police profiling that said that you would be suspicious of people with Dead Head stickers on their car because they were probably carrying pot. That might even be a reasonably accurate assumption although it's not legally justifiable, but that's another issue. So therefore it was incumbent on you to be smart and to be careful and to – if you're going to wear tie-dye and walk through street then you've got to behave because otherwise you're setting yourself up for a hassle. You cannot expect the area around the show – the parking lot – to be exempt from the rules of the American reality, which means, oh by the way, it's illegal to do drugs and to

sell drugs. And you can't assume that the picture – you're in this wonderland surrounded by mostly your brothers and sisters that they're all your brothers and sisters. That's called undercover cops. And the end result was that we had trouble. There were shows where lots of people got arrested and that's, you know, not good. As I tended to say for – at the time – if you do this, this, and this, you will end up spending the night in jail. This is not something you're going to enjoy and we're not so pleased about it either. We would just as soon like it for you to come to the show, have a good time etc. So the - it was hard. You're asking young people to be very thoughtful and very careful – not normal young people behavior.

So what does it mean to be on the Bus?

Oh well everybody decides that for themselves I suppose, but the essential meaning is to – to get it, to – Grateful Dead music is this fusion of improvisation – jazz improvisation and rock format and rock form. And it's not for everybody by any means. So the result is some people get it and some people don't. If you get it and you say – oh this is – I like this fusion – it's sort of jazz-rock fusion on one level – frankly better even in my opinion than the way Miles Davis played it. That's just my opinion. And if you get it then – and you get the sort of peacefulness and what-not – you're on the bus. Simple. It would assume for many people a much more complex thing. Things like – sometimes it got competitive you know. Guys tend to be competitive – "Oh I've been to more shows than you" [Laughs] and "I know more about the Dead than you." Whatever – it's all – a lot of that is silly. But by and large it was innocent and reasonable and fun. And you could pick up horror stories, and there's certainly – there were some conflicts with police and people found dead at concerts – outside concerts, not inside – bad, bad – will always make you wonder. This guy Adam Katz – bothers me to this day – no one will ever know what actually happened to him. They found his body in the parking lot at Giant – not Giant – but Meadowlands – and nobody knows, you know? And they still don't know and the local police thought – the local – and people who think there was a cover up are way off base because the local DA actually thought – this was a respectable family - and he thought he was going to make political points by finding out and they were leaning on the local security guards. Most people thought that one of the – they can be very belligerent the security guard – they thought maybe one of them beat up this guy because he was very small - five feet three inches [tall] and one-hundred and twenty pounds maybe - so it wouldn't take the biggest punch to hurt him badly. But as it happens those guys traveled in pairs and nobody – the pressure was on – you'd think somebody would rat somebody out – it didn't. So those things happen. It was – Jerry used to talk about the Grateful Dead as a full-range experience. And by full range he meant that the music could be beautiful and ugly – could make you feel joyous and make you scared. And that's the way music should be – that's the way life should be – you've no perspective on happiness if you've never been unhappy. And I agree with that, and God knows

that what happened with the world of the Grateful Dead was a very full range experience.

Yea you touched on – I thought that was one of the great parts of your biography was that you actually get the other side because I think that a lot of people just see it as this kind of flower child happy perfect peaceful utopic thing but – it was kind of nice –

It was reality-based which means of course it was not going to be perfect. I never had a major problem, but again I came up at a time when it was a very modest scene. It was small. I will never forget in 1972 just as I was really getting on the bus – you'll pardon the expression - in which there was a big article in *Playboy*, a very good article, by a guy who had been at Stanford with Kesey and had been hanging - and in some ways was an early Prankster - and was hanging out with the Dead in like '66, '65, '66. And he wrote a piece about it. And it came out in *Playboy,* and it was a very good piece and I remember the guy who turned me on to the Dead was just furious – oh yea furious, worried, disgusted, because as far as he was concerned in '72 Dead – being a Dead Head was a small and private club and now suddenly it was going to get bigger. Well it didn't get bigger that month, but, well, by the '80s it certainly had. Well in the earliest days – it's just – it's like the Haight-Ashbury – you have an environment – and that's to say the area around the show and if you overload it – you have too many people in it – it's like any environment, any ecology, it breaks down, and that's what happened. I mean you had too many people. Some of them were not such great people but that's sort of only moderately important. It was simply that – just simple overpopulation screws up everything. When you put too many white rats in a skinner box, they start fighting each other because they don't have enough room. To some extent, that's true of what happened with the Dead, with the Dead audience. Not inside because that was always limited by the number of tickets you could sell, but outside it got ridiculous.

You have a quote from…Jorma that over the years the Dead would train a generation of audience – we were talking about how the audience was taking on a role in the Acid Test – I have been kind of musing over – do you think it was the band training the audience or the audience training each other?

I think it was mutual – certainly the band would tell you it was mutual. But what Jorma was talking about was specifically [how] the band evolved. Remember the band established its relationship with the audience in my opinion at the Acid Test in 1965, and they're a garage band. They're a garage band that's stretching out a little bit, and they're a blues band. They've got Pig singing some blues and they're playing "Do You Believe in Magic," but they're improvising because to quote Bobby, "We didn't know any better. We just – the song was over but we weren't finished playing it." So they jammed. What Jorma's talking about is how over the course of the next, the way the band evolved as musicians in the late '60s until – by the late '60s they're playing for forty minutes and singing one minute

of it, and they trained their audience to accept that. Most people go to a rock concert, they expect three minute songs, that's rock and roll. And as a matter of fact, that's one of the things that happened at Woodstock was that the band was in front of an audience that wasn't really accustomed to them. And they didn't know what to expect; plus technological problems. They didn't feel they did a very good job. I remember contrarily, there's a tape – I want to say in '69 in Flushing Meadow –might be 70 – and this – they did – probably it was '70 because they had a short acoustic set – one of those years – and they did an acoustic set and the audience is going, "What the fuck is this? You're supposed to be playing a mind-blowing hour long "Space" jam. And people were yelling, "Turn it up! Louder!" And Jerry said, 'No man, this is when you have to listen loud." And again, that's training the audience. And by then they became – I think this was 70 – they had evolved into again what I call a full-range band – they could jam. They kept adding things. They added an acoustic element – they added a softer part. But they still could space out for an hour. If they had stayed just that experimental band of January 1969 I don't know how long they would have lasted. They had to grow and they grew.

Great. OK.

OK?

Well I have one more thing. The idea of faith and synchronicity.

Fate or faith?

Faith.

F-a-i-t-h.

Yes. And how it relates to kind of what happened with the band and audience. You speak about it a little bit I was just hoping you could talk about it a little more about that fit into the ethos, the Dead ethos.

The central thing about the Grateful Dead – the simplest and most central thing was improvisation. When you improvise, you put your faith in the notion that it will work. And you're going to jump off a cliff musically speaking and fly. Sometimes they did; sometimes they fell on the rocks below. That's called a train wreck. They did a lot of those; after a while, they got pretty good at it. Improvisation is a learned thing, and it's a risky thing. With it, however, comes the opportunity for magic because things happen that you don't anticipate. The whole is greater than the sum of its parts. If you're playing a piece - if you're Def Leppard and you're playing to the best of your ability note for note the same show every night, you have very little variance between a bad show and a good show because they are competent musicians, they're going to be close to what they know they want. So the opportunity – there's a limited range there. If you're

changing – if you're playing a different show every night – different songs in a different order and you're trying to play the songs differently, sometimes radically so, sometimes it can be really bad – most of the times it will be in a certain range. And the sometimes, sometimes, it can be fabulous; it can be amazing. It can startle you because you're getting stuff you didn't anticipate. And that was the band's essential faith. Faith in improvisation. Synchronicity is something that emerges musically when you improvise and it emerges in the Grateful Dead life. I mean the stuff – I went – my favorite example of synchronicity was when I -- in the Fall of 1978 after they came back from Egypt they had a slide show. Literally it was what we did on our summer vacation. And it was pictures from Egypt. And I was standing there very high and I'm watching – they're playing "Eyes of the World," and as they play "Eyes of the World," in perfect timing to the lines, they sing, "Sometimes we ride on your horses," and at that exact moment there's a picture of Mickey Hart on an Arabian horse tearing around the dunes. "Sometimes we walk alone," and there's a picture of Jerry Garcia watching the sunrise from the top of the pyramid. "Sometimes the songs that we hear are just songs of our own," and it's them on stage performing. Those three images. And I went, "Wow! That's incredible!" And sometime later I went to Candance Brightman who was the lighting person who was in charge of that slide slow and I said, "Did you plan that?" And she looked at me and she said, 'Don't be an idiot. How did I know what song they were going to play?" That's called random, or better synchronicity. Sometimes it lines up. And I went, "Oh yea, right." There you go. That's the kind of thing that happened at a Grateful Dead show. You know the time I drove down one block in Reno, Nevada and saw store names – had nothing to do with the show – the show was down the block – but these are all established stores in Reno – there was a Golden Road Travel Agency – and this was long before you had Grateful Bread and people starting naming stores after the Grateful Dead. This is the 70s, ok? Golden Road. There was an Answer Man Hardware Store. There was some street name that was out of a song. It was amazing. Just random. That's synchronicity.

Do you think the tapes captured that magic?

Sometimes. Sometimes there was a tape – I always thought was one of the most wonderful tapes of the world. I think it was June 74 in Miami and they played Dark Star and then they played three – fragments of three songs all at once. Like different musicians, different band members playing different things. It was sort of a train wreck but not. And then eventually they played all those three songs coherently. And I thought, "Wow – you know I could have been then, I could get it all." It all made total sense to me out of the chaos. Sometimes the tapes really do – but you know…

Do you still have your tapes?

No I gave them all away. I don't have a tape recorder and I just figured at that point I was mostly checking out the CDs from Dicks Picks and I listen to CDs

now and I found folks that really loved tapes, cassette tapes specifically, so I gave them away.

OBIE
Tape Collector, Trader, and Archivist
March 21, 2008
Conducted in Boston, MA

Notes: This interview was actually the third recorded session OBIE and I did together. Before the recorder was turned on, OBIE, wearing a hat and t-shirt with logos of exchange groups, explained the Masonic layers of trading groups. He showed me copies of his tape lists, and we discussed specific song histories. Meanwhile, the Grateful Dead played in the background from his car stereo. Since we did the interview outside, wind interfered with the recording; when the noise actually blocked the words of the interview, I indicated it as [wind] in the transcription. Also, OBIE often used the abbreviation "gen" for "generation."

TRANSCRIPTION:

OK – we're recording

Yes I agree and I understand. Today is March 21, 2008

…

I mean my main question is, I am trying to really understand how these lists and the groups worked. Like how they formed, and then how - and I'm piecing that together a little bit, like [can hear Grateful Dead in the background, playing in the car 6-8-80…"rainbows and highways"] **Everybody was sharing these servers? Just a little bit - like what was going on.**

Well that's the digital age, that's all fairly recent, if you want to go back to the original tape trading clans…

Right, that's what I am interested in.

Right, that was, there wasn't a server, there was people who had tapes and… Friends of friends would trade you tapes, they'd use it as a barter thing so they'd get a copy of a tape from their friend but they wouldn't introduce you to their friend because they wanted to keep that connection. Basically what they were doing is that they were double dipping, as they were able to get everything that their friend was asking for, they would make a copy of on the way, and they were making a copy of whatever I wanted from their friend. You deal with that for a while and then eventually you just burn these people out.

I started with the thirty tapes from Howie and these were all killer quality tapes that nobody had the same quality because he had been friends of Bill Kreutzmann, so he was getting tapes right from the source and these things were just

spectacular and they turned out to be great shows. 4-28-71. Everybody knows the 4-29, but the 4-28 I think, that was the Dark Star show. It had a cut "Other One," [said in sarcastically critical tone:] "Oh we don't like that because it had a cut 'Other One.'" That's the Other One that's on the Skull and Roses album. That shows how good of a tape this is, is this is all the outtakes from the Skull and Roses that they didn't use so they just use the Other One, this has the beginning and the end of it that they cut out. 3-1-69 with the "Hey Jude"

These are all, you're saying the first set of tapes that you had.

This is the thirty tapes, and if I found anybody I would give them at least the thirty tapes. And it got to the point where once I got a couple hundred tapes, I would guarantee almost anybody that I could, I would double the amount of tapes they had if they traded with me. There was no retribution it was just like, I wanted in, I'm willing to throw blanks at the problem, and I just want the recordings and you want to tax me of whatever [Grateful Dead comes in – can hear in the background] I am willing to pay that tax, but bump it up. I am willing to treat you righteously, I want to be treated righteously in the thing. But I am willing to put in a good faith effort in the beginning. And then whatever I get, you can have too. There was no hoarder mentality. And digital, nowadays, that's what it's like, and people don't even know who their getting this stuff from. They see it on a list, and go I want this. It's like picking something, ordering, doing your groceries through Peapod. Where just like you're shopping for what you want. Back then it was very difficult. A lot of the stuff you'd get in was, their buddy taped it, he was way back, they weren't that good, but it was all you had. [Wind] …Then back in '87, I got my first Betty Board…[wind] 5-8-77.

So those were traded openly?...

What the Betty Boards?...

Somehow they go leaked in?

Correct. All of sudden, well they were all DATs, somebody started making a cassette for a friend and then they would move in between the cassette and DAT - there wasn't much interaction. And the DAT people due to the heavy investment, they were more elite traders. Just because it cost a couple of thousand dollars to get set up in that, and then [the cost of] the tapes themselves. It was difficult. Where as cassettes were two bucks a piece. Four bucks you could get a show.

Wait so is this the Howie that you met at the taper warehouse? Same guy?

Yes. Saint Howie. So he set me up. He had been so gracious to me so I basically got them as a gift and I had always worked on doing that to other people. Setting it up. So I was like paying - he gave it to me, so to me, I didn't have to work for it. I didn't have to beg people. I didn't have to be nice to certain tapers. So I had

a different attitude in it. Whereas other people, they'd have to be nice to get – they have to hold them over. It became a powerful talisman. If you want this you've got to do what I want for it, or you've got to bribe me for it or anything else. So that's how it was in the early days. But once the Betty's started coming out, those circulated on DAT. People would put them on cassettes – that's the first I ever heard of a generation on a cassette - whereas how close it was to the Master. You didn't know, hiss was on everything. We thought the Grateful Dead always played with a line of snakes behind them, and if you're listening to the tapes, that's what it sounds like. "Wow, they always have a lot of snakes at their shows." But these things, they started sounding better. And everybody of course had to have first or second or third gen. If you had a fifth gen, "No, we don't want to trade with you." And things like that. It was just so difficult.

Because you know that it was so far removed from the inside?

From the DAT source. If there was such a good version out there, that – we refer to it as the gene pool crowd where people don't want you polluting the trading pool with less perfect versions *than what they have*. Because they're afraid that they might get traded something that isn't what it says it is. And they'd be giving something away that's a better generation for an unknown generation. "No, I'm not even going to take the chance that yours might be better." So groups would form of people with two or three of the gens. Now if you didn't have friends that were in that, you'd be in a lower group that traded the fourth and fifth gen. There would be people like myself, FMs, recorded on a boombox. I didn't care, I wanted it. Because if it wasn't that good, I could tape over it. Plus it was always meeting the people. It was a very interactive thing.

Most record collection people spend a lot a time indoors, touching their record collections…[wind] so to actually find other people like that gave you a chance to go outside [Note: The wind saturated the recording here and blocked OBIE's words. From memory, he commented about people then letting others come in and touch their record collections]…who knows maybe they have financial problems and then sell you their records. So it was always a good thing from my point of view to make friends with these other weirdos. That's how the groups would form. People would have side interests. Some groups – it was like "we like the Dead but we also like Bluegrass." They'd start trading in those things and then you'd go over there and they're like "They're sort of a Bluegrass group." The fact that they traded Dead was sort of would go down and the other minor qualifier would become what the group was about. Even though they were still trading a lot of Dead.

And the logos and everything, that started after the Internet shift? Or no?

Oh no, that was always around before, but after the Internet – once you have a computer, you can basically do anything. You can set up virtual corporations. I have a virtual tape label where I just sit there and I keep using the same name. I

went out of my way to create a fake bootleg label, that looked as good as the bootlegs, but it was my thing. It was my trademark of quality. It was called H.E.A.D. Hedonic Engineering Archive Division. And everything, all of my stuff would have H.E.A.D. I would have little H.E.A.D. catalogues and stuff. It got to the point where I got afraid it was looking too slick and they would come after me as a commercial enterprise. But it was just part of something to do while you listening and making the cassettes. And people would want - once you got a logo, people would want to associate themselves with the logo. It's like I've been part of groups just because they had cool T-shirts.

Right. So there's a lot of these groups?

I assume so, I've seen them. There's big ones. The Internet enabled them to become worldwide. And people would get their friends and if you had a groups of like five or six people that you had been trading with, one person would get in a group [wind – I think he is saying that the one person would bring in the others] They would just become chatty. Pretty soon you'd be trading pet – recipes and pet stories and things about how to hide your spindles of CDs from the wife and stuff like that.

You said that on the email – that's funny – So with the groups, the function is that if somebody got something good, they'd let the group know?

Oh yea, well, that was a part of it – there would be bragging rights and there would always be a couple people in other groups– certain groups would have certain patron tapers. I was part of a group on original Compu-serve before they were bought out by AOL called Section 9. And their group leader was a guy named Rob Eaton. Rob was friends with Dick Latvala and Rob supposedly had everything on DAT that was in the Vault. And Rob…

Is that even possible?

Unfortunately it is. I can explain that later. But Rob. Who was a professional – went to school for professional recording –had made friends with Dick and Dick would have Rob transcribe cassettes to DAT for Dick. And then the DATs would go into the Vault. Rob would make two copies. Rob would have everything – that's how Rob had everything. Plus he traded with everybody. Once you start getting stuff, you start trading for other stuff that you don't have to fill in the gaps. Once you get a large chunk of the year – it's easy to fill in the rest of them. Or they just don't circulate. And once you start combining these collections into Ubercollections where you have 30 people trying to fill those single gaps – Vanderbilt 72 – you can start putting together and say – we have the complete year of circulation.

As a group?

Right as an Ubercollection - We were basically 7 people and we call it Built to Last. One of the guys down in NY – we were trying to come up with a name - for some reason he didn't like OBIE's Collection – so they went for Built to Last.

And that's the group who did Archive?

No we're the people who basically – after Archive.org went public – but then the Soundboards went down – we still wanted to have a public collection of the audiences and the soundboards that we'd put together for TOL plus the new material that had come out that we had added to it – so we did the Built to Last Project in the summer of 2007 and basically in 3 months we went through all thirty years and was able to get everything out there that circulated and then we began putting everything into what is known as the Vernon format – of Band Name, 2 digit yr, 2 digit month, 2 digit day, format – aud, sbd, blah blah blah – the taper, and then who seeded it with the Etree Shn ID. And that's actually the hardest part in the work is the auditing – is going up and making sure the MD5 you have on the hard drive matches exactly the one that's on Etree – if it doesn't and that's why Etree has the MD5s up there.

The Md5 is what you just described?

That is the sum.

Oh it's the 32-digit number?

Check sum. And you bring that down – and that's the only way you can verify that SHN ID 5634 is 5634 by downloading the SHN ID from Etree – it says right up there in the heading – download this MD5 – you bring it to [software] [wind]...whatever check sum thingy you use to verify these – and it will even tell if this is an exact duplicate of what is up on Etree or if this is not – and if it isn't then it ought to be using that SHN ID [wind…] handy plug-in that you can type in - you can either type the Etree Shn ID and it can bring you to that page or you can take a random check sum from the MD5 and plug it in and it will tell you what Shn ID that is. Very…[wind].

So – these projects – you are putting them all together on a server that everyone can access – or like on one hard drive that got passed around – or what? Where was it being collected?

That's a great question – and if you hand me that stuff right there – visual aides people – I actually have one of those notes here at the beginning. And this one is from Junky Willy – that is actually his name on Etree – that's why I say that – he is now a born…He is actually a born again.

…
You said he is not Born Again?

Willy? No, Willy has become Born Again.

What does that mean? You mean he went a way from it?

Now I am a Born Again Dead – now he's a, I think, Christian. A lot of people go from Grateful Dead and they find spirituality, instead of with the Grateful Dead spirituality, the state-sponsored type, the more legal types.

When you say you're a born again Deadhead – it's because you came to it later?

I was a Deadhead heavy duty from 79 until 82 and I saw a show – really didn't do much – Jerry wasn't happy - I was front row right in front of Jerry – and hear him say – "Why am I even here? I hate playing here." – and I was like – why I am bothering to come through here – I had spent all night long staying outside to get tickets and the show wasn't even that good and they were starting to play Touch of Grey and Throwing Stones and I was like – yuck – and they hadn't played Dark Star in 3 years and then I became a punk and got heavy duty into that [wind] so it was like I just fell off from the Dead and then 5 years later – a friend said, "Dude, they're coming to Worchester – let's go – I'll buy you a ticket." - he bought me a ticket and he gave me some sort of Kool-Aid and I became a Born Again Deadhead –

What year was that?

That was April 2nd 1987 – 4-2-87 at the Worchester Center – in fact coming up on the tape I have the moment that I became a Born Again Deadhead on my audio examples that I brought along with me today. This right here would have been the first hard drive that ever circulated that I know about and that was done for Junky Willy by me because I was tired of burning spindles – I was like dude just send me a hard drive.

OK – and this was everything that was on it?

And that was the end part [wind] basically 04 [wind] that date, we're talking – Fall 2002

Was then the hard drive thing started –

You get tired of burning CDs. In fact he's the person – he got tired of trading WAV files. I didn't go for this SHN stuff and this was before FLAC was around. But he found the show that I really wanted that I had never been able to find a recording of – 6-7-80 – found a guy who had it on cassette – bribed the guy with like 15 CDs worth of material to have him transcribe [wind] now digital. It was a terrible recording but it was the first I had heard the show in 15 or so years and I

was just so happy about it, but he gave it to me as a SHN and he gave me the MKWX software and said – "if you want to hear it – you got to figure it out dude."

That was the beginning.

That was how I moved over into SHN.

So the hard drives - it would just be for you – it wasn't' like then that hard drive got thrown around to other people?

Yea, nobody else was doing it – it fact they thought I was wasting my money on it – meanwhile they were spending hundreds of dollars on these CDs that they couldn't record over – but yet my hard drives were dynamic and instead of having to make space for the CDs as I back filled and got shows that I didn't have – I just drop them on the hard drive and what I used to be able to have the collection on two hard drives, four hard drives - originally we thought we'd be able to put it on ten 500 g hard drives. I probably have it now on fifteen 500 g hard drive. And basically primal fits in. So basically 65-70 on the hard drive, 71-72 fit on there but it's like years like 1985 is over 300 gigabytes – it takes up pretty much a 400 g hard drive on its own. So eventually what started out with one we could fit it on – as you can see from the list – it's very limited - and I saw early on – because he was willing to do anything – he would give me every show I was ever at – but I immediately saw how this hard drive thing could pan out – and I said start at the beginning – and he said "but a lot of it's crap" and I said, "start at the beginning" and that became the Primal Dead Hard Drive and I circulated that. In 2003 I used 15 CDs and I had the Primal Dead Hard Drive vine where I went through everything that was on the hard drive and I would seed it on different lists and that went around – and it was a lot of vines – were basically just a lot of copies of what he had sent me on the hard drive.

Can you explain a little bit about the vines – I see that everywhere and I'm not really sure what that is.

There different ways of trading digitally. Now with the download culture you don't see it – but before you could download or FTP – even though the music was digital you still had to send it out some way – and of course the easiest way to do that was to burn CDs – CDs at that time would cost a dollar a CD and it would take 20 minutes to burn – so was an hour of your time and three dollars, without postage, per show. So, people would trade – people would get ripped off – they'd send their blanks – and it was like "dude half way through – it didn't burn." And at a buck a CD it's like who would pay for the CDs – so sometimes nice people would send 4 CDs in case one of them went bad – because in the early days – a lot of them went bad – with changes it started getting so it was like you could fit a whole show on 2 CDs but then you actually had to put them up on your hard drive and pull them up again to 3 CDs so it was 5 CDs for a 3 CD show – so there was a

lot of that - the hard drives got away from that but a vine was - somebody would donate the 3 CDs in the bag – they'd spend their 3 bucks and then they would send that to a list of people – 10 or 25 people would send in their address and you would pay the postage to the next guys – so the seeder of the vine would sit there and burn a show and say hey I'm taking lists – people would send in their name and their address. Hopefully they would create a list based on geographic proximity so it should only take a day or 2 in the mail – shortly we figured out that this didn't work out – because there would be dead zones – certain people that were less quicker than others so then it became a merit based thing where people who we knew would be, basically 24 hour turn around – they'd get it in. They'd burn it to their hard drive, they'd check it – they'd send it out the next day – they got moved to the top of the list – so a lot of times things would bounce around to either side of the US but it would go quicker than ones that seemed geographically closer – but that was a vine. Then there were shrubs which I never really got those – and then there was the tree – which basically people would send CDs to a person who would say they would burn for 3 other people in whatever format was specified and it was all – you would send blank CDs to someone who already had it who said they would burn it for you – whereas the vine – it was burned already and donated by a seeder and people would make their own copies from that and then send the master on to the other people.

OK. Cool.

I was always a bigger fan of the vines because basically for three bucks I could sit there, put the postage in there, put it out in the mailer and then I was done with it. If it fell apart somewhere along it was like, "I really tried to do it" and then you'd try to get somebody who you sent it to maybe donate a copy. So it was like I was willing to throw a couple of dollars at it and just let it get out there as opposed to waiting for people to send me disks. People would sign up and three weeks later and be like, "Oh man, my cat got sick I can't do it. I can't afford the three bucks." [wind…The vine broke] because they couldn't do it – or they'd get their copy and then they just [wind] the other people. So vining became much easier – it was like take it – there it is – have fun with it. Archive.org, LMA, is like a big Vine. As many people as want can tap into it.

And you get on these lists – it was just people that you could meet that just had a good reputation within the community…

There are lower groups – there are public groups – etree.org is basically a public screening ground where anybody can sign up – any troll can say anything he wants – people can say their Jerry's illegitimate spawn or oh this recording was terrible or oh Jerry's all cracked out. You have to deal with it until you can get picked up by somebody and they go – "hey I like what you write – you don't seem troll-like. We have a private group over here – I'll sponsor you- if you want to join."

You have to have sponsor?

Yes – you have to have sponsor to get into a lot of these groups. So there are the public groups and the private groups [wind] those groups are controlled by control freaks who set the groups up because there the people who are willing to pay for the server, to pay for the internet connection – do the work to have the server, set it all up and have the administration – which is actually a lot of work because they're a control freak and they want to be able to control whose on the list – if you say something bad about them or if you want to do something your way, they will give you the ever-popular statement, "if you want to do that why don't you start one of your own list." And that is how most new groups start - is one control freak battles another control freak they then decided. Well no it's like if you want to do it your way – why don't you do it yourself and the people go "I will" and it becomes almost a dare.

[Drums on the recording in background.]

Drums.

Yes. [Laughs] It gets quiet.

…

Then – once you get - work your way up

You get sponsored?

You get sponsored- you build a name for yourself- other people want you to be part of their group.

And you can be part of multiple groups?

Depending on how controlling your control freak is – some groups do not allow you to participate in other groups. I like the groups who have one or two different people on a whole bunch of different groups and they become the representatives for the stalkers of these other subgroups and then we all combine them into the ubergroup. Jerry's Kids was one of those where there are 30 different people who are on 25 or 30 different lists and you don't need to invite these other people because they see if anything good comes along – they throw it up to Jerry's Kids. It's sort of like a list for admins or a list of people who run the lists or a lot of times on the lists there are people who are less control freaky but become the – not the sponsor of the list – but a driving force – the moral voice of a list and can set the tone for it and that's sort of Jerry's Kids is more of those people than the control freaky people – in fact our list is to get away from those control freaky types – basically it's do whatever you want. Some people haven't contributed in years but yet they still email all the time – and other people are highly active –

doing stuff on their own and they just let people know – hey if you want to come over to my place – do it – it is a central area and not much goes on that doesn't get announced to this list so in case you're interested in participating – hey we're having fun over here – you can go over there and do it.

[Referring to papers] This is GDIAP?
[GDIAP – Grateful Dead Internet Archive Project]

This is the GDIAP. [wind]…I know you have already spoken to Noah – so that's who that Noah is.

He's the one that started GDIAP.

Correct. But even before GDIAP.

Is this the Vernon – from the Vernon format?

Yes, yes.

I noticed something like – Matt's a fast worker.

Whether traders know it or not – Matt Vernon is one of the key people to Internet trading as we know it now in the year 2008. He has simplified – Matt has come up with a format to make it easy to distribute the music based on common sense computer principles and we have been – if it wasn't for him – there would be no Archive.org – because they would not be able to handle the random software – somebody had to come up with the format that could be parsed by the code. Matt's an old Pearl guy – he works in Intel. He knows this code inside and out – and he was able to figure out a data format and then get a bunch of stoners to sit there and do the data entry and to do it right and then to go over it and correct all these stoner problems that we had had with dyslexia and things like that. Debates about 4 year - 4 digits for the year or 2 digits. I am a fan of the 2 digit year because I remember that you can only have so many characters in a line before the line fills out so if you want data rich folders, those two characters can be the difference between it will burn you a CD or it won't. I think it's called Joliet. There's 127 characters – and some folder names are allowed, so. And the Grateful Dead were only around 1965 to 1995 therefore you don't need the 19 – it's superfluous. There are no Grateful Dead shows in the year 2000 anything.

Right ok. So talk to me about GDIAP specifically.

Well GDIAP was taking the collection which we had started to assemble on TOL and [began] moving it up to public place – because while TOL was sort of public but you still had to go up to Etree and then get a password and it was busy. Certain groups would have their own private passwords {wind – perhaps: limited what…get on] and these were basically the people who were filling TOL. TOL

was bandwidth and it was basically an old beat-up computer and it could handle 4 hard drives.

So it was kind of public – so people could go to Etree and get a password?

But you had to go to Etree – you had to know what Etree was.

Oh Ok. So this….

GDIAP - Archive.org – that's a public repository of digital information that you can be in there looking at old Mr. Rogers clips or something [wind] machine and all of a sudden stumble on – "wow that Grateful Dead show I was at in college – they have a recording of it here." It makes it much easier for the public to stumble upon it, which gets back to the missionary aspect that I look at it as. These were like little Bible tracks that we're leaving around the Internet. [wind] You have to figure it out. You have to be capable [wind] and FTP server [wind] this was back when people [wind] and very few people had digital or high bandwidth.

OK. But GDIAP is what?

Grateful Dead Internet Archive Project. It was the people who were put together under the Archive.org to assemble the music that eventually became the Grateful Dead archive on LMA. This right here – more visuals – is the original sending the hard drive to TOL list. And that would probably be what I consider the official beginning of the yearly projects and the first one was donated by a guy named Dave Blur from VT and the thing about Dave is - there's only 2 people on Jerry's Kids that were still on a dial up at that time - Dave was one of 'em so he could never even access TOL. He just thought it was such a cool idea he was willing to throw 200 bucks at it to have a hard drive. So once he did that it was like hey – so this was like buying those bricks with the name on it when they want to do a public park – you get to do in memoriam. So Dave was the first one. The second one was bought by a guy named Alan [wind] And he called it something funky so I figured, woah – I get to name something and I was willing to shell out money for the hard drive that was to become the home of '77 and '78.

…

You put the taper on the Vernon format?

Of course we do – because that was part of the way of getting the tapers to actually open up and let us use their master tapes because we were giving them credit…Same thing with the seeder. The reason why you put the seeders name up there – because…it was sort of a trademark of quality whereas you would learn that so and so this guy did not know his ass from his elbow – you did not want his version – you wanted this version because this guy actually knew how to run the

equipment that he was using. Charlie Miller seeds are usually considered very, very high above almost anybody else because Charlie has good equipment – he is friends with David Gans - he is Kimock's official archivist. This guy knows how to make a good tape. So if there's a CM seed out there - most people assume right off the bat that is the best one and even if there are five different versions of a show – if CM, Charlie comes out with a new one – they have to have that.

I remember you saying that that was part of the Archive thing, that you were presenting it as like a history of the recordists.

That would go back to the Tacit approval and how we got into it – that document that I gave you over there- that sort of goes into it – the 2nd one – so maybe we want to get to that later. For the time frame thing - that's the one that we want to start off with first because that is TOL.

TOL was first – but etree was already happening.

Actually the first one that I knew about was a private server coming out of I think it was Stanford Univ. Somebody had access to it – with the high bandwidth – put the old beat up box with a single hard drive on it and that was called "Easy Wind" and that was about 2001 and when the person later moved to NY he had to take it down – he actually donated the hard drive and let it be vined around and I have no idea what happened to it or if he ever got it back or anything – he's in Europe now –but Easy Wind was the original one and then came TOL - TOL was a public one whereas Easy Wind was totally private.

So TOL was public yet the - CDead thought it was their private server?

As it came along CDead got their own private log in – like I said there was many log-ins.

And it would give you certain access?

Correct. The person who ran TOL was a member of Jerry's Kids as he was also a member of CDead but we didn't talk about the Jerry's Kids aspect so they just thought he was a CDead guy and when he said hey I got this server, do it, everybody jumped onto it thinking that they were helping but – in here we talk about how we started buying the hard drive and sending them over to them and what happened is once we sent over I think 4 or 5 of them with all these CDead people – like this is really cool – lets all 100 of us chip in 50 cents each and send over 4 hard drives. Which is - they did – it became an ownership thing whereas -

Oh, as like a group ownership…

Sort of – but the way we were doing it is - not only would you buy the hard drive but you then pay to have it sent over to Sweden going through customs and

everything else, you would fill it from the CDs yourself. We also ended up filling up the CDead CD ones from CD so basically they were throwing minimal money in a group fashion.

And no time

And just going "hey – here's more hard drive for you guys to spend your summer [filling]."

Right….

Copying CDs from to.

Right. Right.

But that right there – is basically the first 3 people and the – how it went down. In fact, here's the plan. And it was –

The three of you were planning this?

At this point yes.

So each of you had a HARD DRIVE copy of everything that was going on TOL?

That was the goal - if you wanted to get a copy of it you could. At that time hard drives were probably 200 bucks a piece – but that was an 80 g hard drive as opposed to the 500 g hard drive you can get now and then they would bring that up and that's basically how it started. I had offered to any hard drive that I got, I would make a copy of it and back it up for the US copy and then I would pay to have the hard drive shipped over to Sweden.

And there was somebody in Sweden working on all of this?

Um – that would be TOL whose name is never mentioned out loud.

OK – oh that's the actual person

A important - Another cyber entity – much like OBIE – TOL is a server but there was a person behind the server who is also referred to as TOL. As you can see……..

OK. Who was receiving the hard drives and making sure they were…?

Loading them up – correct.

Cool. Matt's a fast work– that's what I read – this is your guy that you said was really important.

Matt the GOD.

Ok, Matt is really important. And these are people you knew already through these – just through trading and people that you…?

It got to the point about 2001 – 2002 where people could see that some people had more zeal and uh – time or whatever to offer than others and - and while a lot of people wanted to do stuff – they just weren't with the program and didn't have the free time and they'd be good for a week or two and it would be like they'd be burn out or they had to go wash the dog – or their wife would say get off the computer – "why aren't you watching porn like normal people?" Things like that – so they'd fall apart so when they would find a chump – they would point them towards it and Matt became the leader of the chumps. And somebody said "Matt – have I got chump for you," and I was introduced to Mr. Vernon and I have had a 8 year relationship with him and he is still a god.

Cool.

[Laughs]

OK so after TOL came this GDIAP…?

Correct – but it talks about taking the TOL collection because we had been able to build it up over in Sweden and go, "look, this is what we've gotten so far, but imagine what we could do if we had your bandwidth and access here in America." Plus here -

This is talking to the Archive person?

Correct. We can walk it down to you and hand to you on a hard drive – but it wasn't really ready to go, but it was close enough where we could work on it and we spent – the first one went online I think in April – so we spent 4 months doing meta-data getting all of the Etree stuff and the text files and God knows how they were formatted – so they would be LMA friendly – so even though we already had the recordings, they weren't ready to go live – we had to go in there and make sure that "Beat It On Down the Line" was "Beat It on Down the Line," and not "Biodiddle" or "Beat It" or something else in all of these different recordings so there's a standardization so you could actually go in there and find out how many times they did "Beat it on Down the Line" and get an accurate representation of it.

So the goal was to put everything in circulation on TOL?

Correct. Because with TOL, being a private server we'd been able to get – even tough some people would ask stupid questions of Grateful Dead merchandising or copies of these letters to me around the internet – people consider precedent setting when actually they're not – "hey you just put this show on the DVD is it ok if we circulate the audience recording of it?" – Get a letter back from their legal team – yes it is – "what about the soundboard of it?" As long as it's not a direct rift from our recording – yes it is. That got changed quickly. The person that sent that letter all of a sudden wasn't the person replying to these things anymore. We beat up on the people who would be stupid enough to send those letters. And we came up with the concept that I brought up before – Tacit approval. We weren't going to ask for permission anymore, we were going to look at what they had already said and that was going to be our rules we played by and we would wave their official trading policy at Archive.org – and the Grateful Dead had never made the distinction between audience tapes and soundboard tapes – because they didn't know how may soundboard tapes had broken out into circulation. They had no idea – so to them tapes meant audience tapes. Once we stopped bringing up soundboards – it became a mood point – we were able to walk right through it and with Archive. Org we just never publicized the fact that were going to be throwing the soundboard up there and when we flipped the switch to have them go public, they happened to be on there too because instead of asking for permission ahead of time and being shut down – we decided that is was at a point they could come to us and tell us to shut it down. We were going with what they had said and they had never said no you couldn't do it – they said, "you cannot put out shows that we have released recordings of" – so what happened was even audience recordings of officially released shows weren't allowed to go live on Archive.Org

You can't even stream them?

That's correct – well, now you can, but afterwards, what they said was, "No soundboards of that." And then they said, "Wait a minute. Why do they have soundboards on Archive.org when we're trying to sell these things online?" So that's when the no soundboards thing came down, which at the beginning was misinterpreted to be [that] no recordings at all could be downloaded. And then we got them back to their original statement of, "You can download the audiences. You can stream the soundboards in an MP3 format, but you can no longer download them in the lossless like you can the audiences." And currently right now we are back uploading everything we have to Archive.org, and we are very careful to make sure that the switch for the audience recordings is the only one that gets turned on.

But it's all there collected together in one place?

Oh it is all there – it is our back up and that was the goal behind our group was we needed a backup while I was backing up the group and I had two copies of everything the group had in the collection Built to Last on hard drive that I had

donated money for – a flood comes – we're fucked. So we have 6 different off-site satellite things – these are private people, hard drives go bad. This is organization, insurance, money, servers that can hold more data than I can even count zeros.

Right. Cool.

And they're paying for it.

Which is great.

Businesses pay to have this kind of backup storage for their data – we were able to get them to donate because we had done the work and created [wind] said "hey that's really cool, we'd like to have that on our site" so it was mutually beneficial – they got our content and work – we got that back-up. Being able to share with everybody else – hey that was just a bonus.

I wanted to tell you – this guy in Maine – this got brought up - I was talking about Archives and he was like you know I was downloading soundboards for a while there and it was too good to be true and then one day they were like gone – it was just funny. I was thinking about how you were telling people to download them and he's just sitting there not knowing any of this is going on and he's just sitting wondering why is he able to get these, why is this available?

Because people weren't paying attention – once they figured it out it was like, "No, no, no, no, that was never part of the deal." To this day, I still do not think the Grateful Dead make a distinction in their official trading policy between audience recordings and soundboard recordings, but I know they do consider soundboard recordings their property because they were recorded by people paid for by the band on band paid for equipment on band paid for tape and then stored in the band Vault and then people who were eventually fired, dead, or no longer in the organization let copies of that get out into circulation and then they just proliferated widely. And then we were able to grab them all and put them back together into one big collection again.

So compared to the Vault – but the Vault doesn't have all these audience tapes?

No they don't. Well, if they were smart – they would download everything from Archive.org or if they wanted to get a hold of me I would be happy to give them copies of everything we've been able to collect to supplement the Vault.

And the Vault has stuff that you guys don't have because they have all the band's recording of everything?

They don't have everything. There are whole chunks of years that have gone missing that are actually in circulation in the trader community but they do not exist in the Vault. [Wind – I think he said something like, "before they were allowed to tape stuff"] – they just stole stuff.

That's like the pictures you sent me is stuff that was stolen.

No, those are 2nd generation from an illegal tap that one of the people working – Bill Graham recorded every show at the Fillmore East and the Fillmore West. He has a private copy of it. Wolfgang's Vault was part of that material. One of the sound guys who worked for Bill Graham at the Fillmore East set up his own reel-to-reel deck underneath the stage and tapped into the soundboard cable that went from the stage to Bill Graham's soundboard where he was recording and he made his own copies. Those are copies of the understage illicit Bill Graham copies. Some of which were used on the 2-13, 2-14-70 Dick's Picks to fill in the 90 minutes piece of Dark Star > The Other One > Love Light [is this what OBIE means?]. That was the first CD I ever bought because I had never been able to find The Other One uncut because it's - Dark Star's 30 minutes, The Other One's 30 minutes, and Love Light's is 30 minutes – so there was always a cut in The Other One.

Because of the tape flip or because of CD space?

No, because of a tape flip – 45 minutes. So there was always a tape and there was always like 8 minutes missing – the best one we had, some of them had like 20 minutes missing from them– some of them didn't even start back up again. There was an 8 minutes gap that until Dick's Picks - I think it's like 4 or 5 - 2-13-71, until that came out, I had never been able to hear the entire uncut Other One and that's when I finally went from cassettes and that's when I bought my first CD player. Because they used their tape, which didn't have the cut – it had the cut in a different spot and they actually got a copy and cleaned up the under the stage version which were those reels that were in the picture.

OK – the reels.

Correct.

…

Why? Why do you think people do this, why?

Do …. What?

Collect – I think there's two – you've said one of the reasons you spread is…

People collect balls of string – people collect match book covers. It's an obsessive-compulsive habit that is allowed and even admired by people in society depending on what you collect. It is a psyche – it is a type – there are other people that have nothing – they would rather have a sterile house – everything they get , they throw it out. There are some people who everything they've ever touched goes into a pile somewhere. I'm one of those people. But I try to focus it and use it for a positive benefit when I do it. But it's obsessive compulsive. There's also some disorders that people who do this have. I'm somebody who just isn't that bad. But most collectors are pretty much the same sort of people.

Why the Dead though – because there is enough?

The Dead is the cream of the crop. I collect other bands – it's like the Doors – hey they played for like 4 years, so many amount of recordings. I collect Jimi Hendrix – 5 yrs of recordings – it all fits on one hard drive – even if new stuff comes out – he only played basically live for 3 years, as Jimi Hendrix – before that – it doesn't really count – he was a side guy playing for the Isley Brothers and stuff– that was not Jimi Hendrix doing Jimi Hendrix – so you can collect him but you run out pretty quick. Led Zep same why – 10 yrs of shows. Only a certain amount were recorded – most of it doesn't circulate, so it might be difficult to get stuff. Pink Floyd – a little harder – the shows were almost identical every night – so if you get a good one from '77 Spring Tour – you don't need to collect the other ones. The Grateful Dead - every show is different. 2317 different shows. I think over 2000 of them, there are known recordings of. That's a lot of collecting. That's like stamps. I got all of this year – let's try getting them from last year too and the year before – it's just such a wide variety to collect – it insures that it's very difficult to say – I have it all.

Do you think you have it all?

It would be egotistical of me to say that. And I know I don't have all but I do have most of what's in circulation. And I could probably get the rest if I wanted to - but I got 20 terabytes and I've got more music than minutes left to live, why?

So talk to me a little bit about the missionary mentality – you know, you've mentioned this.

Well – with the Grateful Dead, the Grateful Dead brought me such happiness and a spiritually that nothing else in society has been able to give to me and I feel that it would be good of me to share that with other people – so the whole missionary thing is people who find Jesus or Jebus or whoever they chose to follow – it makes them feel so good that they want to bring along other people too – unless you're ahhh……whatever Michael Jackson is…… 7th Day Adventist – then you earn your way into Heaven by bringing more people along with you. So they actually force you to go out there and missionize people or you're not going to as good a place in Heaven. So the more - it's a pyramid scheme – so the more

people you bring in – the higher level you get hopefully you won't be with those people you brought in – you get to move up to the better version like Presbyterian Heaven as opposed to Universalist Heaven.

But with the Dead it's just like –it brought me so much happiness and it would make me - I know it makes me happy when I hear people talk about finding something on Archive.org. The way I explained it to people before is I want to make it so that some kid in Shri Lanka can walk into some sort of library and just be looking at this stuff and be able to download a show and go, "Wow this is incredible." Or for somebody who knows about the show to be able to go, "I can go anywhere in the world that has an Internet access and be able to call it up and listen to it like the radio." That's – it's like why do they put Bibles in the bureaus in hotel rooms?

Does Archive have every source of the same show?

They try to. There is some editing of it, there's some bad things – once you get into the sources, you have the difference between Masters – you have people who go in there and remaster things and of course these are all incorrect terms because the Master would be the original raw tape – then it is transferred to a digital – so there is a transfer involved and that brings it from the analog and it digitized it – hopefully it's done 24/96 – 24 K - 24 bit – 96 kHz which isn't a CD so to play that on a CD you then have to down sample it yet again and that becomes this 44.1 kHz 16 bit or whatever that is – numbers confuse me

Really? You're so good with numbers.

I am good at word representation of numbers. [wind – I think he "I can remember the concepts, so"] Once you get it down to the CD [wind – I think you have two transfers from analog] then you can start running it through filters and some sort of software that they have illegally downloaded off the internet from Russia like Kool-Aid – something like that - and they go, "I want Phil to be up." And they crank the bass up, and they seed those. So there's a lot of that stuff coming out where they're taking the same transfer but they're just making it sound good to themselves. There are some brands of these. There used to be this thing called Dankseeds that started with a bunch of Phish people and it had to be required that it was done at a certain way through a certain format and of you deviate in any way then it wouldn't get the Dank certification. One of the guys that runs CDead has a digital audio work station called Bertha that he set up and he – Bertha's stuff – and usually CDeaders are fans of these – and these have broken out into circulation – I tend to think it's sort of like hitting the loudness button on your stereo. And, hey I have a loudness button – if I want to push it I can, but I don't want my recording to come in with the loudness button already on. I would rather get the raw recording and go "boy, this needs the loudness button." So a lot of re-masters that come out – are actually the same original 3rd generation transfer from

the analog that somebody's just run digital noise over the top that makes it sound better in their ears.

If this the kind of thing you were saying that there are like brands online now? Dankseeds and Bertha are kind of like that?

Certifications. Yea it's like a brand. There's the Bertha brand. And Bertha brand tends to be bass heavy. Some people like them – some people don't.

…

You can get kicked out of these groups?

Oh you can be shunned – you can be banned – it's like any quasi – religious thing. If you say something bad against your local preacher – you're looking for a new church. Same way with these lists – if you say something bad about the guy that runs the list or the special pal of the guy that runs the list – you will not be on that list for long. There are social shunnings and bannings and everything else. And when we get together and meet in person – we laugh about these things – names come up like ____ …who was the King of the Trolls. This guy just liked hearing himself talk – he would say stuff that he didn't believe and he knew was totally wrong – just to infuriate people. Sometimes the people on the lists like them – sometimes they don't. Sometimes they let him say it until the guy decides to say something against the guy who runs the list – then they are quickly sent through the shoot and not allowed back on again.

And these groups communicate through email or they have message boards or?

In the early days there were BBS systems, which would probably be before your time. It was a bulletin board system – go up and be able to read it on your little mono-chrome amber monitor and it was basically a long script. I used to print them out on the pinwheel computer paper – and I have these stacks of these whole things and the easiest way to say – it's like a fact now. The FAQ is where people keep adding on as they find out. That's how these early lists were – basically read through the whole thing and get to the bottom ad find out – mail order information or something like that – and that's where you'd you go to get the address for the mail order. Things like that – it was informational. Email was a way but then you started getting into the forums where you could write like an email to the group of people instead of going singly to the group of people – people would go up to the list and read it in the forum as opposed to getting all of this spam in your email box – but most lists tend to be email based where they deliver it to you. And some lists can put out 200-300 emails a day depending how big they are and how chatty….

2-300 emails a day??

CDead is one of those lists where it can be 200 emails in the same…[wind] - and halfway through it changes topic - about how somebody's dog had vomited on somebody's CD collection.

Yea too chatty.

It's way too much – I'm a just the facts – I want the info and that's about it. But I give you that as sort of a blog site on where I'd tell stories of shows – where they'd come up. My bandwidth waste tax would be I would then seed that show. It was also a sort of advertising for the show. Then people would go, "this is that show that blah blah blah happened to OBIE at." So I was - much like today I handed you the DVD - I am able to talk about the show and then let you experience it for yourself, but still remember how I experienced it from being there. And it's just sharing knowledge.

Oh – so the Lazy Cow?

Lazy Cow is a video group – it is basically a bunch of people who were taping back in the day when videotaping was forbidden – so they snuck the stuff in – it is a mysterious group of people who have learned to take their tapes and now they are sharing them with the world under this Lazy Cow brand name and they take their old VHS recordings from the show and somebody goes through and synchs them up with the best sounding recording, either audience or soundboard, and then they put them out as what they call the Lazy Cow – a 3-hour show is 3 full DVDs, no compression. The best quality available – they use the best version of the master – the first generation if something has happened to the tape – the tape quality is degraded and this is the way of preserving their efforts during the show. But again it's to a small - they target a small group of people and then from there it just spreads out. And they make their way into general circulation.

Do you have stuff that you hold on to?

Oh you almost said hoarding???

No, hold on to, but that's not the right grammar….

There are certain-

But I guess that means hoarding yea.

There are certain things that I have that before they were given to me, or actually, no, that when they were given to me, I was told I wasn't able to share them.

[Long Pause]

No comment.

There are other things that people tell me – if I send this to you - you can't share it and I usually say no. I became known as the guy who would share anything. Being a cyber entity [LOTS OF WIND] Those were people in the hobby, I was more worried about [wind – I think something like "the authorities"……] and saying that's a copyright infringement, we are going to take this entire collection to look for more stuff to use against you in a court of law – that's my big paranoia. That and fire.

[Laughs] It's funny.

No, it's true. Hard drives melt. Fire's very bad. But hard drive, DVD, I lost my place.

Lazy cow…

We went from Lazy Cow to something…

Yea but I had to back up.

Oh the hoarding – DO I HOARD STUFF?

Oh you said you don't – you didn't let people send it to you if you couldn't share it.

I made most of my friends and connections early on being the guy that nobody knew so people who were well established in the hobby that wanted stuff to get out to just burn somebody else and a lot of it's like that where the hoarders – they don't like another guy and they go "this is his favorite show – he never wants this to get out – hey OBIE how would you like to put this out," sure I'll do it – I'll do anything. And I'd send them the disks and they'd get it and I'd just say from an unannounced source – an ongoing joke became anonymous sperm donor and I have no idea why that guy chose to say anonymous sperm donor but that became a person that did it - a lot of stuff that's seeded by Raoul Duke which was Hunter Thompson's alter ego that he wrote about so it's like you can't blame this person – so you put it out, they didn't want the credit for it but it was to burn someone else because they had been hoarding the show and they considered it their Holy Grail recording – they would trade this to everybody else for their rarest thing – so basically it was blowing the worth – "anybody can get that now – they're treeing it over there."

A lot of stuff after Dick Latvala passed away – he had a bunch of DATs of future Dick's Picks out that he had sent to a bunch of people who were high up in the community who had made a deal with Dick that they would never let it get in circulation – once Dick died the deal was off but they didn't want Grateful Dead

management coming after them. Because they knew basically who Dick had sent it to and stuff like that so they would make a copy and they would slide it to someone like me and I would become a proxy for them and people who were in the community would go – "how the hell would you get this – you've got to be lying about your linage and stuff." It's like, listen to it – all I know is what the guy – Bill - said when he sent it to me or what anonymous donor said when he sent it to me , "Who Sent it to you??" - umm there was no return address on the email.

So that was it – and a lot of the early shows that's how the best quality – all the Latvala leaks came out was through proxy people like me who nobody knew in the deep trader's circles as having any sort of access to this stuff but I came out with the stuff – even they didn't have that good quality. The hoarder mentality had locked them in as people wanted give it to them because they would move to get them in circulation. And there's always been some people who thought that, you know, we get this stuff for free you just put it out there. You don't try and power trip [WIND].

[Lots of wind]

Obsessive compulsive [not sure what he is referencing due to wind] – so to me - hoarding never did much for me. I wanted to get more so that meant I had to give away more to get more.

And you made the decision early on to go by another name?

Oh yea – I've always been OBIE.

Even before Internet and stuff?

I have been OBIE – people on tour know me as OBIE. I'm OBIE in the *Deadbases* and stuff like that – people do not know me by my wage slave name and I only give that out then I'm signing a check – you have to give me money to get that name – right now it's at about 400 dollars – I won't sign checks for less then that.

[laughs]

OK.

….

Adam Egert
Co-founder of Mouth of the Beast (MOTB)
November 1, 2009
Conducted by phone

Notes: Conducted on the phone in New York City. We met in Pennsylvania in the parking lot of the Obama Deadhead Concert. I had noticed an MOTB label on the car. He walked up after the show with MOTB shirt on and carrying taping equipment.

TRANSCRIPTION:

So you're on speaker phone now.

Ok. Cool.

Ok, so, well we can either start with how you got – maybe we should start with that – how you got into the Dead then we can talk about how you got involved with MOTB.

Ok – how much –ok well, I was in 6th grade. And there were like the older guys around my area who were introducing me to things…and they were all really into the Dead. And I remember late in 6th grade, a buddy of mine, an older friend who was like three years, four years older than me, sat me down in his basement. We were all hanging out**…**he sat me down and put headphones on me and put on The Great American Music Hall from '75, which was a tape that was circulating all the time, and I listened to it and at that moment realized that this is my kind of music and very quickly started getting into that. And they had some limited touch to tapes in general with things that would get to the multi, multi, multi generations away from them. I started getting a few tapes, and I got the records, and I got the live records, and fell in love with Skull and Roses and Europe '72 and that kind of a thing. And then I had the opportunity to go to a show with one of them who was an older brother of one of my buddies, my younger guys. And I went to see the show out at Giant Stadium in '78. I think it's like 9-27-78, something like that. That's another thing about me. I am ADD and really bad with dates and can never remember dates, so a Deadhead doing this, I always have to look up the dates. It just kills me, you know.

So you can imagine how bad that is for me in this world. It's one of my problems, is dates. So, you know, I went to that show and they played to me still to this day the greatest "Scarlet-Fire" that I had ever heard. And it was just killer. And then every single time they were in the New York Metropolitan area, I would go. And as I started getting a little older, I started traveling to see the band. It became rather encompassing to my existence, dealing with the band, the Dead. And I really loved them, and I traveled to see them. And through the years, as I

went into - got to high school I started doing certain parts of tour, and then all my friends and everything were around the Dead. And I started getting some tapes. But I was never too close in those early days to the tapers themselves. Although some of the older brothers and friends of older brothers of some of my friends were taping a little bit, but then they were also on tour and rather close, became friends with the band. So my connection with them started waning because they were too focused in on being with the band. But we – I just continued to go. Went to college and got out of college because of having too much fun and seeing the Dead too much. [Laughs] That's how I sort of got into it. Is that a fair thing, or do you want more detail?

Yea, it's great. And at that time – like how you said The Great American Music Hall was a tape that circulated, were there not that many tapes that were spreading far?

Well, I think there were a lot of tapes that were spreading far. I just think now knowing with my history – the question is who you were. And where you were with regards to - where you were with your involvement with the trading world and what concert you had to get tapes, right? And remember that at that time, tapes were like currency. These older guys that I was friends with would just let me copy the tapes, but to get those tapes further downstream, you really needed to have something to give these guys to get those tapes, and it was usually tapes, right? So it was the tapers who were sort of trading with each other to do that. And then if you had a taper friend maybe you got some tapes from them and then you were able to trade those to some people to get others, you know what I mean, to get other tapes. So I was at the part of the food chain early on in my Deadhead world of just being at the low part of the food chain that was sort of spoon-fed certain things by people that were not necessarily part of the overall big trading world who are actually touching the sources. So at the same time that I'm doing this, Glassberg had 1200 reels. You know what I mean? And there was a lot of stuff that circulated. Soundboards were a commodity, or a heavy duty commodity, but there were a lot of audience tapes that we were trading back and forth that way.

And Menke would be taping, lets say, on the West Coast, and Glassberg would be taping on the East Coast and they had a deal where everything that Menke taped, he made copies for Glassberg, and everything that Glassberg taped, Glassberg made copies for Menke and that's how those East Coast tapes made it to the West Coast and the West Coast tapes made it to the East Coast. But I was not involved in that, this is just history that I know. That's not part of my experience. There were a lot of tapes, whether you could get them - I remember the first time that I got the sense of how many tapes there really were…We [him and a girl] were going to be traveling across the country. This was in, I think, '84, to see some shows and stuff, and we stopped at [a] house [to meet with a taper/trader] because she was friends with him….And we went there for her to get a couple of tapes from him to travel with. And I remember going in there and seeing, when we

were there, I saw his wall and his closets and there were a good 2,000, 3,000 tapes and I was like "Holy Shit! Where did all this come from?" And that's when I was sort of made aware of how much there really was, you know. Because you would go and trade tapes with your friends who got a tape here and a tape there and we only had like 15-20 shows, you know what I mean? And here were like whole tours, even going back for years and years and years. I was like, "Man, I want to get that stuff." And then I remember saying to – and this is when I got the trading thing – I remember saying to him, "Dude, man, when I get back I've got to come hang out with you. Do you mind if I copy some of this stuff?" And he's like – he was like, "No way! You can't copy this. What do you got to trade?" I'm like, "What do you mean what do I got to trade?" And I – we were that – I said, "Listen, I've got my tapes in the car, I'll show you." And I brought in this box of tapes, you know, big like suitcase where you could slip tapes into them. He's like, "Dude, I've got all this," and he goes, "You probably have like really high generation. I've got stuff off the masters. What are you talking about? You don't have anything for me. Don't even bother me." And he was like, you know, really condescending about it, and I learned at that moment that this existed. And that was my first touch to it. So I guess a long winded answer to you is, you know, looking back on it historically – there was always a lot of trading going on, but if you were not a member of that group and actively getting the best of what you could get and actively trading with these people, you were not increasing your collection to anything that would be considered decent.

I guess I'm probably one of these people that really came to it in the later stage, so you're going to get another perspective from me. That perspective of being shut out, not always being able to get tapes.

…

So, that's when I became aware of that.

So did you continue to trade then or did you just kind of stop?

Well, it's not that I stopped, I just kept continuing to do it the way I did because I didn't have the right currency to trade and truthfully I wasn't necessarily into that. For me at that time, going to shows was about the social aspect of being at the show and dancing in the hallways and I was rather freaky, you know what I mean? I was not a clean taper, you know what I mean? I was rather freaky, you know. Long hair, big beard. Dirty. Touring. Selling t-shirts and that sort of thing to get through tour, stickers and that kind of thing, so it wasn't that for me. Although I had a made a flourier at the taping in '84 where I bought a rig and I taped a few Jerry's shows, had patched out of a couple of Dead shows. And – but that was like – you know the Jerry shows, you weren't at a big arena. You were in a small little theater or a college, so it's not like you were walking around. So I sat at my seat and I taped it. And at the big Dead shows I would go down and give the D5 or D6 to a taper – somebody would patch out. And I'd be like the 6th

deck out, and I'd get a couple of tapes. So I actually got a few tapes that way. But stopped that pretty quickly because, you know, I was really much more interested in the scene, you know? And whatever tapes came to me, came to me. And I sort of allowed to let myself live in the ignorance is bliss thing. And I had a few tapes that I liked, and I listened to them. And when I could get something else I got it, but I didn't actively go out searching the tapes at that point. And then, in – as time went on, I was old enough that I had to have a job and I was trying to go back to school to do some things, and I was touring, and I was doing all sorts of – you know – still a little lost, so I – my touch to the scene started waning a little bit. And then I started – friends of mine started a band and I started doing sound for them. So my involvement of really being there with the Dead started to wane a little bit. We would go on tour a little bit but not much – as much as like '86 started rolling around, '87.

Ok – so at that point – I'm just trying to get a sense of like how – even with a few tapes – they were super – each one becomes even more valuable to you?

Yea, well it does, I mean, you have your tapes. It's the only way to sort of listen to the Dead, as you hear them, or want to hear them, rather than listening to the records right? So they were – they had a tremendous value to me, but it's not like I used them as currency. I was – you know – was hippish. So I just didn't - I was of the yoke even back then that, "Why should you have to trade for these things, I mean, it's like the music, it's free," you know?...But I think that says a lot of why I am who I am today. I'm like the kind of guy who's really interested in getting everything out, not necessarily enabling it to be a commodity. I want it to be all out there.

Available for anyone at anytime?

Well, yea, I mean yea. I mean I'm really of that ilk. There are qualifiers in that though. I have qualifiers in that. I mean I truly believe that the tapers are the most important people. I mean truthfully, tapers are the most important people. I used to be big into soundboards, but as I started growing up and hearing really amazing live audience recordings, I became enthralled with what it sounded like to be at the show when it was really done well. That sparked my interest in starting the project that I'm doing now.

Ok – so maybe we should shift to MOTB and how that came about.

All right, so I did sound for this band, Dreamspeak, which was sort of, you know truthfully it could have been the heir apparent to the Dead scene. They were – when the jam band scene started back in the mid 80s, they were like the biggest band at the time. I mean this is before Wetlands. In New York, which is where it really started, there was a little bar on the West Side that we'd go to and see a guy called Kenny Quinn, and he was just this amazing player, I mean just stupidly good. And then he was one of the guys – Dreamspeak was a band that was

playing that I hooked up with by a friend of mine – who was the lead guitarist – from tour and a buddy of mine from college who was the drummer, and I didn't know that these two were in a band together. I always heard them talking about their bands, "You've got to come see my band. You've got to see my band." Finally I went down to see the band and it turns out – I went down to see Kenny Quinn and they were both there and Willy says to me, "You've got to come see my band." And this was before they were anything. And Tom is standing there and he's like, "Hey Adam." And I'm like, who's the drummer, and he goes, "Tom Willy!" And then it became obvious from that conversation that they were in the same band. I'm like I've got to go see you guys. I went to go see them, fell in love with what they were doing and decided to hang with them and then became their soundman. So I started doing sound for them and was a neophyte, really not knowing sound at that time and I was learning a lot as I was going and there's another guy who came into the scene who was a really great audio engineer from the studio who really became the head soundman at that point after me because I didn't have the chops but then again I was learning. And – so I grew into the technology of understanding sound in general there. And it just so happens that the band was sort of based out of Columbia University at the time, and this is like '85 – and - '84, '85, and [sighs] based out of this fraternity there called Delta Phi, and Delta Phi was the hippy fraternity. And David Graham, Bill's son, was going to school there and joined the fraternity. So I became friends with David, and David fell in love with the band and sort of made this thing that he wanted to make them the next thing. So his father came to town and he brought him to see Kenny Quinn and met Kenny and thought Kenny was just the sickest and most amazing thing. But Kenny was a junky, so that just didn't happen. And then they started pushing us, you know, Dreamspeak, and we got this opportunity to go to West and play with some of the Dead related bands after, you know, when Jerry had just come out of the coma. And we went out and did that, and the band sort of, on coming back from that whole thing, which is a whole other story because I had Christmas dinner with the Dead, you know, sat with Jerry for like five hours. That's another great story. I'll just give you two snippets of it. It's not related to this but just for your own interest because you'll probably like the story.

We went to Bill Graham's house for Christmas dinner, and we went to the house, we walk in and Bill's in an apron and he comes running in and he's like, "Hey guys, the boys from New York are here. I had cheesecake flown in from New York for you guys. Come sit at your table." And he points at our table and there are eight seats at the table. There's only one person sitting at the table and there were like seven of us. And that person was Jerry Garcia; he sat us with Jerry. So we, of course, were a little psyched and Jerry held court and we sat with him for four hours and had the greatest, greatest, greatest day of our lives. Every one of us will recount the story, every time we're together we can easily fall into it and talk about it and have a really great time around it. But that was a – and I won't give you the particulars of it to waste your time with it, but it was a great time. But we did this little tour, and it was not so successful when on the way back, we

were all down and out, and I really hit the point where the lifestyle had really become old for me and I realized that I needed to make a change in my life and I sort of decided to stop being involved with that stuff at that point and went back to school for engineering to get a degree and go do work and do real life. And my real life took off from there. So one of the things that precipitated me not being interested in the Dead anymore was because of that. Because Jerry was talking so much about how it was - people praying for him and got him out of the coma and his blood was like sand and he'll never allow that to happen again because he was interested in making sure the – you know – he wouldn't let the people down who really saved his life and this whole thing and then one tour later there he is doing – you know- chasing the dragon again with the foil. I don't know if you've ever heard stories about that. I could go chapter and verse on Jerry and the Persian. He was back into it and I was very angry at him and really listening to the music at that time and how it was really, in my opinion, becoming bad because of his abuse. I became very angry and indignant about the band and decided that I was not going to have anything to do with the Grateful Dead anymore at all. I couldn't even listen to them at point. So I stopped and took all my tapes and gave them away.

Wow.

Yea. This is like late '87 to '88 and went back to engineering school. My wife and I got together; got a wife. Continued on my life – did everything. And then later on, I guess I started thinking, you know, listen, I love the music. The old stuff, I can't really listen to the stuff that was available – I couldn't at that time listen to the era of the stuff that got me out of the Dead because it reminded me too much of it. So I found Archive.org online and at that point you could download soundboards and I started downloading a lot of soundboards of the stuff that I wanted to listen to, right? And building books and books of listenable CDs. By that point I wasn't even cognizant of the fact that I should probably save them in shn format, right? Because it was tradable that way right, you know.

You were downloading it in another form?

No, downloading it was in shns and then I would burn CDs and then – drives were expensive at the time. I would just get rid of them. The shns didn't have the listenable CDs to listen to. This is before really listening to stuff electronically was viable, you know. And then I started turning all my friends onto all the CDs that I had, and I started getting back into the concept of having live music and getting it. And it was sort of very available on the web. And then Archive, I forgot the - it's probably like 2 years ago, 2 and half years ago they made it so you couldn't - you know the Dead catalogue sort of came off of Archive. And there was this whole battle and then it came back on – it was streamable, the soundboards only. And I was like, "Holy shit. That sucks." So I started in the bit torrent world grabbing a couple audiences and really finding the great audience tapes, you know? And having some engineer – being an engineer - I have another

little thing on the side where I build tube amplifiers for bands. I build guitar amplifiers for professionals and stuff for studios so, as a hobby, and I have a very good technical understanding of electronics and all that stuff from being an electrical engineer. And I decided that, wow, when I started listening to it and I started looking at the lineages of the way this shit transferred and understanding what was available out there and I was like, "What the fuck are people doing? Why are they doing it this way?" And really not being very aware of the hierarchy of these people in the trading world and not being aware of the hierarchy of the electronic world because these people had taken the trading world and sort of layered it over this electronic world. Even though they were putting stuff out - they had inflated tremendous egos about this stuff, yet they were neophytes technically. They had no f- pardon me – no fucking idea about what they were doing. So I decided, I sat down, and I said, "Let me write up something." And I wrote up a large, large forum post over at, at the time, what was The Music Never Stopped Project, which became Jerome's Place. You've heard of all these places, right?

Yea.

Ok. So it became Jerome's Place and I posted it and a lot of guys started going – and I said, you know, "We should really preserve these audience tapes because this might be the only stuff we get and quite frankly they're the best." Just listening to it even done – they could be taken in digitally and transferred 10 times better than they're done in high resolution and then edited so that they have better sound quality than they are and then put out there. So maybe from now on whatever we're doing, thank God people did what they did, but maybe we should take a look at how we're doing it and do it the right way. And a lot of people took major issue with it. It really caused a very big – you know it hurt a lot of egos and people got pretty pissed at me and in that thread, and still to this day there's a bunch of people who just don't like me because of it, but Derek, my partner in crime at MOTB saw that and said in the forum post, "Listen to what this guy is saying. He's giving you the keys to the fucking world. He's like a hundred percent right." And Derek and I started talking back and forth and I said listen, "I know a bunch of tapers in New York now, " because I have become friendly with some - through my group of friends, had become really good friends with a lot of the tapers out there in New York. Well, not a lot, but a few of the core tapers. And he was a taper through the years and knew a lot of tapers as well. He had known Glassberg over the years and one of my friends, Danny Thompson, who is a taper – like a real stealth up-front taper, front of the board taper, even during the time when you couldn't do it, when you weren't allowed to, decided to get us a couple of tapes. Derek had a really good A-to-D, an Aurora, a Links Aurora, no he didn't have a Links, he had a - oh shit what did he have – I'll remember in a minute, but he had one, he had a great A-to-D. And he had a great Tascam deck and then I started doing all the research and really realizing, "Look we need to have Nak DR1s so we could have azimuth control on the decks," and I posted another thread about that, about what people should be doing, and I got railed

again. And everyone was like, "Screw that! The Tascam deck is the deck and blah, blah, blah. And there's no way you should do things in 24-bit. The cassettes don't have that amount of information." They are screaming, and we're like, "Look, you don't know what you're talking about." And then we got, procured a couple of DR1s and through my electronics capability, I fixed them up and got them set-up right and I started reaching out to electronics manufacturers who had grown out of our world, our taping world, and they donated gear to the project. So I was donated some gear by Sound Devices, a really great bit bucket, like a 3,000 dollar recorder. And I was donated another recorder from Tascam, and I was donated an A-to-D from Benchmark and a D-to-A from Benchmark and A-to-D from – mic pre, you know, preamp from Grace Design. We started doing them and the first one came out and everybody went, "Wow! That sounds great." You know, the people who were not part of the world were just freaking out about how good it was.

And then we got Glassberg's tapes and started doing Glassberg's and forget about it. His stuff is so good, it really showed – people were just like, "Oh my God." And then some of the nay-sayers were still yelling at us. And still to this day anytime we put something up, they try to find a mistake in what we do, so they can make us look bad. But the fact of the matter is the boulder's rolling downhill pretty hard, so it's going to roll over anybody who really – once we got our legs underneath us and people started knowing us, it sort of – they can't – they now don't say anything in public, you know what I mean, because they know. And then the funny thing is, if you take a look at all the people who were doing work at the time and you look at their lineages from before MOTB and then you look at their lineages as the year or year and half went by after MOTB, they all changed. …Now everybody's doing the transfers in 24/96 where they would never do that before.

I know of couple of guys independent who did some of that stuff on their own like Tim Burke, Upstate Tapers, started coming for that perspective as well a little bit around the time that we were doing our thing. So we started – that's sort of how MOTB started. We got the gear and then we started the website and actively started looking for tapers to get tapes and we started getting a lot of tapes but we have real lives so our output and how much we have to do to get something out is a lot more than most people do, so it takes us a lot longer so our output is not as prolific.

…

You really shouldn't edit 16 bit files. Your effective resolution starts going down, so you really can't do as much.

…

Joe [Gastwirt] and I became friendly and Joe helped guide us in the beginning because I would bounce ideas off him. He's like, "Yea, you're right do it that way," or, "I don't know if it's going to make that much of a difference but you could based on your source." I would bounce things off Joe and – so I think MOTB as a brand has sort of influenced a lot of people and influenced the community going forward to do things in a way that's more archival in its thought process. That the real thing that matters are these raw transfers because you have them. And then you do the edits, right? And put them out, but you can always come back to those great raw transfers later on and fix them as technology gets better and make it even better if you wanted to.

Because you're keeping the 24 bit raw-transfer?

Right. Yea. So if you take a look at an MOTB thing, the output of MOTB is going to be a 24 bit raw transfer, a 24 bit edited set that's seeded, and a 16 bit edited set that's seeded.

Oh you do all three?

Yea. Well we don't release the raws. The raws are kept and the thought process is this, this is back to the whole concept of tapers, the raw tape transfer is really now the new master, OK? And to me, the people who really should own that are the tapers, and they should have control over what that is, not me. Well, or not anyone else. And we make a promise to them that we don't give that out. Some don't care, but I care, so we don't. And that's sort of the way we pay homage to the old taping and trading world. That the raw tape is still the commodity, right?

Right.

That's a snapshot. Anymore questions on that? I could really go on for hours about that, so you're going to have to guide me on that.

Well, I'm really kind of interested in what, I mean you've – like what is done once you have the raw transfer, but also how do you know you're getting a really good transfer and what are you listening for? More into the process, I know enough where I can follow techy-language.

All right, so here's the thing. When you make a transfer – when you record a show in analog, analog can take – have you even seen a VU meter?

Yea.

OK. If you look at the meter, the meter goes from minus infinity dB which is no sound to, some of the meters will show you up to plus 10 dB, which is plus, over zero. Now when you look at the analog world, if you go above zero dB, in the analog world, you will be creating a little bit of distortion here or there in your

recording. And depending on the medium that you're in, that distortion will be more or less, OK?

OK.

For most points, if you're making a recording that's touching zero and every once and while going over on transience. Transience is like, Billy hits the kick drum hard or a snare really hard, or the vocals just goes, "Bink," for like two or three microseconds, it might go really high but it doesn't really matter if that goes above zero in analog. But if your music is constantly at plus 2 dB, it's going to get squashed, it's going to get distorted because the media that you're recording to doesn't necessarily have the ability to take it that well. And the pre-amps and the electronics in it are not necessarily designed for that, so they're going to compress it a little bit and distort it a little bit. And that distortion could be everything from like really distortion like, "GCCCGHHHCC" that you hear over the recording or it could be just your overall dynamic range being hurt because of what you're doing.

And the recording gets – so there's some recordings you get from people who always loved hot recordings and record really loud and they don't sound half as good as somebody who kept a little lower level, right? But in the digital world, if you go above zero –

It turns into digital noise right?

It turns into noise completely. So as you're transferring, you want to be able – well, let's just talk about transferring and what the end game is first. If you're going to end game to edit something, you know what I mean? To fix the sound and to change the soundscape a little bit so that the tape if very listenable, you're going to want to transfer in one way versus if what you're trying to do is transfer something and then chop it up just for digital.

Wait – what's the difference between those two things?

Well, if you take a raw transfer and you just take that raw transfer at 24 bit and then transfer to 16 bit directly and then chop it up into the tracks and burn a CD with it, that's the latter description of what we're talking about. If you go and you then take that transfer and then you bring it into a professional digital audio work station software, manipulate it, whether that's just for levels by using a normalize, like a lot of guys do, which I think sucks. Or if you take it in and you use top grade plug-ins like compressors and limiting amplifiers and EQs and things to master the output so that it is one made so that it will be best represented on, let's say a Red Book CD quality, meaning the levels are coming up, the highest level goes near to zero and the lowest levels are in the listenable range. If you do that, those two things are really editing, that's mastering. And when I say editing, I mean mastering. You're mastering the final output for sound. Not necessarily

patches and stuff, which is also part of editing but really more what we're talking about here is for sound. And if you're going to do that, you think about your transfer in a different way than you think about your transfer if you're doing it to just try get to zero - to make a CD from the direct transfer. If you're doing a CD from the direct transfer and that's your only care for output, you might as well go directly to 16 bit and forego the 24 bit stuff because unless you want to archive the raw, it just doesn't matter because you're not doing any editing. You might as well try to transfer it in the way that gets the transience as close to zero without touching zero as you can and then just transfer it. But if you look at what people do in the professional studio, they don't do that. When they record, they record so that the peaks are some where around minus 12 and the highest peaks that you get are probably going up to minus 3 or minus 2.

So there's more gap?

There's more what's called headroom left in the recording, so when you bring it into editing, you've got room to work without creating distortion. So when we do our transfers we do it in that fashion. So a good transfer to me is I've got a deck that's set up, calibrated, cleaned, demagnetized, and the – and also the azimuth set on the deck so that we're getting the right amount of head room, you know, we're getting off the tape what we can. And then I try to record in the method that I just described to you, trying to keep my peaks somewhere in the minus 12 range with the loud peaks going to minus 6 and the transience maybe going to minus 3, and then at that point when we bring it in to do the editing, I can do some EQ, which my first round of EQ will be to find the problem frequencies. If you listen to a raw tape, in the audience, you're going to hear ringing around some of the vocals, you'll hear muddy sound on the low end. The bass is there maybe, a lot of bass but it's just not tight. It's muddy. And it serves to maybe to veil the other great qualities that are inside the recording. As well, and that' because when you have a frequency in a tape, I'm going to get technical now, if this is too much, you just stop me because I could run off like a motor mouth with this stuff. When you look at, lets say, a frequency that's Phil's lowest bass note, right? Phil's lowest bass note is somewhere around 65 Hz, but if you look an a frequency analyzer and look at the tape, there's - on a really good recorded tape that has really good mics that can pick up bass, there's upwards of minus 10 dB worth of signal at, let's say, 10 Hz and if no one played that note, why is it there right? You say, "So, why is it there?" Because there's harmonics around everything, so you get all these harmonics that radiate outwards in both directions in frequency from that center frequency of the note. So if Phil plays the low E, that's at lets say 65 Hz, or something like 70 Hz, something like that, and he plays that, you're going to see all these peaks that are around it, going up to 300 and 600 Hz and going down to minus 10, maybe not minus, down to 10 Hz. There's also a power band so that center frequency might be 70 Hz but the power of that note might be delivered significantly lower or higher than that. But Jerry's vocal is, lets say, at - I'm not saying it's exactly, I'm just pulling numbers out of my head right now, ok? Lets say it's at 600 Hz, but there's this harmonic frequency that is mudding that vocal

from the bass notes or the kick drum, right? What we do through EQ is to find those very, very intensely problematic frequencies that are tight, and very, very, very precise ____ [the recording cuts out for a second] that one frequency that unveils the vocals. Can you hold on one sec?

Yes.

…

So you're going through and cleaning up little moments, you're saying, you're finding these –

Not moments, not even moments. It's really cleaning up the overall sound stage to reveal the music that you really want to hear and then we would then, after that EQ work is done – that initial EQ work is done, we'll raise the overall volume of the show with a limiting amplifier – software limiting amplifier to raise the overall RMS of the show. So, let's say the – do you know what RMS is, RMS power?

No.

The average power that, the average dB level, the average volume level that the show was playing at that point might be minus 22 dB or minus 20 dB, which is low, and if you play that even though it might have transience or peaks that are going much louder than that if you play that on your stereo, you've got to really crank your stereo up to play it and it makes the stereo distort a little bit because the stereo doesn't want to work that hard to do the work. So, in essence what ends up happening is you are creating distortion in your playback. So there's a concept of Red Book CD leveling, which I'm not going to go into great detail other than to say like I described it before that CDs are made in a way so that the overall level is high enough so that it sounds good on the stereo. So we do that. That's done in mastering, ok? The raw mix is sent to mastering engineer. Like the mix engineer mixes the whole album to two tracks and sends it a mastering engineer and the mastering engineer does what we're talking about doing. Because we're starting with two track tapes, we're basically mastering the audience recordings we get. So then what we'll do is we'll raise the overall RMS but remember you have these transience right, that are really loud, if we raise, if I raise the overall show that's at 20 dB, minus 20 dB and I raise it by, let's say, 6 dB, 7dB, those transience are going to be above zero, right? That were, lets say minus 2, they are going to blow way above and what's going to happen, so they're going to distort. So a limiting amplifier has a threshold that it looks at, and that's usually some very high number of dB and when that signal gets at that, it turns the volume down in software automatically for that, so that it comes underneath or just to that threshold, to the set number based on a – based on a certain curve you want to use with an attack and a release, meaning it comes on a certain speed and it lets go at another certain speed, ok? So it does that, so what it

ends up doing is that it reduces these transience that are happening in the millisecond range, right? They happen so fast, you can't even hear them although they're there. You see them, but you don't even notice that it's gone that loud because it's so fast. And it releases – it lowers those. So, in essence, we're reducing the stuff that you don't even hear as being individual and raise the overall RMS to make it louder, so in essence we're not reducing the dynamic range of the recording really of the overall music yet you're squashing the transience and what happens is that makes for a louder sounding more up front recording. So if you listen to our recording of a really good front of board, if you listen to the raw alone and say, "Boy that sounds great." And you feel like you're standing at lets say the 20th row, right? But when you do this you feel like you're standing first row, OK? So, that makes things more up front. And that's the overall process we go through after you do the limiting, compressing work of the transience, you then re-look at the EQ and make sure things are in line. There are other things we do when there are problems in the recording. If there's noise in the recording, hiss and things like that, you might do some things to reduce things like that to make it more pleasant, maybe not during the music but during the in-between points where you can notice it because the overall volume of the tape is not there, you hear the hiss, we might do some reductions of the things in those areas so that you don't hear that at that point.

…

So if you reduce that stuff and clean up the recording, you end up with a very pleasing thing to listen to.

And that happens in 24 bit?

Oh, for sure. You don't want to do that editing in 16 bit. 16 bit doesn't have enough information. Remember as you do this work you *are* taking away something from the recording. So if you're doing this in 24 bit, you're not losing anything really, of consequence. If you do it in 16 bit, you can make a 16 bit recording have the effective resolution of 12 bit which you're going to notice. So that's the overall thing and then we take that set and we, we've also sort of standardized on doing some other things that people never did before, which we believe are important to do, which I think is starting to catch on a little bit around, which is the next round of the change that we're making to this world. Like if you downloaded, you know, a lot of people now only listen to their stuff on – electronically, right? They don't really burn CDs. They have a player, digital stuff into their car, they have digital appliances that attach to their network that read from their drives and play through stereos and they play it through their computers and they do all things like that, so that if you downloaded something from itunes, like an MP3, you have all this information that's in the MP3 so that when you go to play it, there's cover art and there's information, song names come up right, and all that kind of stuff. Well, in the old shn world, you couldn't tag those files with information so you can view that information. But in the flac

world you can, and nobody really did because they didn't really think it was worth it because they felt people are just burning CDs, right? So when you pull up a show in Foobar on your PC and you want to go play it, it just says D01, T01, disc 1, track 1, and you don't know that that's just the crowd. You have no clue what you are about to play. So we now tag our files, so if you took one of our flac sets and you put it on your PC and you put it in your player, it would come up with all this information about what it is, and we're starting to standardize that and that's moving forward. That's the next change in the world, I think, that's coming. So we're constantly I think at MOTB trying to lead in a certain way and really not – it might sound that I'm being a little elitist and making myself or our group sound over important, but I want to highlight here and really in all my posts we say this to people, the shit's not rocket science, we are not gods, we are not more important than anybody else, it's just that this is the way we think things should be done to sound better. We're trying to spread this information so that anyone who's doing work can do it and then get a better product for everyone. Because I don't think that we can do a better job than anyone else who has the basic tools and a functional understanding of what needs to be done and some experience, right? So, to me, I don't think we're so important, you know, I just think that the ideas at which we operate and the principles at which we operate are important principles for creating a good product, and if you're going to spend the time to do something to get it out there, you might as well do it in a way that yields this product right. That's it. That's the basis of MOTB.

So how are you – you already have a relationship with Barry? I mean how are you getting these tapes?

Well, I mean, we talked about it, about what's going on, and Barry's like, "Look they've been done plenty of times." And I'm like, "Look man, but we can do it much better." And Barry's like, "OK, I could care less," because he doesn't give a shit anymore.

Really?

Yea, he's just like, "Go for it." He's not into trading anymore. He's like – he says, "Listen" – when we walked away with his whole reel collection, Derek and I, we came to the house and we took it all away, he was like, "Thank God that you're taking this because my wife is freaking out that they're taking up all our storage." And he's like, "Adam, if this was 10 years ago, there is zero possibility I would even let you touch a tape, in my house let alone take anything out." And he's like, "It's changed so much from –" because his priorities changed, he's a grandfather. His whole priority, and he still tapes all the time. And we're trying to change him from taping in DAT, I mean this is a struggle with Barry for us. That he's – he's loosened up whereas Menke on the other hand still is vigilant and aggressive as he ever was.

He does his own transfers and then – the raw transfers and then you edit?

Yea, he does it because he doesn't want the tapes out of his sight and he also wants that control…And Menke is very, very, very dogmatic in principle. He's a very old dog…I respect it tremendously and I respect him tremendously and I would never ask him to do anything that he didn't want to do and I would never ask him to transfer a tape that he didn't want to do, you know what I mean? I leave it to him because I feel blessed to get whatever I get. We have a saying in my house with our kids, "You get what you get and you don't get upset," so I have to live that way myself, so that's what I do with him.

…

He is very into the best quality, which I'm sure he's described to you in great detail. And there's so many recordings that are out there that are sub-par that better things have come out and his feeling is well, if something better has come out, you should not trade the thing or seed the thing that's lesser quality.

…

[MOTB has] sort of graduated to a Korg MR-1000 over the years to do the transfers because now we're – and this is another thing I didn't even tell you – we're really not doing 24-bit raws anymore.

You're doing 16?

No, we're doing wide DSD transfers; it's another technology all together. And then we then take those wide DSD transfers and covert them through a process of dissemination to build a 24 bit working raw file. So what we're really archiving is the DSD transfers now.

So even though you have this – another mediating technology, it's actually a better way to get the music off the tape?

It is – when you listen to a raw DSD file, it sounds exactly like an analog transfer. You can go above zero with a DSD transfer, but we don't because when we go to a 24 bit you don't want to fuck it up.

Oh – so if it goes above zero, it's still when you go to 24 bit, it has a problem?

Yea – so we record it as if we're recording 24 bit – but - we transfer as if we're transferring in 24 bit. We archive in DSD because we believe that the DSD transfer is the most accurate representation of the tape and - we don't believe, *it is* the most accurate transfer of the tape. The problem is you can't edit the raw files, raw DSD files, yet. Well you can if you have a 40,000-dollar workstation, which we don't have but we believe because there's a 40,000-dollar workstation to do it that at some point in time in the near future there will be a 2,000 piece of software

to do it and then we'll do it, right? So we're in preparation for that – we're doing these transfers that way. But if you take a look at an A-to-D converter – most all of the A-to-D converters you're using today are – their front end is a DSD converter and then it converts it internally to 24 or whatever bit you want and you get that output, you just don't get the ability to save the 1 bit file. And where the thing will get better is that ability to really edit that one bit DSD transfer before it goes to any other bit and then you're going to be doing basically analog editing which would be way better than digital editing. Well, I don't know how much way better, but better. And you know, we're so – we're technologists here, you know, so we're trying to set ourselves up for what we believe the coming of the messiah will be. All right?

Yea, so –

Some of this stuff would be much better if we were together and I could show you graphs and stuff and then it would become very clear for you.

Well, some of this stuff I'm working with the – I'm in a class where we're working with this kind of information so the language I kind of have under my belt – I know –but yea, graphs are great. But as far as how compressors work and limiters work, that kind of thing, I get that.

Yea, but if you look at a one bit file [sighs] – if you could zoom in and take a look at a 16 bit transfer, ok, a 16 bit file. Do you have a workstation that you work on?

Yea, we work on - I have experience with Digital Performer, that's what I use usually.

So if you take a 16 bit file and you open it up in Digital Performer and if you zoom to its, as far as you can zoom in, you're going to see steps in the recording, right? If you take that same thing and overlay it in 24 bit, there's going to be about half, roughly half or 2/3rds the amount of steps in that same time frame. If you take a one-bit DSD wide file and you look at it, you won't see steps. It's like an analog. You might see steps but you'd have to go really far – those samples are just – there may be like 5 or 6 times less steps.

And when you say steps, you mean square wave looking jumps?

Yes. Exactly. You're down in the microsecond, millisecond range. Millisecond, sub-millisecond level. All right? And you won't see that. So, it's just that much more accurate. So what ends up happening is the DSD recording has this analog feel to it, which you still get to a certain extent in the 24 bit, but when you listen to everything side by side as you start going up and up in quality, you notice the difference. Have you ever listened to an SA-CD of a recording?

No.

Well, do it one day. You'll get what I'm talking about. So until we can afford to – and we will because technology just keeps getting better - when we can afford to edit it in DSD we will which is really DFF, it's like a intermediary wide DSD, it's twice as fast as standard DSD. So that's what we do. And we're archiving those DSD files. So if you take a look at MOTB drives, there's this – a lot of drives and they're very big and there's a lot of information all representing these one shows. I mean one set of shows – let me give you an example, if you take a 24 bit raw – well lets – if you take a 16 bit version of the show, it's lets say 600 megabytes – well maybe more, maybe it's – it's like 1.4 gig for the whole show, ok? And if you look at the 24 bit, it's 4 gigabytes for the whole show. And if you look at the DSD, it's roughly 10 gigabytes for the whole show. You understand where I'm going now? There's just so much more information. Now there are tradeoffs in everything that we're talking about here, but I won't go into those, but you could see just from the amount of information that you have, there's more there. You've taken out less, so if you've taken out less, it will sound better. It's a very simplistic way of looking at it, but it's rather true.

And then you guys are housing the reels also?

Well, we have Barry's reels which we haven't been doing much with because we know Menke has much – one generation lower of about two-thirds of them. And our thought process is that at some point we'll get to those. Why do one generation away from Menke. And if I start doing the stuff that Barry got from Menke, you know what I mean?

…

Because we're technologists and we really believe in getting to masters and stuff like that with the lowest generation that's physically possible, we really are only doing the masters but the reality is that sometimes you will never be able to get to the master so you might have to do the lower generation or the next generation away – why do something that's a lower generation when you know where the earlier generation is, and you have so much to do anyway, why bother? So there's stuff just sitting here waiting for those days. Now we've done a few of them, of things that didn't come from Menke, that we then went out and viewed what was already circulating and found it to be better. But there were a few things that were there that Barry got from other people that were not better than what was circulating – like stuff he got from Dick Latvala. He traded with Dick a lot. And Eaton went in and got all the DATs, DAT copies from Dick when Dick died. So – to me, you know, there are battles worth fighting and battles not forth fighting. And that will piss off a lot of people and it will go directly against what our charter is anyway so why would I bother. We have so many tapes, I can't tell you. I'm meeting Barry for lunch next week, probably on Wednesday and he – now Barry tapes everything. I'm going to get five shows that do not circulate of Frank Zappa from the ___. He's got a lot of them. We're just starting. He's

going to pick five shows. And he's giving me the next five rounds of the shows he did in '81. Why would I want to do anything else? That's what I want to do, so that's what we're going to do. And there's a lot of other tapers we work with too, but that's really he crux of it.

So could we talk a little bit more about why you do this and why – perhaps maybe your qualifier to everyone getting everything?

Ok – well – which one do you want to talk about first?

Maybe why?

Why I do it?

Yea.

Because I'm obsessive-compulsive. Because it interests me. Because I love the way it sounds. And the process of creating these things is akin to what it's like for an artist to create a painting. It gives me a tremendous amount of satisfaction to know that I've done this. And it has to fit in-between my life which sometimes it doesn't and it causes stress in my world, my real world. But it's that way for me. It ebbs and flows. There will be times when I'm very, very focused and times when I'm not as focused, but I get a real creative sense of satisfaction from doing it and that's why I do it. I'm not – it might sound like I am – but I am so not an ego guy as it relates to this but I do like hearing that people appreciate it and like it because it makes me feel like what I'm doing matters. And it's sort of like an appreciation of that art yet I'm not the guy who would hide how I do my art so that other people can't do it as well. It makes me intensely happy when somebody who starts doing this stuff becomes really good at it because of my involvement in making them better. And that is all satisfaction akin to being an educator and that means a lot to me as well. That's why.

And you know, part of my project is kind of why tapes of live shows are so important – I mean I'm talking specifically about the Dead in my project but that kind of greater question of what brought you to being involved in the taper world in the first place.

Well if you're into – if you've gone to a lot of live music which I know you have, and you're in to the type of music that I'm into, which you are, you understand that the live performance has it's own life to it and the time at which it's happening is the only time in which it happens and once it's done, that particular moment is over and gone, but through live tapes you can recall that moment and you can enjoy that moment again and because the quality of the playing varies so much from performance to performance you come to appreciate the nuances between those performance and in art and you and I, I mean I'm saying you, here I am talking in third person, or – I really appreciate being able to listen to the

differences between them and appreciate differences between them so it's sort of like appreciating a different take on a food that I like, you know? It gives me the ability to make as well the experience of listening to it non-stagnant. So that's the allure to live tapes to me. I mean, yes, the performance is always the best thing to be at, sometimes you also can't. Being able to hear what happened is important to because you're – my emotions are so – and my intellect towards this type of stuff is so drawn to that spontaneity that being able to hear it when I can't hear it live is great too, you know?

So maybe the qualifiers now?

Ask me the question again so I can be more precise.

I had said that I understood MOTB – that part of your goal is to bring these tapes and make them available to – all tapes available to everyone –

No.

And you said yes but there are qualifiers to that.

Oh, yea – it's not all tapes. We will not do something. Like I've gotten plenty of tapes from certain dates from people. And I won't do something if I think there's a better tape that's out there.

Even if it's something that doesn't circulate or doesn't- ?

No – if it doesn't circulate then it's not out there, but if it's out there and there's a better version and somebody did a really decent job of it but we think we could have done better, we still won't do the one we have and try to get the one that they did so that we can do it better. I mean there's no point…Where it's really the quality that matters. That's why we went into it in the first place. If you go to a show in '81, there were like 30 guys, 20 guys who taped it maybe in a New York show, ok? And with the tapers, it's always an ego thing that they get the best tape - they make the best tape. And the reality is that most of them don't and usually there's one that's the best. And we're just not going to do it. Sitting on my desk right now, I have a '73 Roosevelt Stadium show from Glassberg that he taped in mono but standing right next to him was Jerry Moore and Jerry Moore did it in stereo and if you listen to Jerry's tape, Jerry's is better. And Barry will say the same thing…but the fact of the matter is Berger's doing his tapes again and he's going to get them done…It sounds better than Barry's tape and I – there's no point for me to do it. And Barry is cool enough that he doesn't have an ego around that.

So it's not a qualifier as to who gets them, it's a qualifier as to what you're putting out there?

Oh yea. Once we're done and it's got out there, I want it to get out as far as it can go - at least the edited version, not the raws.

…

We really believe in making sure that this stuff makes it out there and makes it out there in a way that's representative of today's technology because it's just so important. The tapes are dying. I mean this is part of the – our call to action when we got in trouble with everybody. These tapes are dying. They are analog recording on tape and the tape degrades overtime, and if you're going to touch these tapes, it might be one of the last chances you have to get as good a quality out of it as you can, so if you're going to do it, do it the right way. And that's really what this whole project in the end really it's the least common denominator for MOTB and it is my creed. So, that's where we come from, so we – the litmus test for our actions are going to be always compared back to that. I'll send gear – if there's a taper who has a specific tape and he has it and it's at his house and he won't allow it to leave and the only way to get it and it needs to be gotten is I would send out a deck, I'd send out the pre, I'd send out a Korg, and I'd send it to him and I'd say transfer it and I'd say send me everything back. I would do that – to the right person knowing that I could get stuff back. And so far the altruistic things that I've done have never come back to bite me. It's good karma. I've never had anyone not return something or do anything like that. So that's that. Anything else? [Laughs] Has this been helpful so far?

Absolutely. Absolutely. Just last night I was sitting with someone after the show, he put it so simply that there's tapers, there's transferrers, and there's editors, and then I guess on top of that are the people who are actually bit torrenting to actually distribute.

Well. We are tapers, transferrers, and editors.

Yea. Which is good, and I'm just kind of thinking about – I agree that this stuff needs to be kind of preserved and kept and made available so it's just fascinating to me to – that so many people are involved with these huge collections and I've been trying to wrap my head around how much is out there – like how when you saw all those tapes in that guy's house – I'm having that kind of same revelation slowly how much is out there.

Well go to the Live Music Archive. Go to LMA.

Yea – there's 5,000 things on there.

For just the Dead. And there's more that hasn't circulated.

…

How do you feel about the whole "do not circulate" world?

I understand it.

And I can't tell a taper – like I said, tapers are the most important. I can't tell a taper not to do anything. It's his tape. He made it. He went there. He lugged the goddamn gear in. Risked having mic cables cut by Parish or whatever. He did what he did and it's his and while I think that the music that was played there is not his, right? That version is. And if he doesn't want to share it, it's his. Do I think it's sad? Yes. Do I not agree with it? Yes. But I could never get angry at a taper for not sharing something because of that.

…

So could – this world – it really now lives online, people are just typing to one anther?

Yes.

In chat rooms, on forums?

Yes.

OK.

And they're all there and everybody's way open to talking in the chat room. And you get that. In one chat room, on Thursday nights, they have a listening party where 20, 30, 40 people come in and they all start a certain show at the same exact time on their PCs like they're listening together. And then they hang out in the chat room and they listen to the show and they talk about it. You should definitely stop in for the Thursday night listening party…for you from a sociological perspective, that is exactly where it's going on. It's right there. You've got to go.

And anybody can go into the chat room?

Yea.

…

Well, I'm just now figuring out – I mean what I've been writing on up until now was kind of two sides. One side was kind of an ethnographic study of how relationships we formed through trade. So who was trading was whom, how, how the tapes were involved in connecting people and connecting people to the music and how those tapes were kind of given a perceived value so that in trade what was valued higher than others and how exchange – how

people were trading highlights what the aesthetic values of the community. And this whole other side was this technological side – and how I've written about it up until now which I think will be a piece of my thesis – are you familiar with Walter Benjamin's work? He's a German writer in the 20s and he has this great work called, "Art in the Age of Mechanical Reproduction," and he's talking about – his whole concept is that the art piece – there's an aura around the art piece and if you can mass produce copies of it that in some ways the aura of the original goes down because the value goes down because everyone has access to it but in other ways the aura remains because it is the original – so in this sense the show is the original and then the master tape has its own aura and then the copying – so that's where the digital world comes in for me – the value system totally changed when you could have a perfect copy and everyone got access to it, so I mean my – I've been

But it's not a perfect copy. You know I have to tell you just to qualify to it. If you take the digital stuff that was circulated up until about two years ago versus the stuff that's being down now, the tapes sounded way better than the digital stuff. If you got back to the master you would have been blown away. And now is when I think you're statements are right, that what we're doing now is a better representation.

…

But even with the – when the digital file wasn't so close to the master at least it evened out the playing so that everyone who got a copy of the digital file got the same thing – there wasn't this one to one hierarchy. I mean that changed –

Yes. It became static at that point, although there were people who continued getting copies of the analog because they felt it was better.

Ok – yea. Yea – I mean now like I said I'm working on this proposal and the hardest thing for me is how to organize the information because one way I was organizing was through various issues of trade – but they're all so interrelated. My most recent organization was doing an introduction – a history of the Grateful Dead…a whole section on what the Grateful Dead was in a live setting – the concert and they're kind of live aesthetic and what that was about. And then the paper project shifted to the tapes and how they were made and then it shifted to exchange and exchange theory and then how digital – the digital world - and the Internet changed everything.

Right.

And my main – my main kind of goal in this is to highlight number one the importance of live music and number two the importance of technology in

the ability to record that live music, preserve it, share it, have access to it as this historical record. And I am – I have to agree with the side of getting all the tapes out there, even the not so good tapes, because I know researchers who are working on the Grateful Dead who listen to the so-called bad audience tapes because they actually want to hear the conversations that are on the tapes. So they're using the tapes as a completely different research tool with different goals in mind. So in my head everything needs to be out, even the ones that people are talking over the whole time. But I also, because I have this sort of reverence for tapes, and old tapes, and masters…I can almost get that these don't circulate, they have to keep the value, they have to keep this magic – that there is this magic and this ability to take the live even and put through the magnetization of particles to get sound and what you're doing is such an interesting thing - drawing it off that tape into a new realm and trying to talk about how the music can be moved around to these different containers or different, I don't know, and being able to convey this to other people – why is this so important to so many people.

Well I think that – I want to just qualify a couple things you just said – or at least give my opinion to a couple things you just said. [Sighs] I think that you have to look at – as you say – you want to get everything out –another reason – there are two sides to the everything out thing. There's that point that you talked about but a lot of what we're talking about, about not getting everything out is that, for example, someone transferred Barry Glassberg's 11-1-79 show four years ago with shitty gear and then we do it with really good gear and edit it and make it sound the way it's supposed to sound and get it out. A lot of people are feeling like the thing they don't want to have circulate is the older version of Barry's thing because it's not as good as what's there now. So why muddy, piss in the pool of that source? So why do we need 10 of the same exact tape out, is a lot of the argument. Right? So that's that. I do get the listening to what people say thing as well. I mean there's one of the shows we did from '69, in LA that the conversations that these people had were just so sick. As they were walking away – there's a great show – and there's one from – oh which one – oh the best of them all is the Georgetown '73 show that we did and the guy left the deck running, recording as they left the concert and they were all talking, all tripping. And they're all talking about the show and people hooting and hollering in the parking lot as their walking out having these conversations; it was just incredible. And there are definitely vignettes like that, that exist that highlight the communal nature of what was going there as not related necessarily to the music, which is great. But back to your point, there are definitely camps there feel that from a circulated music perspective, there's so much out there, that why do you want to have seven versions of the same show up there so people don't know which one to grab to listen to musically.

So you're – I mean it's almost like the people involved in bit torrent – there's so many people involved in bit torrent – to have a responsibility to be aware

of what they're seeding to the mass collection in order to just help out, what, new people who don't know what they're doing and are just kind of taking?

Yea. Yes. And also to help themselves to get what's best. So Lossless Legs now has this new thing called OCD, if you look at some of the torrents, you'll see there's an icon – an actual animated guy, of a stick figure that's rolling this big boulder up the hill, and then the boulder rolls back down and the stick figure runs back down and starts pushing it back up again and it just repeats. These are the ones you're only grabbing because you have to have everything that exists but it's really not the one to listen to.

OK, so they're marking it –

…

They created this thing called OCD and said these are things that you shouldn't grab unless you're so OCD that you have to have it all.

It's so beautiful that they call it OCD.

Go online and take a look at it – you'll see there's an icon.

Yea – I've seen that icon, I didn't know that they were – but those things are being called that because there's something circulating that's better –

Yea yea yea yea. Something that's circulating that's better. I mean if it's the only thing that circulates, it doesn't get an OCD.

Or if it's considered to be the best thing. But people, I mean once they get a better version, are people clearing out their old versions or it just gets tacked into these collections that people are building? …. I guess it's an individual –

Yes! You know everybody handles their stuff individually. Some people are hyper-organized like the OBIE's of the world. Everything is so organized so that it's so perfect. And everything is there and I have it all. It's like sort of like – and some of these people are like – did you ever watch Bugs Bunny growing up?

A little. Yea.

There was a great Bugs Bunny where him and Daffy Duck were trying – this one was "Open Sesame," where they find this cave that has all the jewels in the world and Daffy wants it all and it won't let – he's trying to kill Bugs so he won't have any of it – so he finally – he angers the genie in the lamp and the genie in the lamp blows up Daffy Duck and makes him this tiny little thing. So finally, where they were trying to get was Pysmal Beach to hang out on the beach and Bugs is sitting on the beach and he has this big oyster and there's a pearl and there's this

little tiny Daffy Duck that comes running up his arm and grabs the pearl and goes, "It's mine. Mine. Mine. All mine." And Bugs goes, "Close sesame," to the oyster and it closes him in there and that's the end of the thing – end of the cartoon but I guess the whole point of it is, is that there are certain people who just want to enjoy it, like Bugs, and just have whatever he's going to get out of it and enjoy and it is what it is. And then there are certain people who are completely about having it all and it all being theirs. And in this community you exist somewhere on that spectrum where one end is Bugs and the other is Daffy. It's a great cartoon. It reminds me of that a lot. There are certain people that are, "Mine's better," which comes directly out of the taper world. I have it. It's mine, it's the best. And if – if you're worthy, I'll let you have it. And in the tape world when it was analog, you can have it but you still won't have what I have because I have one generation above you, which makes me better. And there's the currency aspect to that, but there's also the ego aspect to that, of knowing that you have better than everyone else, which has been brought to real extremes in some of the taper world where there's a guy who's taped many – he's not a Dead taper but he's taped everything since the early, early, early 70s and his name is Freezer, and he's like a big wig, or highly respected person at the taper's den and he's been known to make copies for people but damage the copies in some way. A lot of the copies have mistakes in them so that no one can actually have what he has.

Which seems almost antithetical to the don't pollute the gene pool, high quality standard.

Well, that's him. That's this one guy.

…

This is Freezer like a refrigerator in a freezer?

Well he's Freezer because all of his tapes are frozen with him and no one else can have them.

Woah.

He has an uncirculated tape of the Dead playing the bust show in New Orleans in 1970 I think it is. That the only tape that exists is the one that Freezer taped. And Freezer hates the Dead and he will not allow it to go out. He will not. It's like, "I'm going to burn this, so no one - "

Why?

Well it's this whole control thing. He's fucking Daffy Duck on steroids. And that's the deal. You know it's really – I've got to tell you – people are – if you look at the electronic world – and the funny thing is – I know you're doing this from a perspective that includes a tremendous sociological component – if you

look – the trading world that was analog trading is very bland and cut and dry in the way it operated and very easy to define from a sociological perspective and while there is ego involved and there is currency and there's power struggles that go on it, it happens over a telephone call here or a telephone call there and most of the time through an email here or an email there at the beginning at the of email world. Or a letter here or a letter there. But with the advent of the forums that exist today and the way people are communicating, it has taken on a *Lord of the Flies* kind of tinge to it where the society has devolved into it's most – at it's worst, the most basic interactions of people and it is on pure id level. There is no ego or super-ego involved in it. It's all id. It's sociologically and psychologically fascinating to see these people who obviously have to have some other life vesting the amount of energy and emotion into these conversations that are happening with people that they don't have any, any, any relationship other than reading six or seven typed sentences. To, that's the most fascinating in all of this. But then again, I'm not writing any thesis.

…

[And] the digital rights legislation that's just gone down. So there's a-whole-other aspect that will change so much of what we're talking about and it will take another turn at some point akin to what happened when the first digital sharing was shut down…[But] these bands are allowing this stuff – we are doing things that are above board here, so lets see, lets see.

…

And a lot of what people are doing does relate to the social aspect of this whole thing, that they're doing it because it involves this new social network that they've found and they want to place themselves somewhere in that hierarchy. So they do this stuff because of that. That is another portion of the motivation for people in this. But there's a whole new crew of people who are doing this stuff, and I guess one of the interesting things is that as waves of these people come and waves of these people go, there's plenty of people lined up behind them to replace them to continue that work, much like an ant colony. A certain worker ant dies, they carry the body off and somebody else steps right into the place and picks up right where they left off in building the colony or protecting the Queen, whatever their job is right? That's it. And it is it's own whole environmental world. And in essence, I really believe that it is just the replacement of what was there originally, which was tour when the Dead was really the Dead. It might not look exactly like it but it is the parking lot, it is the taper's section, it is the hotel rooms, it is tour. On some level. If you went to a Dead show, you go to one car and you hang out with certain people and they're having a certain experience and they're listening to '74 Dead and they're drinking beer, right? And throwing a football around. And you go to the next car down and they're listening to '68 Dead and they just finished taking mushrooms and they're listening to the Dead low on their radio but they have a drum circle going on. You go to the next car and there's

somebody selling veggie burritos and they're making money. And you go to the next car – and as you keep going down the line, there's some repetition in the experience yet there's something very individual about it. And yet if you ask the same exact question to each one of those different car loads of people you would get a different answer each time you went, and I think you're going to find as you keep broadening your scope of inquiry, you will find that, that same model holds true because what's important to me in this thing is different than what's important to OBIE and what's different in its importance to Bob or Glassberg, you know what I mean? They all have different things.

…

And you think that in this virtual world is where things are actually changing – I mean it's an actual – I mean I guess with your involvement and talking to people about what you are doing, it's actually changing the way people are –

Yea, the only way it gets out to people who are not involved in this world is when somebody downloads it and gives it to them or they go to the LMA and they get a show and that's the only place they know because it's a place you can actually go listen to it and download it. And that's it. That's their whole experience…They have no clue that etree exists other than to see when they're looking at the LMA that there's some reference to this thing called etree. No knowledge at all and those people are another – there the outer fringe of this whole spinning universe…the whole spinning galaxy while we might sit at the center of the brightest point in the galaxy, there's some star at the tip, the end of galaxy rotating around it and the energy from the center trickles out to them sort of like the way I was getting tapes when I started early on. And that's how the – what happened before might overlay onto what's going on today. But until you start meeting and talking to the people who sit at the end of the galaxy I don't think you're going to get the perspective that you got from me about my beginnings in the trading world or getting tapes when I was young at 11 or 12 years old, you know?

That's how I got into it – because a bunch of my friends are those people. I'm young, I'm only 24 and all through college I had a couple friends who were downloading off bit torrent and using archive and there was never any discussion of where are these tapes coming from it was just like, "How I can get this, I'll just take these."

Right but you don't have any clue about, what's going on to get them to you. But yet you are, in your involvement of actually getting the copy, involved in that world. I don't know if you look at it from that perspective or have thought about that.

…