A Cross Cultural Examination of the Psychological Dynamics in Music and Religious Practice

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This dissertation was prepared under the direction of the Suraj Sharma’s Dissertation Committee. It has been approved and accepted by all members of that committee, and it has been accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy in Business Administration in the J. Mack Robinson College of Business of Georgia State University.

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ABSTRACT

A CROSS CULTURAL EXAMINATION OF THE PSYCHOLOGICAL DYNAMICS OF MUSIC AND RELIGIOUS PRACTICE

BY

SURAJ SHARMA

4/15/2022

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Music and religion exist ubiquitously across time and space, hold profound phylogenetic importance to the human condition, and provide fruitful avenues for culture research. Existing norms, values, schemas, language, and mythological frameworks interact with auditory harmony, melody, and rhythm, within naturalistic settings, to condition profound psychological mechanisms with deep implications to the study of social psychology and culture.

Music has been and continues to be a normative tool in the use of religious ritualistic practice. Music has both the ability to facilitate changes in cognition and emotion on an individual level, while also strengthening group bonds and unifying a community at the social level. Religion represents a powerful cultural framework that one is typically conditioned to at an extremely early age and exerts massive pressure on the norms and values of the environment it exists in. This dissertation seeks to explore differences and similarities of music and religious practice across cultures and offers implications for the field of cross-cultural psychology.

The first essay is a quantitative paper that examines how one’s religion and how one practices their religion shapes their psychological mechanisms associated with the emotional
construal of terror, within the naturalistic setting of the covid-19 pandemic. During the pandemic many people have turned to their religious faiths for comfort and meaning in these existentially threatening times, however, many people have also found their ability to practice their religion effected by Covid-19, as well. The second essay will utilize a qualitative methodology to probe the use of music in ritualistic settings to understand cultural similarities and differences and what implications that may have for further understanding human cognitive and emotional capabilities and potentials. The final paper will be an interdisciplinary theory paper that borrows from social psychology, organizational psychology, musical psychology, and theology to propose mechanisms for how live musical practice in a communal setting interact to induce transformations in an individual’s sense of self. Often referred to as the “human obsession”, music is a unique communicative agent capable of arousing powerful cognitive and emotional responses in both the listener and performer across cultures.
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INTRODUCTION TO THE ESSAYS

Significance of Essay One

Essay one explicates religion as a distinct aspect of culture, challenging existing hypotheses of cultural dimensions, in a naturalistic setting. Religion, religious practice and religious communities play a central role in how individuals learn to conceptualize their worlds (Hood et al., 2009; Park & Paloutzian, 2013; Saroglou, 2013; Ysseldyk et al., 2010) and in the formation of one’s sense of self (Sampson, 2000; Snibbe & Markus, 2003; Cohen et al., 2005; Verkuyten & Yildiz, 2007; Ysseldyk et al., 2010; Burch-Brown & Baker, 2016). The interaction of what religion one practices, how one practices their religion and how often, along with the overarching cultural norms and values of the larger social environment, are important considerations for understanding the impact of religion on shaping psychological mechanisms in the individual (Burch-Brown & Baker, 2016). This essay contributes to the literature on cultural psychology and terror management theory. We show that how one practices their religion interacts with what religion one identifies as, in conditioning cognitive and emotional responses to notions of death. Different motivations and preferences for practicing their religion along with different religious frameworks were differentially affected by the pandemic, thus necessitating further research seeking to understand the effect of the pandemic on the psychology of individuals.

Significance of Essay Two

Essay two utilizes two highly understudied settings with rich qualitative data to build theoretical implications for the study of culture, specifically exploring the universality of musical
philosophies. I use data from naturalistic settings with an emic perspective to determine the external validity of existing cultural dimensions while exploring cultural universals and its implications for human cognition and emotion. Often referred to as a “human obsession”, music is a unique communicative agent capable of arousing powerful cognitive and emotional responses in both the listener and performer across cultures (Levitin, 2008). The human proclivity for music is one that humans are innately predisposed to shortly after or even at birth (Hart et al., 1998; Levitin, 2008; Dissanayake, 2000; Trehub, 2003). Music leverages both mathematical frequency and time intervals, as well as language, a more abstract form of meaning making, to communicate what typically cannot be communicated through any other medium (Cross, 2014). Thus, due to music’s unique capabilities, it is often deployed in religious worship and ritualistic practice to empower the ability for these settings to provide a meaningful experience that aids in an individual’s search for a sense of self.

Despite the cultural manifestations of the musical practices, there appears to be a profound common theme behind the philosophies of both musical practices. Musicians from Tibetan Buddhist cultures American Jam Band cultures speak about music as having specific cognitive effects and used for similar intentions.

This paper explores the similarities of the differences of their cultural musical practices used in a ritualistic context. A common philosophy may speak to greater implications of the cognitive and emotional mechanisms of individuals across cultures. Tibetan Buddhists and American Jam Musicians were first chosen to represent extremes on the cultural spectrum of analytical/independent/individualism vs. holistic/interdependent/collectivism. Interviews, triangulated by multiple sources of data, were used to examine the philosophical perspectives of their musical practice. A cross cultural analysis yielded differences in the physical manifestation
of the musical practice, but profound similarities in the mental states facilitated by the musical ritualistic practice.

This paper offers several theoretical and methodological implications. First, this paper builds to the cross-cultural psychology literature on the differences and similarities of ritualistic practices and offers behavioral and cognitive implications. While the manifestations of ritualistic practice, specifically in musical ritualistic practice, differ in the specific behaviors of the musicians, the cognitive processes involved appear to be quite similar. These similarities speak to the innate predisposition for ritualistic practices in human cognition and their evolutionary benefits.

Methodologically, this paper provides rich accounts from previously understudied contexts. The Tibetan Buddhists have only recently been exposed to the globalized world and thus the context is still raw for investigations. To date, this study offers a wealth of unique insight into the phenomenology of these practitioners and unique insight into the esoteric realm of their practice. The Jam Band musicians, despite being previously investigated in literature, has never been systematically analyzed and compared in cross cultural research. This context is important given the impact this genre had in American counterculture and represents, in some ways, a culmination of the Western culture. Besides these unique samples, this study explores in-depth interviews that offer emic insights into personal transformative accounts as well as etic comparisons shedding light for future research.

Significance of Essay Three

Essay three proposes mechanisms through an interdisciplinary lens for transformative experiences within a naturalistic setting. From organizational and social psychology, we utilize
sensemaking theory to show how the collective and the individual interact to dynamically create and simultaneously negotiate a shared sense of meaning and an individual’s sense of self (Weick, 2015; Ann Glynn & Watkiss, 2020; Weick et al., 2005). Within the sensemaking literature, both emotion and cognition interact and remain key points of focus for understanding the mechanisms by which transformative experiences are facilitated. We deploy existing literature from musical psychology to propose mechanisms for how components of the auditory stimuli, namely melody, harmony, and rhythm, interact within the cultural framework to aid the introspective and intra- and interpersonal negotiation processes by effecting an individual’s cognitive and emotional processes (Levitin, 2008). We show how collective participation in a musical experience amplify the cognitive and emotional responses through synchrony and effervescence. Lastly, we apply sensemaking to hermeneutical theory in theology to propose that communicative events within a shared mythological framework largely aid an individual’s introspective process for finding and resonating with one’s sense of self (McCaffrey et al., Moules, 2012). Overall, elements of the musical practice and the community synergize to spark a reevaluation of a part of one’s identity and facilitate a reconstruction of that part of their identity.

**Contribution of the Essays**

Together, this dissertation will make three contributions to the literature of cross-cultural psychology, communication, ritual, and cognition. Specifically, essay one provides quantitative evidence for religion to be treated as its own distinct aspect of culture and adds additional nuance to the existing literature on religion and terror management theory. The religion one belongs to and how they practice their religion have profound impacts on the psychological mechanisms of
its participants. In my study, I demonstrate how an individual enacts their religion and religiosity effect how one psychologically copes with ideas of death.

Essay two provides qualitative evidence from two opposite cultural frameworks to explicate similarities and differences regarding their philosophies of musical practice, yielding implications to the social psychological literature on cognition and emotion. This essay provides rich data from unique sources that contributes to understanding how culture shapes and is shaped by artifacts within it, particularly musical ritualistic practice. Despite culture affecting the manifestation of the musical ritual, the cognitive effects are retained as hypothesized by previous literature explicating ritual as a vital human construct for individual and social benefits.

Essay three provides an interdisciplinary theoretical framework that synthesizes previously compartmentalized literatures to explain mechanisms involved in the facilitation of transformations of one’s identity through music. This literature contributes to the literature on social and organizational psychology by proposing novel and fresh mechanisms for exploration that have powerful cognitive and emotional impacts. Music is universally held as a treasured cultural artifact across the world and this research hopefully sparks further investigation. We show how elements of music, and the community music is experienced in, synergize to cause an individual to have certain cognitive and emotional processes that cause an individual to have part of their identity evoked, that identity reevaluated and then effectively reconstructed through various musical experiences and communications within the fandom.
ESSAY 1: THE ENACTMENT OF RELIGION AND RELIGIOSITY ON BLATANT DEHUMANIZATION DURING THE COVID-19 PANDEMIC

ABSTRACT

During the COVID-19 pandemic, many individuals have turned to their religions for meaning and comfort. However, due to the pandemic, the ability to practice their religions has also been affected. Ideas of religious apocalypticism may also have been primed due to the pandemic. We seek to explore how individuals of different religions and different dimensions of religiosity were affected by the pandemic and what effect this impact had on their ability to meaningfully enact their religions in the face of existential terror. We investigate outgroup perceptions from Christians, Atheists and Buddhists and measures of their intrinsic and extrinsic religiosity to determine how religion and religiosity interact in shielding against existential threat. We find Christians blatantly dehumanized religious outgroups, when primed with death, as both intrinsic and extrinsic religiosity increased. We also find that Buddhists did not change their perceptions of outgroups regardless of level of intrinsic or extrinsic religiosity.

Key Words: religion, religiosity, covid-19, terror, prejudice, worldview defense, intrinsic, extrinsic
STATEMENT OF RELEVANCE

Efforts to fully understand the psychological and societal impact of the Covid-19 pandemic require taking individuals’ religions and how they practice their religions into consideration. The existential threat of the covid-19 pandemic has forced many individuals to confront death, and many individuals have turned to their religions to understand and cope with this threat. In some faiths, the concept of religious apocalypticism may have been primed by the unprecedented global pandemic, confounding previous hypotheses on religion and terror management (Dein, 2021). While religion may play a role in providing psychological comfort, religion may also play a role in perpetuating the ongoing polarization of society. In a world where violence is escalating and social and political stability is heightening, we seek to explore how religion, religiosity and death play a role.

Due to pandemic restrictions, many people have found their ability to practice their religions has been interrupted. Individuals that depend on public spaces for effective religious practice may be more impacted by the pandemic than those that don’t. We seek to understand what role religion and different dimensions of religiosity play in an individual’s psychological defense to mortality salience in society, specifically the dehumanization of religious outgroups, and what implications these findings may offer for a better understanding of the personal and societal impact of covid-19.

INTRODUCTION

The Covid-19 pandemic has been and continues to be an unprecedented “omnipresent mortality cue” for individuals across the world (Zhong et al., 2021). Stimuli within the environment, such as mask wearing mandates and death counts from the media, perpetually
prime individuals with death anxiety. Mortality is a foundation of many, if not all other anxiety orders, with dire implications on the wellbeing of individuals, communities, and nations (Iverach et al. 2014; Moreton et al., 2019). Many individuals seeking to find comfort, psychological safety, and meaning have turned to their religious faith to cope with this existential threat.

However, people may have found that the Covid-19 pandemic has disrupted their ability to practice their faith, thus potentially undermining their coping mechanisms for imminent threats, with implications on the cognitions, emotions, and subsequent behaviors of these individuals. Additionally, in certain religions such as Christianity, the idea of religious apocalypticism is believed to be primed due to the resonation of the global pandemic with religious doctrines and prophecies (Dein, 2021). This concept may have additional effects on the enactment of religion to cope with death during the context of a perceived apocalyptic narrative.

We seek to explore how the Covid-19 pandemic, as a death and apocalyptic primer, has affected Christians and what implications this disruption in religious practice may have on the psychology of these individuals, particularly in their perception of others from their religious outgroup. We use the Ascent Dehumanization Scale, a new scale that taps into overt and blatant prejudice that predicts intergroup behaviors more effectively than covert or subtle forms (Bruneau et al., 2018, Bruneau et al., 2017; Kteily et al., 2015). Using this scale in a naturalistic setting maximizes external validity for better understanding the existing and enduring division in current society.

We then compare to individuals with no religion, Atheists, and to a religion with a less salient apocalyptic narrative, Buddhism. Specifically, we ask the research question: how are religion, religiosity and the ability to practice religion associated outgroup prejudice during the Covid-19 pandemic? Understanding the role of religion and religiosity will help us better
understand the societal impact of the pandemic. As Cohen and Varnum (2016) state, religion may inform unique psychological processes than what is typically studied in culture research.

To the extent that death is omnipresent during a pandemic, not only would people take disease preventative actions to protect themselves, but they may also be motivated to defend against death psychologically. According to Terror Management Theory, outgroup prejudice has been shown to be psychological defense mechanisms for death (Pyszczynski et al., 2015), and remains important to understand in a social milieu characterized by evolving division between groups. One form of defense mechanism, Jonas and Fischer (2006) state that following mortality salience, people are inclined to react “negatively to those who violate or challenge their worldview” (p. 554; Greenberg et al., 1997).

Peoples’ religions may serve as worldviews that inform how they respond to threats of death, serving as a coping strategy against the terror of death, but they may also be a source of conflict in society. When confronted with death, individuals turn to their religious faiths to psychologically shield against it. However, religion may also serve to exacerbate intergroup conflicts and heighten prejudice, especially when individuals are confronted with death and primed with religious apocalyptic narratives. These apocalyptic narratives, within the context of covid-19, may cause MS (mortality salience) to have individuals subjectively perceive others that defy their religious worldview, negatively. We explore this tension and the paradoxical effects of religion.

**Mortality and Religion**

Existing literature positions religion as a “sacred canopy” that provides humans with a system to find meaning and protection from notions of death (Becker, 1971; Berger, 1967).
Religion, religious practice, and religious communities play a central role in how individuals learn to conceptualize their worlds (Hood et al., 2009; Paloutzian & Park, 2013; Saroglou, 2013; Ysseldyk et al., 2010) and in the formation of one’s sense of self (Sampson, 2000; Snibbe & Markus, 2003; Cohen et al., 2005; Verkuyten & Yildiz, 2007; Ysseldyk et al., 2010; Burch-Brown & Baker, 2016). Thus, exploring religion is crucial for a true understanding of societal trends.

Religion is a complex entity to study, with both individual and societal components. These individual and societal components are examined in perspectives on intrinsic and extrinsic religiosity (Allport & Ross, 1967). At the individual level, one’s religious faith and practice may provide psychological benefits on the cognitive and affective processes, such as “a sense of spiritual, moral, and social purpose; a sense of meaning; feelings of connection and belonging; emotional bonding; and cognitively and emotionally rewarding ways of understanding existence and one’s place within it” (Burch-Brown & Baker, 2016, p 7; Graham & Haidt, 2010; Hood et al., 2009; Parmagent, 1997; Saroglou, 2011). Accordingly, religion has been hypothesized to offer a system for psychologically protecting individuals against death terror (Solomon et al., 1991), with many studies confirming that religiousness can dampen concerns of death (Jonas & Fischer, 2006; Feifel & Nagy, 1981; Kahoe & Dunn, 1975; Spilka et al., 1977; Templer, 1970).

At the communal level, religion also serves a social and communal role by offering a distinct way of coping with death. Religious communities have been shown to drastically affect the way members conceptualize their world and form their social identities (Hood et al., 2009; Paloutzian & Park, 2013; Saroglou, 2013; Ysseldyk et al., 2010; Verkuyten & Yildiz, 2007; Ysseldyk et al., 2010). Additionally, previous research has proposed that religious identification “may be experienced as a particularly valuable form of group membership, because of the
meaningfulness of religious experience, and the cognitive and emotional rewards of participating in a community organized around important moral ideals and values like love and commitment” (Burch-Brown & Baker, 2016 pg. 6; Graham & Haidt, 2010; Hood et al., 2009; Parmagent, 1997; Saroglou, 2011, 2013; Ysseldyk et al., 2010). Thus, a shared and communal validation of belief amplifies religious experience as well as provides additional comfort and protection against existential fears through providing members with a feeling of belonging (Pyszczynski et al., 1996; Pyszczynski et al., 2015; Durkheim, 1915/1965). Given these two different components of religions, individual and communal, we explore intrinsic and extrinsic religiosities in our study.

Regarding the idea of death in religions, eschatological examinations may provide additional insight into how religion is enacted during MS. Eschatology refers to the study of the end of the world, or the end times, in different world religions (Carroll, 200). While eschatological accounts are found in most religions, understanding Biblical apocrypha within the context of Covid-19 may shed light on how individuals are psychologically coping with the global pandemic, especially within Christians.

According to the Pew Research Center, 70.6% of Americans identify as Christian, making it by far the overwhelming majority religious faith in America (“Pew Religious Landscape Study”, 2022). Christianity, an Abrahamic religion, explicitly has doctrines that prophesize the end times. The Christian Bible is composed of the Old Testament, compiled before the birth of Christ, and the New Testament, compiled after the birth of Christ. In the book of Revelation, the final book of the New Testament, the book discusses a prophecy about the end of the world and the second coming of Christ. Christians may have had these times primed due to the Covid-19 pandemic, especially when additionally primed with death (Dein, 2021). In what
Dein (2021) calls religious apocalypticism, “fundamentalist Christians, especially those who hold to the rapture, assert that the Book of Revelation forecasted the pandemic 2000 years ago” (p. 7).

Some pastors such as Gerald Flurry (2020) asserted that the coronavirus pandemic “is a sign from God redirecting humanity on the right path before the ultimate clash between the forces of good and evil” (Dein, 2021, p. 9). Additional Biblical verses resonate with the pandemic and its concomitant geopolitical instability, “For nation shall rise against nation, and kingdom against kingdom: and there shall be … pestilences … in divers places” (Dein, 2021 p. 10; Bible, 1996; Matthew 24:7; see also Mark 13:8 and Luke 21:11). Christians may find meaning in these unprecedented times by referring to the Biblical apocalyptic narrative (Stein, 2020). This perspective was quite far reaching just following the terrorist attacks of 9/11 and is likely even be more pervasive in today’s context of increasing global instability. Weber (2004) states, “More than one-third of Americans said that since the terrorist attacks of 9/11, they have been thinking more about how current events might be leading to the end of the world” and that “59 percent say they believe that events predicted in the Book of Revelation will come to pass” (p. 11).

Additionally, in Christianity, the idea of genuine acceptance of Jesus Christ as savior is central to Christian worship, whether individually practices or communally (Tyndale, 2004). Many Biblical verses refer, explicitly, to the necessity of accepting the idea of Jesus Christ as Son of God to be saved in the end times (Ellwood & Alles, 2007). For example, John 14:6 states that “Jesus saith unto him, I am the way, the truth, and the life: no man cometh unto the Father, but by me” (Bible, 1996).
Christians may thus have an increased negative perception of religious outgroups when primed with death during the context of an apocalyptic narratives, given the warnings in Christian doctrines, “Beware of false prophets” (Bible, 1996; Matthew 7:15). In this view, other religions are thus seen as inappropriate for salvation and thus, it is possible that highly religious Christians may have a less favorable view of religious outgroups. We explore how this idea conforms or opposes previous research on death and religion.

Buddhists, on the other hand, while they may have eschatological accounts in their doctrines, the Pali Canon (Kitagawa, 1981), it is likely to be significantly less salient, especially given that American Buddhists have adopted the religion for practical purposes rather than religious (Smith, 1999; Drougge, 2016). Buddhist apocryphal accounts of end times prophesize that Maitreya, the next Buddha, will return when Buddhism has disappeared from the world (Hooper, 2011). Given that Buddhism has not disappeared yet and is in fact growing in appeal, we believe that even if Buddhists are aware of the eschatological texts in their faith, they will not have be primed within the Covid-19 pandemic to the same degree Christians would.

Outgroup Perceptions

Previous research on the psychological mechanisms of shielding against mortality threats explicate worldview defending and anxiety buffering as coping strategies for psychologically shielding against death thoughts (Pyszczynski et al., 2015). That is, when individuals are primed with death, they tend to have less favorable opinions of those that differ from them. This is evolutionarily consistent, given the enhanced ability for survival by defaulting to individuals more like you when threatened (De Dreu et al., 2014).
We explore how differences in individuals that have intrinsic and extrinsic religiousness differ in deploying their religions when faced with death. Intrinsic religiousness involves using religion as a source for meaning and value in one’s life. Extrinsic religiousness involves using religion in a utilitarian approach such as for “safety, solace, social standing and self-justification and to from the self from infractions (Jonas & Fischer, 2006, p. 555; Allport, 1966). Previous research has found differences in the effectiveness of intrinsic and extrinsic routes of religiosity in shielding individuals from existential threat. For example, Jonas and Fischer (2006) found that individuals low on intrinsic religiosity psychologically defended whereas individuals high on intrinsic religiosity did not.

Additionally, the research on religion, religiosity and prejudice is mixed. Research on religion and mortality salience found that MS led individuals to bolster their own faith and derogate others from outside of their religion (Greenberg et al., 1990). However, this research focused only on Christians as an ingroup and Jews as an outgroup. We expand outgroup to include other world religions and atheists while using a novel scale that explores overt prejudice and strongly predicts intergroup behaviors, the Ascent Dehumanization Scale, exploring blatant dehumanization of outgroups (Bruneau et al., 2018, Bruneau et al., 2017; Kteily et al., 2015).

Other research has found that religious identification and participation is associated with increased prejudice towards outgroups (Burch - Brown, & Baker, 2016; Altemeyer, 2009; Batson et al., 1993; Hall et al., 2010; Johnson et al., 2012; Rowatt, et al., 2009; Whitley, 2009). Extrinsic religiosity has been found to be associated with higher levels of overt and covert prejudice (Batson, 2013; Burch, et al., 2016). Intrinsic religiosity, however, has been found to be associated with lower levels or neutral levels of covert prejudice (Burch, et al., 2016; Batson et al., 1978; Kirkpatrick & Hood, 1990; Sedikides & Gebauer, 2010).
In addition to religiosity, what religion one practices may also affect levels of prejudice. For example, Clobert, al. (2014) found that individuals from East Asian religions exhibited greater intergroup tolerance, specifically less prejudice towards Muslims (Burch, et al., 2016).

Overall, the research on Terror Management Theory and research on the relationship between religions and induced prejudice are currently inconsistent in providing a strong theoretical basis for expected patterns on how individuals from different religions and religiosity will enact their religions to shield against death. Additionally, ideas of religious apocalypticism may further confound previous hypotheses on religion and death, necessitating further investigation. We thus seek to explore, in a naturalistic setting, how individuals from a religion that may have an apocalyptic narrative primed conform to previous hypotheses on terror management and literature. We then compare to individuals with no religious faith and a religion with a lesser emphasized apocalyptic narrative.

Specifically, we examine how Christians respond to death during the Covid-19 pandemic. We then compare to individuals with no religious faith and a religion with a less salient apocalyptic narrative, Atheists and Buddhists, respectively.

Atheists are individuals that do not believe a god exists (Draper, 2021). In the face of death, previous literature has hypothesized that atheists enact may enact naturalistic beliefs that play a similar role belief supernatural agents may for religious individuals, in dealing with adverse environmental stimuli, referred to as the “belief replacement hypothesis” (Farias, 2013). For example, research has found that belief in moral progress has helped secular individuals deal with existential anxieties (Rutjens et al., 2009). Other research has found that belief in science may serve as another emotionally comforting mechanism for shielding against death (Paulhus & Carey, 2011).
Buddhism is an enlightenment religion based on the teachings of the Buddha and teaches that nirvana, or freedom from the cycle of reincarnation that brings worldly suffering, can be obtained by anyone through personal acceptance of the Four Noble Truths through the Eightfold Path (Ellwood & Alles, 2007). Unlike Christianity, Buddhism teaches that the universe has no beginning or end and any case of apocalypticism is not permanent, but instead leads to renewal in a cyclical manner (Hemmann, 2019; Smith, 1999). While some Buddhists hold that the Maitreya myth is an apocalyptic narrative within Buddhism, this belief is much less central to Buddhist belief than in Christianity (Sponberg & Hardacre, 1988). Buddhism instead was a religion that drew mass appeal due to its practical benefits such as that found in mindfulness and meditation (Smith, 1999; Drougge, 2016). Given these specific differences, we expect the psychological defenses of Christians and Buddhists to differ vis-a-vis outgroup perceptions.

Despite Christianity and Buddhism having rich histories in their expansion across the world and take many different forms in the cultural contexts they are found in, this research is a preliminary examination into how different religions, due to differences in their teachings and practices, psychologically respond to notions of death.

Thus, we seek to explore how Christians enact their religions during the covid-19 pandemic when primed with death. We additionally explore how different religiosity, specifically intrinsic and extrinsic religiosity, and effects from covid-19 on religious practice affect the enactment of their religion on perception of religious outgroups. We then compare to individuals that identify as atheist, that is individuals that don’t believe in God, and then to individuals that identify with a religion with a much less heavily emphasized apocalyptic narrative, Buddhists.
Within the context of the Covid-19 pandemic, we believe that for highly intrinsic religious Christians, MS will not lead to more exacerbated prejudice than those with low intrinsic religiosity given previous literature (Jonas & Fischer, 2006). Because intrinsic religiosity is not reliant on worship in a public location, we expect no interaction with the effect of covid 19 on religious practice.

In Christians high on extrinsic religiosity, on the other hand, we expect MS to cause them to psychologically defend, causing them to have a lower perception of outgroup (Greenberg et al., 1990; Jonas & Fischer, 2006). Additionally, we expect the impact of Covid-19 on their ability to practice to significantly interact with religiosity in predicting outgroup perception.

We then compare these findings to Atheists and Buddhists.

Specifically, we hypothesize the following:

H1: Christians high in intrinsic religiosity will have a higher outgroup perception than Christians low in intrinsic religiosity.

H2: The effect of Covid-19 on religious practice will have no effect on the relationship between intrinsic religiosity and outgroup perception.

H3: Christians high in extrinsic religiosity will have a lower outgroup perception than Christians low in extrinsic religiosity.

H4: The effect of Covid-19 on religious practice will strengthen the negative relationship between extrinsic religiosity and outgroup perception.
METHOD

Participants

A total of 299 participants were recruited through Cloud Research: 99 affiliating with Christianity, 100 affiliating with Buddhism and 100 with Atheism. Participants ranged from age 18 to 65+. Participants were all living in the United States. Of the Christians, 8 identified as Asian, 12 as black, and 79 as white. Of the Buddhists, 56 identified as Asian, 1 as black, 39 as white, and 4 as other or mix. Of the Atheists, 10 identified as Asian, 2 as black, 81 as white and 7 as other or mix. Attention checks were inserted into the questionnaires and individuals that failed one or many of them were dropped.

In the first round of surveys, 105 Christians passed the attention check, and 10 Christians failed, 118 Buddhists passed, and 19 Buddhists failed, and 141 Atheists passed, and 1 Atheist failed. A week later, these respondents were followed up with to respond to a second set of survey questions. Of the 105 Christians that passed, 79 responded, with 4 failing, leaving us with 75 total Christians. Of the 118 Buddhists that passed the first round, 45 responded with 1 failing, leaving us with 44 Buddhists that responded to the first and second wave that passed the attention check. Of the 141 Atheists that passed the first round, 101 responded with 1 failing the attention check for a total of 100 Atheists that responded to the first and second wave that passed attention checks.

A second batch of surveys was sent out. In the second batch 44 Christians responded with 1 failing. In the second wave, 26 Christians followed up, with 2 failing the attention check. In the second batch first wave, 70 more Buddhists responded, with 3 failing the attention check. Of the 67 that passed the first round, 59 Buddhists responded to the second wave, with 3 failing, leaving
us with 56 more Buddhist first and second wave responses that passed. Final sample counts were n = 99 for Christians, n = 100 for Buddhists and n = 100 for Atheists.

**Materials**

We obtained responses during May and June of 2020. Our independent variables are religion and religiosity. We collected this data from only Christians and Buddhists. We used the Allport Ross (1967) Intrinsic and Extrinsic Religiosity scale to collect data from Buddhists and Christians (Allport & Ross, 1967). The I/E scale consists of 3 subscales: Intrinsic (α = .849), Extrinsic Social (α = .865), and Extrinsic Personal (α = .68). The intrinsic religiosity scale includes items such as “I enjoy reading about my religion” and “I pray mainly to gain relief and protection”. The extrinsic social scale includes items such as “I go to church because it helps me to make friends” and “I go to church mostly to spend time with my friends”. The extrinsic personal scale was not used given its low alpha score. Since the scale uses words like church, we slightly adopted the scale to be applicable to Buddhists through changing church to place of worship.

The dependent variable was outgroup perception. We use the Ascent Dehumanization Scale to measure the perception of religious outgroup (Kteily et al., 2015). We collected this data from Christians, Buddhists, and Atheists.

Our moderator was the perceived impact of covid-19 on religious worship. We created this scale to assess the impact of Covid-19 on religious worship. We collected this data from Christians and Buddhists.
We use the standard terror management manipulation which includes a filler questionnaire, which we used the PANAS scale (positive affect negative affect scale) (Pyszczynski et al., 2015).

We use the Rosenberg self-esteem (RSE) scale to collect a measure of self-esteem which is used as a covariate (Rosenberg, 1965).

**Procedure**

Individuals were asked to respond to questionnaires in two waves, about a week apart, in during May and June 2020, at the peak of the first wave of the Coronavirus pandemic. Individuals from the Christian and Buddhism groups were first asked to answer questions from the Allport Ross Intrinsic/Extrinsic Scale (Allport & Ross, 1967).

We collected information of individual self-esteem (Rosenberg, 1965), which was used as a covariate. Previous research has found that self-esteem moderates the effect of mortality salience, so we used the RSE ($\alpha = .943$) as a covariate (Harmon-Jones et al., 1997; Dunkel, 2002).

A week later, these same individuals were followed up with and were first asked to participate in the standard Terror Management Theory (TMT) manipulation, two open ended questions intended to prime death thoughts; “imagine what will happen when you die” and “how does that make you feel” (Pyszczynski et al., 2015). The TMT manipulation is used to ensure a uniform death thought accessibility across the sample. A great deal of variability regarding perceived threat from COVID-19 exists, but because we were interested in the enactment of religiosity in the face of death, we use this manipulation to reduce potential confounds in our data. Unlike typical TMT studies, we did not include a control condition in which participants
were asked to think about a dentist visit because the Covid-19 pandemic was overwhelmingly prevalent around the county and the world, creating an intensively salient condition for our study as a natural experiment.

Participants were deliberately given these questionnaires regarding their religiosity and the TMT manipulation a week apart to avoid priming religion during the manipulation. Participants were then asked to complete the PANAS scale (positive affect negative affect scale), a question commonly used in the TMT literature as a filler to ensure death thoughts are distal, and not proximal, a key feature needed to ensure psychological defense mechanisms are enacted (Pyszczynski et al., 2015).

Participants were then asked to respond to an Ascent Dehumanization Scale (Kteily et al., 2015), our dependent variable measure for ingroup and outgroup perceptions. The Ascent Dehumanization scale is a measure of dehumanization that uses the “Ascent of Man” diagram, where participants rated how human or animal like others are that belong to different groups. The scale asks participants to rank individuals from groups from 0 meaning most animal like to 100 meaning most human like. We altered this scale from its previous form to measure perceptions of specific religious groups, Christianity, Buddhism, Islam, Judaism, Hinduism and Atheism. This measure of blatant dehumanization was chosen to measure perceptions of outgroup based on past research which demonstrated blatant dehumanization measure’s ability to better predict intergroup behaviors than subtle dehumanization (Bruneau et al., 2018; Kteily et al., 2015). Research by Kteily et al., (2015) has found that the Ascent Dehumanization Scale is “(a) more strongly associated with individual differences in support for hierarchy than subtle or implicit dehumanization, (b) uniquely predictive of numerous consequential attitudes and behaviors
toward multiple outgroup targets, (c) predictive above prejudice, and (d) reliable over time” (p. 1).

We then collected information on the individuals perception of the effect of Covid-19 on their religious practice (CVDRel) from the Christians and Buddhists ($\alpha = .819$) This scale was created by us and is composed of 6 items which asked to rate on a scale of 1 – 5 (stop to do it much more than before) items such as “going to a religious gathering” and “praying, singing, religious songs, or other religious activities”.

Composites were created by averaging the scores from I/E. Out group scores were created by averaging the scores from the out groups. For example, for Christians, outgroup scores were generated by averaging the scores for Buddhists, Muslims, Jews, Hindus, and Atheists.
RESULTS

To test hypothesis 1, we conducted a regression on our Christian participants with outgroup score as the dependent variable and intrinsic religiosity as the independent variable, and race and self-esteem as covariates. Unexpectedly, we find a significant opposite effect of intrinsic religiosity on predicting outgroup perception, controlling for race and self-esteem ($\beta = -5.83$, $SE = 2.46$, $t = -2.37$, $p = .020$). Whereas we predicted higher intrinsic religiosity would be
associated with higher outgroup perception, we found that as intrinsic religiosity increases, perception of outgroup decreases.

To test hypothesis 2, we use PROCESS Macro 3.5 on SPSS. CVDRel was introduced as a moderator between intrinsic religiosity and outgroup perception on Christian participants. Moderator values were set at -1 SD, Mean and +1 SD. There was an insignificant interaction between intrinsic religiosity and effect of covid on religious practice in predicting outgroup scores ($\beta = -2.09$, SE = 2.80, $t = -0.7466$, $p = .4572$).

Figure 2: Moderation of CVDRel on Intrinsic Religiosity Predicting Outgroup for Christians

To test hypothesis 3, we conducted a regression on our Christian participants with outgroup score as the dependent variable and extrinsic religiosity as the independent variable, and race and self-esteem as covariates. As predicted, we find a significant effect of extrinsic
religiosity on predicting outgroup perception, controlling for race and self-esteem ($\beta = -3.96$, SE = 1.38, t = -2.87, p = .005). Higher extrinsic religiosity was associated with lower perception of outgroup.

To test hypothesis 4, we use PROCESS Macro 3.5. The independent variable was extrinsic religiosity, the dependent variable was outgroup score, CVDRel the moderator, and race and self-esteem covariates. Moderator values were set at -1 SD, Mean, and +1 SD. The interaction effect was insignificant ($\beta = .92$, SE = 2.61, t = .35, p = .72). The interaction is displayed in Figure 3. We, thus, do not find support for hypothesis 4.

Figure 3: Moderation of CVDRel on Extrinsic Religiosity Predicting Outgroup for Christians
To explore differences between Christians and Atheists, a one-way ANOVA was conducted between Christians and Atheists, with outgroup score as the dependent variable and religious group as the factor. A significant difference was found at the p < .05 level, [F(1, 197) = 5.04, p = .026]. A regression for the Christians and Atheists was conducted with outgroup as the dependent variable and religious group as the independent variable. Christians had a significantly lower outgroup score than Atheists (β = -3.98, SE = 1.77, t = -2.25, p = .026).

To explore differences between Christians and Buddhists, PROCESS Macro 3.5 was used to analyze the interaction of intrinsic religiosity and religion in predicting outgroup scores between Christians and Buddhists. The dependent variable was outgroup score, the independent variable was religious group, the moderator was intrinsic religiosity, and self-esteem and race were set as covariates. Moderator values were set at -1 SD, Mean and +1 SD. A significant interaction result was found between religion and religiosity in predicting outgroup scores (β = -7.37, SE = 3.61, t = -2.04, p = .043). Interaction results are displayed in Figure 4.

Figure 4: Intrinsic Religiosity on Predicting Outgroup Scores for Christians and Buddhists
PROCESS Macro 3.5 was used to analyze the interaction of extrinsic religiosity and religion in predicting outgroup scores between Christians and Buddhists. The dependent variable was outgroup score, the independent variable was religious group, the moderator was extrinsic religiosity, and self-esteem and race were set as covariates. Moderator values were set at -1 SD, Mean and +1 SD. We found a highly significant interaction effect between religion and extrinsic religiosity ($\beta = -6.52$, SE = 2.68, $t = -2.43$, $p = .016$). Interaction results are displayed in Figure 5.
DISCUSSION

In general, we find mixed support for our hypotheses. In testing hypothesis 1, using a scale that tests blatant prejudice, when primed with death during the naturalistic setting of the Covid-19 pandemic, highly intrinsic religious Christians unexpectedly derogated religious outgroups more than less intrinsically religious Christians. Regarding hypothesis 2, we had hypothesized that due to Covid-19 only affecting extrinsic religious activities, there would not be a significant interaction. In other words, activities like praying and reading were expected to be less related to the impact of the pandemic. As predicted, we find an insignificant interaction.

In testing hypothesis 3, we found that higher extrinsic religiosity is correlated with a lower perception of outgroup. This is consistent with past literature that shows that extrinsic religiosity is linked with prejudice (Batson, 2013; Burch-Brown & Baker, 2016).
literature has suggested this occurs because extrinsic religious individuals have their existential worldviews threatened by religious outgroups and thus subjectively derogate them (Greenberg et al., 1990; Jonas & Fischer, 2006). Individuals rely on the validity of their worldviews. Accordingly, threats to this worldview hinder their ability to deploy their religion effectively in psychologically shielding against death causing them to view others that disagree with this worldview, unfavorably (Rosenblatt et al., 1989).

Regarding hypothesis 4, we expected extrinsic religious Christians and impact to Covid-19 on religious worship to interact, where highly extrinsic religious Christians that had their religious practices impacted by the pandemic would exhibit the largest psychological defense of derogating outgroups. However, we did not find a significant interaction.

When we compared Christians to Atheists, we found that there was a significant difference in outgroup perception across Christians and Atheists. Christians exhibited a significantly lower perception of outgroups than Atheists, suggesting that Atheists may deploy something other than their religious faith in the face of death to psychologically cope with mortality salience. Previous research has hypothesized a “belief replacement hypothesis” (Farias, 2013) where atheists will enact naturalistic beliefs to psychologically cope with death. Other research has found, in secular individuals, that belief in moral progress helped with existential threat (Rutjens et al., 2009).

Perhaps most interestingly, when comparing the Christian relationship between religiosity with the Buddhist relationship between religiosity, we found a significant difference. Buddhists consistently rated the outgroup as more humanlike, regardless of their religiosity, whereas Christians at higher levels of both intrinsic and extrinsic religiosity rated outgroups as more “primate-like” than did Christians at lower levels of both religiosities.
Buddhism's teachings have begun to be more popular in the west due to their practical benefits and so it is possible that individuals that identify with Buddhism may have had less of a Terror Management response, that is a lower perception of outgroups (Batchelor, 2021). Buddhism is also often discussed as a religion that emphasizes “compassion and interdependence” (Clobert & Saroglou, 2013, p. 464). While Buddhist ideology is more inclusive and less dogmatic, Christian ideology is more specific in what is required for salvation in death or the end times, possibly explaining why larger derogation of religious outgroups occurred in highly religious Christians, but not Buddhists.

There may have also been a selection bias where American individuals that identify with Buddhism may have previously been born into a different religion, converted to Buddhism and thus are already individuals that embody notions of equality and oneness, regardless of religion. Future research should compare different Buddhist sects, especially outside of a western context. One reason may be due to the lack of a salient eschatological narrative in American Buddhist mentalities.

**Contribution to Theory and Practice**

This current study makes many contributions to the existing literature on terror management theory and religion. First, we test existing hypotheses in a naturalistic setting and show that, at least within Christians, both intrinsic and extrinsic religiousness is linked to more outgroup derogation. While previous research found that worldview defending, that is bolstering ingroup perception and decreasing attraction of outgroups, is mitigated by being intrinsically religious (Jonas & Fischer, 2006), we find that both extrinsic and intrinsic religiousness is linked to decreases in the perception of outgroup during the naturalistic setting of Covid-19. This
relationship in intrinsic religious Christians, however, was found in Christians that were highly
effected by Covid-19 and was dampened when intrinsic religious Christians reported less
subjective impact to their ability to practice their religion.

We introduce the idea of eschatology and apocrypha as possible mechanisms that may
explain why both intrinsic and extrinsic religiousness are linked with derogation in Christians,
but not in Buddhists, within the context of the Covid-19 pandemic and the concomitant global
turmoil. Future research can tease out in what settings these narratives are primed and the
explicit mechanisms involved in outgroup perceptions.

We fuse literature on blatant dehumanization and terror management by deploying the
Ascent Dehumanization Scale as a measure of outgroup perception (Bruneau et al., 2018; Kteily
et al., 2015). We use this scale given the understudied nature of blatant dehumanization and the
explanatory power in intergroup behaviors of blatant over subtle dehumanization. Analysis of
blatant dehumanization is important given its ability to strongly predict aggressive actions
(Kteily et al., 2015). Global intercultural relationships are escalating towards more violence and
aggression. Research exploring under what conditions and what psychological mechanisms are
responsible for these perceptions and behaviors are thus becoming increasingly more important.

We also show, albeit only preliminarily, that atheists may also have their own distinct
way of psychologically coping with death, apart from a theological framework. Future research
could look at different levels of perceptions within the brief replacement hypothesis, for example
different levels of belief in moral or scientific progress and examine how this relationship on
predicting outgroup perception compares to religiosity.

Limitations
One major limitation is the western centric nature of the intrinsic/extrinsic scale. For example, Cohen et al. (2005) has explained that the normative motivations for religious practice vary across religious groups. In the same vein, it is possible that the current dichotomy of intrinsic and extrinsic religiosity does not effectively investigate the different mechanisms of religious practice and motivation in Eastern religions. Further research is needed to create scales that accurately investigate Eastern religions without imposing current western centric ways of thinking. For example, literature has explicated mindfulness as being a key mechanism of Buddhist practice and should thus be incorporated into future investigations of Buddhist practice and diversity in the Buddhist practitioners (Garces-Folley, 2005).

This current research did not explicitly examine the salience of an apocalyptic narrative in participant’s religious cognitive frame. Future research could ask participants how aware they are of their religious frameworks eschatological narratives and explore how the salience of these narratives interact with their religion in predicting outgroup perception.

Another major limitation is our current study did not investigate the differences that lie within the major religion heads. For example, within Christianity, Protestants and Catholics have differences in how they practice and what emphasis they place on existing institutions. Protestantism is a branch of Christianity that was created as a means of breaking from the institutional reliance on the Catholic church, and instead places more emphasis on individualistic practice. Thus, literature has positioned Protestantism as being more individualist, whereas Catholics are seen as more collectivist (Cohen et al., 2005; Garces-Folley, 2005). Similarly, many different sects of Buddhism exist across the world. Tibetan Buddhism, Indian Buddhism, Japanese Buddhism and Chinese Buddhism, just to name a few (Garces-Folley, 2005). Buddhism seems to be an interesting religious framework given its ability to morph with the cultural
framework it exists in. For example, the process known as “shin-butsu shugo” in Japan, meaning Shinto-Buddhism coalescence, indicates that many people in Japanese culture identify as both Buddhist and Shinto (“Buddhism and Shinto”, 2016). Thus, it is quite possible, in our study, the Buddhism that trickled into America adopted many of the individualistic components of the overarching cultural environment and fused with America’s strong and imposing cultural framework. As the world becomes more globalized and the dynamic contemporary cultural milieu fuses with traditional religious practices, future research should place a greater emphasis in examining the tensions between tradition and modernity as well as written dogma and cultural setting.

CONCLUSION

Understanding religion and religiosity is vital for understanding the psychological impacts of Covid-19. Individuals have turned to their faith to cope with the pandemic but have also found their ability to practice affected as well. Additionally, the Covid-19 is an unprecedented even in human history that resonates with eschatological prophecies in religious texts. We explored how individuals from different religions and religiosities psychologically coped with death using a new scale that measures blatant dehumanization. We find that highly intrinsic and extrinsic Christians derogated religious outgroups, but Buddhists did not differ in their perception of outgroups, regardless of religiosity. Religion is thus a distinct component of culture and necessitates further investigation.
ESSAY 2: A CROSS CULTURAL EXPLORATION OF PHILOSOPHIES OF MUSIC IN RITUALISTIC PRACTICE

INTRODUCTION

Rituals exist in cultural traditions across the world, particularly in religious domains. Given their fundamental importance to the human experience, rituals have been a prevalent topic for investigation to social scientists and psychologists (Durkheim, 1915; Geertz, 1973; Levi-Strauss, 1955; Hobson et al., 2017). Cross cultural research suggests that virtually all cultures in institutionalized ritualistic contexts employ the use of some type of musical practice (McDaniel, 2018). Music, “the human obsession”, is universally held to be of the most important and distinguishing cultural artifacts in nearly every society (Levitin, 2008). Music has been used in conjunction with ritualistic practices as early as the first hominids, to being used in nearly every contemporary religion, from Christian Gospel to Islamic chants (Beck, 2006). Despite its presence and reverence across the world, music remains understudied within the context of cultural psychology literature, especially in eastern contexts (Sharma & Liu, in press).

The synthesis of musical elements in ritualistic contexts, cross culturally, appears to consistently be used for facilitating altered or “ecstatic” cognitive and emotional states (Bourguignon, 1968; Winkelman, 1992; Winkelman, 2010; McDaniel, 2018). These states are often subjectively described as mystical, religious, or spiritual (Griffiths et al., 2006). Scholars have thus hypothesized that there is an innate human drive for altering consciousness, (Winkelman, 2011; Winkelman, 2010; Siegel, 2005; Laughlin et al., 1992) and musical rituals serve a unique purpose for facilitating these altered states.

This innate biological potential and predisposition for induced altered cognitive states through institutionalized ritualistic practice is hypothesized to provide unique individual and
societal evolutionary benefits. The ritual itself synchronizes group action, enhances feelings of belonging and emotional alignment, and strengthens overall group cohesion on the group level, making the group more fit for survival (Xygalatas, 2015). On an individual level, musical rituals may facilitate altered cognitive states, and recent literature has explicated that these states produce a synchronization of brain waves and an integration of brain structures that provide “psychodynamic growth and social and psychological integration” (Winkelman, 2010, p. 29).

Thus, Winkelman (2010) argues that a biological basis is at the root of the cross-cultural manifestation of these practices. Due to this biological grounding, ritualistic practices that effect emotion and cognition, often in conjunction with a musical practice, are inevitably expressed in the human experience across time and space, even in cases when the surrounding culture attempts to repress them. Given this universal drive situated in different cultural contexts, the manifestations of ritual may be different but still retain its underlying mechanisms and purposes. We seek to explore this.

Thus, this essay asks the research question: how are musician phenomenology’s and behaviors in ritualistic settings different or similar across two radically different cultures, and what implications does this have for human cognitive, emotional, and behavioral capabilities? We employ the definition of phenomenology that explores “the experience that is associated with cognitive activities, such as thinking, reasoning and understanding” (Smithies, 2013, p. 1). We explore how musicians from the East and West differ or are similar in their philosophies, phenomenologies and behaviors of musical performance in ritualistic contexts to shed light on the interaction between culture and psychophysiology. We then explore the cross-cultural psychology literature and offer implications from our findings to theoretically advance current understandings of cross-cultural universals and differences.
Culture

Culture is a human software for organizing and effectively navigating the world (Hofstede, 2010). The West and the East have well established cultural differences and distinct epistemological understandings of the world. The Western school of thought is believed to have descended from an analytical standpoint, promoting a more individualistic construction of reality and led to the advancement of “physical sciences” (Nisbett et al., 2001). The Eastern school of thought is believed that have descended from a Confucian standpoint of promoting dialectical thinking, the ever dynamic and flowing world, and the individual as part of the greater whole. This is hypothesized to have led to a more collectivist culture concept.

Extensive research has been dedicated to divulging the cultural differences between Eastern and Western cultures. Kitayama and Park (2010) have explained that “different cultural regions have been characterized in terms of different sets of cultural tools, practices and tasks” (p. 114). These cultural tools have been organized based on overarching themes such as an individualist, independent and analytical perspective in the west and a collectivist, interdependent and holistic perspective in the east, and provide a repertoire for “strategies of action” (Swidler, 1986, p. 276). These cultural schemas are both the result of the initial ideologies enacted in the ancient enactment of the culture’s ancestors and a result of necessity to effectively navigate the world for optimal survival (Nisbett et al., 2001; Markus & Kitayama, 1991; Mrazek et al., 2013; Brewer & Chen, 2007). These cultural schemas are not only seen in the cultural constructs of each society but have even been shown to be rooted physiologically and neurologically, guiding both an individual’s cognition, perception and how one reasons themselves in the world (Kitayama & Park, 2010).
Perhaps the most heavily researched cultural distinction would be the individualist versus the collectivist (Hofstede, 1980). Individuals from individualist societies, such as within the West, construct independent construals of the self, “seek[ing] to maintain their independence from others by attending to the self and by discovering and expressing their unique inner attributes” (p. 224). On the other hand, individuals from collectivist societies such as those in the East, construct interdependent construals of the self, viewing themselves in relation to others within the group and playing greater emphasis on “attending to others, fitting in and harmonious interdependence with them” (Markus & Kitayama, 1991, p. 224).

Nisbett and colleagues (2001) examine how the philosophical outlooks of the ancient Greek societies and the ancient Chinese societies laid the roots for an analytical versus holistic system of thought in the West and East, respectively. Ancient Greeks attributed large power to the individual, where individuals were allowed to and encouraged to explore their own passions and live how they sought fit. Greek civilization believed that the natural world could be understood by the implementation of an abstract set of rules, and that through the application of scientific and logical examination into the natural and physical world, causal models could be created for “systematic description, prediction and explanation” (Nisbett et al., 2001, p. 292.) This emphasis on individualism and scientific inquiry profoundly affected and shaped musical practice in the West.

On the other hand, the guiding Confucian philosophy and moral system of ancient China placed a greater emphasis on in-group harmony and while ancient Chinese civilization boasted its own technological marvels such as irrigation, ink, and magnetic compasses, these were not the result of scientific discovery, but instead reflected Chinese cultures emphasis on practicality (Nisbett et al., 2001). While the Greeks created formal and systematic models of the natural
world, the Chinese used intuition and empirical experimentation and viewed nature and humans as holistically and spiritually interwoven (Nisbett et al., 2001).

The result of these tacit philosophies established an analytical thought in the Greeks western descendants, defined as “involving detachment from its context, a tendency to focus on attributes of the object to assign it to categories, and a preference for using rules about the categories to explain and predict the object’s behavior”, and a holistic thought process of the Chinese societal descendants in the East, defined as “involving an orientation to the context or field as a whole, including attention to relationships between a focal object and the field, and a preference for explaining and predicting events on the basis of such relationships” (Nisbett et al., 2001, p. 293).

However, while much of the past literature on culture has explored differences in values, a newer theory centered on cultural norms has begun to receive more attention (Morris et al., 2015). The study of norms, or normology, postulates that individuals in a community may think and behave a certain way based on existing shared social patterns in their shared context. This theory emphasizes the importance of context in regulating thought and behavior for understanding cultural patterns across different situations and contexts. Norms, then, exist by being institutionalized, through either explicit formal structures or being engrained into the social fabric through becoming taken for granted (Zucker, 1987), implicitly understood as a group tradition (Hobsbawm, 1983), or “upheld as sacrosanct” (Morris et al., 2015, p. 3; Atran & Ginges, 2012). Rituals, then, might be seen as an institutionalized normative process for retaining and perpetuating culture.

**Rituals**
Ritual is defined by Hobson et al. (2018) as “(a) predefined sequences characterized by rigidity, formality, and repetition that are (b) embedded in a larger system of symbolism and meaning, but (c) contain elements that lack direct instrumental purpose” (p. 2). Thus, ritualistic practices situated in a particular cultural context are subject to the norms and values of the culture, emphasizing or deemphasizing aspects of these three features of ritual. For example, some cultures may employ rituals that are highly symbolic and meaningful but less rigid, while another culture may have less meaning rituals, but are more rigid and rule bound (Hobson et al., 2018). Despite their manifestations, scholars argue that the psychological processes underpinning rituals are similar across cultures (Hobson et al., 2018; Dulaney & Fiske, 1994). We explore the psychological processes involved in two different cultures, in the use of musical practice in a ritualistic context, to shed light on the interaction between innate psychological predispositions and cultural settings.

Hobson et al. (2018) have created an organizing framework of ritual for exploring this interaction by postulating that rituals “physical and psychological features lead to bottom-up and top-down processing, respectively, and the combined processing regulates one or more psychosocial states, which result in both individual and social-based outcomes” (p. 3). An analysis of the convergence and integration of bottom-up and top-down information processing can be used to explore and understand the different psychosocial effects of ritual.

Bottom-up perception refers to the perceptual process of stimuli, whereby an individual perceives and pays attention to specific stimuli in an environment, in this case the ritual, and processes these sensorimotor components of the ritual (Hobson et al., 2018). This bottom-up processing involves both the sensory experiences involved in the perception of the ritual as well as the motor control involved in physically engaging with the ritual.
Top-down perception refers to the processing of information driven by an individual’s existing cognitive frameworks and goal orientation, where interpretation of the ritual is determined by an individual’s past experiences and pre-learned expectations. In top-down processing, the physical elements of the ritual are appraised and understood to be meaningful in some way (Hobson et al., 2018).

Combined, the physical features of the ritual perceived and engaged with, along with an individual’s cognitive background and goal orientation, lead to the psychosocial effects of the ritual. Therefore, it is important to understand the “cultural priors” that effect these experiences (Nielbo & Sorensen, 2015). Culture can shape both the individual cognitive frameworks and goal orientations of an individual participating in the ritual as well as the context and tools used in the ritual, such as the instruments, music theories and settings the ritual occurs in. Exploring the similarities and differences of ritual phenomenology and behaviors, particularly in musicians, may yield unique insight into the psychosocial processes and outcomes involved in ritual. In this study, we investigate the phenomenologies and behaviors of musicians in ritualistic contexts from the East and West and explore similarities and differences between them.

Music and Culture

Nearly every culture has a musical tradition that is often valued as a fundamental artifact and representation of that culture. Music is used by various cultures in rituals such as religious ceremonies, funerals, anthems, and militaristic contexts to everyday use by its populations (Beck, 2006). Musical practice and culture are deeply and dynamically interwoven with each other (Sharma & Liu, in press). Musical practice, especially in the context of rituals, are a manifestation of innate cultural traditions, norms and values that carry on and sustain culture.
Particularly in religious contexts, music has the unique ability to convey abstract ideas in an aesthetic and unifying manner.

Musical practice and the culture that surrounds it also serve as a vehicle for culture to change and evolve (Lovesey, 2020). Given this perpetual interaction of culture both shaping and being shaped by musical practice, musical practice may serve as a fruitful and understudied avenue for research in cross cultural psychology. While the use of music in ritualistic contexts appear to be universal, the manifestation of the practice appears to be “deeply entrenched within its cultural context” (Sharma & Liu, in press, p. 20), given the different histories of cultural traditions and the cognitive and material tools made available to participants in different cultural environments.

In the West, for example, cultural tools resulting from the natural sciences understanding of electromagnetism were applied to a ritualistic musical context which revolutionized musical ritual. Though invisible to the naked eye, a set of “rules” was created to understand that which cannot be seen. The electromagnetic spectrum was harnessed in a variety of ways, one of which was the integration of electromagnetism into the musical practice. Magnetic coils, circuits, transistors, transformers, capacitors, and diodes were combined with musical instruments to create one of the most iconic Western instruments, the electric guitar (Tolinski & Di Perna, 2016). Vibrations created by the musician with physical contact with the strings are converted into an electric current, where they are deliberately manipulated by the artist through different electrical circuits before becoming audible in the form of sound waves. The applications of power tubes and speakers were used to amplify the current and make sound audible to audiences larger than ever before. Larger audiences meant more simultaneous collective participation. More simultaneous collective participation, it is argued, then facilitates more collective
effervescence, or a more powerful ritualistic experience (Durkheim, 2008; Wiltermuth & Heath, 2009). Musical rituals could involve more participants and thus amplify the subsequent cognitive, emotional, and behavioral effects of the ritual as well.

To explore similarities and differences between rituals in the East and West, specifically musical rituals, samples representative of these cultural dimensions were chosen. Two extreme manifestations of these cultural concepts, Tibetan Buddhist Monks and American Jam musicians, are used for a cross cultural analysis. We explore their phenomenology’s of engaging in musical practice in a ritualistic context to explore what the psychosocial consequences are of the ritual, how they are facilitated and why. We choose musicians from each culture given the literature explicating live musical practice as a key mechanism in rituals for facilitating altered states (Bourguignon, 1968; Winkelman, 1992; Winkelman, 2010; McDaniel, 2018).

These cultures each have unique and compelling histories that have been historically understudied in cross cultural research. In only the past few decades have the Tibetan Buddhists been exposed to the outside world, making them ripe for investigation. Despite only recent exposure on the global lens, pop culture has been fascinated with their culture (Batchelor, 2021). Similarly, the artform of Rock and Roll is only a few decades old as well, but is the result of many inventions and innovations, culturally and technologically, that made its music and surrounding counterculture a powerful movement with deep and far-reaching impacts on American culture (Kimball, 2010). We explore their unique cultural histories and investigate their musician’s phenomenology’s situated in their cultural contexts.

Comparing the phenomenologies and behaviors of the musical rituals from the Tibetan Buddhist monk musicians and the Jam Band Phish musicians therefore may lead to interesting findings given their unique histories and will contribute to the literature by providing two fruitful
and understudied settings for the study of culture. Rituals are vital for understanding human
cognitive, affective, behavioral predispositions and capabilities. Additionally, religion,
particularly religious experience, is a phenomenon that deserves more attention in cross cultural
literature. Accordingly, a qualitative examination of interviews from both cultural settings is
conducted to explore differences and similarities of the philosophies, phenomenologies and
behaviors of the musicians in each setting.

The research question we seek to explore is: how do the philosophies, phenomenologies
and behaviors of musicians that play in ritualistic contexts, similar and different to each other.
Based on these similarities and differences, we hope to explore what implications this may have
for better understanding the ritualistic predispositions and capabilities of humans and the role
culture plays in determining the manifestation of these rituals.

**METHOD**

To explore the philosophies, phenomenologies and behaviors of the musicians, an auto-
ethnographical approach combined with a grounded theory approach to coding firsthand and
archival data will be used. In qualitative research, the importance of the researcher’s perspective
cannot be overlooked, and instead is argued to depict a constructive bias in aiding the extraction
of theoretical constructs (Golden-Biddle & Locke, 2007; Mason, 2018). Abductive reasoning
was used to develop a theoretical construct that examines the similarities and differences of the
two musical practices being examined.

Interviews are used to take direct quotes from practitioners to examine the philosophical
perspectives of musical practice. An auto-ethnographical perspective aided the researcher’s
subjective coding process since an emic approach is conducive to understanding
phenomenology’s. Tibetan Buddhist monks were taken to represent Eastern culture and American Phish Musicians were taken to represent Western culture.

**Tibetan Buddhist Musicians**

Tibetan Buddhists are a compelling and representative example of Eastern culture. Buddhist monks live in egalitarian societies on monasteries which represent Eastern collectivism near perfectly. Every monk wears the same attire and eats communally. Their philosophies of life and spirituality are explicitly holistic. Their religious practices emphasize oneness and harmony with all life. For Tibetan Buddhists, the use of music in ritualistic settings entrains the group, conveys abstract cultural imperatives, enacts symbology, deploys cultural artifacts as musicians play their cultures instruments and overall serves to both reflect and sustain the culture.

Tibet is not an easily characterizable culture due to its unique history in the past decades. While Tibet at one point, represented an independent nation shut off to the outside world, following a militaristic invasion by the Chinese People’s Liberation Army in the 1950s, Tibet, or the Tibetan people, have been forced into refugee locations in India (Roemer, 2008). In 1959, the political and spiritual figure head of the Tibetan people, the 14th Dalai Lama, fled to India across the Himalayas, followed by over 120,000 Tibetans. Following this exodus, two different Tibetan communities now exist, one in its original location taken over by the Chinese, and one in refuge in India and Nepal. The cultures of these communities may differ considerably given the economic, political, and social changes in the decades since the exodus and future research could examine these differences. However, since the Chinese invasion of Tibet, it has been effectively closed off to the outside world and so this present research will focus specifically on the Tibetan community in refuge in India.
Due to its relatively new exposure to the global landscape, the Tibetans in refuge, have been exposed to the scientific, cultural, and geopolitical environment of the world. Given this recent change, refugee Tibet may be characterized as an unsettled culture (Swidler, 1986). As Swidler (1986) explains, during these periods of profound social transformation, “ideologies play a powerful role in organizing social life” (p. 278). Ideology is defined as a “highly articulated, self-conscious belief and ritual system, aspiring to offer a unified answer to problems of social action” (Swidler, 1986, p. 279).

Given the relocated Tibetans in India, we would expect, due to being in an unsettled state, their rituals to explicitly promote and emphasize this ideology of Buddhism that serves as a cultural foundation for the Tibetans. Rituals in unsettled cultures, compared to settled cultures, may be given more significant importance given the necessity to reapply and define previously taken for granted modes of experience in a new environmental context (Swidler, 1989). The Tibetan Buddhist refugees are tasked with organizing, understanding, and acting in a new environment and accordingly may depend on and formulate strategies of action from their preexisting cultural models. In the case of the Tibetans, much of their cultural model is derived from the prevailing ethos of their religion, Tibetan Buddhism (O’Brien, 2019; Roemer, 2008). As Roemer (2008) states, “religion was, and still is, the fundamental driving power in Tibetan social and political life” (p. 10). The monasteries in Tibet owned much of the fertile land, served as key places for social interaction, were centers of education and served as important sites for commerce and trade (Roemer, 2008).

Buddhism was first founded in India but gradually made its way into Tibet, culminating in the Tibetan Buddhist sects of Buddhism. Tibetan Buddhists practice Vajrayana Buddhism, which is an extension of the Mahayana Buddhist belief system (O’Brien, 2019). While
Mahayana Buddhism is the most common form of Buddhism in China, Japan, and other Asian countries, Vajrayana Buddhism employs esoteric practices of tantra to achieve enlightenment. Buddhism first entered Tibet when King Songtsen Gampo, in 641 CE, unified Tibet and married two Buddhist women, one from Nepal and one from China (O’Brien, 2019). Then, in 1642, the Fifth Dalai Lama, Lobsang Gyatso, often referred to as the “Great Fifth”, became the spiritual and political leader of Tibetan Buddhism.

While Buddhism is speculated in the literature to be collectivist, there may be important interactions between religion and culture, in Tibet (Cohen et al., 2016). Tibetans innovated their culture and religion in the thousand years since the unification of Tibet, but the central tenets of Buddhism established a core foundation for Tibetan culture. Buddhist beliefs center around the idea of the Four Noble Truths. The Four Noble Truths are the truth of Dukkha, or that suffering exists. The second truth is the cause of Dukkha, or the cause of suffering. The first truth is the cessation of dukkha. The fourth truth is the path that leads to the cessation of dukkha (Gunaratna, 2008). As Gunaratna (2008) states “these Four Noble Truths are regarded as the topic of all topics, the one topic which appertains to Reality and leads to the awakening of the highest wisdom, the one topic for the complete realization” (p. 6). These four noble truths can be summarized through the notion that suffering is a human inevitability that comes through attachment and that the pathway out of suffering to nirvana, a prerequisite to enlightenment, comes from an 8-fold path to break away from attachment (Gunaratna, 2008).

Before conducting the interviews with the Tibetan Buddhist monks, the researcher lived and attended classes on a Buddhist College in Dharamasala, India, as well as attended a private session with the Dalai Lama. Additional information on the Mystic Arts of Tibet group, the musicians interviewed, was gathered through an exploration of available information on the
Mystic Arts of Tibet website. Documentaries and short videos were available on this site and were used to inform the interviewing process and note novel information presented by the current study’s interviews.

Secondary data on the Mystic Arts of Tibet group is compiled on their website from different Universities that have had the group visit and have produced videos about them. These Universities include University of Texas San Antonio, University of Wisconsin Madison, University at Buffalo, Emory University, University of Texas Austin, and East Carolina University (Mystic Arts of Tibet Media, n.d.).

Much of the emphasis is on the sand mandala creation, the other activity the Mystic Arts of Tibet Group conducts in combination with their musical practice. University of Texas explains how it represents impermanence and the dumping of the sand is meant to symbolically provide peace to the world (Mystic Arts of Tibet Media, n.d.). While different mandalas exist, the monks interviewed in the videos describe how each mandala can be powerful and synergized with chanting and music playing can be used to evict oneself to reveal the instinct and true powers, the enlightened nature.

In a video produced by University at Buffalo, a monk explains how chanter’s sing 3 notes and that the dancing is used to create a healthy and harmonious environment for all beings to rejoice (Mystic Arts of Tibet Media, n.d.). University of Wisconsin, Madison, describe how the mandala creation and changing is meant to revitalize the natural elements of the earth, crucial for the well-being of the inhabitants (Mystic Arts of Tibet Media, n.d.). Information on the Mystic Arts of Tibet website explain how these rituals are intended to promote world peace and healing, share cultural traditions, and provide greater awareness of Tibetan situation (Mystic Arts of Tibet Media, n.d.).
A demo video of the Mystic Arts of Tibet group explain how they are a group endorsed by the Dalai Lama for the purpose of performing sacred music and dance for healing and world peace (Mystic Arts of Tibet Media, n.d.). They acknowledge that the audience absorbs peaceful energies, with some audience members such as Jon Pareles (1989) of the NY Times, describing the experience as “remarkable… sacred ecstasy… dignified and graceful” (p.17). An event held following the 9/11 attacks was conducted to represent unshakeable resolve in tragedy and resolving conflict.

However, from all these sources, little is said about the musicians and what they are experiencing. We thus focused on understanding their experiences and mind sets and gaining more insight into why they play and how they learned.

Firsthand interviews were then conducted for the Tibetan Buddhist monks, specifically the Mystic Arts of Tibet group that live on the Drepung Loseling Monastery in Southern India. Through the ETSI (Emory Tibetan Science Initiative), the researcher lived on the Drepung Loseling Monastery for 5 weeks, with explicit permission from the Dalai Lama, the political and spiritual figure head of Tibet.¹ This visit marked one of the only times Westerners have entered and exchanged knowledge with the Tibetan Buddhist Monk community in such a fashion. To create a mutually beneficial relationship between Emory and Tibetan Buddhists, the researcher was assigned to teach the Mystic Arts of Tibet group English, to prepare them for their American tours. In exchange, the group answered questions pertaining to the symbolic and philosophical nature of their musical ritualistic practice and provided insight into their phenomenology when playing in a ritualistic context.

¹ The ETSI (Emory Tibetan Science Initiative) was founded in the Tibetan Buddhist attempt to catch up with the scientific advancements of the world that occurred while their community was in isolation. The Tibetan Buddhist community have begun to integrate science into their Buddhist doctrines and reconciling the associated problems. For more information, visit “https://tibet.emory.edu/emory-tibet-science-initiative/”
Theoretical sampling was used to ensure a robust and broad analysis of the different instruments and their purpose in the Tibetan Buddhist monk lifestyle. A translator was provided by the monastery to aid with the interviews, so we acknowledge that there is potential for error, however the translator provided also tours the United States with the MAOT group, so this translator has a firm grasp on both languages and gives us good reason to believe that translations are robust.

To ensure equal insights for all instruments in the group, a set amount of time was allocated for the interviewing of at least one of the practitioners of each instrument. Initial questions were formulated beforehand to gain an understanding of what the instrument is, what it is called, how they were chosen to play, how they learned, and what purpose the instrument serves in their musical practice. The uniformity of these questions allowed for an efficient coding process.

Interviews were conducted over the period of a week. A musician from one of the 7 instruments was interviewed and 2 monks that participated in rituals through chanting and following the chantmaster, for a total of 9 interviews: the chantmaster, a hand drum player, a small trumpet player, a long horn player, a bass drum player, a vajra bell player, a small drum player and 2 other chanters. In these 9 interviews, the musicians were asked questions regarding how they selected or were chosen to play their instrument, the purpose of the instrument and how they prepare and learn. Naturally, questions arose that flowed through conversation that further probed interesting or thought-provoking ideas, for example asking for elaboration on how the masters that taught them how to play learned themselves, history of the instrument, and whether different rhythms are used for different purposes.
Interviews completed when we felt we had exhausted the obtaining of information from representatives of each instrument. Interviews were recorded on an iPhone, and then later transcribed into text. Once the transcription process was complete, an external individual was drawn in to ensure that the interviews were transcribed accurately. A grounded theory (Glaser and Strauss, 1967) was used to code the material.

Table 1: Summary of Data Sources

<table>
<thead>
<tr>
<th>Data Type</th>
<th>Source</th>
<th>Group</th>
<th>Summary of Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interview</td>
<td>Firsthand Interviews</td>
<td>Mystic Arts of Tibet</td>
<td>9 Interviews conducted on Drepung Loseling Monastery of different musicians</td>
</tr>
<tr>
<td>Videos</td>
<td><a href="https://www.mysticalartsoftibet.org/video">https://www.mysticalartsoftibet.org/video</a></td>
<td>Mystic Arts of Tibet</td>
<td>Videos compiled by Mystic Arts of Tibet displaying their tour across America and brief summary of their objectives</td>
</tr>
</tbody>
</table>

**Phish Musicians**

Musicians from a Jam band, a genre of music similar to rock and roll, were taken to be representative of Western culture. The artform of rock and roll is the result of the evolution of western culture, socially and technologically. Socially, the creation of Rock and Roll can be largely attributed to the influence of blues and Jazz. These musical genres have deep African American influence, and still retain the “spiritual-blues impulse” (Sylvan, 2002; Olszewksi,
Following the West African diaspora into the Americas, African Americans created unique religious traditions that combined with the existing Christian religious framework in America (Olszeweksi, 2019; Sylvan, 2002). Their musical practice was deeply interwoven with and served to maintain and preserve their cultural identities (Maultsby, 1985; Sylvan, 2002; Olszeweksi, 2019). An integral part of their cultural identities was a “connection to the larger spiritual universe”, giving their musical practice’s deep religious undertones (Olszeweksi, 2019, p. 9). This music eventually fused with the “white” popular music of the time, resulting in rock and roll. Cultural values of individualist and independence are clearly seen in the “Rock Star” archetype.

Technologically, Western analytical thinking is argued to be at the root of the Western systematic examination of the natural sciences (Nisbett et al., 2001). Rock and roll have utilized the technological advancements due to revolutions in the natural sciences and applied them to music. The result was the amplification and manipulation of sound leading to the electric and bass guitar, synthesizers, and amplifiers.

Jam is a genre of music that has its technological and social roots in rock and roll. Jam bands and the culture surrounding the genre played a key role in the 1960s American counterculture movement making it a compelling context to study Western culture given its importance to American culture and its representative manifestation of Western values and norms (Hart et al., 1998; Kreutzmann & Eisen, 2015).

Conner (2013) classifies jam bands as 1) emphasizing a singular musical event driven by heavily improvised moments, 2) emphasizing the live performances over records and 3) deliberate and intentional grassroots effort of the band to connect with fans. Phish is most often
talked about as one of the most popular jam bands after the Grateful Dead. Because of these features, the bands within this subculture are intentionally or unintentionally ritualistic in nature.

For the Phish musicians, their musical practice deeply reflects the unique cultural evolution of the American melting pot, the resulting innovation in instrumental technology and manufacturing, music theory, and even served to generate new cultural movements, further impacting and shaping American culture.

In the West, while it has argued that mainstream culture is becoming more secularized, Olszeweksi (2019) argues that religious aspects have been unconsciously maintained in the ritualistic nature of live musical performances, “supplying religious meaning to the secular society” (p. 10). While science and empiricism in the west have largely replaced the previously religious American foundation with secularism, it is believed that religious dimensions, however intentional it may be, are maintained in the ritualistic nature of the live musical performances in the Jam subculture (Olszeweksi, 2019). The culture and live musical events surrounding American “Jam bands” is ritualistic in nature.

Olszeweski (2019) refers to Phish as “the ultimate spiritual experience.” Merkin (2003) states that “there has developed supplemental religious organizations in parts of American society that unconsciously serve the function of traditional societies' religious experiences through ritual experience” referring to Grateful Dead and Phish (p. ii). The unique history of America as a cultural melting pot and innovator of technological advancements led to the synthesis of music and religion in a uniquely compelling ritualistic context.

For the Phish musicians, interviews were taken from a secondary source, a compilation of interviews found in “The Phish Book” (Gehr, 1998). “The Phish Book” is one of the only books directly authorized by the band and is a compilation of direct quotes from band and crew
members (Gehr, 1998). Gehr (1998) traveled with the band and gradually compiled interviews he had conducted on tours that he thought were insightful for understanding the “musical and cultural kaleidoscope that is Phish” (p. 6). The interviews, as Gehr (1998) explains, “dipped freely into both their collective and personal histories in order to shed light on whatever was shaping their evolving musical persona” at the time of the interviews, which followed their New Years Eve show in 1996, continuing to the end of 1997 (p. 5). Conversations between Gehr (1998) and the band explored the bands individual member’s relationship with music, their thought processes in recording sessions, the conditions the recordings occurred in, and insight into their phenomenology’s when performing live. The band Phish is composed of four main members and one unofficial fifth member; Trey Anastasio the guitar player and front man, Mike Gordon the bass player, Page McConnell the piano player, Jon Fishman the drummer, and Chris Kuroda, the unofficial fifth member of the band that controls the lights and simultaneously improvises with the band.

An emic perspective was achieved through a variety of means. By directly attending concerts of the band, the researcher has directly participated in the live musical ritualistic experience. The researcher, additionally, is an active member on the largest online groups and forums, allowing the researcher to interact with and understand the subjective experiences and opinions of other listeners. The researcher, in addition to the wealth of experience in the Phish community, has over 10 years of professional musical experience within the genre of Western Rock and Roll, Jam, Jazz and Blues, giving the researcher unique insight into the realm of the musician during and preparing for live musical performances. These experiences provided a unique insider perspective that aided the coding process.
Table 2: Summary of Interviews and Participants

<table>
<thead>
<tr>
<th>Source</th>
<th>Date</th>
<th>Group</th>
<th>Member</th>
<th>Instrument</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Phish Book</td>
<td>1996-1997</td>
<td>Phish</td>
<td>Trey Anastasio</td>
<td>Guitar</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Mike Gordon</td>
<td>Bass Guitar</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Page McConnell</td>
<td>Piano</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Jon Fishman</td>
<td>Drums</td>
</tr>
<tr>
<td>Interview</td>
<td>6/14/14</td>
<td>Mystic Arts of Tibet</td>
<td>Practitioner Monk 1</td>
<td>Chantmaster</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Practitioner Monk 2</td>
<td>Hand Drum</td>
</tr>
<tr>
<td></td>
<td>6/15/14</td>
<td></td>
<td>Practitioner Monk 3</td>
<td>Small Trumpet</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Practitioner Monk 4</td>
<td>Long Horn</td>
</tr>
<tr>
<td></td>
<td>6/17/14</td>
<td></td>
<td>Practitioner Monk 5</td>
<td>Bass Drum</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Practitioner Monk 6</td>
<td>Bell</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Practitioner Monk 7</td>
<td>Small Drum</td>
</tr>
<tr>
<td></td>
<td>6/18/14</td>
<td></td>
<td>Practitioner Monk 8</td>
<td>Chanting</td>
</tr>
<tr>
<td></td>
<td>6/19/14</td>
<td></td>
<td>Practitioner Monk 9</td>
<td>Chanting</td>
</tr>
</tbody>
</table>

RESULTS

The interviews yielded rich and fascinating descriptions of the philosophies, phenomenologies and behaviors of the musicians from each cultural context with stark differences but profound similarities. Six themes emerged from coding the similarities and differences between the two groups of musicians; i) Their intentions for playing, ii) what they hope to achieve in the ears of their listeners, iii) their perceived relationship to the audience, iv) their subjective mindset when playing their instrument in a ritualistic setting, v) how they trained their body and mind for the instrument, and vi) how they interact with the other musicians when playing. Two higher level dimensions emerged for comparing and contrasting: 1) a cognitive dimension and 2) a behavioral dimension. The cognitive dimension is composed of i) Influences, ii) Intention, iii) Audience, iv) Mind state. The behavioral dimension is composed of v) training and vi) musician communication.
I discuss each of these domains while providing quotes from the musicians to substantiate the codes. The provided quotes will by no means be exhaustive and instead the full interviews will be provided in an appendix.
Table 3: Coding Scheme and Sample Quotes

<table>
<thead>
<tr>
<th>Tibetan Buddhists</th>
<th>Phish</th>
<th>2nd Order Categories</th>
<th>Aggregated Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Practitioner Monk 1: It is also worth noting that in chanting and for all other instruments used in this ritual, that one does not play randomly. They should always play in association with a divine understanding usually assigned by a highly realized master.</td>
<td>Jon Fishman: We respect tradition, but it’s like a Borg thing. We take in all these different styles then apply them to original material so it comes out sounding different.</td>
<td>Influences</td>
<td>Cognitive</td>
</tr>
<tr>
<td>Practitioner Monk 7: We are not fully authorized to do these songs and dances until after a retreat, and then a master will decide whether or not you are qualified to present or play these songs.</td>
<td>Trey Anastasio: I always discovered that most teachers conveyed just about everything they had to teach in one or two lessons – although you could spend years practicing and learning those things.</td>
<td>Intention</td>
<td></td>
</tr>
<tr>
<td>Practitioner Monk 5: In order to create transformation for the listeners with this sound, you need a special external sound such as the sound of this drum. This would be from the sound of primordial wisdom that one would hear from the bass drum.</td>
<td>Trey Anastasio: In some songs I try to take listeners on a journey that ends in a different harmonic place than it began.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Practitioner Monk 1: The purpose is to invoke the spirit of divine understanding and waves of energy. The focus on this spirit gives special energies to empower the meditation.</td>
<td>Trey Anastasio: I need to play music, it’s my ultimate release. You can’t imagine the feelings I have onstage. It’s a very self-centered experience in a certain way, but it’s like a dream to me.</td>
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<td></td>
<td>Jon Fishman: Live music is still the most important thing. The thing about live music</td>
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<tr>
<td>Practitioner Monk 8: This being the idea that one can be the group and the group can be the individual, and it will not lose the individual qualities during this. The universe is full of atoms and atoms can also be the universe.</td>
<td>Trey Anastasio: For years I’ve harped on the notion that a group is greater than the sum of its parts.</td>
<td>Audience</td>
<td></td>
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<td>---</td>
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<tr>
<td>Mik Gordon: It’s as though we were all in it together, rather than separate from the audience.</td>
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</tr>
<tr>
<td>Practitioner Monk 2: By removing the ego mentally and also surrendering your body you are able to contribute to the well being of other sentient beings. This is believed to invite one to bring in spirits to be an offering to.</td>
<td>Mike Gordon: I try to play with as little ego as possible by taking away as many notes as I can- maybe those are the ego notes.</td>
<td>Mind State</td>
<td></td>
</tr>
<tr>
<td>Jon Fishman: I always picture a brain floating in a container of water, and the music is all the liquid surrounding it. Your brain has to float in the middle of the book if you want to really hear anything. If you focus on one aspect of the music, it’s as though the liquid dries up or drifts toward one specific zone.</td>
<td></td>
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</tr>
<tr>
<td>Practitioner Monk 7: I rise myself as a wrathful deity so powerful at the same time while meditating. So a lot of meditation needs to be done. At times I feel like I need to own the universe, and see oneself as a savior of the world at times. Sometimes I am the most loyal servant to all sentient beings being ready to sacrifice everything even my body for the sake or well being of all sentient beings.</td>
<td></td>
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<tr>
<td></td>
<td>Trey Anastasio: Fish figured out how to play a calypso rhythm, with that high-hat upbeat. That takes a while, and he was at it for hours while I sat at the kitchen table.</td>
<td>Training</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Behavioral</td>
<td></td>
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</table>
Practitioner Monk 2: Well the moves are very easy to learn. After that though, it takes a lot of practice to get good at it. One must recite mantras over and over. Having a strong understanding compassion, wisdom, and emptiness is a prerequisite for learning this instrument.

Mike Gordon: Since all notes are potentially meaningful, we need to train ourselves to hear them as consonant rather than dissonant while playing with purpose and determination.

Practitioner Monk 8: It depends, if you are with a group then you have to follow the group for the sake of unison. You might have your own way of playing but you can do it later. Since you are with the group, you have to stay with the group.

Practitioner Monk 7: A person simply becomes one with all while playing this, can be an angel or deity. I could be male or female deities, and everything is equally controlled by nothingness since they arise from nothingness. Everything is essentially same in the nature.

Jon Fishman: We always try to communicate with one another, even during the written sections. If Trey plays his part in a particularly inspired, aggressive, or subdued way we respond to him. It establishes a mood, a unified emotional state that carries over into the jam.

Page McConnell: There’s a lot more conversational back-and-forth playing between us now, and I have to credit Trey with letting it happen
Cognition

Influence

The first component within the cognitive aggregate domain refers to what the musicians were influenced by in determining how to and what to play in a ritualistic setting. Differences were found between the Phish musicians and the Tibetan Buddhist monks. The Phish musicians talk about drawing from various art forms and previous musicians that shape their individual style and take what they learn from teachers and practice it and adopt it into their own style in their own idiosyncratic way. The Tibetan Buddhist monks on the other hand discuss strict and rigid adherence to what they are taught by a “highly realized master” and are only allowed to perform a certain song in a ritual after getting explicit permission from this master.

Jon Fishman, the drummer of Phish, describes,

- Jon Fishman: We respect tradition, but it’s like a Borg thing. We take in all these different styles then apply them to original material, so it comes out sounding different (Gehr, 1998).

Trey Anastasio, the guitarist of Phish, also explains,

- Trey Anastasio: I always discovered that most teachers conveyed just about everything they had to teach in one or two lessons – although you could spend years practicing and learning those things (Gehr, 1998).

Another quote from Trey that highlights this difference between adopting influences for individual expression compared to rigid and strict adherence to what is mandated by masters well,

- Trey Anastasio: I think that the one quality that is shared by all great artists is individuality. To me, the greatest goal as a musician is to sound like yourself. Since everyone’s life experience is different, sounding like yourself would be to sound totally original and different (Gehr, 1998).

On the other hand, the chantmaster, one of the Tibetan Buddhist monks explains how playing should never be random and can only be done in accordance to what is assigned by a master. A strong departure from the philosophy of the Phish musicians in the west,
• Practitioner Monk 1: It is also worth noting that in chanting and for all other instruments used in this ritual, that one does not play randomly. They should always play in association with a divine understanding usually assigned by a highly realized master (Interview, 6/14/14).

The chant master monk explains the explicit permission needed from a master before the musician can play in a ritualistic setting,

• Practitioner Monk 1: The highly realized master teaches usually teaches the chanter for about a month, while the chanter can practice on his own from then on after gaining the understanding needed for chanting. We practice and meditate on it, and then we go on a retreat while thinking about the meaning of these sacred songs. We are not fully authorized to do these songs and dances until after a retreat, and then a master will decide whether or not you are qualified to present or play these songs (Interview, 6/14/14).

He then describes how these highly realized master obtains these song melodies,

• Practitioner Monk 1: The highly realized masters find these tunes by seeing subtle energies of mind and body, and one has to have a deep understanding in order to see this. The highly realized masters help create a special tradition by realizing and guiding the group based off of the subtle energies of mind and body. These highly realized masters also are able to see the divine, even in their dreams. This is done in order to create special connections between the sounds being made and those hearing them in the rituals (Interview, 6/14/14).

Another monk, the player of the Tibetan Bass Drum, describes how the masters receive the melodies from beings,

• Practitioner Monk 5: Masters will compose their own rhythms, most of these masters are highly realized and are tantric masters. These masters have a special connection with the mind beings. Some of the masters after having special visions of deities (especially the female ones) they are taught the moves of the dancing and rhythms for the offering. These visions are played out as the rhythms and the dances for our rituals (Interview, 6/17/14).

**Intention**

The second component of the cognitive domain refers to the explicit intentions of the musicians for playing in ritualistic settings. Not surprisingly, the Phish musicians had more of an individualist perspective regarding for why they play music. While both musicians describe a
key intention of the ritual as taking the listeners on a journey and providing some type of collective value from the ritual, the Phish musicians describe personal reasons for playing, as well as desires for breaking new ground creatively.

Regarding the intention of collective benefits of the ritual, Trey describes,

- Trey Anastasio: In some songs I try to take listeners on a journey that ends in a different harmonic place than it began (Gehr, 1998).

Jon Fishman also describes intentionally trying to effect the audience, such as working the audience into a frenzy,

- Jon Fishman: I love communicating with our audience and working it into a wild frenzy, but I prefer earning that frenzy the hard way (Gehr, 1998).

Similarly, the bass drum monk practitioner explains how the purpose of the music in the ritual is to create a transformation in the listener,

- Practitioner Monk 5: In order to create transformation for the listeners with this sound, you need an a special external sound such as the sound of this drum. This would be from the sound of primordial wisdom that one would hear from the bass drum (Interview, 6/17/14).

Some Buddhist monks even explicitly refer to the ritual as being intended for deliberate healing.

For example, one of the chanting monks explains,

- Practitioner Monk 8: You can perform it on stage, from our perspective though it is more than just a performance but rather a healing prayer. It is a real practice and not just for business (Interview, 6/18/14).

Another chanting monk describes the calming effect their music has on their listeners,

- Practitioner Monk 9: When they listen to this music, their mind immediately becomes calm and they become more conscious about the life and the music helps them pursue a better a life. The meanings of the sound itself have a special quality to heal them and calm them down (Interview, 6/19/14).
The use of musical rituals, for the Buddhist monks, seems to be explicitly for a spiritual focus, such as invoking the presence of deities or energies that empower or aid the meditative practice intended in these rituals. The chantmaster explains,

- Practitioner Monk 1: The purpose is to invoke the spirit of divine understanding and waves of energy. The focus on this spirit gives special energies to empower the meditation (Interview, 6/14/14).

While the music of the Phish musicians may heal or facilitate transformations in listeners, the musicians seem to be more explicitly focused with individual creative goals and pursuing an individual passion for playing.

Jon Fishman describes,

- Jon Fishman: We weren’t necessarily breaking ground other people hadn’t before us, but the idea was that if we kept breaking ground for ourselves, eventually we might actually enter uncharted territory, which is all I want out of life (Gehr, 1998).

Trey describes,

- Trey Anastasio: I need to play music, it’s my ultimate release. You can’t imagine the feelings I have onstage. It’s a very self-centered experience in a certain way, but it’s like a dream to me. When I walk offstage, my feet feel six inches off the ground. Then somebody says something like, the bus is leaving in fifteen minutes and I’m back to earth again and can’t wait until the next night (Gehr, 1998).

**Audience**

The third component of the cognitive domain is the intentions of the musicians regarding their intended outcomes in the audiences that are listening and participating in the ritual. Both the Phish musicians and Tibetan Buddhist monk musicians describe a similar relationship with their audiences. Both describe the musicians and the audience as being one collective entity.

Mike Gordon, the bass player of Phish, for example, says,
• Mike Gordon: It’s as though we were all in it together, rather than separate from the audience (Gehr, 1998).

One chanting monk describes a similar idea of a dissolved barrier between the musicians and the audience,

• Practitioner Monk 8: This being the idea that one can be the group and the group can be the individual, and it will not lose the individual qualities during this. The universe is full of atoms and atoms can also be the universe (Interview, 6/18/14).

Additionally, both musicians describe an amplified ritualistic power when performed in a group setting compared to performed alone.

For example, Trey describes,

• Trey Anastasio: For years I’ve harped on the notion that a group is greater than the sum of its parts, and almost all the music I like demonstrates that (Gehr, 1998).

Similarly, a chanting monk explains,

• Practitioner Monk 8: So anyway whatever our imagination or practice is, there is always others in reality. This group is in reality and more powerful than you, it is beneficial for yourself and others if you perform in a group. At the same time the group is nothing but the combination or composition of individuals. There is this philosophical thinking surrounding the reality of there being a group itself (Interview, 6/18/14).

These descriptions provide insight into the philosophical reasonings for even holding the musical ritual to begin with. Musicians from both cultures explain the collective experience and participation of the audience and musicians in a group setting facilitate the intended experience of the ritual.

Mind state

The fourth component in the cognitive domain refers to the cognitive mind state that the musicians are in when they are playing. The musicians from both cultural contexts provide rich
accounts of their subjective phenomenology when participating in their respective ritualistic contexts. Amazingly, both musicians report trying to actively dissolve their egos away while playing and engaging in certain meditative tactics.

For example, Mike Gordon the bassist explains,

- Mike Gordon: I try to play with as little ego as possible by taking away as many notes as I can- maybe those are the ego notes (Gehr, 1998).

Trey describes how it is the lack of ego when playing that is why people enjoy coming to see Phish,

- Trey Anastasio: The only reason we’re here is because we’ve all experience moments when we’ve transcended our egos and the music has taken a life of its own. That’s what brings people together for a Phish show (Gehr, 1998).

Fishman explains actively trying to work back to this mind state of emptiness when he gets too excited,

- Jon Fishman: When I get too excited. I sometimes try to play sparsely, let a bunch of beats go by, and just float above the whole thing. Sometimes after establishing the groove, I start taking things away and let it dissipate (Gehr, 1998).

Page even explicitly mentions Buddhism’s emphasis on emptiness,

- Page McConnell: It said that someone on acid will appreciate all the little pieces of psychedelic music while simultaneously believing it all points to emptiness, like Zen Buddhism. I can relate to that feeling (Gehr, 1998).

Nearly every Tibetan monk musician of every instrument highlighted the necessity of removing the ego and achieving emptiness. For example, the hand drum player and the chantmaster explain,

- Practitioner 2: Wisdom and compassion focus on the nature of the ego and wipe it out. The rigidness of the ego disintegrates while this is being played (Interview, 6/14/14).
- Practitioner 1: The beat of the cymbals can also express the inner understanding of reality as mentioned earlier with it relating to emptiness (Interview, 6/14/14).
The hand drum player emphasizes that the removing of the ego is integral to the intention of the ritual,

- Practitioner 2: By removing the ego mentally and also surrendering your body you are able to contribute to the well-being of other sentient beings. This is believed to invite one to bring in spirits to be an offering to (Interview, 6/14/14).

The Phish musicians as well as the Buddhist Monks report an emotional response to the music being played in the ritual as well.

Mike Gordon explains,

- Mike Gordon: Certain words seep through as “emotional triggers” for me. I read a psychology paper a while back that showed how certain words, guitar riffs, and other elements of acid rock become a murky pile of emotional triggers (Gehr, 1998).

One of the chanting monks describes the affective feelings aroused during the ritual, as aiding the process of emptiness and being amplified by the music,

- Practitioner 8: A mind that is separable or indivisible with its appearance and emptiness. I am aware of this flower that appears and what experience it invokes. Please partake it with such inseparable bliss and bestow the blessings to all beings. So when you are doing like this it is kind of spiritually transforming for your feelings for the time being. The melody certainly helps during this, it heightens affective feelings (Interview, 6/18/14).

Musicians from both Phish and the Tibetans also describe visualization tactics being employed while playing.

Fishman describes,

- Jon Fishman: I always picture a brain floating in a container of water, and the music is all the liquid surrounding it. Your brain has to float in the middle of the book if you want to really hear anything. If you focus on one aspect of the music, its as though the liquid dries up or drifts toward one specific zone (Gehr, 1998).
Similarly, the small drum playing monk explains a visualization tactic, where he is visualizing himself become a powerful deity,

- Practitioner 7: I rise myself as a wrathful deity so powerful at the same time while meditating. So a lot of meditation needs to be done. At times I feel like I need to own the universe, and see oneself as a savior of the world at times. Sometimes I am the most loyal servant to all sentient beings being ready to sacrifice everything even my body for the sake or well being of all sentient beings (Interview, 6/17/14).

Another monk visualizes their body as jewels that are offered to the spirits, aiding the process of removing their ego,

- Practitioner 2: Imagine the body as jewels to give up to these spirits by the removal of the ego (Interview, 6/14/14).

**Behavior**

**Training**

The second domain refers to the behaviors of the musicians. The first component of the behavioral domain regards to how the musicians train to play their instruments in a ritualistic context. Both musicians describe spending countless hours practicing preparing for playing their instruments in a ritual. The Phish musicians, however, describe spending a long time developing and training their ear for various degrees of consonance and dissonance, to appropriately play with purpose and crafting a narrative through their music, as well as training their bodies to develop the fine motor skills needed for their instrument. Some of the Buddhist monks, on the other hand, describe spending hours gaining the physical capabilities for playing the instruments, such as the chantmaster and the horn players, but other instrumentalists explain that learning how to physically play their instrument isn’t very demanding. However, all instrumentalists of the Tibetan monks describe a lot of time being dedicated to cultivating their compassion, wisdom
and emptiness for the spiritual realization needed for playing the instrument appropriately in a ritual.

Trey, the guitarist of Phish, describes Fishman (nickname is Fish), the drummer, spending hours trying to learn a specific style of drum beat they wanted to include on one of their songs,

- Trey Anastasio: Fish figured our how to play a calypso rhythm, with that high-hat upbeat. That takes a while, and he was at it for hours while I sat at the kitchen table with my guitar, tape deck and a piece of paper (Gehr, 1998).

Trey also describes practicing until physical exhaustion in preparation for their Halloween show,

- Trey Anastasio: We practiced for five or six hours that night… I was exhausted, tense, and losing my voice at two in the morning before Halloween (Gehr, 1998).

The Chantmaster for the Tibetan Monks describes the countless hours and strategies used for training his voice to make it physically capable of hitting the multiphonic tones necessary for ritualistic playing,

- Practitioner 1: This chanting takes a long time to train. It can even get to the point where it hurts one's throat. Water can be used during practice in order to train vibrations. Heavy objects are also placed on the chanter's stomach during practice for the applied pressure helps improve the chanting. Being a good chanter is mainly based off of qualities of your throat (Interview, 6/14/14).

A small trumpet playing monk describes training his body to being physically capable of circular breathing in order to sustain a note continuously in a ritual,

- Practitioner 3: The most difficult part of learning is how to balance the sound of this instrument. When you blow this for say 10/15 minutes or an hour, you cannot stop. You have to learn how to play it continuously for an hour. Sometimes you play as long as it takes for great masters to come on the stage. At the same time in the rituals, you have to play it as well for say about 15 minutes. You cannot stop in the middle during playing. The balance of taking a breath and controlling the breath helps it flows continuously and this is hard to learn (Interview, 6/15/14).

On training their ears for hearing various degrees of consonance and dissonance in western music theory, Mike Gordon, the bass player for Phish describes,
• Mike Gordon: Since all notes are potentially meaningful, we need to train ourselves to hear them as consonant rather than dissonant while playing with purpose and determination (Gehr, 1998).

The Tibetan monks, on the other hand, have no use for training their ears to western music theory since there is no variability in what they play in rituals. They do, however, need to cultivate a spiritual realization for playing their instrument in rituals. The hand drum player describes,

• Practitioner 2: Well the moves are very easy to learn. After that though, it takes a lot of practice to get good at it. One must recite mantras over and over. Having a strong understanding compassion, wisdom, and emptiness is a prerequisite for learning this instrument. The person playing this instrument is still in the process on learning and learning this instrument is especially dependent on the spiritual realization for the first few years (Interview, 6/14/14).

This hand drum playing monk further elaborates by describing how failure to achieve a certain degree of spiritual cultivation before playing in a ritual can have detrimental effects on the individual such as losing their body to a spiritual entity,

• Practitioner 2: These lesser spirits or durgatis are believed to take the entire physical body from you. This in part makes the hand drummer take part in a very risky role. There is a pleasure in taking this risk. This is because of the law of karma, that you would not be physically harmed due to the fact that you choose to give yourself up after spiritual realization. Giving yourself up is of high importance because it helps others for healings. It can symbolize the spirit being able to leave the body during this ritual (Interview, 6/14/14).

**Musician Communication**

The second component of the behavioral domain refers to how the musicians describe interacting with each other while playing. Because there is more freedom and creativity involved in the musical practice of the Phish musicians, it is not surprising we hear more back and forth between
the musicians. The phish musicians describe a conversational interaction with each other where ideas are exchanged between them.

For example, Page McConnell, the piano player of Phish describes,

- Page McConnell: There’s a lot more conversational back-and-forth playing between us now, and I have to credit Trey with letting it happen (Gehr, 1998).

Fishman, the drummer of Phish, similarly describes,

- Jon Fishman: We always try to communicate with one another, even during the written sections. If Trey plays his part in a particularly inspired, aggressive, or subdued way we respond to him. It establishes a mood, a unified emotional state that carries over into the jam (Gehr, 1998).

Trey, the guitarist, summarizes the philosophy of interacting with each other quite well when he says,

- Trey Anastasio: Everyone in our band becomes naked to one another during the jams. You can clearly hear what each of us is thinking. It’s like having the most intimate conversation imaginable, and it just becomes more so the longer we’re together (Gehr, 1998).

The Tibetan monks, on the other hand, focus more on playing and/or chanting in line with the musician that has been trained by the master, when in a ritualistic setting.

For example, one of the chanting monk describes,

- Practitioner 8: It depends, if you are with a group then you have to follow the group for the sake of unison. You might have your own way of playing but you can do it later. Since you are with the group, you have to stay with the group (Interview, 6/18/14).

Additionally, the Tibetan Buddhist musicians describe focusing their attention on facilitating altered cognitive states that allow subjective perception of deities or angels, rather than the other musicians. For example, the small drum playing monk describes becoming one with all, referring
to not just the other musicians like the Phish musicians described, but with other spiritual entities or beings as well,

- Practitioner 7: A person simply becomes one with all while playing this, can be an angel or deity. I could be male or female deities, and everything is equally controlled by nothingness since they arise from nothingness. Everything is essentially same in the nature (Interview, 6/17/14).

Table 4: Summary of Code Similarities Between Phish and Tibetan Buddhists

<table>
<thead>
<tr>
<th>Tibetan Buddhists</th>
<th>Phish</th>
<th>2nd Order Categories</th>
<th>Aggregate Dimensions</th>
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<tbody>
<tr>
<td>-</td>
<td>-</td>
<td>Influences</td>
<td>Cognitive</td>
</tr>
<tr>
<td>Take listeners on journey</td>
<td>Take listeners on Journey</td>
<td>Intention</td>
<td></td>
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<tr>
<td>Unified with audience</td>
<td>Unified with audience</td>
<td>Audience</td>
<td></td>
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<tr>
<td>Rituals empowered in group</td>
<td>Rituals empowered in group</td>
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<tr>
<td>Egolessness/Emptiness</td>
<td>Egolessness/Emptiness</td>
<td>Mind State</td>
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<tr>
<td>Emotional Response</td>
<td>Emotional Response</td>
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<td>Visualization Tactics</td>
<td>Visualization Tactics</td>
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<td>Many hours practicing</td>
<td>Many hours practicing</td>
<td>Training Behavioral</td>
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<td>Training body</td>
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<td>-</td>
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<td>Musician Communication</td>
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Table 5: Summary of Code Differences Between Phish and Tibetan Buddhists

<table>
<thead>
<tr>
<th>Tibetan Buddhists</th>
<th>Phish</th>
<th>2nd Order Categories</th>
<th>Aggregate Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prescribed by “Highly Realized Masters”</td>
<td>Influenced by previous musicians and various genres</td>
<td>Influences Cognitive</td>
<td></td>
</tr>
</tbody>
</table>
A summary of the similarities and differences between both cultural contexts is displayed above. We explore the similarities in the cultures cognitive and behavioral domains before exploring the differences in these domains.

**Similarities**

**Cognition**

Musicians from both cultural contexts discuss similar intentions of deliberately using the music to take listeners on a journey, and thus have similar views on their relationship with the
audience. Music is used as a tool, cross culturally, to elicit specific cognitive and emotional effects in listeners. As Winkelman (2010) states, “music has been used as a curative agent and that its effects have been understood in terms of the ability of music to promote health and wellness through enhancement of natural balance and harmony in our emotional systems” (p. 193; Crowe, 2004). Additionally, there is a vast amount of research explicating the effects of music on an individual’s emotionality (Panksepp & Trevarthen, 2009; Cross & Morley, 2009; Warrenburg, 2020; Huron, 2015; Juslin, 2013; Juslin & Laukka, 2003; Zentner et al., 2008) with clear implications on the psychological processes of both listeners and performers. The facilitation of an emotional journey in listeners is also the result of collective participation in a ritual.

The journey that listeners are taken on can also be healing at both the individual and group level. The Phish musicians and Tibetan Buddhists both explain how rituals are empowered in a group and how the audience is unified with the musicians during a ritual. Collective rituals align participants emotions and attentions (Fischer et al., 2014). Referred to as emotional synchrony, stronger feelings of oneness, increased affiliation, cohesion and bonding occurs when individuals collectively participate and are taken on an emotional journey together (Fischer at al., 2014; Wiltermuth & Heath, 2009; Haidt et al., 2008; Rimé, 2007; Spoor & Kelly, 2004). The shared emotional experience leads to what Durkheim (1915) refers as collective effervescence, where subjective boundaries between the self and others are dissolved and the impact of the ritual are amplified. This experience of collective effervescence appears to be a key feature of rituals across musical, sports and religious domains. During periods of collective effervescence, the cognitive and emotional impact of the ritual are amplified (Durkheim, 1915).
While the Tibetan monks discuss healing more explicitly as a goal of the musical ritual, both cultural contexts acknowledge the individual and communal benefit of the ritualistic practice as being a key intention of the performance. The deliberate use of rituals for individual and communal benefit is thoroughly studied in the literature. Hobson et al. (2017) argue that rituals are a “fundamental part of the human experience” (p. 1), given their ability to aid in the regulations of emotions, performance goal states and a social connection to others. Additionally, Rappaport (1967) argue that rituals are used as a means of maintaining various sociocultural and psychological states. The musicians in both cultural contexts of this study appear to intentionally perform in ritualistic settings for the end goal of achieving one or more of these ritualistic benefits.

In line with the earlier hypothesized intention of rituals to facilitate altered states, the most similarities and lack of differences between the musicians occurred in the mind state component with musicians from both cultural contexts describing a loss of ego or feeling of emptiness when playing, an emotional response to the music, and engaging in visualization tactics when playing.

Canning (2021) reports that within musical performance, elite performance levels require not just technical mastery, but also require profound levels of empathy and humility. This appears to be cross culturally consistent given the accounts of both cultural contexts describing the necessity of dissolving away an ego and adopting a feeling of emptiness. The emphasis on a subjective feeling of emptiness may be a psychophysiological strategy to free up cognitive resources for the abstract and emotional intentions of the ritual, as discussed in the inspiration and motivation section.
The ego loss, emptiness, emotional response, and visualization tactics also seem to describe an ecstatic experience. Ecstasy is defined as “a feeling of glory, joy, happiness, satisfaction… everyday consciousness is stripped away, leaving only the essential self. Ecstasy creates both a catharsis and a creative inspiration, making the vessel of the body empty and fit for the divine to enter” (Stewart, 2000, p. 184; McDaniel, 2010).

Rituals using live musical practice with a religious or supernatural valence or intention appear to universally induce these ecstatic experiences (McDaniel, 2018). For example, indigenous cultures across the world report music’s ability to induce trance states in both the musicians and the listeners (McDaniel, 2018). The Greeks report “Dionysic frenzy” through religious music and dance. Even in contemporary western society, such as in rave culture and the American 1960s counterculture, music in ritualistic contexts, though not explicitly religious, facilitated ecstatic journeys in the listeners and performers (McDaniel, 2018; Wright, 1998).

These musical rituals of the Phish musicians and the Tibetan Buddhist monks may be different institutionalized manifestations of a biologically rooted predisposition for a ritually induced alteration of cognition (Siegel, 2005; Winkelman, 2011). These alterations of cognition are proposed by Winkelman (2011) and others, to provide individual and communal benefits that were evolutionary vital for survival. These experiences are argued to be so vital to human “psychodynamic growth and social and psychological integration” (Winkelman, 2011, p. 29), that even when cultures repress these experiences, they inevitably surface, one way or another. This idea is interesting considering the view that the community of Phish and its precursor, the Grateful Dead, flourished into a critical mass of followers through countercultural movements.

Cultural differences exist in the perception of the appropriateness of institutionalized alterations of consciousness. Laughlin et al., (1992) describe these cultural differences as
monophasic and polyphasic cultures. Monophasic cultures institutionally value only normal forms of consciousness, such as the waking state, while polyphasic cultures encourage and extol other states, such as dreaming states or ecstatic states. While the West is typically viewed as a monophasic culture, this innate drive for ritually induced alterations of consciousness, may explain the appeal of the countercultural revolution that the Grateful Dead and Phish brought about. Given the history of the Tibetan Buddhists, the emphasis of their religion on the perception and communication with extrasensory beings, and the normativity and centrality of their rituals for inducing meditative states, they may be an example of a polyphasic culture. Future research can examine how the movement of the Tibetans into a more westernized context in India impacts their perception and the normativity of altered states.

Behavior

Musicians from both cultural contexts speak about the countless hours dedicated towards the cultivation of the physical capabilities needed for effective performance in musical rituals. Humans, cross culturally, require significant time, effort, and practice to be dedicated for individuals to achieve expert performance (Miall, 2013). Research exploring expert performance has found ample for support for the “10,000-hour rule” where 10,000 hours or 10 years of intense practice differentiates experts from novices across various domains (Miall, 2013; Erocssson & Lehmann, 1996). On a physiological level, Miall (2013) found that following extensive practice in a certain behavioral task causes an alteration in synaptic efficacy. For example, a piano player, after hours of motor practice can evoke the motor cortical outputs associated with the playing of the piano with relatively less mental effort. This may free up
cognitive resources for the musician to deploy for more higher order cognitive structures associated with abstract meaning, imbuing emotional valence, or constructing a narrative.

**Differences**

*Cognition*

Large differences exist in the influences of what impacts the musicians in deciding what they choose to play in ritualistic contexts. The art of creating and performing music is subject to the cultural context the musician exists in (Güss et al, 2018). Culture provides the norms, values and behaviors for certain events which are inevitably impacted by the surrounding history, political, social, and economic forces (Berry, 1999; Güss et al, 2018). At times, culture may provide a context for creativity to occur (Glăveanu, 2010, 2014; Rudowicz, 2003), while other times culture may limit creativity, such as in contexts where its members may be required to adhere to standards and norms (Güss et al, 2018). We see this idea demonstrated here in the differences of how the musicians from Phish and the Tibetan Buddhist monks describe their influences. The Phish musicians describe drawing from various genres, previous musicians, and teachers to creatively shape an individual sound. The Tibetan Buddhists, on the other hand, describe strictly adhering to the melodies taught by highly realized masters and only performing them in ritualistic contexts after qualifying to, when given the explicit permission from the masters.

The Phish musicians exist at the nexus of the American rock and roll culture which is the result of an individualistic and low power distance cultural setting, largely facilitated by a capitalist system. Past literature has hypothesized that capitalism would serve to foster creativity whereas communist and authoritarian systems would limit creativity (Dunphy et al., 1999; Güss et al, 2018). In the context of rock and roll, a capitalist system is largely responsible for
providing the tools for shaping an individual’s idiosyncratic sound, while also diffusing records and cd’s from past musicians and facilitating a culture where ideas are widely circulated and exchanged. Capitalism provided a system for individuals to manufacture different instruments, synthesizers, and guitar pedal effects that musicians can use to pick and choose to shape their own unique sound (Tolinski & di Perna, 2016).

Literature on creativity and power distance has also hypothesized that a lower power distance would be related to more creativity since low power distance cultures would provide a context where more freedom is given to create and act (Güss et al, 2018). We clearly see the effect on power distance in the differences between these musicians. An explicit power difference is described by the Tibetan Buddhist monk musicians and the masters that prescribe what melodies should be written. This power distance mandates that no creativity be infused in what is to be played in the ritual.

Literature on settled versus unsettled periods and its effects on norms may provide additional insight into the differences between the culture’s musicians. Tibetan Buddhists have very recently been uprooted from Tibet and moved into India, making them highly unsettled. In unsettled cultural periods, a highly articulated ritual system is used to provide a unified answer to a problem which moves from ideology to tradition to common sense (Swidler, 1986.) In this sense, culture is directly shaping action. It is possible that the unsettlement of the Tibetan Buddhists has forced the community to develop a unified front in their rituals, given the importance of the religious practice in their lives. As Swidler (1986) states, in unsettled lives ritual provides the cultural models needed to “learn styles of self, relationship, cooperation, authority and so forth” in that commitment is more conscious than in settled cultures and that people depend on these traditional patterns (p. 279). In settled cultures, such as in the United
States (Hawrysh and Zaichkowsky, 1988), the culture doesn’t impose unified action but instead provides the materials for individuals to develop strategies of action selectively and creatively from, such as in ritualistic practices (Swidler, 1986). We find support for these hypothesized differences in our findings.

Regarding mindset, interestingly not many differences were found between the cultural contexts. The only difference that was found was the specific visualization tactics used. The Tibetans described visualizing entities that exist in their religious paradigm, whereas the Phish musicians don’t describe specifics of a religious framework, but instead a strategy such as visualizing the brain floating in a container of water. This may just be a different manifestation of the same goal for altering cognition.

**Behavior**

While both musicians describe intense dedication in practicing their instruments and cultivating the skills needed, there are differences in the skills needed for performance in their cultural contexts. The Phish musicians describe hours being dedicated for training their ears to be sensitive to various degrees of consonance and dissonance. This makes sense given the philosophy of western music theory (Parncutt & Hair, 2011). The Tibetan monks, on the other hand, do not have a musical framework that explicates various degrees of tension and resolve, and is instead dictated by a master and melodies are played accordingly. These musicians, however, describe the necessity of cultivating mental and spiritual attributes for effective playing in a ritual. Some Tibetan monks even say that failure to have a sufficient spiritual skill may be physically and spiritually dangerous when giving their body up to spiritual entities during the ritual.
Research on embodied cultural cognition explains how “cognition is grounded in bodily interactions with the environment and that abstract concepts are tied to the body’s sensory and motor systems” (Leung et al., 2011, p. 591). In this view, bodily experiences are situated in a specific sociocultural context where abstract concepts are associated to specific bodily actions, informed by the culture’s norms, values, habits or imperatives (Gibson, 1979; Varela et al., 1991; Leung et al., 2011). While musicians from both cultural contexts describe the necessity of dedicating hours to the conditioning of a mind body connection for effective playing in a ritual, what cognitions are associated with playing are different and culturally specific. As the musicians from both cultural contexts practice their respective instruments, cognitive associations are drawn between the bodily actions they take and the abstract concepts emphasized as important in their own cultural contexts. A Phish musician’s cognitive associations to playing their instrument will thus be different than the cognitive associations a Buddhist monk will have with playing their instruments. Phish musicians condition their body and mind to be sensitive to the abstraction explicated in Western Music theory regarding the perception of different degrees of consonance and dissonance (Parncutt & Hair, 2011), whereas the Buddhist monks condition cognitions associated with spiritual entities such as divine beings and demons.

The other behavioral difference between the Phish Musicians and Tibetan Buddhists is how the musicians interact with each other. The Phish musicians describe a humble give and take of ideas during improvisational parts and a heightened sensitivity to the other musicians. The Tibetan Buddhists, on the other hand, with little freedom for musical improvisation, describe following the musician that has been trained by the master, but also describe interacting with spiritual entities such as deities or angels during the ritual. Given the embodied cultural cognition
view, this difference in communication amongst the musicians is not surprising. The framework for playing music in the cultural context Phish exists in has a philosophy that allows for spontaneous creativity for creating different degrees of consonance and dissonance, and thus have sensitized their ears to listening to these changes and adjusting their playing accordingly. The Tibetan Buddhists, given their emphasis on Buddhist philosophy, have conditioned their minds to phenomenologically experiencing and connecting to deities or angels during ritual, and thus describe interactions with them while playing.

Theoretical Implications for Culture Research

We find evidence that confirms previous findings regarding collectivist versus individualist (Hofstede, 2009), holistic vs analytical (Nisbett et al., 2001) and interdependent vs. independent self construals (Markus & Kitayama, 1991), in the manifestation of cross cultural musical ritualistic practices. The manifestations of both cultures ritualistic practices use their cultural tools in the way expected by these explicated cultural dimensions. Tibetan Buddhists practice collectively, use their ritual for the purpose of interdependently connecting and healing the population, and holistically view themselves are part of the greater cosmos, surrounded by spiritual beings and other sentient life. The American Jam Bands, on the other hand, represent the individualist mindset of the rock star and deploy the result of their analytical culture using electric guitars, amplifiers and synthesizers. They, musically, seek to break new ground and use music as a personal outlet for emotional expression culturally and creatively. This extends the current literature on cultural dimensions in naturalistic settings in previously understudied context with rich data and ethnographic support.
We also find support for Swidler (1986)’s theory on settled versus unsettled cultures by providing evidence for differentiations in the enactment of culture in action in naturalistic settings. The current form of Tibet is representative of an unsettled culture, and we find evidence of the practitioners in this culture strongly abiding by what is explicit in their cultural beliefs, which in the case of Tibetans, is their religious framework.

We provide rich accounts of musicians from a cultural context that has received no deep scholarly investigation. These interviews provide unique insight into a culture that had previously been isolated from the outside world.

Lastly, we find support for the existence of rituals and their concomitant cognitive impacts, cross culturally (Winkelman, 2010). Previous research has hypothesized that the use of rituals for altering cognition is innate to human nature and will manifest itself across cultures (Winkelman, 2010). We find musicians from both cultural contexts speaking about their cognitive processes altered during playing, visualization tactics used to focus their minds, and the necessity of emptiness and ego loss in their playing. These findings lend to greater implications and innate cognitive predispositions. Future research could explore whether there is consistency, physiologically, of the similarities in psychological and psychosocial phenomenology.

**Practical Implications for Cultural Sensemaking with Music**

Musical ritual, cross culturally, appears to be a powerful agent in affecting human cognitive and emotional processes. Music is a tool that appears to be used universally for therapeutic and healing purposes (Winkelman, 2010; Crowe, 2004). As the world continues to fracture, this current literature emphasizes the need for communal gatherings and joint
participation in ritual as a deliberate means of therapy. While future research can explore how rituals conducted over virtual mediums and whether the cognitive and emotional impacts compare, the current research emphasizes music ritual as a key feature of human behavior, necessary for group effectiveness. The prevailing phenomenologies of musicians from radically different cultures speak to a shared humanity between us all and can serve as a medium for bridging together seemingly unrepairable divisions.

CONCLUSION

This research provides a cross cultural examination of the musical ritualistic practices in a Tibetan Buddhist and American Jam band context. Rich accounts of the philosophies and phenomenology’s of the musicians are received and coded to examine similarities and differences between them. Differences were largely found on the behavioral domain whereas similarities were mostly found in the cognitive domains. These findings suggest that the intentions for musical ritualistic practice and its subsequent cognitive effects are shared across cultures, while the behavioral manifestation of the practices differ speak to the convergence of top-down and bottom-up processes that facilitate these ritualistic practices. The similarities between them speak to innate biological predispositions that may have provided evolutionary benefit for early humans. Rituals serve both individual and group level purposes across cultures, regardless of how the manifestation of the ritual differs across cultures.
ESSAY 3: THE TRANSFORMATIVE EFFECTS OF MUSIC IN INDIVIDUAL AND COLLECTIVE SENSEMAKING

ABSTRACT

Music can facilitate transformations of one’s identity. Perceptual features of musical practice along with features of the larger community in a live musical setting synergize to prime, cause a reevaluation, and facilitate a reconstruction of a part of one’s identity. By applying literature on sensemaking, we see how the ability for music and fandom can arouse certain psychological effects on the cognitive and emotional processes of the participants, affecting what is being thought of and how. Harmonic, melodic, rhythmic, and lyrical content in music arouse various degrees of tension and resolve can be created, inducing cognitive and emotional effects in the listener. Situated in a collective environment, elements of the collective amplify the experience through synchrony and collective effervescence. Following the musical experience, the community collectively and iteratively negotiates meaning which is then used by individuals in future musical experiences to understand musical passages and determine new personal relevance. The result is the music and community facilitating the individual to spark and empower a reevaluation and subsequent reconstruction of their identity, a transformation.

Key Words: identity, transformation, music, cognition, emotion, sensemaking

INTRODUCTION

Musical practice is powerful tool, embraced by cultures across time and space. Musical components can serve as a dynamic primer that synergize with communal components within
ritualistic settings to facilitate transformations in the identities of listeners. This research is important given the recent call for research that explores transformative experiences within naturalistic settings (Forstmann et al., 2020). Research by DeNora (2000, 2003, 2013), for example, has discussed how “music acts as a technology for listeners to structure and organize their identities” (Clarke et al., 2015, p. 33). In her research, she finds that many people use music in the short term for mood management, and in the longer term for constructing their identities and maintaining them (Clarke et al., 2015). Thus, this essay asks the research question: what are the psychological mechanisms involved in musical rituals that facilitate transformations in one’s identity? This interdisciplinary theoretical framework can inform future research that seeks to understand transformative experiences by synthesizing perspectives from social and organizational psychology, theology, and musicology.

We employ sensemaking theory to propose how and under what conditions transformative experiences are facilitated, that is, shifts in an individual’s self-concept (Forstmann et al., 2020). Specifically, we explicate live musical performances and the larger musical community as having unique cognitive and emotional capabilities which resonate with individuals on different levels of abstraction. We propose that the dichotomous phenomenon of tension and resolve is a key mechanism that leads to a reevaluation and subsequent reconstruction of one’s identity. This is done by promoting variations of highly nuanced interpersonal and intrapersonal communicative events through the arousal of specific cognitive and emotional processes, at individual and communal levels of analysis within music performance. We apply tension and resolve to live musical rituals and fandom to demonstrate how i) harmony and timbre, ii) rhythm and melody, iii) language, iv) communal ritual and v) fandom communications are dynamically interwoven and lead to cognitive and emotional
processes that lead to these transformative experiences and the subsequent integration of these experiences into their identity.

**Sensemaking, Identity Work, and Transformative Experiences**

Transformative experiences are phylogenetically fundamental to the human condition that have existed in cultures across time and space and have typically been facilitated using musical stimuli, communal and ritualistic practice and at times, psychoactive substances (Eliade, 2020; Muraresku, 2020; Durkheim, 1965; Winkelman, 2010; Hart et al., 1998). Transformative experiences are defined as experiences “characterized by an epistemic shift that is so profound it causes a substantial change in one’s personal values and priorities that is practically impossible to accurately imagine in advance” (Forstmann et al., 2020, p. 2). Though literature views these experiences as characterized by feelings of unity, internally and externally, transcending time and space, subjective perceptions of sacredness, feelings of awe, and a noetic quality of a deeper understanding of one’s reality (Forstmann et al., 2020), transformative experiences also require subsequent integration of the experience and insights gained from these experiences into one’s own self-concept, causing a reevaluation, reconstruction and ultimately the transformation of one’s identity. Thus, we operationalize our definition of transformative experiences to encapsule both the initial spark that causes an individual to reevaluate their identity, and the subsequent changes or reconstruction of their identity. Literature on sensemaking and identity work shed light on what make these experiences and the subsequent transformation of one’s identity possible, cognitively, emotionally, and socially (Vough et al., 2020).

Sensemaking refers to the process where individuals extract cues from their perceptive awareness and attach them to or completely reform cognitive frames, to understand their realities
It is through the sensemaking process that individuals within an organization interpret meaning from their environments, thus determining how an individual will act (Weick et al, 2005). This process is critical for understanding how individuals and organizations of individuals interact to contribute to each other’s understanding of their environments. Environments are composed of a wealth of complicated, constantly changing and often conflicting stimuli and it is through organization that individuals interpersonally and intrapersonally communicate to understand this dynamic and perpetual flux (Tsoukas & Chia, 2002).

Involved in this process of sensemaking is one’s sense of self, or their identity (Vough et al., 2020). The self, or one’s identity, is constantly changing as individuals continually perceive and extract cues from their environments and integrate them into a coherent narrative of who they were, are and will become (Vough et al., 2020; Ashforth & Schinoff, 2016; Maitlis, 2009; Ravasi & Schultz, 2006). A constructionist stance on sensemaking views the self as the fundamental target, where individuals negotiate their sense of who they are and can be through interactions with others (Vough et al., 2020). This process-oriented view of the dynamic and interwoven processes of identity and sensemaking emphasizes the need to understand the mechanisms that facilitate identity work, “the cognitive, discursive, physical and behavioral activities that individuals engage in to create, repair, maintain, and revise identities” (Vough et al., 2020, p. 246; Alvesson & Willmott, 2002; Brown, 2015; Caza et al., 2018; Snow & Anderson, 1987).

Components of musical rituals have distinctive mechanisms within unique settings that make them particularly well suited for facilitating transformative experiences, or a spark for reevaluation and subsequent reconstruction of one’s identity. Specifically, the phenomenon of
tension and resolve of musical and communal components, in the live musical performance and fandom settings, facilitate specific types of cognitive and emotional processes which lead to forms of interpersonal and intrapersonal communication that induce identity work within the participants of the sensemaking process.

Past literature on music has explicated its ability to initiate “personal and social change” (Clarke et al., 2015, p. 5; Becker, 2004; Gabrielsson, 2011; Herbert, 2011; DeNora, 2013). Ample literature has proposed and explicated the emotional responses to music are facilitated through physiological and psychological empathic processes (e.g. Scherer & Zentner, 2001; Clarke et al., 2015). However, we propose that specific features of musical rituals create varying degrees of tension and resolve, which induce specific cognitive and emotional responses, facilitating a subsequent reevaluation and reconstruction of a component of one’s identity. While the current literature does not deny the empathetic mechanisms involved in musical perception and processing, our research focuses on new mechanisms and thus contributes to the literature on musical psychology, culture, and identity research in a novel way.

On an individual perceptive level, the components of music we discuss are harmony, melody, rhythm, and lyrics. Harmony is defined as “two or more notes heard simultaneously” (Rich, 2019), including a given note’s overtones. Harmonically, a musician can create various and nuanced degrees of tension and resolve through harmonic consonance and dissonance of instrumental timbres or through different combinations of notes, arousing coinciding psychological and physiological effects (Greco, et al., 2017; Tajadura, 2010; Kabuto et al., 1993; Maity, 2015). Melody is defined as the “succession of pitches in musical time, implying rhythmically ordered movement from pitch to pitch” and rhythm is defined as the “placement of sounds in time” (Rich, 2019). Melodically and rhythmically, a musician can create tension and
resolve through the formation of expectations through melodic or rhythmic motifs and then
defying those expectations (Huron & Ommen, 2004). Melodic and rhythmic expectations are
both shaped during the passage of a song, but also through past lived experiences and cultural
norms (Jacoby et al., 2020; Curtis & Bharucha, 2009). Lyrical content of a musician provides
listeners with primes and cues that convey granular emotionality that are deployed by listeners to
evoke emotions and cognitions, directly effecting the sensemaking process. This content both
stimulates tension through either arousing emotionality that sparks the sensemaking process,
invoking cognitive dissonance to create individual perceived need to reevaluate identity, or
resonates and resolves with an individual’s existing cognitive and emotional states, further
facilitating deeper, introspective thoughts.

On a communal level, we discuss both simultaneous effects that occur during the context
of a collective musical ritual (Durkheim, 1915), and the sequential effects that occur in
interpersonal communications following the musical ritual. During the event, or simultaneously,
the collective amplifies the cognitive and emotional responses of the participants through
synchrony and effervescence. Following the musical event, or sequentially, individuals of a
collective dynamically and iteratively co-negotiate meaning, transforming the collective
unconscious in a subculture, which is then used by the individuals of the collective to further
inform individual perception and sensemaking of the ritual. We propose that these individual and
communal mechanisms synergize to facilitate a reevaluation and reconstruction of an
individual’s identity, or a transformative experience.

We first explore the literature on music and identity. We then explore how music effect
emotion and cognition and thus the sensemaking process. We discuss how individual perception
of specific musical components, harmony, rhythm, melody and lyrics, facilitate sensemaking and
cognitive and emotional changes. We then discuss how the collective environment of a musical ritual and the interpersonal communications that occur within a fandom also effect the sensemaking process. We then conclude by proposing that the dynamic interaction of these events and communications lead to the induction of a transformative experience, where individuals are facilitated through various cognitive and emotional states with various abstract ideas that cause an individual to reevaluate and reconstruct an individual’s self-concept.

**Music and Identity**

Music is a powerful tool individuals use for reevaluating, reconstructing, and maintaining their identities (Clarke et al., 2018; DeNora, 2000). However, music varies in what identity it resonates with and in its degree of individual resonance that component of one’s identity. Erez and Gati (2004) explain how one’s cultural identity is situated in a “hierarchy of levels nested within one another where the most internal level is that of cultural representation at the individual level nested within groups, organizations, nations, and the global culture” (p.587). Music appeals to and resonates with each of these different identities and its coinciding cognitive frames, thus allowing it to cause a reevaluation and subsequent reconstruction of that identity at each of these levels.

Research by Hong et al. (2001), provides empirical evidence for cognitive frame switching, in a dynamic constructivist view, where individuals shift cognitive frames to the associated cognitions of a culture when primed. While this research used a visual prime, an auditory cultural prime likely has the same effect. For example, an individual participating in singing of a national anthem may cause an individual to enact their national identity and the associated cognitions with this identity. The harmonies, melodies, and rhythms of the national
anthem, synergized with the collective engagement in the singing of a ritual, for example before a sports game, may cause a transformation in an individual’s national identity, strengthening affiliation with one’s country. The individual has effectively been transformed through participation in a collective musical ritual.

Music may also resonate on a deeper, individual level. For example, Don’t Fear the Reaper by Blue Oyster Cult, has lyrical content that discusses overcoming existential dread, or fear of death. Existential ideas like how one situates their existence in the world are deeply held and are discussed by scholars as underlying a wealth of human thoughts and behaviors (Pyszczynski et al., 1996). A song that has lyrical content that assuages fears of death, with coinciding harmonies, melodies and rhythms that emotionally and cognitively engage a listener to deliberate ideas of death may result in an even deeper transformation of one’s identity. An individual attending a Blue Oyster Cult concert and singing along with the crowd in a ritualistic setting, may have an amplified experience, causing an even more powerful transformation.

Music may also resonate with both one’s individual spiritual identity as well as one’s group identity, simultaneously. For example, songs in Christian worship, may directly enact religious identities, prime cognitive associations to existing mythological frameworks and doctrines, and with the right coinciding musical features, one’s Christian identity can be strengthened (Ingalls et al., 2018; Conner & Menger, 2021).

Lastly, music may not resonate with an individual at all. If an individual is not conditioned to finding a particular musical genre aesthetically pleasing, there may be little to no resulting change in one’s identity, or even a transformation of identity in the opposite direction, strengthening resentment in that cultural identity.
Music, Emotions and Cognition, and Sensemaking

Emotion and cognition are inexorably linked in the sensemaking process, making music uniquely capable of inducing various nuanced and dynamic neurological processes. Music is a collection of vibrations that are composed strategically on three dimensions; harmony, melody, and rhythm (Martineau, 2008). Each of these dimensions work synergistically or conflictingly to produce varying degrees of tension and resolve, inducing highly varied and nuanced emotions in the listener, and priming various memories and cognitive frames (Meyer, 1956). Music additionally, often has a linguistic component, lyrics, further evoking specific cognitive processes within the listener, such as priming and making more accessible certain cognitions, inducing self-perceptive processes in the listener vocalizing lyrics, or crafting a cohesive narrative with powerful emotional resonance. Lyrical content and the abstract messages they convey are informed by the shared and negotiated meaning within a culture.

In addition to the perceptive agents of music, a communal live musical ritual has unique participatory features that effect individual emotional and cognitive processes such as collective effervescence (Durkheim, 1915), emotional synchrony (Trehub, 2003), and collective entrainment (Cross, 2014). Given the ability for music to utilize nuanced and granular combinations of these components, music is often seen as a uniquely powerful communicative agent. As Wigram and Elefant (2009) state, music “should be conceived as communication that can engage emotions and thoughts profoundly” (p. 423).

Across history, “music has been used as a curative agent and that its effects have been understood in terms of the ability of music to promote health and wellness through enhancement of natural balance and harmony in our emotional systems” (Winkelman, 2010, p. 193; Crowe, 2004). A large amount of research has been dedicated to investigating and elaborating on
music’s unique ability to affect an individual’s emotionality (Panksepp & Trevarthen, 2009; Cross & Morley, 2009; Warrenburg, 2020; Huron, 2015; Juslin, 2013; Juslin & Laukka, 2003; Zentner et al., 2008). Features intrinsic to a musical passage’s structure, such as harmony, tonality, melodic progression, and culture specific idioms combine to evoke various nuanced emotions in listeners (Warrenburg, 2020). Specifically, research has found that emotion from music is generally the result of a continuous process of creating tension and resolving, or relaxing that tension, strategically (Gomez et al., 2005; Meyer, 1956). This is either done through harmonic tension through timbre or consonant or dissonant notes within a chord, or the defying of melodic and rhythmic motif expectations and returning to these motifs, strategically.

Emotion is an important variable in understanding the variation in certain cognitive and social processes, such as the events being interpreted (Schwarz & Clore, 2007), the beliefs revised (Hodgkinson & Healey 2001; Lieberman, 2000), the decisions made (Forgas, 1995) and the chosen strategy for implementation (Huy, 2011). Maitlis et al., (2013) propose that both the likelihood of engaging in sensemaking and the type of sensemaking engaged in, generative or integrative, is largely determined on the valence and arousal of the evoked emotion.

Our emotional paradigm is psychological construction theory (Barrett, 2013; Russell, 2003). This theory of emotion states that all mental states emerge from ongoing cognitive and physiological processes, referred to as construction. Individuals draw from various domains such as previous experience, cultural norms, previously learned association, and innate behaviors to inform and evaluate their surroundings and incoming stimuli (Barret, 2017; Warrenburg, 2020). As an individual perceives information, it is evaluated and used to inform and construct a unique emotional experience. Happiness, in this view, is unique in every instance. The happiness felt from passing a dissertation defense and the happiness from receiving a belt promotion in a
martial art will both be forms of happiness, albeit distinctly unique given the situations and past experiences that led to that feeling of happiness. Accordingly, the happiness one feels from passing a dissertation defense will be distinctly unique from another person passing their defense, making each emotional response unique and individual in nature (Barrett, 2017; Warrenburg, 2020). This idea of emotions being highly nuanced and varying on an individual basis makes it particularly well suited for the current investigation of a psychological examination of musical rituals.

Individuals will derive meaning from the same musical passage in different ways (Cross, 2012), and will feel unique emotions given each individual’s unique past experiences, goal orientations, acculturation, musical knowledge, and experience. Prior to an emotionally inducing event, this theory also explains how individuals will start with a core affect, “a baseline state of valence and arousal that is always occurring” (Warrenburg, 2020, p. 22; Russell, 2003). This baseline core affect thus plays a role in the initial perception and the following impact stimuli will have on an individual.

Individuals, however, differ in emotional granularity, where individuals will vary in their ability to articulate their nuanced emotions (Barrett, 2004). Emotional granularity, or the ability to articulate a certain emotion, may be conveyed through abstract and metaphorical language used in lyrics. Music is a particularly effective tool for resonating with highly nuanced emotions given its floating intentionality. In other words, Cross (2014) describes that what music conveys is “variable and particular to an individual” (p. 8). A person may use the language in a musical excerpt to inform their emotionality, and another individual may use that same language to inform their emotionality in distinct, but related ways.
For example, a song may sound sad and cause coinciding physiological changes, such as changes in “cardiac, vascular, electrodermal and respiratory functions” (Warrenburg, 2020, p. 26; Krumhansl, 1997). Lyrics may use language that refers to the fleeting nature of life, causing the individual to extract personally relevant meaning and use it to inform the felt affect. The individual’s emotional granularity, in this view, is informed by the language used in the musical passage. The individual, now with additional cognitions associated with this feeling, may feel an even more powerful emotional state. An individual may start thinking about a loved one that passed away, or another family member that just got sent to war. In this view, cognition and emotion are intertwined.

Thus, how music is perceived and understood results from a combination of top-down and bottom-up processes that converge and interact with each other. Individuals will have preconceived identities, cognitions, goal orientations, cultural backgrounds, past experiences and baseline emotions prior to the participation in and perception of a musical event. An individual simultaneously uses sensorimotor processes to engage with stimuli in the event, leading to physiological changes and coinciding affect. Affect and previous cognitions will interact to facilitate new cognitions and emotions. Because music is constantly moving and changing, this process is dynamic and flowing.

Emotions, according to the circumplex model (Bartunek et al., 2006; Walsh & Bartunek, 2011) vary on valence and arousal. Arousal refers to the intensity of an emotion evoked by a particular stimulus. The valence of an emotion refers to either being positive or negative. From an emotion-congruence perspective, moods and emotions are associative networks that serve as nodes that connect to cognitions associated with that emotion or mood (Hansen & Shantz, 1995). Research conducted by Lewis et al. (2004) showed how memories are more easily retrieved
when the individual feels the emotion that the memory was encoded in. For example, if an individual is studying for a test when happy, they will more easily remember that information if they are in that same emotional valence the memory was encoded in.

Music can evoke precise and idiosyncratic emotions of varying degrees of arousal of positively and negatively valanced emotions, and thus prime cognitions and cognitive processes associated with these emotions, which then shape the sensemaking process. Induced negative affect may arouse cognitions associated with that affect, such as the memory of a loved one that passed away or the memory of someone that stole something from you. Induced positive affect may arouse cognitions associated with the birth of a child or going out on the weekend.

The felt emotion of an individual in response to a stimulus in the environment will also play a role in the processing of the situation (Forgas, 1995). The process of sensemaking entails the extraction and connection of environmental cues into a certain framework, in either a completely novel or partially existing way. Two types of sensemaking that differ on how cues are constructed into frameworks are generative and integrative sensemaking. Generative sensemaking refers to when “relationships among cues and frames constructed flexibly and creatively to allow development of novel accounts” (Maitlis et al., 2013, p. 230; Koestler, 1964; Ward et al., 1999.) Integrative sensemaking refers to identifying whether these new cues are “consistent or inconsistent with the emerging account of a situation, such that accounts are continuously and critically evaluated with respect to their plausibility” (Maitlis et al., 2013, p. 230). In other words, integrative sensemaking is more iterative and systematic whereas generative is more flexible and creative.

While negative emotions may be more effective in sparking the necessity to engage in sensemaking, positive emotions appear to be more productive in the connection of cues and
frames, along with concluding the sensemaking process. To address this apparent paradox, Maitlis et al., (2013) introduce the perspective of dual tuning, where the sequential use of positive and negative emotions is hypothesized to optimize cognitive processes (George, 2011; George & Zhou, 2007). A felt negative emotion may be optimal for stimulating an individual’s initial attention and energize the sensemaking process, while a felt positive emotion may allow the individual to creatively develop divergent ways of addressing and solving a problem and feel good enough about their interpretation of the situation to conclude the sensemaking process.

Music is uniquely capable of conveying nuanced degrees of negative and positive emotionality, dynamically, and thus can be deployed strategically to evoke emotions that engage what someone is thinking about, through the mood congruence perspective, and how one thinks about it, generatively or integratively. A dual tuning perspective synthesizes the necessity of having both positive and negative valanced emotions, dynamically, making a musical passage with varying degrees of tension and resolve and its concomitant emotionality varying on valence and degree of intensity, particularly well-suited for facilitating intrapersonal communications, potentially leading to a transformation within the individual.

Tension in music will evoke forms of negative affect and its coinciding cognitive effects; integrative sensemaking and negative affect mood congruent cognitions. Resolving those tensions may evoke forms of positive affect, invoking generative sensemaking and positive affect mood congruent cognitions. A strategic combination of tension and resolve can thus be deployed strategically to take a listener through an introspective journey. Tension and resolve can then occur at a communal level, as individuals resonate with each other at a musical event, or conflict with each other. Following the musical event, as individuals communicate and negotiate meaning with each other, tension may arise as the community strives for an optimal
understanding for meaning. The process iteratively leads to new co-negotiated meanings as the organization, in this case a fandom, collectively sensemakes. This meaning is then enacted by individuals as they engage in future events, such as how they make sense of a particular song. The process then repeats, leading to dynamic transformations of the individual’s identity.

For example, an individual can be made to feel a highly arousing negative emotion through rough tones, dissonant chords, and a melody with notes that convey sadness. This song can have lyrics that discuss a loved one dying. This negative affect stimulates an individual’s attention and energizes the sensemaking process. That musical passage can then begin to convey positive emotionality through smoother tones, more consonant chords, and a happier sounding melody. This will then cause the listener to think more creatively through healing through the emotional trauma caused by the death of a loved one, possibly providing new cognitive routes for the individual to subjectively move past the trauma. Singing lyrics that indicate that the individual has moved passed the grief of a dead one, even when the individual has not, may provide additional motivation for the individual to reevaluate their identity relating to the death. Additionally, in a collective experience, the feelings of negativity and positivity is amplified through emotional synchrony of the collective (Trehub, 2003).

Supporting this, in a study that explored the pleasure evoked from sad music, they found pleasure was mediated by feelings of being moved (Vuoskoski & Eerola, 2017). In this sense, the individual was transformed, and subjectively benefited from the experience. How they subjectively related their identity to an event, or another person, was reevaluated and reconstructed following the musical passage.

We elaborate how specific components of music can each create its own degree of tension and resolve, which interact to induce cognitions and emotions within the listener. We
additionally explore how culture may moderate the perception of these musical elements in affecting cognitions and emotions. We start with harmony and timbre, which are perceived at the smallest temporal field. In other words, a singular note or notes played together are at the finest temporal level the human ear can perceive. Harmonics of a note or chord can be perceived as rough or smooth, dissonant or consonant, and thus create tension or resolve, respectively. We then move to a series of notes being played subsequently, rhythm and melody. Expectations for rhythmic and melodic motifs are shaped throughout a passage but also through cultural musical norms. Once expectations are established, strategically defying these expectations, rhythmically or melodically, can create tension, whereas returning to the rhythmic or melodic motif to what is expected, resolves the tension.

We then elaborate on how language is used lyrically, to inform the listener how to appraise the felt emotion given the degrees of tension and resolve felt, and how these lyrics themselves prime cognitive networks, further interacting in the intrapersonal communicative event within the listener. We also explore how singing along may induce self-perception, and how lyrics can resonate deeply through story or narrative. These lyrics are informed by cultural co-negotiated meanings, providing the link between collective and individual perception.

The next section will then elaborate on how the community and interpersonal communication plays a role in the transformative experience. On a communal level, effects can be simultaneous or sequential. Simultaneous effects occur at the community level during the collective engagement in the musical ritual. Sequential effects occur following the musical event through iterative communicative events between individuals. We summarize our proposed mechanisms in a figure below.
Harmony

Musical notes are composed of overlapping, synergizing, and conflicting frequencies. Various frequencies occurring simultaneously and successively differ on a spectrum of consonance and dissonance. Harmony refers to the consonance and dissonance of vibrations occurring at the same time. Even when one note is attempted to be played on a non-digital instrument, this note is actually composed of a multitude of tones. A note played on a piano and that same note played on a guitar will sound differently to an individual due to the harmonic structure of the overtones, referred to as timbre (Fletcher, 1934). An overtone refers to any resonant frequency that exists above the fundamental frequency (Yokoyama et al., 2016). These
overtones will differ on their degree of harmony with the fundamental. The materials the instrument is made of, and the method used to evoke that vibration give rise to differing timbres. Stradivarius violins, for example, are world renowned instruments, due to their acoustical harmony in their overtones, leading to a precise and pure, consonant tone (Yokoyama et al., 2016).

Timbre is thus one of the first tools in the musician’s toolbox that allows the musician to begin to create tension and resolve and is seen as one of the fundamental building blocks of music (Tervaniemi, 1997). Interestingly, timbre independent of melody and rhythm has emotional effects. Hailstone (2009) found that playing the same musical excerpts, but just changing timbre, led to changes in the reported emotion. Similarly, Paraskeva and McAdams (1997) found variations in timbre “modulates perceived relaxation and tension in musical compositions” (Wallmark et al., 2018, p. 333).

The perception of timbre and its physiological effects are believed to have evolutionary roots. In humans, noisy signals such as screaming or crying are generally in response to negative stimuli (Wallmark et al., 2018; Arnal et al., 2015). This association between noisiness of signal and action-perception associations is also found in animals. Body size projection theory posits timbre as a tool for communicating threat level. A rough tone characterized by lower frequencies and more harmonics, or overtones, is used by animals to convey threats, whereas smooth or pure tones convey lack of threats (Morton, 1977). Thus, it is not surprising that the perception of a noisy or smooth timbre stimuli leads to physiological changes and emotional responses in the listener (Wallmark et al., 2018).

A musician can effectively utilize different degrees of smoothness and roughness when playing, to start creating various degrees of tension and resolve. Electric circuits and power tubes
were combined with musical instruments to create one of the most iconic Western instruments, the electric guitar (Tolinski & Di Perna, 2016). The tones of the electric guitar are converted into an electric current, where the musician can use electric circuits to deliberately alter, distort or amplify the frequencies to create a variety of new sounds. The ability to alter or distort sound waves through the conversion of sound to electric current, back to sound, led to the characteristic sound of rock and roll. Blues and rock and roll musicians used electric circuits to make their sound rougher to deliberately convey emotionality in their music.

Chuck Berry, for example, used the electric guitar for the performance of the blues, a cathartic and visceral musical genre that resonates with pain and anguish, and provided an effective interface for an avenue of emotional self-expression (Oliver, 1998). Oliver (1998) describes the blues as “both a state of mind and a music which gives voice to it. Blues is the wail of the forsaken, the cry of independence, the passion of the lusty, the anger of the frustrated and the laughter of the fatalist. It’s the agony of indecision, the despair of the jobless, the anguish of the bereaved and the dry wit of the cynic” (p. 3).

Interestingly, a study by Sharman and Dingle (2015) found that metal music, a genre that uses extremely loud and noisy timbres, decreased but not increased anger (Cook et al., 2019). It is possible that timbre may help resonate with an individual’s core affect, their affect prior the musical event, and then other features of the musical passage or communal ritual engage the listener in different ways that can have therapeutic and regulative impacts. Both fans of metal and fans of blues may participate in live musical rituals of that genre given their ability to resonate with their core affect, which then have different features, such as therapeutic melodies, rhythms, lyrics or feelings of community, that then aid in transforming the individual.
A musician may also use many notes at once to create more dissonance or consonance. Several notes played at the same time is referred to as a chord, which also vary on their consonance and dissonance with each other, depending on the mathematical ratios between their frequencies (Sollberge et al., 2003). Each of these notes subjectively perceived consonance and dissonance are subjectively appraised, but what is perceived as consonant and dissonant appear to be cross culturally consistent (Willis & Kenny, 2008; Ohmura et al., 2016; Schellenberg & Trehub, 1994). Bowling and Pruves (2015) explore perspectives from mathematics, physics and biology for why this phenomenon exists. From a physics perspective, roughness theory by Helmholtz (1885) explains how waveforms of harmonic overtones with complex ratios result in rougher waves and are thus perceived as more dissonant. From a mathematical perspective, simplicity of mathematical ratios between notes leads to more perceived consonance. For example, the simplest interval ratios in western music theory are the perfect 5th and perfect 4th, where the frequency ratios between two notes are 2:3 and 3:4, respectively. These intervals are perceived as more consonant than more complex intervals such as the tritone or the minor ninth, which have ratios of 32:45 and 15:32, respectively (Bowling & Purves, 2015; Trainor et al., 2002).

Thus, musicians can use notes and chords varying in internal consonance and dissonance to create tension and resolve for conveying emotion through the myriad possible combinations of notes on an instrument. Different combinations of different musical intervals with different timbres, can lead to sounds that are perceived as happy, sad, angry or tense. The sequential use of these chords, a chord progression, will then play a role in the cognitive and emotional processing of the listener.
Cultural Moderation of Harmony

Culture may moderate the perception of timbre and its coinciding cognitive and emotional responses. Cognitive linguistic psychologists such as Bloom (2001), Piaget (1926), Chomsky (1986) have debated on how and when children gain or lose the ability for pitch differentiation. Children, with increased exposure to their native language and environment, begin to specialize in phonetic and pitch differentiation as an adaptive tool for language acquisition. This subjective pitch acculturation process may carry over into the musical realm, as well. Individuals come into repeated contact with the cultural artifacts of their environment, conditioning and normalizing certain overtone structures, or timbres. An individual that grew up in India, may have had ample exposure to the timbre of a sitar, whereas an American may have had little to no exposure. When both individuals are confronted with a musical passage that uses a sitar, they may have a very different response. An individual that grew up in India and now lives in America, may even find their Indian identity primed with the timbre of this instrument, thus invoking its coinciding cognitive frames (Hong, et al., 2001) and maybe even feelings of nostalgia.

Interestingly, the perception of consonance and dissonance in chords, that is, more than one note played at a time, appears to hold cross culturally (Willis a& Kenny, 2008; Ohmura et al., 2016; Schellenberg & Trehub, 1994). However, while western music theory divides the octave (440Hz and 880Hz are perceived as the same note, but an octave higher), into 12 equal steps, other cultures divide the octave into different intervals. For example, Indian music divides the octave into 22 microtones. Combinations of these notes that don’t ‘exist’ in western music theory may invoke different cognitive and emotional responses in individuals previously exposed and conditioned to these notes.
Melody and Rhythm

Melody and rhythm differ temporally from harmony, in that melody occurs through notes arranged successively, not simultaneously, but still apply concepts discussed above with harmony and timbre. A musical passage is composed of a sequence of notes or chords arranged strategically to give rise to varying degrees of tension and resolve. Melody can be used to craft a story for conveying cognitions and emotion, which can, itself, “create a knowledge of something that has been formerly unknown, something that asks to be integrated in the mind of the hearer” (Cumming, 1997, p. 17), transforming an individual. Individuals can have profound messages conveyed to them through tonal and harmonic movement, or in other words, the movement of notes and chords.

We propose that melody and rhythm invoke cognitions and emotions in the listener by arranging notes with varying degrees of tension and resolve, along with creating expectations and then strategically defying those expectations, to further create degrees of tension and resolve. To reiterate, these feelings of tension and resolve create feelings of emotion that vary on valence and intensity. These emotions effect the sensemaking process in that what is being thought about and how it is being thought about are affected.

As discussed earlier, cross culturally, simple intervals are perceived as more consonant than complex intervals. For example, the major fifth, where notes frequencies differ by a proportion of 2:3, is referred to as the most stable interval in music. This phenomenon extends to notes played successively. In music theory, scales refer to a collection of tones in specific intervals (Gill & Purves, 2009). The use of different scales can differ in their degree of consonance and dissonance, and notes within these scales will each have their own degree of
consonance and dissonance with the fundamental and its overtone series, or the main note of the song and its coinciding overtones. This degree of consonance and dissonance gives each note its own color. Musicians will use scales to create an auditory dance of notes with different colors, moving upwards and downwards in a scale, or sometimes even leaving the scale, building even more tension.

Melodic motifs, or patterns, can be used to create expectations in the listeners ears. Once an expectation is created, that musician can strategically defy these expectations and resolve back to what’s expected, to create an even more powerful emotional and cognitive response. Defying expectation, then, creates a form of tension or dissonance which may stimulate discomfort or negative affect in the listener (Egerman & McAdams, 2013; Koelsch et al., 2008). This negative affect caused by dissonance stimulates more cognitive resources to be deployed for attention to the song, whereas resolving back may amplify the emotional impact and the cognitions primed through other elements of the song.

For example, in The Beatles song, A Day in The Life, there are parts when the musicians play melodies that are highly dissonant before finally returning to the note the ear expects. These notes ascend before resolving back to the original note, giving a greater sense of emotional impact and a feeling of returning home when the melody returns to the original melodic motif. Similarly, Space Oddity by David Bowie uses a similar method of the melody climbing dissonantly before returning to the expected set of notes, amplifying the emotional impact of the song. The concept of dual tuning and its coinciding cognitive and emotional effects are clearly exhibited here by the masterful writing of these musicians.

These songs begin by first building melodic expectations and stay relatively consonant. The timbres, melodies, rhythms and lyrics may initially resonate with the listener, providing
them with the initial resonance with the musical passage. These songs then, between sections, move into melodies that are highly dissonant. This departure from expectations may spark additional attention to the musical passage. The resolution of the tension then creates a greater feeling of symbolically “returning home” and arouses a feeling of positive affect. This will invoke generative sensemaking where individuals can now creatively extract cues from the musical passage for reconstructing their identity with. Dancing between tension and resolve can thus cause an individual to resonate with a message, stimulate greater attention to the message, extract a powerful meaning from the passage, and then be efficiently integrated into their identity.

While melody is the result of differing frequencies of notes played successively, these notes can also differ in the temporal pattern they’re evoked in, or in other words, the rhythm they are played in. Certain rhythmic practices can be deployed effectively for the generation of tension and resolve. Rhythm and the formation of rhythmic motifs can be used to create expectations which then can be violated to create tension. Rhythmic patterns, one’s acculturation and one’s previous exposure to musical practices create certain expectations, or schemas, of temporal regularities of how and when musical notes will be played. Musicians strategically engage with these expectations by defying them and returning back to them to create varying degrees of tension and resolve.

For example, syncopation refers to “a form of violation of metrical expectations” (Huron & Ommen, 2006, p. 221). Jazz musicians made use of syncopation by acknowledging the expectations of a steady pulse underlying the musical passage, and deliberately playing off the beat and returning back onto the beat to create tension and resolve (Gomez et al., 2005). The swing style of Duke Ellington is an example of this strategy.
Thus, so far, musicians can leverage the philosophy of tension and resolve within a note, notes and successive notes, to convey and arouse certain cognitions and emotionality in the listeners. This emotionality, according to the sensemaking literature, serves as a vehicle to spark and facilitate various cognitive and emotional responses.

*Cultural Moderation of Melody and Rhythm*

Culture may moderate the experience created by melody and rhythm. For example, blues and jazz music more commonly engages with practices of syncopated rhythms. Music genres may also use “odd time signatures” that one may not be exposed to and experienced with. The song, “Take 5” by Dave Brubeck, uses both of these concepts. Jazz musicians that have studied this song and may have even rehearsed the song, may experience the violation of expected rhythms in a different way than someone that isn’t.

Culture may also cause certain melodies and rhythms to prime past experiences. For example, the characteristic drum beat of We Will Rock You by Queen, likely invokes memories and feelings in individuals that have had experiences with this song. Memories of sports games or school pep rallies may be invoked by the cognitive association between this rhythm and experience. Similarly, the melody of a national anthem will create a different emotional and cognitive response in individuals that have had previous exposure to this melody. Nonetheless, intrinsic melodic and rhythmic features of these songs are still responsible for taking the listener on a specific intended journey that can create a transformation in part of an individual’s identity.

*Lyrical Content*
Lyrical content also plays a role in the cognitive and emotional process of the listener. Three potential mechanisms may serve as inducers and facilitators of the intrapersonal communicative process, i) cognitive priming and accessibility, ii) self-perception theory and iii) narrative. These mechanisms are believed to all be dynamically interacting with each other, along with the musical components discussed earlier.

Regarding cognitive priming and accessibility, literature has explicated the ability of language to implicitly prime cognitive networks (Soler et al., 2015; Pyszczynski et al., 2015). Similarly, research by Hong et al., (2001) has found the ability for culturally associated cognitive frames to be primed by external stimuli. Primed cognitive networks and their coinciding identities can be reevaluated and reconstructed by synergizing with the other musical elements discussed earlier, resulting in a transformation.

Often times, linguistic content of lyrics is highly metaphorical. The highly metaphorical content may provide an ambiguous enough medium to add to the “floating-intentionality” of music (Cross, 2012) allowing for individuals to extract meaning that is relevant to them, personally. As Swain (1996) puts it, "…music seems full of meaning to ordinary and often extraordinary listeners, yet no community of listeners can agree among themselves with any precision that comes close to natural language about the nature of that meaning" (p. 135).

This will allow an individual to appraise the lyrical content in terms of the affective experience they are having from the music and have cognitive networks primed that they implicitly feel is personally relevant. Once a cognitive network is primed, tension can be created to necessitate a reevaluation of the content of the network, before it is ultimately reconstructed, and thus transformed. While Swain (1996) argues that precise consensus on the meaning of
music is hard to come by, conversations within the collective about the meaning of musical passages may moderate the personal interpretation of the passage.

Self-perception is defined as the process of an individual inferring their traits, attitudes or emotion by observing how they are behaving and the overall situation the behavior is occurring in (Bem, 1972). In the context of a musical rituals, individuals may participate by singing along. When individuals sing along to a song, they are discreetly vocalizing the linguistic content of these songs. Research by Osgood et al., (1957) have theorized that words elicit patterns of internal responses which are then used to construct an emotional response to the stimulus. In terms of self-perception theory, an individual viewing themselves singing a lyric causes an individual to then evaluate themselves based on that content of these lyrics.

When an individual’s attitudes differ from their behaviors, which in this case is the content of what they are singing, tension, or dissonance, is created in the individual necessitating a change in behavior, a change in the attitude or belief, or to justify the inconsistent behavior or attitude by adding new cognitions (Bem, 1967; Festinger, 1962). This self-perception provides motivation for an individual to engage in the introspective process necessary for the transformation of an individual’s self-concept. An individual, when a feeling of cognitive dissonance is aroused, will reevaluate their cognitions, and when combined effectively with other musical components, may effectively reconstruct these cognitions of a particular part of their identity, resulting in a transformation.

Lastly, lyrics can construct a narrative, or story, for the listeners. Campbell (2003) proposed that there is an innate predisposition of the human psyche to a story or narrative, as seen in a cross-cultural analysis of mythologies (Campbell, 2003). Powerful music tells a story and is moving. A story central to transformation is the archetype of the hero’s journey (Jung,
2014; Campbell, 2008). Jung (2014) believed that a central component of the human process of individuation comes from this hero’s journey. The hero’s journey can be broken up into four distinct “acts”; Separation, Descent, initiation and return. Lyrics often tell a story that is meant to be emotionally impactful and resonate with listeners. Other features of the musical passage may amplify the meaning of the story, making it more emotionally and cognitively impactful and resonant. It is no surprise that religions therefore use music and musical melodies to amplify the meaning and stories found in their words (Beck, 2006).

Melodic and rhythmic deviation and resolve back to expectation may similarly be invoking concepts of the hero’s journey stages and the psychological predisposition for movement through this journey (Warrenburg, 2020). Separation and descent may be created with varying forms of tension, whereas initiation and return may resolve the tension by returning to a harmonic, melodic or rhythmic motif. Combined with associated lyrical content, a powerful narrative can be crafted with deep emotional and cognitive effects that profoundly resonate within an individual. Thus, harmony, melody, rhythm, and lyrics can be strategically deployed by musicians to create profound emotional and cognitive impact in listeners which may spark and facilitate transformative intrapersonal communicative processes within the listener.

**Cultural Moderation of Lyrical Content**

Culture undoubtedly moderates the effect of lyrical content and cognition. A linguistic system is constructed within a culture to provide an avenue for conveying abstract ideas (Sharma & Liu, in press). As a culture evolves, so does the language system (Tallerman, 2005). Cognitive associations between words and phrases are created as an individual interacts in their culture.
Thus, what cognitive networks are primed through the language used in a musical passage will be largely impacted by the culture one belongs to.

Similarly, the meanings associated with words and phrases shaped by culture will play a role in how individuals evaluate themselves, or self-perceive themselves, when vocalizing this content. While the ultimate interpretation is personal, meaning is partially the result of dynamic interactions at the collective level. For example, within the Phish fandom, the phrase often used in lyrics “reading the book” refers to the Helping Friendly Book. However, this lyric is not meant to refer literally to the reading of a book since no physical Helping Friendly Book exists but is instead a metaphorical reference for introspection. The meaning of The Helping Friendly Book is often discussed by fans (Mockingbird, 2019).

Lastly, the psychological predisposition for a narrative appears to be cross culturally consistent (Campbell, 2003). However, while research on story meaning recall found similar patterns of recall across cultures (Mandler et al., 1980), specific meaning and lessons from narratives may be culturally conditioned. Research by Shenglan et al., (2020) found that Chinese and English-speaking individuals differed in their “perceptions of and judgements about the fundamental ‘culture based’ determinants” in interpreting the meaning of a fictional story (p. 266). In this study, Chinese speakers focused more on the value of solving a particular problem, whereas English speakers emphasized exploring the causes of a particular problem (Shenglan et al., 2020). Thus, the meaning extracted from a narrative and how the narrative is cognitively used to reevaluate and reconstruct may result in distinctly different transformations across cultures.

Collective Communication and Sensemaking
Two distinct mechanisms may come from the collective level of analysis; mechanisms that result from the simultaneous engagement of the collective in a musical ritual, and mechanisms that result from sequential engagement of the collective following a musical ritual. Mechanisms that occur during the simultaneous engagement in a collective musical ritual include synchrony and collective effervescence. Mechanisms that occur sequentially, that is, in events following the actual musical ritual, include hermeneutics and meaning making.

Figure 7: Synchronous and Sequential Collective Sensemaking

Simultaneous Collective: Synchrony and Collective Effervescence

Collective musical rituals involve participants collectively involved in the perception of the same stimulus, resulting in synchrony. Tschacher et al. (2021) found that during live concerts, audience members become physiologically synchronized. Another research by Czepiel et al. (2021) found that “specific music features induce similar physiological responses across audience members in a concert context”, which were linked to emotional arousal and
engagement (p. 1). The collective experience of jointly participating in a ritual synchronized with a group of other people could provide for a more powerful emotional response by the individual (Coutinho & Scherer, 2017, Gabrielson & Lindstrom, 2011; Lamont, 2011).

A powerful group emotion is referred to Durkheim (1912) as collective effervescence and is the result of joint participation in a ritual. Interacting with others that have a shared focus can result in the generation of emotional energy (Collins, 2004; Vandenberg, 2021). An audience engaged in the joint listening of a band can result in a more powerful emotional response than the perception of that same musical passage alone through headphones. A stronger emotional response will lead to a more powerful sensemaking process, resulting in a deeper transformation of the individual.

A key feature of synchrony resulting from joint music participation may be due to the ability for music to entrain listeners. Entrainment is defined as participant behaviors being coordinated to one another around inferred temporal regularities from musical sounds and actions to a pulse that is sensed by the participants (Cross, 2012). For example, often in musical concerts, individuals will synchronize their clapping to the beat of a song. Previous research on joint music making has found that the act of playing together can facilitate increased empathy and social commitment (Kirschner & Tomasello, 2010). Other research has shown that synchrony, whether its physical, such as through drumming, or even nonphysical, such as singing together, caused similar results regarding community cohesion such as increased trust, affiliation, and prosocial behavior (Kniffin et al., 2017; Wiltermuth & Heath, 2009). When synchronized or collectively entrained, audiences may feel experiences of “sharing the musical moment”, which research has shown to increase physiological responses, reduce stress, and stimulate increased attention to a live musical performance (Shoda et al., 2016, p. 9).
Increases in empathy, trust, affiliation and prosocial behaviors are transformations of one’s cognitive identity, the identity one uses to subjectively relate to another person. Additionally, in research conducted by Temmerman et al. (2021), the researchers found that belief-shifts, that is, transformations in one’s metaphysical beliefs, were mediated by perceived emotional synchrony. The participation in a collective musical ritual thus may amplify the emotional experience, entrain the audience, synchronize the audience emotionally and physiologically, and result in transformations of one’s beliefs and subjective relationships to others.

Interestingly, a more powerful emotional response may result in a larger physiological response by the audience which may result in more cheering, which could then amplify the performer’s actions, leading to a musical passage that may even be more emotionally impactful. There is thus bidirectional communication between audience and performer during live musical performances (Otsu et al., 2021).

**Sequential Collective: Hermeneutics**

The experiences by individuals in a collective musical ritual characterized by arousing various overlapping and often conflicting and paradoxical cognitions and emotions may lead to phenomenological experiences of confusion and ineffability (Osto, 2016). Individuals, following these events, will often turn to their community to share their experiences and derive further meaning from the event. Transformative experiences result in the subsequent transformation of an individual’s self-concept only after successful integration of the experience into their identity (Gorman et al., 2021). We propose that individuals collectively engage in a hermeneutic loop, where individuals co-negotiate meaning and understanding of their experiences so that they can
integrate the meaning into their identity (Arnold & Fischer, 1994). As Arnold and Fischer (1994) state, “hermeneutics has two tasks: to determine what a text has to say and to provide instruction about what to do” (Bleicher, 2017, p. 56).

Hermeneutics refers to a theory of interpretation where people seek meaning and do so in the interpretation of their cultural contexts (McCaffrey et al., 2012). This approach emphasizes the relationship between a deeply resonant medium for individuals, for example, fans of a band, and identity construction (Ahuvia, 2005). Additionally, the historically religious valence of hermeneutics, for example by Bleicher (2017), make it particularly relevant to transformative experiences and their interpretation, given the perceived and subjective “sacredness” and mystic acity of these experiences (Forstmann et al., 2020; Griffiths, 2006).

Sensemaking is inherently a social process where participants of an organization collectively interact and attempt to interpret the world (Maitlis, 2005; Weick & Roberts, 1993). Within the context of a band’s fandom, individuals collectively participate in conversations, discussing and interpreting lyrical meanings, band lore and ultimately, their personal relevance. These conversations, due to technological advancements, can now occur across digital mediums, facilitating more conversations from more diverse audiences than ever before. Within both religions and fandom, a commonly held narrative provides a cognitive shortcut for demonstrating shared cognitive categories and an avenue for a shared pursuit into finding meaning. In other words, fans within a fandom use the narratives and lore associated with the fandom as a means for contributing to each other’s understanding and integration of the experience for transforming their identity.

As discussed earlier, this negotiated meaning will then be used by individuals in deriving meaning from lyrical content in future musical events. This process of experience, deriving
meaning from experience, and negotiating meaning of experience, is constantly evolving where the collective identity and individual identity are perpetually in flux. The collective culture shapes the individual and the individuals shape the collective culture (Sharma & Liu, in press).

In sum, Figure 8 provides a temporal examination of the changes in emotions and cognition and individual experiences through engagement with a musical ritual and subsequent communal communications, which then result in a transformation of a component of one’s identity. An individual enters an event with their core affect, determined by their past experiences, goal orientations and expectations. The individual then is affected by the various features of the music rituals which include musical harmony, rhythm, melody, and lyrical component, along with the communal features of synchrony and effervescence. These features spark a sensemaking process during the musical event. Following the event, the individuals of the community collectively negotiate meanings of the musical ritual and extract personal relevance from these communications with others, which is then used in future events. The result is a dynamic and perpetual cycle that leads to a transformation of a component of the individual’s identity.

Figure 8: Cycle of Transformation in Musical Ritual and Community Communications
CONCLUSION

Components of musical performances resonate with particular parts of an individual’s identity and evoke certain cognitions, cognitive processes and emotions. Through resonating with an individual’s core affect and strategically using elements of musical practice in a collective setting, an individual is taken on a journey where cognitive frames within an identity can be reevaluated and reconstructed. Emotion serves as a tool for sparking the sensemaking process as well as being dynamically intertwined with cognition. Both cognition and emotion synergize to facilitate transformative experiences and the subsequent transformation of an individual’s identity.

Specific features of musical performance such as harmony, timbre, melody, rhythm and lyrics synergize to invoke cognitive and emotional effects, through arousing varying degrees of tension and resolve. Tension is created through rough harmony, defying rhythmic and melodic expectations, and dissonance with previously held emotions and cognitions, and may be associated with negative affect. Resolve is created through smooth harmony, returning to rhythmic and melodic expectations, and resonating with emotions and cognitions, and may be associated with positive affect. Through dual tuning, a dynamic ebb and flow of tension and resolve and negative and positive can guide listeners through a sensemaking process where an individual reevaluates and reconstructs a particular component of their identity.

In the collective setting rituals occur in, simultaneous and sequential mechanisms exist. Within the ritualistic setting, the collective amplifies emotional and cognitive responses through synchrony and effervescence. Following the musical performance setting in post performance communications, the community provides an interface where individuals collectively engage in a hermeneutical analysis of these experience where meaning is negotiated by participants of the
collective. The result is a deeper understanding of the experience and its personal relevance, which is then deployed by individuals in subsequent performances.

The implications of the use of facilitating transformations within listeners is deep. Musical rituals can be used to strengthen existing groups, communicate across language and cultural barriers, or serve as a therapeutic avenue for individuals to amplify desired personal change. Collective music rituals can be used to facilitate stronger cohesion in a population fractured and breaking apart. Across cultures, music can be used as an avenue for bridging together warring factions using a medium that transcends linguistic boundaries. Lastly, music can be used as a therapeutic tool for individuals to spark and empower desired change in their identities. In a metaphorical sense, music can be seen as a sled that carves paths, or cognitions, in the snow. The dichotomy of tension and resolve can be used to carve out new cognitive pathways in one’s neural net as well as allow cognitions to flow more smoothly and creatively in these new paths. Through the strategic use of music, profound change at both the individual and collective level is possible.
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APPENDIX

Appendix 1: Mystic Arts of Tibet Raw Interview

6/14: Cymbals, Chanting, Highly Realized Masters, and Hand Drums

Cymbals:
How are you selected to play your instrument?
Practitioner monk 1 (Chantmaster): Because I am the chantmaster I am chosen to play the cymbals, it is a tradition for the chantmaster to play the cymbals. It makes the sound of wisdom and this wisdom surrounding around the idea of emptiness being found in yourself and everyone around you. It also helps one see the place of things in the entirety of existence by helping one gaining an understanding of reality through the phenomenon of sound.

*The chantmaster plays the cymbals and chants*

Practitioner monk 1: Every time a beat is played by the cymbals, it has its own unique symbolization. This can prayer can be mystic dancing in order to honor divine beings. The beat of the cymbals can also express the inner understanding of reality as mentioned earlier with it relating to emptiness.

Multiphonic Chanting:
How do you prepare for chanting?
Practitioner monk 1: This chanting takes a long time to train. It can even get to the point where it hurts one's throat. Water can be used during practice in order to train vibrations. Heavy objects are also placed on the chanter's stomach during practice for the applied pressure helps improve the chanting. Being a good chanter is mainly based off of qualities of your throat.

What is the purpose of the chanting?
Practitioner monk 1: The purpose is to invoke the spirit of divine understanding and waves of energy. The focus on this spirit gives special energies to empower the meditation. It is also believed that dieties come to the monastery to see the monks chanting. The spirits walk with the sounds since they give off emotions. This chanting is believed to have a special connection to the balance of your energy.

How much time did you spend learning from tantric masters?
Practitioner monk 1: It did not take a long time for me. It all is dependent though on the person ranging from five, ten, to even fifteen years. The highly realized master teaches usually teaches the chanter for about a month, while the chanter can practice on his own from then on after gaining the understanding needed for chanting. The cymbals are gradually learned, but are not as hard to learn in comparison to the chanting. It can take about one to two years to master playing the cymbals in accordance with chanting.
Highly Realized Masters:
Practitioner monk 1: The highly realized masters find these tunes by seeing subtle energies of mind and body, and one has to have a deep understanding in order to see this. The highly realized masters help create a special tradition by realizing and guiding the group based off of the subtle energies of mind and body. These highly realized masters also are able to see the divine, even in their dreams. This is done in order to create special connections between the sounds being made and those hearing them in the rituals.

It is also worth noting that in chanting and for all other instruments used in this ritual, that one does not play randomly. They should always play in association with a divine understanding usually assigned by a highly realized master. For example the popping sound that is made during chanting is not to relieve the throat of the chanter, but instead specifically established by the highly realized master.

Hand Drums:
What is your instrument called and what is the significance of it?
Practitioner Monk 2: These are the hand drums and they are used in all traditions of Buddhism. The significance of it centers around the belief that this drum is cutting the root of the ego. The founder of this practice is connected with deities, for kings would use these drums during ceremonies to call upon the divine.

Practitioner monk 2: You must know what the hand drum represents while playing it. It shows special connections with the mental energy flows. The two main components of these mental energy flows are wisdom and compassion. These two parts are represented by the pendulums on each side of the drum. Wisdom and compassion focus on the nature of the ego and wipe it out. The rigidness of the ego disintegrates while this is being played.

Spiritual Significance:
Practitioner monk 2: There is also a belief that infinite spirits are everywhere around you. These spirits are in desperate need of either healing or teaching. By removing the ego mentally and also surrendering your body you are able to contribute to the well being of other sentient beings. This is believed to invite one to bring in spirits to be an offering to. Imagine the body as jewels to give up to these spirits by the removal of the ego. These lesser spirits or durgatis are believed to take the entire physical body from you. This in part makes the hand drummer take part in a very risky role.

Practitioner monk 2: There is a pleasure in taking this risk. This is because of the law of karma, that you would not be physically harmed due to the fact that you choose to give yourself up after spiritual realization. Giving yourself up is of high importance because it helps others for healings. It can symbolize the spirit being able to leave the body during this ritual

How much time did you spend learning this instrument?
Practitioner monk 2: Well the moves are very easy to learn. After that though, it takes a lot of practice to get good at it. One must recite mantras over and over. Having a strong understanding compassion, wisdom, and emptiness is a prerequisite for learning this instrument. The person playing this instrument is still in the process on learning and learning this instrument is especially dependent on the spiritual realization for the first few years.
6/15: Offerings, Small Trumpet, and the Long Horn

Offerings:
Practitioner Monk 3 (small trumpet): When played in accordance to being directed and taught by a highly realized master, then an offering is able to be done. There are five pieces in an offering, although it sometimes goes up to seven pieces. The main five pieces consist of form, smells, sound, taste, and touch. In order to make people happy you have to please all five of the senses:
- Sounds represent the set and unifying of the offerings and also sound is empty by nature so it helps one recognize impermanence. The sound also helps one get into a meditative state in their mind
- Forms could be very beautiful which makes other happy, that could be offering of form
- Taste would be a delicious food to offer to a master
- Smells would be like a perfume or a good smell
- Touch could be through very gentle and smooth

Origins of the instruments used by T.M.A.O.T.:
Practitioner monk 3: In terms of the origins of these instruments, they come from varying traditions. Some instruments used by T.M.A.O.T. come from India, some are from China, and some such as the longhorn are from Tibet dating back to ancient. All these instruments though have been used in Tibet for a very long time before Buddhism was even present there. The masters came to see a special significance in using these as instruments not only for their auditory purposes, but for symbolic purposes as well in rituals. When combined with their auditory and symbolic functions, these instruments help make authentic offerings.

What is your instrument called and what is the significance of it?
Practitioner monk 3: It is called the small trumpet (find Tibetan translation?) and it is kind of works like a flute. So it has its own design and the sounds from the patterns played have special significance. These are special sounds written by masters so you have to play these notes in the pattern that they are given. These notes represent one piece being sound, and these are from a series of pieces used in an offering.

Practitioner monk 3: These notes have a special meaning used for various causes. These series of sounds needs to be seen by the player and the sound must be manifested into the offering to a deity with reasons consisting of: Improving the well being of a deity, Improving the well being of a group of people, Improving the well being for any sentient beings

What is the history of this instrument?
Practitioner monk 3: The small trumpet currently comes from China where it was used to provide respect. In order to pay respects to your masters in Tibetan Buddhism, this instrument is played. For example when His Holiness the Dalai Lama comes to visit, it is played to help welcome him and bring him well being.

What is the significance of this instrument?
Practitioner monk 3: Well this instrument is in scripted to depict the vision or ideas of a tantric master on how it should be changed a bit, and what the drawing on these instruments should be and what these drawings represent. When you play this instrument the drawings on it should be a part of that sound. Suppose there are prayers written on it, then it would bring about a message of peace through its sound. It is also worth noting that this instrument is related closely to the longhorn (clarify?)

How long did it take to learn how to play? Is there a specific melody?
Practitioner monk 3: So it actually depends, the most difficult part of learning is how to balance the sound of this instrument. When you blow this for say 10/15 minutes or an hour, you cannot stop. You have to learn how to play it continuously for an hour. Sometimes you play as long as it takes for great masters to come on the stage. At the same time in the rituals, you have to play it as well for say about 15 minutes. You cannot stop in the middle during playing. The balance of taking a breath and controlling the breath helps it flows continuously and this is hard to learn.

Practitioner monk 3: The sounds or melodies to make are pretty easy to learn, and can be learned rather quickly. So once you inhale and take a breath in, you have to hold it inside and of course you also need to breath. There is a special technique you develop to breath out while also blowing the trumpet at once simultaneously. This skill takes a bit of time to develop.

Practitioner monk 3: When this is playing with the group, how does it match up with the group? They are all playing the same melody and is dependent on the mantra. They have a special way of learning, and learn from a special melody from the master.

What is the significance of this instrument (log horn) and how do they learn to play?
Practitioner Monk 4: Mainly there is three different notes or melodies played when one blows it. One would be a really big note, one would be a little bit longer but not much vibration and a bit mild, and the third would be very long and low pitched. Each master has their own style for playing this. It is a lot like the small trumpet, it forms its own significance in its way of blowing depending on the master playing it.

Does the longhorn contain the same spiritual significance as the small trumpet when playing notes?
Practitioner monk 4: Well the long horn can be used two ways. The first use is for the pacifications of evil spirits in order to enhance the power of protection. In order to protect you from spirits there are special rituals, there are peaceful and wrathful rituals. Blowing hard for wrathful rituals represents the defeats of the evil spirits, and it shows the intense power of compassionate beings overtaking the evil. Not only by being simple and humble, but also through the power of compassion. Shows the power of getting rid of any evil thing that exists in this world. You are showing the power of compassion and not anger.

Practitioner monk 4: Anger is not brave, and very weak in this in that it is easy to give out. When anger comes, the person is not able to stand or challenge for it is easy to lose. Compassion has the power to overtake everything, and this long horn represents overtaking the powers of anger and hatred through the use of compassion.
Practitioner monk 4: The peaceful ritual is for offering and accompanied with beautiful dances at times to one's guru for example. It also has three different styles for blowing helps calms the mind. It can be used for meditation. Sometimes the person who blows it needs a special kind of understanding, mostly the master will imagine what is going on and what needs to be done. The rituals are being performed in a group, so everyone has their own responsibility to meditate on it. To present to the master will make it very powerful when in unison. The monks and the master are both meditating in order to help with offerings.

6/17: Bass Drum, Bell, Small Drum, and Purpose of Offerings

What is the significance of this bass drum?
Practitioner Monk 5 (Bass Drum): It is a part of the sound offering. It has its own stories and significance. It is like the hand drum except used in a different style. So this instrument is used for rituals and spiritual dances. For example they are used for the Yak and Snow Lion dances. The beating of the drum in these rituals symbolize the movement of the mystical animals or beings.

Practitioner monk 5: So at the same time we have to remember the nature of sounds, the sound of the drum itself has a very special significance. Our mind body exists with a combination of the sounds we hear and the physical beings we see. In order to create transformation for the listeners with this sound, you need an a special external sound such as the sound of this drum. This would be from the sound of primordial wisdom that one would hear from the bass drum.

Is the rhythm dependent on this concept of transformation?
Practitioner monk 5: Masters will compose their own rhythms, most of these masters are highly realized and are tantric masters. These masters have a special connection with the mind beings. Some of the masters after having special visions of deities (especially the female ones) they are taught the moves of the dancing and rhythms for the offering. These visions are played out as the rhythms and the dances for our rituals.

Practitioner monk 5: There is a part of the ritual where we need to play the drums, and a ritual dance must be performed in front of the masters in order to create some energy or a connection with the divine energy. This divine energy is connected with human energies in order to create good healing.

Practioner Monk 6 (Bell): The important part of the bell is the vajra and this is the handle. The vajra and the bell come together and should always be together. So you can see the bell itself and it represents wisdom and compassion, these two must always come together. Whenever the there are offerings, the vajra bell is of most importance. This is because everything should be associated with practice of compassion and wisdom.

Practitioner monk 6: Vajra has many meanings with its most important meaning referring to it being indestructible. The vajra is seen as the combination of wisdom and compassion. It shows that wisdom and compassion are indestructible, this practice helps leads you to the high levels of
enlightenment. When you have seen a lot of wrathful bloody deities, these should be dealt with by compassion.

How does the vajra deal with wrathful spirits with wisdom and compassion?
Practitioner monk 6: Any kind of wrathful spirits are rooted by anger. This is because the anger causes them to have a bad intention, and this makes them look scary. All of these demons, evil spirits, durgatis essentially arise from the energy of anger. So anger is somehow a harming concept which always wants to kill, harm, or destroy someone. This energy can only be defeated by the direct opposite concepts or opposite energies

Practitioner monk 6: So if you think there is a tree, and do not find one. Then the concept of there being a tree present is now gone by then knowing the actual reality. This describes the wisdom part that the bell represents. Wisdom helps one understand the reality of the situation.

Practitioner monk 6: This root of negative energy is encouraged by negative concepts, this could be eliminated by the concept of compassion. This feeling wants peace, happiness, joy from others, and to be free from danger.

Practitioner monk 6: Compassion is not just to simply "just be nice" since it has a very deep and profound philosophy behind it. When you embrace compassion there is no way anger can harm you in your mind. There is also no way the activities of anger can harm you with compassion, this makes it indestructible or a vajra. At the same time it is not ok to simply be nice, but we also need the wisdom to work properly. In other words, one needs to be wise and kind. Think of a mother's love for her child and our love should be strong like this. For example a mother jumping into a running river in order to save her child. Compassion must be always be supported by wisdom.

Practitioner monk 6: You to get to the fullest possible extension of compassion through wisdom and you will have all the powers needed to defeat negative beings or durgatis. In other words with this understanding says that compassion is indestructible, so this knowledge is rooted in logical understanding.

Practioner Monk 7 (small drum): Most of the deities use this drum for the invocation of wisdom as well. Sometimes they use it for other reasons. The two side of the small drum represent the energies throughout our body and the centers of these energies in our body. This represent the opening of chakra channels by helping one realize empty nature of reality when hearing the sound of the drum.

A path to Nirvana is something an individual has to take and how can this relate to music? Or are they individually meditating on their own instrument at the same time on a personal level?
Practitioner monk 7: It is not mainly for those who play it, the sound in the offerings benefits everybody. When talking about these imaginations, we can create infinite numbers of one’s self and one can be clear with every single sentient being. A person simply becomes one with all while playing this, can be an angel or deity. I could be male or female deities, and everything is equally controlled by nothingness since they arise from nothingness. Everything is essentially same in the nature.
Practitioner monk 7: I rise myself as a wrathful deity so powerful at the same time while meditating. So a lot of meditation needs to be done. At times I feel like I need to own the universe, and see oneself as a savior of the world at times. Sometimes I am the most loyal servant to all sentient beings being ready to sacrifice everything even my body for the sake or well being of all sentient beings.

Do they also focus as a group playing together?
Practitioner monk 7: There is a very individual understanding that can be done anywhere, but it is more effective if you do it in a group. Once you attend certain levels of this path, then you have more freedom. Only one master's power is good enough compared with groups.

With the meditators listening to it will they also see themselves with the group?
Practitioner monk 7: Yes for there are different levels of meditation. If your mind is good enough, then you can understand the symbology of all the instruments rather than separately understanding what each instrument means.

When these masters have the visions, do they compose all the instruments together?
Practitioner monk 7: Yes when we came from Tibet in 1959, some of the masters forgot to bring the text with them. This left lots of rhythms behind unfortunately, and this left everyone in great worry. Highly realized master (need name from recording) woke up and wrote the same text after deities told him in a dream. So we never really compose new rhythms and are reliant on new rhythms.

Would it be possible to see what the text looks like?
Practitioner monk 7: Well first it comes from the mind of the master and is written down on the paper. This is very sacred texture because the theme is very sacred. Respecting the theme of this scripture is very sacred, so some people write on gold trimmed scrolls and others write it on expensive fabrics or silks. The deities are believed to have blessed these sacred texts.

So when they are learning it, they learn it from the texts?
Practitioner monk 7: Our belief is very strange, even if you know or have full information on the texts it is still not enough. You need to also have oral transmissions on this from your master, if you do not have teachings from the master then you cannot completely understand it. You always need an oral transmission from the masters and this is believed to help have the meaning of the texts live on through you while performing.

How often do they learn new songs?
Practitioner monk 7: So we have our own way of singing spiritual songs. We follow our masters by playing the song they give us. We have collected a limited set of sounds from the text from a master, so we memorize and learn these songs. We practice and meditate on it, and then we go on a retreat while thinking about the meaning of these sacred songs. We are not fully authorized to do these songs and dances until after a retreat, and then a master will decide whether or not you are qualified to present or play these songs.

6/18: Offering Demonstration (Sansue)
What was this song called and what is the purpose of it?
Practitioner Monk 8 (chanting 2): So it is the practice of (check recording) or the cutting of the ego. They recite the mantras and also the prayers and they have to meditate on the meanings of the prayers.

When do they usually use this song?
Practitioner monk 8: You can use it anywhere like for healing and also for blessings, ceremonies, and also as a prayer for the well being of your friends. You can perform it on stage, from our perspective though it is more than just a performance but rather a healing prayer. It is a real practice and not just for business.

Practitioner monk 8: There is an individual aspect where you are focusing on the well being of your path and all sentient beings.

So they have to play together and is it something that they balance by playing as a group?
Practitioner monk 8: For instance there if there is a group of one kind of person saying the same prayers and healings, then it will be much more powerful if it is done in a group. It is significant to do in a group for this.

So do they think of playing as a group?
Practitioner monk 8: Yes of course for the benefit of the prayer, and it can also have individual meditative purposes. The individual aspect is good, but it is more beneficial if it is done in a group.

Practitioner monk 8: So anyway whatever our imagination or practice is, there is always others in reality. This group is in reality and more powerful than you, it is beneficial for yourself and others if you perform in a group. At the same time the group is nothing but the combination or composition of individuals. There is this philosophical thinking surrounding the reality of there being a group itself.

Practitioner monk 8: There is a complicated way of thinking which is not real, but on the subtle level it is real. This being the idea that one can be the group and the group can be the individual, and it will not lose the individual qualities during this. The universe is full of atoms and atoms can also be the universe.

So if one of them is playing at a different speed, does one keep at his pace or do they change to go with the group?
Practitioner monk 8: It depends, if you are with a group then you have to follow the group for the sake of unison. You might have your own way of playing but you can do it later. Since you are with the group, you have to stay with the group. During the period of learning, it is ok to play out of speed for the sake of practicing.

Does the music help facilitate a sense of community?
Practitioner monk 8: Yes we covered it earlier.
What was the name of this ritual and the spiritual purpose?
Practitioner monk 8: It is called sansue (spell check?) and it is an auspicious offering song. Usually it comes with the smoke offering. While the monks are doing these prayers someone has to come up and carry the incense and burning smokes. The belief is that the smoke can carry the blazings all over the place and thereby the prayers and energies sent will go out with the smokes and will bless the people around you and the place around you.

Practitioner monk 8: The smoke goes up into the sky to bless the world. At the same time a lot of prayers have to be done, you have to meditate on the nature of the smokes. It has to be seen as the combination of a million particles, tracing is back to its constitutive levels. This smoke has to be manifested as wishful jewels and offered to all sentient beings and turned into whatever they are looking for. For example this may be for powerful protection who are in the danger of being affected by natural disasters. This smoke offering can also be for powerful healing pertaining to nature or for those who are really ill. There are different parts and prayers that focus on these parts of happiness.

6/19: Experiences as a Musician

Now we will have more general questions with you playing the music and as a musician how you feel about listening to the music. If you have not been playing for that long there may be a difference on how you feel about the music before and after playing.

First how did you experience change from before you played an instrument and how did your experience change after you joined if it did?
Practitioners Monk 9: So the music or the melody that we are playing is actually spiritual music, but there is a great similarity between this and the music we play in our regular life. If you want to replay music to make your life happy and more fun then that is a reason. When we listen to the music there is a special insight that we can understand through the music and with that sound our mind can understand the meaning better and deeper while also being able to have an intense offering.

Practitioner Monk 9: This music was very carefully composed and chosen by highly trained great masters who see the true natures of the mind. In Tibet when the monks play this kind of music from the top of the monastery there is a lot of lay people that then come and go around the monastery, and it is also done to help a lot of people there who are depressed or in hard times. Practioner Monk 9: When they listen to this music, their mind immediately becomes calm and they become more conscious about the life and the music helps them pursue a better a life. The meanings of the sound itself have a special quality to heal them and calm them down.

Did the feelings of the benefits increase with the more spiritual they became or for the length of time they played the instrument and what benefits came from the increasing of this spirituality?
Practitioners Monk 9: So it also has or as soon as you play the music the feeling that you immediately get helps you realize that everything is impermanent and that this fact is forever, and how shortlasting impermanence is by nature. The insight that you get from these sounds will continue forever. Say that during the ritual the sound helps you focus on the mind and
phenomenon. The sound also clears distractions in the mind and lets the insight of impermanence remain in the mind. It becomes a lot more useful in your daily life and becomes a lot more natural. It advances and depends your spiritual understanding.

Does the depth of the realizations become more evident after you have practiced for longer or are they more noticeable from the start?
Practitioner Monk 9: So the music is not only practiced for the tune, that is only a small part of the practice. It is another way of calling upon the special energies to help awaken our mind. There are many other types of rituals that we can perform such as offering the mandala and circumambulations, and all of these types of rituals have the same potential and energy to help open up ourselves. There is no limitation to the benefits of these practices. Anyone can perform any activities that helps your mind unleash your inner energies.

In the west, professional musicians are well known obviously for the music they make. Do they enjoy the music the most out of their practice?
Practitioner Monk 9: So according to our belief, there are many different kinds of people playing music in the realm of music. Even the spiritual songs could be a kind of song that is not initially very spiritual. We cannot be sure that this kind of level of music is practiced. There is also other dangers of attachment that arise which is not really practiced here. This kind of attachment would end up blinding your mind, and one is urged to instead control their mind. You have to authorize your mind and not let your attachment lead your mind. This does not come easy for one who spends their entire life playing music. There are highly realized masters in stories who seem attached to their music, but are instead just expressing the spiritual concepts. It is not attachment, and it depends if they enjoy it or not, but they should always avoid attachment.

How can you tell if the chanting or music is good? If you play an instrument can you think yourself to be better than others? Do you have feelings surrounding good and bad performances?
So for example you can play all the notes correctly but the sound can still be bad
Practitioner Monk 9: So as far as the kind of goodness and badness, it is absolutely true that it is a reality that some do well and others are not good at playing music. This of course is a fact because we are human beings and can have our downsides or imperfections. Whatever you do there is always ups and downs, like birds flying have differences in speed. This is a challenge that we have because everyone's differences are inevitably going to be there, but we have to be assured that all can reach a certain common level that is good enough for T.M.A.O.T.

Practitioner Monk 9: As far as someone who is struggling or not as good as your, you must check yourself and try to teach them. Instead of taking pride, you have to help him or look at him with care and loving kindness in order to help the person. Since we are practitioners, the two kind of mental constructs are the objects of appreciation or respect and the object of compassion. We have only two different types of people in our eyes, if you are caring for them then it is object of compassion and they are an object of respect if they are a hard working musician that performs well. You help them improve.