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Musical Intensity in Affect Regulation:
Uncovering Hope and Resilience Through Heavy Music

A Thesis submitted in partial satisfaction of the requirements
For the degree Master of Arts

in

Music

by

Diana Christine Hereld

Committee in charge:
      Professor David Borgo, Chair
      Professor Anthony Burr
      Professor Nicholas Christenfeld

2016

The Thesis of Diana Christine Hereld is approved and it is acceptable in quality and

form for publication on microfilm and electronically:

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Chair

University of California, San Diego

2016

DEDICATION

For my father, whose ancestry, tenacity of being,
and love for life made this opportunity possible.

I hope you're still singing.

"One cannot be without being affected."

— Catherine Malabou,
Ontology of the Accident,
2012

*"I should be sorry if I only entertained them,
I wish to make them better."*

—George Frideric Handel
An Account of the Life and Writings of James Beattie,
1824

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LIST OF ABBREVIATIONS

IAAM - Inventory for Measurement of Activation and Arousal Modulation scale. Reflects the use of music (UofM) in everyday life. The IAAM has successfully been used to reveal differences between clinical psychiatric and non-clinical samples. The five strategies are as follows:

RX - relaxation (somatic and psychological relaxation through music)

CP - cognitive problem solving (thinking about social and internal problems and affects, including memory aspects)

RA - reduction of negative activation (modulation of a strong negative activation and emotional arousal/reduction of negative emotional strain)

FS - fun stimulation (positive psychological and motoric activation and establishment of social relationships)

AM - arousal modulation (the modulation of concentration skills and general capability)

MMR - Music in Mood Regulation scale. A self-report measurement tool outlined by Saarikallio defining seven categories of music mood regulation, characterizing such strategies by typical mood prior to music use, type of music activity, social aspects, and change in mood following music use. (Saarikallio, 2008).

MARQ - Music in Affect Regulation Questionnaire. A thirty two point self-report scale examining the use of affect regulation in both generic (non-specified) and heavy music. Utilizes music in mood regulation (MMR) strategies from the work of Saarikallio (2008).

LIST OF FIGURES

ACKNOWLEDGEMENTS

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"Recovering the Subject Through Sonic Gesture: Contending the Annihilation of Self (March 16, 2016). Epigenesis and Philosophy: A Workshop on the Work of Catherine Malabou, Bristol, UK.

"Musical Intensity in Affect Regulation: Interventions in Self-Harming Behavior" (July, 2016). International Conference for Music Perception & Cognition, San Francisco, California

ABSTRACT OF THE THESIS

Musical Intensity in Affect Regulation:
Uncovering Hope and Resilience Through Heavy Music

by

Diana Christine Hereld

Master of Arts in Music

University of California, San Diego, 2016

Professor David Borgo, Chair

This thesis discusses the nature of music's impact on identity, subjectivity, and the self. To better understand music's role in promoting hope and resilience, I pinpoint how heavy, intense, and highly emotive music applied over distinct listening practices

impacts the regulation of affect and self-destructive impulses in individuals who suffer from trauma, mental illness, or self-destructive behavior. This research also investigates the characteristic of intensity often found in heavy music that seems (despite intuition) to ease negative or painful emotions, circumvent impulses to self-harm, and propel one to positive action.

Of particular interest to this project are the ways both heavy and non-genre specific music listeners use various listening strategies in the regulation and modulation of negative affect and emotion. Specifically highlighted are the three strategies defined by Saarikallio (2008) in the Music in Mood Regulation (MMR) scale of using music to cope with negative mood states: Diversion, where music is used to distract from negative thoughts and feelings, Solace, where music is used for comfort, acceptance, and understanding when feeling sad or troubled, and Discharge, where anger or sadness are released through music.

Through review and analysis of existing literature, qualitative research, and in-depth case studies, this thesis illuminates the ways musically-afforded emotion-regulation strategies allow subjects to meet, shape, and transform their difficult experiences by establishing hope and resilience that strengthens one's ontological security and sense of self.

INTRODUCTION

In this thesis, I discuss the nature of music's impact on identity, subjectivity, and the self. In order to understand how music may be used to promote hope and resilience, I pinpoint how characteristically heavy, intense, and highly emotive music applied in conscientious listening practices impacts the regulation of affect and self-destructive impulses in individuals who suffer from trauma, mental illness, or self-destructive behavior. This task additionally explores what it is about musical *intensity* (often found in heavy music) that seems to almost counterintuitively help in alleviating anger, pain, or sadness, feelings of hopelessness or despair, and impulses to self-harm.

Of particular interest to this project are the ways in which both heavy and non-genre specific music listeners employ various listening strategies in the regulation and modulation of negative affect and emotion. I specifically highlight the three strategies defined by Saarikallio (2008) in the Music in Mood Regulation (MMR) scale of using music to cope with negative mood states: *Diversion*, where music is used to distract from negative thoughts and feelings, *Solace,* where music is used for comfort, acceptance, and understanding when feeling sad or troubled and *Discharge[1]*, where anger or sadness are released through music (similar to "vicarious re

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[1] Listening strategies specific to MMR hereafter capitalized

1

lease"; Lacourse, 2008 and "reduction of negative affect" [RA]; von Georgi, Grant, von Georgi, & Gebhardt, 2006).

Though Discharge specifically has been thought not to tend towards mood repair and thus presented as analogous to rumination as maladaptive regulation behavior (Carlson, Saarikallio, Toiviainen, Bogert, Kliuchko & Brattico, 2015), it has nevertheless been found by a number of studies to be a successful method of using music to cope with negative mood states or self-destructive impulses (Baker & Brown, 2014; Lacourse, 2008; DeNora, 2004, 56; Stegemann, Brüggemann-Etchart, Badorrek-Hinkelmann, & Romer, 2010), especially in subjects with disorders of adult personality and behavior (Gebhardt & Von Georgi, 2007, Gebhardt, Kunkel, & von Georgi, 2014c). Through the review and analysis of existing literature, qualitative research, and in-depth case studies, this thesis most importantly illuminates the many ways musically-afforded strategies of meeting, accepting, and transforming the pain of trauma and hardship (as opposed to habitually distracting or diverting) is vital to the forging of hope, resilience, and the ultimate strengthening of the self.

Heavy Music

Historically, public sentiment often suggested that "extreme" or "heavy" music genres like metal, alternative, and progressive rock influence young listeners towards violence and aggression. Prior to academic inquiry, this contagious designation in-

trigued me as I remained unconvinced that any genre, style or way a song *sounded*

could be wholly responsible for holding our innocent youth in its very grips.

Driven by my long-held interest of studies in music psychology, upon entering

graduate school I began to wonder more deeply about this "dangerous" or "invasive"

power of music: if so many people had somehow found themselves successfully con-

vinced that heavy music was harmful, *what* exactly was harming them? More interest-

ingly, could the opposite then also be true?

After several inquiries, conversations, presentations and subsequent revisions

surrounding what precisely comprises "heavy music," I remain convinced that the typ-

ical treatment of the term "heavy music" in both musicological and sociological re-

search ultimately fails to encompass the deeper issue. Though my earlier research

(here outlined in chapter one) primarily deals with fans, bands, and studies pertaining

to distinctly "heavy" genres often coinciding with metal, field work continues to show

that both the designation and affective effects of what constitutes "heavy music" vary

drastically between listeners, far and beyond the realms of heavy (or any other type of)

metal.

What began as an inquiry to find if this "problem" music could be used for

more than just harm (indeed, for good) slowly morphed into a far deeper understand-

ing of the obstacle at hand: the ultimate realization that it's not just the "heavy" in mu-

sic, it's the *intensity* - what I have come to understand and thus define as the immer-

sive, overwhelming, and even *overpowering* state that often comes when high arousal

is met with the either the conscious or unconscious decisive vulnerability of allowing oneself to be moved. As reports of heavy music considered as everything from Beethoven, Mahler, Liszt and Rachmaninov to Radiohead, Joni Mitchell, Jack White and MUSE continued to pour in, I began to realize this music might hold far more potential than the solidarity, culture, and community that stereotypically heavy and/or metal genres notoriously provide its listeners. In the light of this wider inclusion, my understanding of the term "heavy" includes psychological, material, affective, and social connotations.

To summon an example of this hermeneutic versatility: While three specific mentions of musical artist Sufjan Stevens initially conjured the sounds of the densely stacked electronic layers comprising the end of "I Want to Be Well" from *Age of Adz* (2010), the 'heaviness' to which these subjects referred was in actuality less heavy in the loud or driving sense than psychological and emotional. They were referring to the quiet yet highly affective acoustic pieces such as those found in *Carrie & Lowell* (2015), an album largely inspired by the passing of his mother.

Joshua M. Rice, Assistant Professor of History at Corban University, references Stevens' "John Wayne Gacy, Jr.," *(Illinois,* 2005), a mostly minor, almost hushed ballad of piano and guitar. Through its eventual crescendo and return to *piano*, the song portrays the devastating, biographical account of the troubled individual responsible for the murder of at least thirty-three young boys and men**.** The vulnerably introspective ending perhaps represents Stevens' perception of humanity's fallen na-

ture, relating his own to that of the killer's: "And in my best behavior, I am really just like him. Look underneath the floorboards for the secrets I have hid…"

Rice observes:

> In an age where solipsism and self-declaration are not rebellion but the norm, Sufjan's confession is one of the most naked and transgressive tracks of the 2000s. [Referencing other heavy musics outside metal genres] Most songs of this power directly implicate the listener: [Billy Holiday's] "Strange Fruit," their inaction; [Radiohead's] "Hail to the Thief," their anger; and Pulp's lyric, "Wipe your feet on my dreams," their sympathy. Sufjan indicts only himself, but his judgment is so exacting, just, and familiar that the listener suddenly finds themselves joining Sufjan in the cell of their own accord. (Josh Rice, Personal correspondence, April 2016).

To Rice, the designation of "heavy" might be thought of in a comparative context, signifying more than measurements of velocity, distortion, and volume:

> Obviously Sufjan is not as "heavy" as metal, but some of his stuff is crushing. The heaviness of Sufjan needs to be measured against his genre and the listener expectations: when listening to a folk album with an explicitly regional focus, is the audience at all prepared for the black hole of 'John Wayne Gacy, Jr.'? Doubtful—that's why it swallows you whole. (Josh Rice, Personal correspondence, May 2016).

In my field work and case studies, the notion of "heavy" appears to imply everything from denoting a reportedly "physical, surprising or crushing" *weight,* to a means of structuring experience, to the operationalizing of emotive and affective concepts, all of which seem to inexplicably arrive each time at *intensity.* No longer constrained to a specific genre, I employ this new understanding of heavy music to encompass both psychologically and sonically-evocative elements, allowing this project

to speculate just what it is about heavy music that has been deemed as everything from

dangerous, to invasive, to life-saving.

Music and Affect

In the endeavor to perturb the basic model of stimulus and response, the re-

sponsibility of the individual cannot be emphasized enough. Viewing this process

through a musical lens offers an interesting depiction of phenotypic factors: Though

the relationship between music and emotion is complex to say the least, both music's

affects and effects stem largely from the ways listeners hear, interpret, associate past

exposure and novelty, act, and *react* in relation to it. The role of the conscientious

agent, individual will, and collective social dynamic are critical to the understanding

of music and affect. As we will see throughout this research, it is the ways in which we

appropriate such stimuli that designate us the final agents of our personality, subjec-

tivity, and self.

To clarify the use of terms: When we speak of affect, the term's application and

use often becomes convoluted, passing through a long line of psychological, neurolog-

ical, and critical theory. In this project, the term "affect" is drawn broadly from

Shouse, Spinoza, and Malabou. In *Feeling, Emotion, Affect* (2005) Shouse states that

although feeling and affect are often used interchangeably, it is critical not to confuse

affects with feelings and emotions. He calls attention to the introduction of Deleuze

and Guittari's *A Thousand Plateaus,* where Brian Massumi makes clear that affect is

not a personal feeling. Shouse clarifies, "Feelings are personal and biographical, emotions are social, and affects are prepersonal." By prepersonal, Shouse points to the type of "*non-conscious experience of intensity,* and a moment of unformed and unstructured potential" (Shouse, 2005), thus referring to the kind of sensation experienced before it is assigned either a negative or positive valence. His use of "potential" here is key, and will be addressed at length in chapter three.

Malabou provides a similar reading in *How is Subjectivity Undergoing Construction Today? Philosophy, Auto-Hetero-Affection, and Neurobiological Emotion* (2009):

> First, *affects.* This generic term includes emotions, feelings, and passions and characterizes a *modification*. To be affected is to be modified or altered by somebody or something… 'Affect' can then be used as a generic term that not only comprises Spinoza's definition but also characterizes every kind of *modification or difference that generates the feeling of existence.* (112).

This reading of affect is of course somewhat more broadly open-ended than what Shouse provides ("Feelings are personal and biographical, emotions are social, and affects are prepersonal"). When I speak of *affect* and/or an *affective modification*, I find most scholarship's treatment of affect may ultimately (if not immediately) be reconciled with "that which *modifies* something." As a result, this understanding is used for the entirety of this thesis.

Given affect's sometimes ambiguous treatment, further confusion often stems from the clinical designation of labels such as "mood (affective) disorder." As we ob-

serve throughout this work and in Malabou's designation of the *new wounded*, due to affect's significant role in the forming of identity and *the self*, far more psychological conditions apply to the inability or disability to properly regulate affect than those strictly found on the "mood (affective)" axis. The common interchangeability of the terms "affect regulation" and "emotion regulation" make mobilizing discourse no simpler. This thesis will understand *affect* as pre-conscious and pre-evaluative, *feeling* as personal and biographical, *emotion* as personal and based in social context, and *effect* as personal response. These distinctions enable the critical discussion of affect surrounding pathology, behavior, and treatment.

In chapter one, I approach the psychology of heavy music: how some musics come to be known as harmful, and how this supposition simultaneously suggests that music can heal. Drawing from both prior works and personal correspondence with heavy music artists in the field, I present a review of existing literature on the effects of heavy music on depression, self-harming behaviors, and suicidal ideation. I further address how heavy music may be seen as not simply genre-specific (such as 'heavy metal,' for example) but as a more largely encompassing term characteristic of intensity, immersion, and highly emotive affection. Chapter one concludes with an introduction to the three listening strategies used for the modification of negative emotions outlined in the MMR: Diversion, Solace, and Discharge.

The second chapter is divided into two parts and encompasses my practical investigation: research via field work, qualitative analysis and case studies. The first

half of the chapter examines the ways in which distinct listening practices are used in typical and clinical populations, thus posing the question of whether it is the music, or the way the people use the music that results in tangible change. The second half of the chapter includes three in-depth case studies and widely considers how these strategies are used in practice as well as how vastly they can differ in application.

In chapter three, I employ Catherine Malabou's notions of neurological plasticity, trauma, affect, and the new wounded to reflect broadly on the nature of music's impact on identity, subjectivity, and the self. I continue to focus on how various listening practices are implemented to forge ontological security, existential responsibility, and a stronger sense of self. By ontological security, I employ the understanding set forth in R.D. Laing's *Divided Self* (1960).

> The individual, then, may experience his own being as real, alive, whole; as differentiated from the rest of the world in ordinary circumstances so clearly that his identity and autonomy are never in question; as a continuum in time; as having an inner consistency, substantiality, genuineness, and worth; as spatially coextensive with the body; and, usually, as having begun in or around birth and liable to extinction with death. He thus has a firm core of ontological security (Laing, 1960, 42).

Laing contrasts the experience of the "ontologically secure" person with one who "cannot take the realness, aliveness, autonomy and identity of himself and others for granted" and consequently becomes absorbed in contriving ways of "trying to be real, of keeping himself or others alive, of preserving his identity, in efforts, as he will often put it, to prevent himself losing his self" (42-43).

To continue anticipating how musical applications may be particularly relevant to both traumatized and clinical populations, I continue to explore varying pathologies reflected in Malabou's appointment of the *new wounded,* designating those subjected to trauma, organic brain damage or other mental and physical illnesses. Not wholly unlike the description of Laing's hyper-affected subject [2], Malabou explains that regardless of their disparate clinical profiles, the new wounded experience "emotional disturbances that essentially consist in the malfunctioning of affective signals necessary to make decisions" (Malabou, 2012, 9-10).

For those new wounded who suffer from mental illness, painful and abusive life situations, or major trauma, the circumstances engendered by these events often represent a loss of control for the subject. This loss of control is often connected to the inability to efficiently regulate affect. Considering this affective deficit or dysregulation, I aim to perturb the means by which the processual journey from affect to the self transpires, revealing the subject's potential to provide feedback with the capacity to alter personality, behavior, emotion, and the self. I thus imagine the possibility of forgoing a fixed model of stimulus/response for one that is more nuanced and complex, illuminating the many ways musical intensity informs this affective process along the way. Re-affording the social, political, and affective agent its agency, one may finally

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[2] "External events no longer affect him in the same way as they do others: it is not that they affect him less; on the contrary, frequently they affect him more" (Laing, 1960, 43).

echo the sentiment of Malabou's *What Should We Do With Our Brain*: What might be

gained by claiming our plasticity?

I. HEAVY MUSIC: SHEDDING LIGHT ON MUSICAL INTENSITY

Abstract

"Extreme" or "heavy" music genres, such as various forms of metal, alternative, and progressive rock reportedly hold a positive correlation with violence and aggression in youths (Binder, 1993; Litman & Farberow, 1994, Richardson & Scott, 2002). However, recent findings not only challenge this notion, but point to the reverse: Previous studies associate listening to heavy music with reduced suicide risk, especially among teenage girls when utilized for vicarious release (Lacourse, Claes, & Villeneuve, 2001). For young persons suffering from anger, depression, or suicidal ideation, research has shown that heavily emotive music can be a safe way for listeners to process negative emotions, regulate mood, and experience catharsis (Arnett, 1995; North & Hargreaves, 2006; Huron, 2011; Moore, 2013; Shafer, Smukalla & Oelker, 2013; Baker & Brown, 2014). This chapter argues that heavy music offers a self-regulation strategy to reduce destructive and auto-destructive behavior; a strategy already intuitively used by many youths. We identify heavy music by the presence of capacious, distorted riffs; loud, pervasive percussion; or an overall feeling of 'raw power,' emotion, and affective intensity stemming from the instrumental or vocal parts. Finally, this chapter examines how heavy music might be used therapeutically to bring meaning, positive affect, and resilience into the lives of youths.

Music And Power: Heavy Music On Trial

In the summer of 1990, British heavy metal band Judas Priest was sued in a civil action over a suicide pact made by two young men in Nevada. The lawsuit by their families claimed that the 1978 Judas Priest album Stained Class contained hidden and subliminal messages, including the words "Do it" in the song "Better By You, Better Than Me" (a cover version of the Spooky Tooth original), and various backward subliminal messages. On December 23,1985, twenty-year-old James Vance and eighteen-year-old Raymond Belknap, after hours of drinking beer, smoking marijuana, and listening to Judas Priest, went to a playground at a church in Sparks, Nevada with a 12-gauge shotgun to end their lives. Belknap was the first to place the shotgun under his chin, dying instantly after pulling the trigger. Vance then shot himself but survived, suffering severe facial injuries. Following numerous complications, Vance passed away in 1988, three years after the suicide pact. The case was dismissed by the judge for insufficient evidence of Judas Priest's placement of subliminal messages on the record, and the judge's ruling stated that, "the scientific research presented does not establish that subliminal stimuli, even if perceived, may precipitate conduct of this magnitude. There exist other factors which explain the conduct of the deceased independent of the subliminal stimuli" (Van Taylor, 1982).

One of the witnesses for the defense, Dr. Timothy E. Moore, wrote an article for Skeptical Inquirer chronicling the trial. The trial was covered in the 1991 docu-

mentary Dream Deceivers: The Story Behind James Vance vs. Judas Priest. Moore

states the following:

> Since the recipient of a subliminal message is unaware of it, the message can't contribute to dialogue, the pursuit of truth, the marketplace of ideas, or personal autonomy. There is no information exchange. No arguments are possible if recipients are unaware of the message's presence.

According to the clinical psychologist who testified for the defense, both boys

had serious, long-term issues with interpersonal adjustment. Both boys demonstrated

violent and abusive behavior in their relationships; behaviors consistent with social

alienation, strong emotional disturbance, depression, and impulsivity. Vance proved

markedly aggressive in a school settings. Both young men had a history of drug abuse,

petty crime, educational failure, and unemployment with violent and severe family

backgrounds.

> What issues did the trial and the subsequent mass-media coverage emphasize? Certainly not the need for drug treatment centers; there was no evaluation of the pros and cons of America's juvenile justice system, no investigation of the schools, no inquiry into how to prevent family violence, no discussion of the effects of unemployment on a family. Instead, our attention was mesmerized by an attempt to count the number of subliminal demons that can dance on the end of a record needle (Pratkanis,1992).

Were the boys' parents founded in their accusations of Judas Priest? Can sub-

liminal messages in music hold the power to influence intention? As perception is an

active, constructive process, unfortunately and consequently, people often see or hear

what they are predisposed to perceive (Vokey and Read, 1985).

When examining the 'harmful music' paradigm, it is first and foremost essential to recognize that the isolated act of listening (or even deeply appreciating) the music of these artists does not implicate an objective, causal link to antisocial behavior. Many people by default cling to the blanket attribution of cause and effect in actions sometimes associated with heavy or "problem" music. However, this rather naive insistence poses a problem psychologically speaking. What of the youth already in a state of disadvantage or social isolation that would simply seek to find music that most 'speaks' to their unique circumstance? A 2014 article by Baker and Brown addressed the need to explore the psychosocial benefits for individuals who both listen to heavy metal music and socialize in associated groups:

> A change needs to occur in the foci of research into self-harm and music preferences in young people—one which does not select only those youth who have come to the attention of clinicians but also examines youth subcultures and their individual vulnerabilities and strengths from a more diverse perspective. When we can listen to and with heavy metal music fans through ethnographic narrative research, we may begin to find solutions to this fiercely contested debate. This solution could lead to more creative ways forward with young people who self-harm whatever their musical preference… (Baker & Brown, 2014, italics mine).

As marginalized young people residing in conditions of adversity are often identified within "at-risk" discourses, these frameworks tend to highlight pathologies and antisocial behaviors rather than cultural competency and understanding. Often, troubled young people are drawn to the extreme or intense nature of such musics. Rich in alternative and welcoming ideals, in a society that seemingly regards young people

with contempt, heavy music genres can provide a feeling of community, sensation of a *safe haven*, and a mode of reconciling their often turbulent sense of social and cultural identity. By focusing on music as an emotional or behavioral *captor*, opportunities are being missed to better understand the positive, emotive role extreme music might play in alerting practitioners to otherwise undiscovered underlying conditions (Wilson & Arvanitakis, 2013).

Teen Idols, Worshipping, And Modeling

Unlike the archetype of the troubled teen who indeed benefits from the solace of their MP3 player or social music setting, sometimes the act of listening to certain bands or musicians crosses a certain boundary, resulting in idolization. When a listener crosses the threshold of common admiration and appreciation of an entity, acts of worshipping and modeling can also occur. Idolization presents itself in various forms, with gender, age, culture and environmental conditions playing a role in intensity and type of expression. *Worshipping* refers to an uncommonly intense admiration and extreme idolization of an idea or person, expressed as actively collecting information and artifacts related to the idol or trying to meet them personally (Bar-Tal, Raviv, and Ben-Horin, 1996). *Modeling* refers to the desire to be like an idol, which may involve imitating the idolized figures by copying their dress, hairstyle, speech, activities, or any other social behavioral patterns (Bar-Tal, Raviv, and Ben-Horin,1996). These types of behaviors (if carried to an extreme) are not only symptomatic of difficulty in forming

self-identity and an over-reliance of group peers, but may also be associated with substance abuse, which has been linked to elevated suicidal thinking and behavior (Kandel *et al.*, 1991; Schaffer *et al.*, 1988). Though worshipping musical idols is not implicitly dangerous, when listeners follow people and/or content referencing self-destructive behavior to an extreme, the lines of healthy entertainment and enjoyment can become blurred.

One study carried out in Israel focused on the role of music worshipping and youth culture identification, shedding light on the teen phenomenon of idolization shown especially in musician worshipping and modeling (Raviv et al., 1996). Having established that music and its surrounding media can play a substantial role in the seeking of stability amongst otherwise turbulent conditions, music can often influence remarkable sway in the interpretation of everything from sexual relations, to issues with self-esteem, to ideas of autonomy. The musical content (lyrics, rhythms, and harmonies) supply stimuli that attract youth for use in learning gender roles, the making and forming of value judgements, and establishing their independence (Cooper, 1991; Denisoff & John, 1983; Frith, 1983; Sebald, 1984).

Baker and Brown (2014) again offer a different perspective, noting that there is no compelling or detailed evidence that lyrical content compel young adults to engage in self-destructive or suicidal behavior:

> It could equally be argued that these songs provide a protective element, allowing fans not only catharsis through music but also effecting a process of familiarization whereby they may believe that others—not

only others but others whom they deeply admire and use as role mod-
els—have potentially felt low, negative, desperate but survived and, not
only survived, but used their struggle in a creative and successful man-
ner.

Lacourse, Claes, & Villeneuve (2001) describe various habits of specifically

heavy music listening by highlighting three types:

1. Those who prefer heavy music (passive listening)

2. Those who use heavy music for *vicarious release* (vicarious listening)

3. Those who 'worship' heavy music

In pinpointing these three forms, the affect achieved may be observed from one

end of the spectrum (passive, casual or "background" listening) to the other (where

worshiping, modeling, and idolization come into play).

Aside from the potential negative influences on listeners, is it possible that

heavy music may have some decidedly positive impacts as well? Some "extreme" or

"heavy" music genres, such as various forms of metal, alternative, and progressive

rock reportedly hold a positive correlation with violence and aggression in youths

(Binder, 1993; Litman & Farberow, 1994, Richardson & Scott, 2002). However, recent

findings not only challenge this notion, but point to the reverse: Previous studies as-

sociate listening to heavy music with reduced suicide risk, especially among teenage

girls when utilized for *vicarious release* (where anger, sadness or other negative emo-

tions are 'released' through music) (Lacourse, *et al.*, 2001). For young persons suffer-

ing from anger, depression, or suicidal ideation, research has shown that heavily emo-

tive music can be a safe way for listeners to process negative emotions, regulate mood, and experience catharsis (Arnett, 1995; North & Hargreaves, 2006; Huron, 2011; Moore, 2013; Shafer, Smukalla & Oelker, 2013; Baker & Brown, 2014, von Georgi, Göbel, & Gebhardt, 2009). This chapter argues that heavy, intense, and highly emotive music offers a self-regulation strategy to reduce destructive and auto-destructive behavior; a strategy already intuitively used by many youths. Additionally, this research examines how we might utilize heavy music therapeutically to bring meaning, positive affect, and resilience into the lives of youths.

Psychological Backdrop For Music And Affect

Research in music psychology has shown music capable of providing listeners with relief from stress, a heightened sense of self, peace, meaning, solidarity, and community (Christenfeld, 2004; Huron, 2011; Moore, 2013; Shafer, Smukalla & Oelker, 2013). In order to proceed into the different types of listening and affect in heavy music, let us first examine music's modern utilization across the board.

In 2014, Taruffi and Koelsch conducted a study[3] surveying peoples' varying use of happy and sad music. Categories used in regard to 'happy' music were entertainment, background, motor, arousal, mood maintenance, celebration, mood regulation, motivation, distraction, memory, and musical features; the last of which focuses

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[3] Taruffi L, Koelsch S (2014) The Paradox of Music-Evoked Sadness: An Online Survey. PLoS ONE 9(10): e110490. doi: 10.1371/journal.pone.0110490

strictly on the absolute, aesthetic value of the music (tonality, timbre, rhythm, contour).

The graphs below illustrate the assorted situations and functions for which people purposefully employ happy music (figure 1), followed by their employment of what they deemed characteristically 'sad' music (figure 2). One problem that immediately arises in studies such as these is how the difference between 'happy' and 'sad' music is discerned. What many might find 'sad' due to a finely placed appoggiatura in a minor key, others might find up-lifting. While many might consider major keys and tonalities inertly happy or joyful, an intentionally placed major triad amongst a mostly-dissonant context could convey a heightened sense of immense pain or loss. Affective differences springing from disposition, personality, gender, sex, and cultural stance (as well as a host of others) all contribute to one's highly individual experience with and phenomenological response to music. This characteristic issue subjectivity has plagued the field for quite some time, and the valuable criticism of blanket terms which fail to take cultural, social or ethnomusicological factors into account is slowly gaining traction. Thus, the focal point of this research serves to examine affect: the resulting outcome, as opposed to strictly prescriptive categories, of music.

Situation Category	Situation Description	Function
Emotional distress	Argument, failure, frustration, death, love-sickness or break up, need to cry, and stress	Emotional: mood enhancement (e.g., venting and cognitive reappraisal), consolation, reflection of the current mood
Social	Homesickness, feeling lonely, missing someone, need to be accepted and understood	Social and emotional: consolation due to mood-sharing and contact
Memory	Retrieving memories of valued past events	Sad music as a memory trigger
Relaxation and arousal	Relaxing and getting new energy, quieting down before going to bed	Emotional: mood and arousal regulation
Nature	Travelling, being in contact with nature, during specific times of the day (evening) or of the year (winter)	Sad music as a reflection of the environment
Musical features	Engaging with sad music not because of its emotional content but rather for its musical features (e.g., "sad songs are beautiful")	Aesthetic
Introspection	Contemplating, organizing, and reappraising personal experiences	Cognitive: improve personal introspection
Background	While doing a parallel activity such as driving, reading, working	Sad music provides a pleasant background
Fantasy	Creative thinking, looking for inspiration	Cognitive: engage creative thinking
Avoiding sad music	Preference for other types of music	-
Intense emotion	Seeking a touching emotional experience	Emotional: experience intense emotions
Positive mood	Listening to sad music only when being in a positive mood or emotional state	Emotional: mood control
Cognitive	Improving rational thinking, obtaining a better focus	Cognitive: engage rational thinking

Note. Situational categories are listed in descending order according to the number of nominations.
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Figure 1

Situation Category	Situation Description	Function
Entertainment	Gathering with friends, social occasions	Social and emotional: use of happy music to entertain, to create a nice atmosphere, and to experience enjoyment
Background	Travelling or while doing a parallel activity such as housekeeping, working, driving	Happy music provides a pleasant background
Motor	Running, dancing, working out	Happy music helps to raise energy level and motivation
Arousal	Energizing in the morning, releasing energy, relaxing	Emotional: arousal and mood regulation
Mood maintenance	Listening to happy music when being in a positive mood or emotional state	Emotional: to maintain a positive mood and to experience enjoyment and pleasure
Celebration	To celebrate (e.g., birthday, graduation, wedding, new year)	Social and emotional: use of happy music to create a nice atmosphere, and to experience enjoyment and pleasure
Mood regulation	Listening to happy music when being in a negative mood or emotional state	Emotional: mood enhancement
After work	After a busy day at work	Happy music is used to relax, celebrate, entertain
Motivation	When copying with a challenging activity	Happy music is used to improve achievement and motivation
Distraction	Listening to happy music to forget about worries and unwanted thoughts	Emotional: diversion or distraction
Avoiding happy music	Preference for other types of music	-
Memory	Retrieving memories of valued past events	Happy music as a memory trigger
Musical features	Engaging with happy music not because of its emotional content but rather for the musical features of the piece	Aesthetic

Note. Situational categories are listed in descending order according to the number of nominations.
doi:10.1371/journal.pone.0110490.t006

Figure 2

Music psychologists make a distinction between emotion perception and emotion induction, the latter of which refers to listeners' affective responses to music (Marin & Bhattacharya, 2009). For the sake of this research, instead of reverting solely on "happy" or "sad" music paradigms, I focus on concepts like emotion induction. In 1990, philosopher and musicologist Peter Kivy employed the term 'cognitivist' to illustrate a position that states music simply expresses emotions without inducing them; that affective responses arise from listeners' appraisals of the music. Conversely, an 'emotivist' holds that music actually induces emotion in the listener. Contrary to the seeming necessity of emotion perception's 'prescriptive' categorization, sonically-aided experiences of emotion-regulation have been shown to work positively toward mood enhancement in the vein of cognitive reappraisal and venting, augment personal introspection, function as valence and arousal regulator, engage creative thinking, and foster rational thinking when functioning under the categorically cognitive domain (Taruffi & Koelsch, 2014).

When speaking of heavy, intense, and highly emotive music, much of the content might formally be placed in the 'sad' music category because of assumptions made based on characteristic tonalities. This does not mean heavy music necessarily induces sadness or negative valence, but further stands to reveal the genuine challenge (or mistake) of ascribing basic emotions rather than genres or sonic elements. Despite this challenge, it is nevertheless worthwhile to note the other end of the aforementioned study's spectrum - the often-called upon functions of "sad" (or *heavy*) music.

Where some papers pinpoint heavy music as synonymous with 'problem music' (see, e.g., Litman & Farberow, 1994), I argue that this objectification falls vastly short of multiple psychological, cultural, and social considerations. By working to adopt a subjective, open-ended framework for discussing heavy music, researchers allow sonic or contextual elements such as lyrical content, timbre, movement and tonality to set the definition, as opposed to arbitrarily-endowed constructs provided by the media or ill-informed populations. Consequently, heavy music can take many forms. Here, I distinguish this type of music as characterized by capacious, distorted riffs; loud, pervasive percussion; or an overall feeling of 'raw power,' emotion, and affective intensity stemming from the instrumental and/or vocal parts. For this reason, a multitude of bands, market distinctions, and sub-genres might easily fall within the category of 'heavy' — be they inclusive of 'heavy metal' or not.

Research shows heavy music can influence mood in the following ways:

1. The external musical stimulation distracts listeners from uncomfortable, destructive moods and feelings (Van den Tol & Edwards, 2013);

2. Listeners seek validation in the music for what they think and feel about themselves, others, and society, and are thus assured that they are not emotionally alone (Gantz, Gartenberg et al. 1978);

3. The music provides listeners with a cathartic or calming effect that can soften or relieve unhappiness, anger, and anxiety (Arnett, 1991, 1996).

In 2009, von Georgi et al. found a relationship between coping and emotion modulation by means of music in connection with various forms of stress management for juveniles and young adults in particular (von Georgi, Göbel, & Gebhardt, 2009, 314). Instead of seeking to criticize and censure particular types of music enjoyed by young people, it should be accepted that many, including those in marginalized or at-risk environments, are drawn to heavy music. Future research might offer additional physiological evidence of heavy music's capability in regulating aggressive or destructive feelings and, establishing deep implications for potential strategies of emotion-regulation via music. Projects such as these could be a piece of the larger puzzle regarding the relationship between music and emotion, yielding broad impact to researchers wishing to pose the same question through lenses of a different genre.

Australian band Ne Obliviscaris is a noteworthy example of a metal band actively juxtaposing both heavy and light elements into their timbre and emotion. Fusing native sounds of extreme, progressive, death, black, and melodic metal, as well as jazz, flamenco, and classical violin, the intensity of enthusiasm from both the band and young attendees of their live shows form a parallel with the intensity of the music. While the music's heavy, often minor tonalities might allude to sadness, pain and suffering, the progression and lyrics often speak to a hopeful tone.

In a personal interview, Tim Charles speaks of the heaviness and intensity of music he finds cathartic.

For me, music was always like a constant emotional barometer in my life that I could use to enhance or minimize whatever I was feeling. I remember the first band I played in, in high school…the lyrics to our first song were this typical angsty teenager thing, probably more like a Slipknot song, of you know, 'I don't care what you think about me' or something like that, and trying to use that as a "Stand up for yourself regardless of what other people might think of you." To be able to do that in your own music and your own art, and then to be able to pick that up from other people as well… there's just so much great music in every sort of genre.

But everyone has their predispositions to different types of music and some of that is based on their personality type so they might connect more so with certain genres. So for example, I connect more than anything else with intense music, but that can come out in many different ways... it could be Underoath, it could be a Sigur Rós song with an enormous buildup, it could be something like what I write with Ne Obliviscaris, or it could be John Coltrane and his Love Supreme album (which is probably my favorite album of all time)… But all of that stuff for me is *intense*. Now there's some people who don't want any part of that because it's intense and they want something that is more relaxed, or that can complement the way they want to feel, and chill out or whatever. Or other people that might grow up and associate music with dancing, and if you can't dance to it, they don't like it. I think people kind of develop biases to these things either based on the function of music in their lives, or based on the personality types (Tim Charles, Personal Interview, 2016).

The intensity to which Charles refers both complicates and expands the musically prescriptive archetype, shedding light on the continuing challenge to classify certain types of music by their affective impact on listeners. This reinforces the notion of why it is critical to treat individuals on a case by case basis in any type of diagnostic or therapeutic setting.

Charles describes the "emotional intensity" and positive affect he derives from emo/post-hardcore band Underoath's *Define The Great Line* (2006):

If I was frustrated or upset and I wanted to find some music that enhanced that, that's an example of an album I would listen to, because I connect to that. It's not the most extreme music, but emotionally, I find it really intense…the way the music is written and the vocals… all that sort of stuff. I really love that.

…Sometimes, to be able to let something go, to be able to 'sit within it' is actually more productive, I find. So you know, if you're frustrated or upset, to be able to have something that actually enhances the emotion in a positive way, instead of someone telling you, "You shouldn't feel like that," you can sit within it and just feel it it to its fullest extent, and use that as a cathartic thing to then be able to move on (Tim Charles, Personal Interview, 2016).

In an email correspondence, progressive metal rocker Benjamin Weinman talked about how the process of listening and then creating heavy music helped in overcoming adversity:

When I was growing up I had a lot of difficulties in school. I had certain learning disabilities that made it difficult for me to process information in the way that it was presented by a typical school curriculum. My experiences left me feeling extremely isolated and insecure. When I started playing music, I realized that intelligence had nothing to do with ones ability to excel in the classroom environment. It gave me passion. It gave me confidence. I was able to make friends and also figure out new ways of learning. Creating give me purpose every day and will for the rest of my life (Benjamin Weinman, personal communication, April 2014).

Weinman has been recognized multiple times for his unique talent as a guitarist, most recently in SPIN magazine's 100 Greatest Guitarists of All Time[4]. He is widely known as founder and guitarist of The Dillinger Escape Plan, a mathcore band notorious for its highly complex meters, virtuosic musicianship, and creative live per-

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[4] http://www.spin.com/2012/05/spins-100-greatest-guitarists-all-time/?page=3

formances. Weinman describes his attraction to and investment from heavy music as the following:

> Throughout the years there's been a lot of attention towards the negativity of heavy music as being a bad influence of people. For me, it's been a good influence. It's always been a cathartic way for me to express myself and actually feel better through a kind of productive, non-damaging art form. It's really been great anger management for me to actually be able to express myself through music and listen to aggressive music and almost get inspired by it as opposed to let it get me down. It's done the opposite, which is interesting (Benjamin Weinman, April 2014).

What Weinman describes here closely resembles *vicarious listening,* in which the listener is able to experience a cathartic effect that allows for the empathetic expression of oneself, without having to physically manifest said emotions and feelings in a 'real-life' setting. Although few studies have explored the role of heavy music as a means of vicarious release, some studies suggest that vicarious listening to heavy music contributes to reducing suicidal thoughts (Weinstein, 1991), stress (Arnett, 1991) and negative emotions (Arnett, 1995). A 2010 study seeking to chronicle music's function in the context of adolescent self-harm found music successful in self-regulating and inhibiting auto-aggressive tendencies (Stegemann, Brüggemann-Etchart, Badorrek-Hinkelmann & Romer, 2010). The study additionally showed that for patients with borderline personality disorder, music was often used as a substitute for non-suicidal self-injury (Gebhardt, Kunkel, & von Georgi, 2014).

Many types of holistic practice tend to default to the musical "one size fits all" approach, often falling drastically short of its therapeutic goals. What practitioners and

therapists commonly fail to take into account is music's highly referential nature. It is therefore tantamount for treatment and intervention methods to be based upon precisely what one means to achieve, be it cognitive reappraisal or distraction, mood-enhancement, intervention and/or emotion-regulation, redirection of flight-or-flight behaviors (Berger, 2012), social cohesion, etc.

A 2015 study by the University of Jyväskylä used psychological testing and functional magnetic resonance imaging (fMRI) to explore music listening strategies in relation to mental health and self-regulation (Carlson, Saarikallio, Toiviainen, Bogert, Kliuchko & Brattico, 2015). The study points out that though music therapy is used in the treatment of mental health disorders in clinical settings, there is a scarcity of vigorous empirical studies to explain the mechanisms by which desired effects take place (Carlson et al. 2015; Maratos, Gold, Wang, & Crawford, 2008). The study's primary neurological interest was medial prefrontal cortex (mPFC) activity, given its association with subconscious emotion regulation in the neurosciences.

To analyze how various modes of listening differ in affect regulation goals, the study highlights self-regulation strategies derived from the Music in Mood Regulation scale (hereafter MMR), a self-report measurement tool characterizing such strategies by typical mood prior to music use, type of music activity, social aspects, and change in mood following music use (Saarikallio, 2008). Of the defined Entertainment, Revival, Strong Sensation, Mental Work, Diversion, Discharge, and Solace, the latter

three are strategies defined by the MMR related to using music to cope with negative

mood states (Carlson et al. 2015). The study defines the three as follows:

1. Diversion: a strategy used by listeners wanting to be distracted from nega-

   tive thoughts, with an outcome of successfully forgetting the current mood

   (Saarikallio, 2007, 96).

2. Solace: defined by a prior negative mood and listening to music that reflects

   the negative mood, but has an outcome of the listener feeling comfort

3. Discharge: similar to Solace in that it is defined by a negative mood such as

   anger or sadness prior to music use leading the individual to listen to ag-

   gressive or sad music, the outcome of which is that the negative feelings has

   been expressed; it is most similar to the IAAM scale's Reduction of Nega-

   tive Activation (RA), defined as dealing with reducing negative emotional

   strain (von Georgi et al. 2006).

The study found that of all the strategies, Discharge correlated with higher lev-

els of anxiety and neuroticism, especially among men. The data obtained through

fMRI additionally show decreased activation in the mPFC in these men high in Dis-

charge compared to those using less Discharge. As both the vmPFC (ventromedial pre-

frontal cortex) and vlPFC (ventrolateral prefrtonal cortex) have both been previously

associated with affect regulation, this finding indicates the possibility of the observed

activation correlating with maladaptive emotion musical affect regulation (Carlson et. al 2015).

Though the study's findings were consistent with what some might assume (that the practice of Discharge might be linked to unhealthy emotional habits such as compulsive rumination, "amplifying" a negative feeling, or "externalizing strategies" of redirecting negative feelings and behaviors outward into the environment), Carlson reminds in an interview with The Atlantic that these results are not without limitations:

> Interpreting these results is a little tricky, because while Discharge is the only music-listening strategy that doesn't aim to make mood more positive, it's also true that the expression of an emotion, even a negative one, is part of healthy emotional regulation. Carlson notes that it is difficult to draw the line between healthy versus unhealthy expression of negative emotions.
>
> Still, studies like this emphasize how particular our engagement with music can be. In the past, entire genres like punk or heavy metal were accused of being inherently damaging to adolescents' mental health. The reality is likely much more complicated. Some may seek out Metallica's rapid riffs and screeching guitars to gain solace; others may vent anger through Mozart (Davis, 2015).

Significant findings such as these may pale in comparison to the implicated lesson for future research: individual phenomenological responses to music are tremendously divergent, volatile, and plastic in their application. Though Diversion proves an enjoyable strategy to some, it may not always prove the most effective way to experience validation in one's thoughts, or struggle with intense negative affect and high arousal. While Solace may prove a highly effective means of providing a sense of solidarity, support, and affirmation during tumultuous times, a significant percentage

report that using Discharge or similar strategies such as RA, modulation of a strong

negative activation and emotional arousal is most effective in using music to cope with

negative mood states, especially in patients with personality disorders (Gebhardt &

Von Georgi, 2007). Though the strategy of Discharge may correlate with emotional

habits many assume to be negative, the practice of rumination used for the goal of

cognitive reappraisal provides a valuable tool in taking a moment to reevaluate the

negative affect or situation at hand. A recent study by Chin & Rickard shows that "in-

dividuals highly engaged with music for the purposes of cognitive and emotional regu-

lation are more likely to use cognitive re-appraisal as an emotion regulation strategy,"

in turn predicting positive mental health outcomes and further suggesting that purpose-

ful music use has the potential to lessen depressive, anxiety, and stress symptoms from

levels typically associated with negative trait affect (Chin & Rickard, 2014, 11). The

practice of "externalizing" to redirect negative feelings and behaviors outward into the

environment is a positive alternative to self-harm, especially when pursued in a

healthy way, such as creative endeavors or physical exercise. For young persons suf-

fering from depression, thoughts of self-harm, or suicidal ideation, heavily emotive

music can be a safe and appropriate way to process auto-destructive impulses by mak-

ing what is internal, external.

Working Towards Community

Over the past few years, one mainstream development that's taken place in the world of music and positive affect is the addition of several nonprofits working to combat stigma surrounding mental illness, and reduce depression and suicide in young people. Many nonprofit organizations such as The You Rock Foundation, Superbands, and To Write Love On Her Arms utilize music as a primary means for outreach and support, forming community through shared live music experience, creative music practice, and the sharing of personal stories from one music creator, performer or listener to another.

As growing research, advocacy, and awareness in mental health pave the way for more wide-spread support, more research is needed regarding the auditory, neurological, and psychological processes of utilizing heavy music for positive affect and resilience. Much remains to be studied about heavy music, as the issue seems not to be the music itself but rather our limited knowledge concerning its regulatory impact on its listeners and the appropriate ways to enhance this positive influence (Bodner and Bensimon, 2014).

II. MUSICAL INTENSITY IN AFFECT REGULATION: INTERVENING IN SELF-DESTRUCTIVE BEHAVIOR

Abstract

Prior research associates listening to heavy music with reduced suicide risk, especially among teenage girls when utilized for vicarious release. Nevertheless, few studies consider the active use of heavy music in self-regulation for those who suffer from thoughts of self-harm and/or mental illness. In order to to better understand the mechanisms by which engaging with heavy and intense music may circumvent self-harming behavior, a pilot study is presented of 283 subjects, *the majority of whom* report suffering from thoughts of self-harm or mental disorders. To examine the use of affect regulation via both generic (non-specified) and heavy, intense, and highly emotive music, we created the Music in Affect Regulation Questionnaire (MARQ), utilizing music in mood regulation (MMR) strategies from the work of Saarikallio. Our findings collectively show that heavy music listeners (and those who have thoughts of self-harm, in particular) interact with definitively heavy, intense, or highly emotive music differently than with generic music, especially in the use of modulating negative mood. These findings seem less related to genre-specific categories than certain musical commonalities collectively understood as intensity, and provide significant evidence for heavy music's ability to circumvent self-destructive impulses, especially when applied in tandem with specific listening strategies of affect-regulation. Additional evidence from prior case studies further suggests the value of deeper investiga-

tion of the conscientious use of heavy music as a potential intervention for those suf-

fering from affect dysregulation and self-harm.

Etiology Of Affect Dysregulation And Self-Harm

Many professionals across the field of psychology report a substantial clinical

population under the etiological umbrella of "affect dysregulation" as suffering from

disturbances of the self **(**Austin, 2001; Braaten & Rosén, 2000; Herman, & van der

Kolk, 2009; Kobak & Sceery, 1988; Kolk & Fisler, 1994; Klonsky, 2009; Klonsky &

Muehlenkamp, 2007; Laing, 1960; Markus & Wurf, 1987; Minde, 2006; Schore, 2003;

Schore, 2015; Taylor, Bagby, & Parker, 1999; Yen, Zlotnick, & Costello, 2002). Affec-

tive features symptomatic of this dysregulation include emotional or behavioral re-

sponses poorly modulated or inappropriate to the stimulus, and may be found in a

number of psychiatric disorders including attention deficit hyperactivity disorder,

bipolar disorder, borderline personality disorder, and post-traumatic stress disorder

(Pynoos, Steinberg, & Piacentini, 1999; Schore, 2003), as well as among those with

autism spectrum and sensory processing disorders (Pynoos, et al. 1999).

These subjects often exhibit maladaptive coping mechanisms from the effects

of a significant trauma or loss, some type of abuse, or complications in dealing with

various affective or sensory issues. Characteristic to prolonged emotional instability, a

portion of these individuals develop a "pathological personality" (such as those seen in

disorders of adult personality and behavior), described as enduring patterns of cogni-

tion, emotion, and behavior that negatively affect a person's adaptation to their environment, often leading to pervasive patterns of affective instability (DSM-5, 2013). In practice, these cycles of maladaptive behavior are intensified in response to negative life events or stress, and may contribute to a self-destructive behaviors and identity disturbance, manifest as a markedly and persistently unstable self-image and sense of self.

In discussions surrounding the instability of identity, affectivity, and the self, many indicators of Borderline Personality Disorder (BPD) provide an overarching view of affect pathology. The DSM criteria for BPD involve a pervasive pattern of instability in interpersonal relationships, self-image, and responsivity, chronic feelings of emptiness, severe dissociative symptoms, and a distorted or unstable sense of self. Diagnostic criteria also include marked impulsivity beginning in early adulthood and present in a variety of contexts, as well as recurrent suicidal or self-harming behavior. The National Institute of Mental Health reports that up to eighty percent of subjects with BPD engage in self-harm (NIMH, 2016).

Studies show that subjects with BPD and recurring self-harming behavior display reduced sensitivity to painful sensory stimuli (Schmahl et al., 2004), which is further reduced under distress (Bohus et al., 2000; Ludäscher et al., 2007). Niedtfeld et al. note that "although reduced pain sensitivity is part of aversive affective states, they can be terminated (e.g., in the case of self-injury) by strong above-threshold painful stimuli" (Niedtfeld, et al. 2010). While both negative and neutral visual arousal stimuli

repeatedly produce heightened activation of limbic regions including the amygdala, insula, and anterior cingulate cortex compared to healthy controls, pain in BPD has further been observed to lead to a *reduction* in neural activity in the amygdala and anterior cingulate cortex.

Not only did their 2010 study reconfirm these prior findings, it illuminated previous work on emotional hyperactivity in BPD, suggesting that "pain stimuli in BPD are processed differently depending on arousal status," which would support the hypothesis that limbic deactivation may be attributed to subjects' perception of relaxation (Niedtfeld, et al. 2010). These activation processes are congruent with theories of self-harm's "soothing" effect, which would further explain why such a tragically high percentage of subjects suffering from extreme emotion dysregulation resort to harming behavior as a form of relief.

As previously discussed, subjects with borderline personality disorder often experience highly intense emotions whilst simultaneously suffering from a critical deficiency in their ability to regulate emotion. Subjects report engaging in self-injurious behavior for a number of highly individual and complex reasons, yet largely reveal a theme of self-harm as a cathartic release, an "immediate relief" effect of emotional tension, and "coping mechanism" of seeking control over overwhelming negative activation and emotion (Baker & Brown, 2014). As demonstrated in Chapter one and elaborated by Baker & Brown, such "themes, effects and experiences are echoed in the accounts of heavy metal fans - not through self-harm, but through the music, the cul-

ture, and live music event" (Baker & Brown, 2014). Though this effect can be seen routinely in heavy metal fan accounts, it is vividly evident in accounts of those interacting with more general forms of heavy and intense music.

In 2007, Gebhardt and von Georgi observed that "apart from studies evaluating active or passive music therapy, almost no systematic scientific data on the functional-receptive use of music in everyday life of individuals suffering from mental disorders exist." Given the amount of light shed on neural and psychological motivation mechanisms of self-inflicted pain, it is no surprise researchers are beginning to pay more attention to concepts of self-regulation and music in those who suffer from self-harming and suicidal behavior.

Music And Emotion Regulation In Mental Illness

Over the past ten years, a group of researchers have made strides in the field of music and emotion regulation in the psychiatric population. In 2007, von Georgi et al. explained that current research regarding music's impact on psychiatric subjects could be divided into three categories: studies on active music therapy, receptive or passive music therapy and functional-receptive, everyday life use of music, as an interactional process.

Noting that up until this time existing questionnaires focused on mainly *passive reception behavior* (von Georgi et al. 2007, 2013), the Inventory for Measurement of Activation and Arousal Modulation (IAAM) was constructed to reflect the use of

music (UofM) in everyday life regarding "the existence of a learned behavior or (active) action strategy that is applied consciously by individuals who use music to influence existing everyday states (e.g., positive or negative emotions, affects, arousal, concentration, vigilance, or processes of social attachment)" (von Georgi, 2013; Gebhardt, Kunkel, & von Georgi, 2014a). The IAAM uses principal component analysis (PCA) of a variety of tests including existing personality and stress-coping inventories, as well as psychological and clinical measures to investigate the application of and reaction to music in everyday life (von Georgi et al. 2007).

The Inventory for Measurement of Activation and Arousal Modulation (IAAM) questionnaire is organized into five categories regarding the active and conscious use of music:

relaxation (RX) : somatic and psychological relaxation through music

cognitive problem solving (CP) : thinking about social and internal problems and affects, including memory aspects

reduction of negative activation (RA) : modulation of a strong negative activation and emotional arousal/reduction of negative emotional strain

fun stimulation (FS) : positive psychological and motoric activation and establishment of social relationships

arousal modulation (AM) : the modulation of concentration skills and general capability

von Georgi, R., Grant, P., von Georgi, S., & Gebhardt, S. (2006). Personality, emotion and the use of music in everyday life: Measurement, theory and neurophysiological aspects of a missing link - First studies with the IAAM. *Tönning, Lübeck, Marburg: Der Andere Verlag.*

Figure 3

Realizing that extremely few studies exist on the UofM for individuals with psychiatric conditions, both the IAAM and Music in Mood Regulation (MMR) measures are increasingly being used to address this issue.

In their 2007 study, Gebhardt and von Georgi looked at the difference in functional-receptive effects of music on mental illness. They found that subjects with mental disorders tend to use music more frequently for reduction of negative activation (RA), relaxation (RX) and cognitive problem solving (CP), while healthy young persons tend to use music for increased positive activation. Though strategies of positive stimulation (such as FS) were significantly reduced in subjects with personality disorders, a strong RA by music was apparent. Given the weight of BPD sufferer's efforts to regulate high affective activation levels in the psychopathology of these subjects; the use of music is a comparably functional skill of coping with tension states, and even sometimes recommended as a therapeutic intervention with the intent to avoid more dysfunctional behavior such as self-harm and suicidal ideation (Gebhardt and von Georgi, 2007).

Multiple studies have since confirmed that disorders of adult personality and behavior (F6 by the ICM-10) strongly use music for the reduction of negative activation more often than healthy controls (Gebhardt et al., 2014a; Gebhardt, Kunkel, & von Georgi, 2014b; Gebhardt, Kunkel & von Georgi, 2016; von Georgi, Gießen, Kunkel, & Gießen, 2016). A 2010 study investigating the connections between music and self-destructive behavior in adolescents confirmed that subjects with borderline

personality disorder consider music highly important in their life and use it for affect

regulation as a substitute for NSSI (non-suicidal self-injury) (Stegemann, Brügge-

mann-Etchart, Badorrek-Hinkelmann, & Romer, 2010). They write:

> "In a qualitative analysis, it could be demonstrated that music and
> lyrics are associated with affect regulation, anti-dissociation and inter-
> personal influence. Music seems to fulfill similar self-regulatory func-
> tions as have been described for NSSI and can thus be considered as a
> substitute to have a protective effect" (Stegemann et al. 2010).

Most significantly, an investigation of music therapy showed a therapeutic

transfer effect resulting in changed UofM behaviors, meaning subjects apply the use of

music in their daily lives in a more helpful way after the application of music therapy

(Silina, von Georgi, Gebhardt, and Weber, 2012). This not only suggests that music

therapy might hold strong residual effects beyond the active therapeutic phase, but

lends credence to potential implications of therapeutic music interventions for those

who struggle from self-destructive behaviors. Recalling that affect dysregulation and

self-destructive impulses are often pervasive in borderline personality disorder (BPD),

this clinical population affords a unique etiology for which to further examine such

implications.

Survey

In order to more fully understand the role of conscientious music use in affect,

emotion, and mood regulation, I drafted a 32 point survey entitled the Music in Affect

Regulation Questionnaire (MARQ) to be distributed and taken anonymously online by

those over 18 years of age. As research regarding the use of emotion regulation in the general population exists in no small measure, I was particularly interested in populations of those who suffer from self-destructive impulses, affect dysregulation, and unstable or shaky sense of self (commonly manifest in but not limited to those who engage in self-harm or hold the diagnosis of a personality disorder). The survey was distributed online by various nonprofit organizations supporting music and mental health, as well as a Dialectical Behavior Therapy (DBT) skills group and network for those suffering from personality disorders. Participants were advised that the study was open to anyone over the age of eighteen, taken anonymously, and surveyed the ways in which people use music in their lives.

At the beginning of the MARQ, each subject reported any formal diagnosis of mental illness and given the option to select one or more illness, including the option to designate a specified "other" from a drop down list. The breakdown of subject mental health conditions by percentage shown in Figure 4 illustrates that of the 283 participating subjects, 203 reported a formal diagnosis of depression, anxiety, or some other mental health condition. 152 subjects had been diagnosed with with depression, 115 with an anxiety disorder, 108 with a personality disorder, 59 with post-traumatic stress disorder, 39 with a mood (affective) disorder, 33 with attention deficit hyperactivity disorder, 32 with an eating disorder, 23 with substance abuse, 10 with autism spectrum disorder, and 1 with schizophrenia.
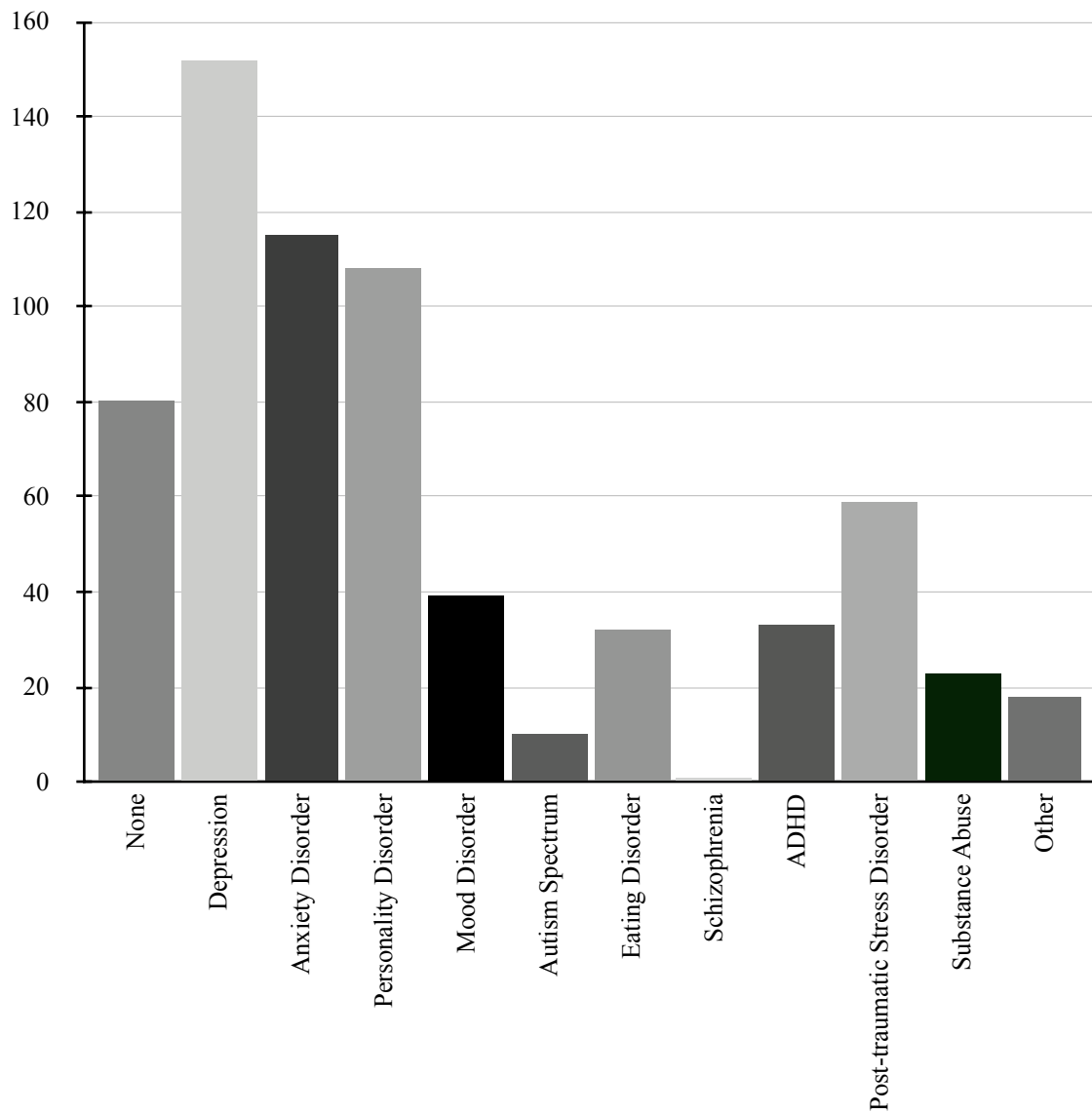
Figure 4

Encouraged by the replicated findings regarding mental disorders and RA (re-

duction of negative activation) provided by Gebhardt, Gießen, Kunkel, and von Geor-

gi, I focused on strategies of reducing negative emotion. Returning to Saarikallio's

model of music in mood regulation (MMR) discussed at the end of chapter one, I fo-

cused on the three strategies characterized by their function of using music to cope

with negative mood: *Diversion*, where music is used to distract from negative thoughts

and feelings, *Solace,* where music is used for comfort, acceptance, and understanding

when feeling sad or troubled, and *Discharge*, where anger or sadness are released

through music (similar to "vicarious release"; Lacourse, 2008) and "reduction of nega-

tive activation" [RA]; von Georgi, et al. 2006).

Music And Affect Regulation

Of the total 283 participants, 75.0% (212 participants) report ever having had

thoughts of self-harm. Of those who report thoughts of self-harm, 88.7% (188 partici-

pants) report sometimes using music to intentionally regulate moods and/or emotions

(66.4% of total participants). The following percentages in Figure 5 represent the per-

centage of the 177 participants who continued in the survey and who report both hav-

ing had thoughts of self-harm and using music to intentionally regulate moods or emo-

tions.

Reports using music to alleviate or lesson:	Sometimes, Frequently, or Always	Rarely, Sometimes, Frequently, or Always
Sadness	95%	98%
Anger	84%	97%
Thoughts of Self-Harm	71%	88%
Thoughts of hopelessness or despair	89%	97%

Figure 5

Of the total participants, 38.2% (108 participants) report a formal diagnosis of a personality disorder. Of those reporting a personality disorder, 87.0% (94 partici-pants) report sometimes using music to intentionally regulate moods and/or emotions (33.2% of total participants). The following percentages in Figure 6 represent the per-centage of the 90 participants who continued in the survey and who report both having reported a formal diagnosis of a personality disorder and using music to intentionally regulate moods or emotions.

Reports using music to alleviate or lesson:	Sometimes, Frequently, or Always	Rarely, Sometimes, Frequently, or Always
Sadness	94%	99%
Anger	83%	96%
Thoughts of Self-Harm	78%	92%
Thoughts of hopelessness or despair	90%	97%

Figure 6

Of the total participants, 20.8% (59 participants) report a formal diagnosis of Post traumatic Stress Disorder. Of those reporting PTSD, 88.1% (52 participants) report sometimes using music to intentionally regulate moods and/or emotions (18.4% of total participants). The following percentages in Figure 7 represent the percentage of the 50 participants who continued in the survey and who report both having reported a formal diagnosis of PTSD and using music to intentionally regulate moods or emotions.

Reports using music to alleviate or lesson:	Sometimes, Frequently, or Always	Rarely, Sometimes, Frequently, or Always
Sadness	94%	96%
Anger	78%	92%
Thoughts of Self-Harm	82%	92%
Thoughts of hopelessness or despair	92%	94%

Figure 7

In addition to looking at the use of affect regulation via generic (non-specified) music, I pinpointed listening strategies specific to heavy music. Participants answered, "If ever, how often do you listen to heavy music?" designating "never, rarely, sometimes, frequently, or always" via Likert-scale slider. To promote response replicability, this music was identified as follows:

"Heavy, intense, and highly emotive music can take many forms. Here, we distinguish this type of music as characterized by capacious, distorted riffs; loud, pervasive percussion; or an overall feeling of 'raw power,' emotion, and affective intensity stemming from the instrumental or vocal parts" (Hereld, 2016)

Of the total study participants, 89% report listening to heavy music.

To focus on musical behavior using heavy music to regulate emotion and self-destructive behavior, the next section isolates those who listen to heavy music and report having had thoughts of self-harm.

Self-Harm And Heavy Music

Of those who report thoughts of self-harm, 89% report listening to heavy music. Of those who report thoughts of self-harm and listen to heavy music, 76% report heavy music listening most often *improves* their mood, while 24% report it most often *worsens* their mood. Regarding non-specified music listening strategies, subjects were allowed to designate frequency via Likert-type scale slider responses, including never, rarely, sometimes, frequently, or always.

	Diversion	Solace	Discharge
SH : Non Specified	41%	45%	41%
NSH : Non Specified	48%	46%	30%
SH : Heavy	23%	27%	50%
NSH : Heavy	44%	26%	30%

Figure 8

Figure 6 describes the reported correlation for four categories of subjects:

SH : Non Specified - those who report thoughts of self harm and listen to heavy music, the type of [non-specified] music listening strategy/strategies that most often improves their mood

NSH : Non Specified - those who report *never* having thoughts of self-harm and listen to heavy music, the type of [non-specified] listening strategy/strategies that most improves their mood

SH : Heavy - those who report thoughts of self-harm and listen to heavy music, the type of heavy listening that most improves their mood

NSH : Heavy - those who report *never* having thoughts of self-harm and listen to heavy music, the type of heavy listening that most improves their mood

These data collectively show that the heavy music listeners who report thoughts of self-harm use listening strategies to non-specified music (above) distinct from the ways they use heavy music. SH : Non-specified shows use of all three strategies at a comparable rate (41%, 45%, 41%) whereas SH : Heavy shows a significant dominance for Discharge (50%) compared to Diversion and Solace (23% and 27%). This suggests that some people (and those who have thoughts of self-harm, in particular) interact with definitively heavy, intense, or highly emotive music differently than they do with non-specified music, especially in the use of modulating negative mood.

These findings also support prior studies that show that those who engage in self-harm [and/or suffer from a mental health condition] use music less for positive stimulation and more for the reduction of negative activation [RA], shown here through the preference for Discharge. To echo the thoughts of Gebhardt and von Georgi (2007), this emphasis on the strategy of RA is likely in the effort to overcome strong or overwhelming negative emotions often present in those who suffer from affect dysregulation.

Of those who report thoughts of self-harm, 61% report that there is a particular mood or mindset that motivates them to listen to heavy music. Most commonly provided are anger, frustration, and hopelessness. Responses include the following:

> "When frustrated or annoyed, heavy music helps vent those feelings. Music that is raw and unapologetic can encourage a sense of empowerment."

> "The desire for intensity. A desire to feel empowered and to be overwhelmed by a force that you WANT to have consume your senses."

> "Usually when I'm feeling low, but also when I'm in need of motivation."

Discussion

Returning to Baker and Brown's (2014) observation regarding the similarities shown in motivational aspects of both self-destructive behavior and accounts of interactions with heavy and intense music, it is unsurprising that certain populations (such

as those with personality disorders and those who self-harm) would be drawn to the intensity often heard in heavy music. The fact that both populations report more Discharge than Diversion as the most successful in reducing negative mood states falls in line with the experiences most often sought in times of extreme emotional distress: cathartic release, and the immediate relief or control of tension and overwhelming emotion.

Though Diversion has proven a useful tactic for healthy controls to distract themselves from negative thoughts or feelings, one must consider why this strategy either seems to prove less effective or less desirable in comparison to Solace and Discharge for those with disorders of affective instability. Recalling that subjects with BPD who self-harm show differing neural activation during pain stimuli depending on arousal status, suggesting that the limbic deactivation may be attributed to subjects' perception of relaxation (Niedtfeld, et al. 2010), one might speculate the unconscious (or conscious) aim during moments of extreme distress is simply the deactivation of high arousal. That the subject seeks to gain control by *reducing* arousal either by relief or release is key. It is possible that the neural and psychological activation experienced during self-harm is unique (as sometimes reported by subjects that it "doesn't hurt at the time") precisely because it is a deliberate, conscious, and intentional act of interrupting the emotional pain from which they seek relief. In many cases, when the act of harm is inflicted by the self, it is not an accident or violation whereas the subject func-

tions as passive receiver, but a release in that the subject is active, and reclaims agency.

Regarding the use of heavy music, again consider the characteristics included: highly emotive, loud and pervasive; powerful and intense. Additional descriptors taken from subject interviews include such sentiments as "overwhelming" and "immersive." One respondent in particular describes why music that is heavily emotive and even "painfully beautiful" (as opposed to "carefree" or distracting) is most successful in thwarting efforts to self-harm: "If it doesn't hurt a little, it doesn't work!"

Other respondents who report having had thoughts of self-harm and the formal diagnosis of a personality disorder explain varying moods or mindsets that motivate them to listen to heavy music:

> "Usually when I'm either sad in the extreme or angry in the extreme. When I'm sad, heavy music makes me feel "powerful" and can turn the sadness into something a little more proactive. When I'm angry, listening to heavy music gives me something else to exercise those feelings of anger towards, instead of acting out on them."

> "Overwhelming frustration and raw energy"

> "If I'm insanely upset, and angry at the world. I want something that matches what I'm feeling so I can feel validated and matched."

> "When I start to lose my sense of self with numbness, I sing it out and explore the songs I can connect with and it reminds me of the emotions I am suppressing."

The catalyzing force here seems less related to genre-specific categories than certain musical and psychological commonalities collectively understood as *intensity*.

Though the exact music described as "heavy" varies remarkably between subjects, these data highlight significant evidence for heavy music's ability to circumvent self-destructive impulses, especially when applied in tandem with Discharge. Additional evidence from prior studies further suggests the value of deeper investigation of the conscientious use of heavy music as a potential intervention for those suffering from affect dysregulation and self-harm.

Music In The Reduction Of Negative Emotion: Three Case Studies

In *Music in Everyday Life* (2004), Tia DeNora illustrates a wide variety of ways in which music is used as a source for entraining and modulating emotion, mood, and levels of distress. She then clarifies that these endeavors are by no means strictly under the purview of the professional music therapy encounter:

> In the course of daily life, many of us resort to music, often in highly reflexive ways. Building and deploying musical montages is part of a repertory of strategies for coping and for generating pleasure, creating occasion, and affirming self and group identity. (DeNora, 2004, 32)

Returning once again to the methods of modulating negative mood described in Saarikallio's model of MMR, how are these three everyday listening practices (Diversion, Solace and Discharge) ultimately called upon to work in affective, life-changing, or even life-preserving, ways? Is it the truly that the music which acts upon us as a stimulus, or could it be the way the music is used or even *claimed* by the people?

In addition to the research I conducted in the field over the past few years, I decided to pinpoint three specific subjects for more in-depth case studies. Though all fall in similar spectrums of age and ethnicity (American, 18-30), their life journeys prove quite unique. These subjects were chosen based on the following factors: length of time spent in contact, the extent of their availability for research, and what I subjectively perceived to be the sheer power of their stories. Each subject at one point or another experienced a disruption in formative years of education as well as one or more traumatic events. These young people have seen remarkable hardship and blossomed regardless. They are resilient beyond the norm, and provide a poignant illustration to the true tenacity of the will to survive. For safety and confidentiality, the names of the case studies have been changed.

Case Study One

My first subject, whom we will call Amy, was born in Kitsap county, Washington. Amy was homeschooled during her childhood and adolescence, and never attended public school. Her friends described her as somewhat reserved, yet thoughtful and warm. During my extensive conversations with Amy over the past few years, I've come to know an extremely bright young woman with an ardent compassion for others. Over the past decade, she has experienced anxiety, abuse, hunger, poverty, and homelessness.

Prior to her natural mother's psychiatric diagnosis, her three sisters individual-

ly often observed the mother exhibiting severe symptoms consistent with a Borderline

personality (BPD). Amy reports:

> I guess I first found out what BPD was by hearing that my mom had it.
> When we moved out of the house, we had to sneak out and felt guilty
> all of our lives. Every time we left the house for church, we felt bad
> that we left our mom. She would constantly blow up over the 'dumbest'
> stuff….
>
> I'm worried I might have black-outs in my past because I am VERY
> VERY fearful of my mother, but I don't remember any significant
> abuse, other than emotional. But by my behavior now, I feel she must
> have done something to me when I was about 4-6 because before that, I
> remember I wasn't afraid of my mom. Suddenly I became terrified of
> her, but for no real reason that I remember.

In 2004, Amy was raped and became pregnant. At 18 years old, this was the

first time she began seeing a doctor. Shortly after, she was diagnosed with depression

and a severe anxiety disorder. During a conversation we had in 2014, she recalls:

> I got depression after being raped and was first put on Celexa, then
> Prozac, and Zoloft with no real help. I was seen in the ER (while taking
> Celexa) for what I thought was a heart attack, which turned out to be a
> "Bronchial Panic Attack." They never offered any benzos (benzodi-
> azepines) which at the time I didn't know existed. I even asked if there
> was something fast-acting I could take if I felt a panic attack coming
> on, and they said there was no such thing. Not sure if I explained it
> wrong, or if they were lying. But I continued to have panic attacks, not
> always that bad, but often enough to cause problems. I ended up losing
> a lot of jobs, being too scared to go into work because of being 15 min-
> utes late, so I'd just never go back to that work. I'd find a new job. At
> that time the economy wasn't too bad so it was doable.
>
> As my anxiety got worse and worse, finding and keeping jobs got hard-
> er and harder. I became homeless a few years ago for a short time, and I
> am homeless right now (because of my anxiety holding me back). I was

embarrassed about my problem, some of the people close to me were telling me I needed to suck it up because I have kids. I can't just not work. I felt I was being selfish and a bad mom but my anxiety is so debilitating. I actually never realized how much of a problem I have until I started seeing the free therapist at the shelter where I'm staying. She helped me understand how it doesn't make me bad to be like this. And she told me she thinks I need Valium. I saw my doctor and they put me on Paxil. Which didn't work. So she put me on Buspar, and Ativan. Still didn't work. So she gave me Xanax. The dose was too small. But finally she gave me valium but only 2mg and told me to call her in a week. It felt like a light at the end of the tunnel. It didn't make me tired at all, I felt I could maybe actually go to a job interview at some point. When I called her, I asked if I could up the dose because it was working (I had got the feel of how it would be but it wasn't quite enough). I was able to make a phone call (I'm terrified to talk on the phone) but when I asked to up the dose she told me to stop taking the Valium and had me start taking Risperidone. It surely helped with my mood swings which is amazing! But did nothing for my anxiety. I have been a nervous wreck since then. I haven't been able to call her back to even tell her. I've been getting frequent panic attacks to the point my whole body is sore.

The difficulties in finding a suitable and effective psychiatric medication is a common issue in mental health. Frequently, those subjected to trauma suffer from a co-morbid pathology, and while certain medications may succeed in alleviating certain symptoms, their relief comes at the expense of another.

Another time, Amy confided a darker portion of her stay in the shelter:

In January or February, I made friends with my neighbor (which is very rare for me) and I knew she was a recovered heroin addict. But one evening her very shy and quiet 12 year-old son came pounding on my door crying saying his mom passed out. I walked over there and she was slumped on the toilet. Her 2 year-old was running around and my 3 and 4 year olds followed me over there. I didn't know what was going on but I tried to help wake her up. Then I noticed a needle and a black tar blob on the counter in a little plate beside her. It took everything in

me to keep it together. But I got her to wake back up and she was ok. I went home and cried all night and cut myself.

She swore it was a one time relapse and it wouldn't happen again. But it did. Same type of situation about a month later. That created a new kind of PTSD for me and is why I believe my anxiety sky-rocketed so bad. Plus being in the shelter here isn't fun. It's just like a ghetto but they call it a shelter. There is a lot of drug activity and cops out front a lot. Dangerous looking 'thugs' all around, which plays a part in my elevated anxiety. Right now it's to the point I only leave my house if I really have to. I can only use self-checkouts at the store. It's very difficult to ride the bus. Talking to anyone is out of the question. I cannot do crowds any more. As much as I LOVE concerts, I don't know if I'll ever be able to go to one again. I have a lot of issues with being stuck in the past. I never listen to new music or watch new movies. (Sept 2014)

At the time, Amy had been homeless for a year. Moving from tent city to motel to shelter, she described the unfortunate cycle of being able to pay just enough in "service" fees to stay at the shelter, but not making enough to ever get out. Caught in an abusive relationship but feeling unable to leave, Amy expressed

…It's horrible. I'm so done with him. But I'm so so terrified to leave. I don't feel like I can do it on my own, even though I pretty much am already. It's just such a terrifying thought. I don't have any friends nearby…

As time passed, she continued to struggle with self-harm, mild substance abuse, and ongoing acute anxiety and depression. She expressed the difficulty of juggling both the mental health issues of herself and her partner, whilst keeping her children protected, healthy, and oblivious as possible. She recalled the event that led to her daughter's post traumatic stress:

I don't remember if I told you Keira has PTSD now from the shooting that happened at the shelter. We walked into it right after it happened

and as much as I tried to keep the kids unaware, Keira (4 years old) told her teacher that someone got shot and died and is with Jesus now.

Amy went on to describe how she wished her family could help, but understood there just wasn't money. She clarified "As long as we can stay at the campsite here, were safe and good. It's surprising the lack of family shelters, and I get denied for most because of my stupid theft charge from when my son was little, I stole diapers."

Throughout my correspondence with Amy, she expressed a hearty desire to rise above her circumstances. When seldom she was offered assistance, she responded "I really feel like needy lazy scum. I can't wait to someday be out of this slump and be able to help others."

On September 1, 2014, I recruited Amy for a simple pilot project in frisson responses to music. As Amy exhibited a high level of enthusiasm in hearing about music and well-being research, she happily obliged. The task was simple: listen to the first two minutes of a piece, and answer the following questions: 1) *Did you experience any type of intense feeling (i.e. chills, pleasure, or the 'hairs on the back of your neck standing up)* and 2) *At what precise moment in the recording (please use time stamp as reference) was this affect?*

The piece was "Montis" - a concert etude for 2 pianos from *Modes & Meters Vol.1* by Milen Kirov, preformed by Milen Kirov and Neema Pazargad. Amy reported

experiencing chills at 1:08, 1:18, 2:57, and 6:10 (she decided to listen to the piece in its entirety).

A few days later, Amy and I continued our discussion. We spoke of self-harm, and she reported engaging in cutting behaviors once at age fourteen, approximately once or twice a week from age nineteen to twenty-two, and "maybe once every two or three months" from ages twenty-two to twenty-seven or twenty-eight. She expressed cutting mostly her forearms, biceps, chest, legs, hands, and rarely wrists. This behavior is most consistent with NSSI (non-suicidal self injury) as opposed to action with intent to end her life.

In an effort to help me understand what caused her to want to harm herself, she described her feelings:

> It was kind of a distraction. And to feel something bigger than what I was going through. It wasn't really from being depressed. Maybe angry. Or maybe to feel in control of something…I think I've felt very powerless a lot in my life and that is one thing I can do. And it calms me down. If I felt like I was losing my mind, or very emotional than I would cut and it brought me back to reality.

When I clarified that it helped to feel in control, she replied "Absolutely, it helped me take control of my emotions and find a center." When asked to clarify that she engaged in self-harm without the intent to end her life[5], she responded:

> "Not really. I have thought about it. Once I took a bunch of pills and didn't care if I woke up. But when I cut I never tried to bleed out or anything. I always cut to feel in control and to stop the emotional pain."

---

[5] What Amy describes (NSSI) is an unfortunate yet common constituent of Borderline Personality Disorder. She since reports no longer struggling with self-harm, and remains under the care and supervision of her doctor.

As I tried my best as always to comfort and listen openly, she exclaimed that she'd never felt her life could be "normal" until the past week. Through my emphasizing that even science and psychology (revealed though theories of everything from neural plasticity to existentialism) proved she *was* strong and in more control of her behaviors and outcome than she may have thought, she expressed that I had given her hope.

The next time Amy and I spoke, she immediately revealed a breakthrough: "I actually made a phone call today! A pretty important one. To setup my son's next therapist appointment!"

When I asked what she thought had enabled her to do this, she humorously replied:

> I mentally prepared and waited until I was alone. And when it comes to my kids I keep reminding myself there is no anxiety that will get in the way of being the best mom I can be. Fuck, I saw a spider as I was putting my daughter to sleep IN HER BED CRAWLING under her blankets and without thinking I picked up the spider with my bare hand and threw it across the room. That is how I know I'm stronger than this.

I told her I was so happy to hear of her progress, and briefly explained the neurological process of what happens when our brain reacts to a threat. I explained that evolutionarily speaking, a less healthy response would have been to experience too much fear and shy away from the potentially harmful arachnid close to her daughter, and that by responding quickly and automatically, she did just the right thing, and that she was right: she was "stronger than this." I cautiously suggested that if she could

respond 'correctly' automatically even just once, theoretically but potentially, she

could "train her brain" to respond correctly to any situation - even ones where she has

previously succumbed to destructive behaviors.

This idea seemed to excite her greatly, and we agreed that though it was a

small example, it was a great demonstration of how "love conquers all."

Three weeks later, Amy sent me a brief message: "Do you think it's possible

that listening to that one instrumental song helped me?" When I asked her to clarify,

she replied "Since then I've only had 1 or 2 intense urges to cut, and that is huge dif-

ference than normal." As we continued discussing her progress, she filled me in on

recent events. She had just had her first session with a new therapist, whom she felt

was very well qualified and "right for her" due to her background and ease of rapport.

She also felt Amy showed signs of a borderline personality. I asked Amy what she

thought about this, given her mother shared the diagnosis:

> Yeah, I've heard that hardly anybody wants to work with borderlines.
> (But) It's nice to know what has been going on for the past 15 years my
> life. I've always been able to feel other peoples feelings so deeply or
> when watching a movie it would be like I was them.

As Amy had begun to show a real interest in music therapy, and disorders of

adult personality and behavior had become a major interest in my research on music

and mental health, I explained to Amy that though complex, what she experienced

with the music was technically quite possible. I told her that because music (like so

many things we engage with in daily life) has the power to even ever so slightly modi-

fy things about our brain (much in the way that traumas or positive life events do) lis-

tening to music really can help us, and the more we reflect on even one single, affec-

tive instance…theoretically speaking, it has the power to change us. She replied en-

thusiastically:

> That's awesome! I'm definitely open to alternatives to long-term med-
> ication use. Especially music! I also started listening to a band recently
> that I used to listen to when I was a pre-teen. And I understood the
> lyrics sooo deeply, it really hit home. Before I was too young to under-
> stand. I read up on the lead singer/songwriter, and it turns out he has
> severe anxiety. It's like I could have written all the songs! I don't think
> that really falls in the category of musical therapy, but it helped me
> even more to see I wasn't alone.

I laughed, and told her that it could indeed fall into the category of music ther-

apy (this being prior to the incredible amount of backlash that practices such as those

shown in the documentary *Alive Inside* received from the Music Therapy community,

largely due to their lack of AMTA accreditation). I continued to explain that it was

something not everyone quite grasps all of the time because it could be a little bit con-

fusing, and there's a lot of different ways to define and understand *music as* therapy -

and even though she thought it might be too basic to be music therapy, actually, the

way people *use* music was really what was most important.

I caught up with Amy two years later. When I approached her with the idea of

sharing her story for my case study, I was absolutely amazed. She had made a stagger-

ing amount of progress. She'd found the courage to leave her abusive partner, and sus-

tain what she described as a new and loving relationship. She was no longer homeless,

and had been nearly medication-free for the past year. She mentioned that she had

since lost one job due to anxiety, but already managed to find a new one that she was

excited about (and has since informed me that she indeed now works full time). She

expressed that listening to a musical playlist often helped. Her kids were doing much

better, and though they saw him from time to time, she felt it was best that their father

remain mostly removed from the picture. What follows is our most recent conversa-

tion, dated Tuesday, April 9, 2016.

> *Why did you get into music?*
>
> I've always loved music but my mom listened to it all the time when I
> was little. From when I was a baby, there was always music playing
>
> *Why do you listen to music?*
>
> It makes me feel better, helps me put feelings into words. Relaxation.
> To feel happy.
>
> *Do your kids like music? Do you ever kind of "enjoy listening" with them?*
>
> Absolutely. They both know the lyrics to a good amount of the songs,
> and hum along to a lot more.
>
> *Tell me about your playlist(s).* (She regularly listens to a specific playlist on her

phone.)

> I downloaded Spotify where I could get more specific songs. That was
> just about a year ago I think…songs that made me feel better and re-
> minded me of a happier time, I guess. I listen to it for at least an hour,
> everyday. Or try. And if I skip a day or two, I definitely notice (she
> laughs).
>
> *What type of music is on your playlist?*

A big variety, some country, a lot of punk, alternative, 90's rock, some 80's love ballads, couple rap songs even.

When I asked how she chose them, she responded "by the way they make me feel." Upon receiving screen captures of her playlists, I asked what the title of one in particular signified. She responded:

My boyfriend Travis. Songs that remind me of him. He is also really into music, uses musical therapy, and encourages me as well. Even though he doesn't like a lot of the embarrassing crap I do (she laughs).

I noticed on the playlist marked "Sleep," she included "The End of the World" by Skeeter Davis. When I inquired to its particular significance, she remarked:

Its a very hurtful deep down song, but reminds me of how sad things can be. And of the light at the end of the tunnel.

When I asked if she had a particular favorite for "making her feel better," she replied:

The best that I can relate to is "This is Where it Ends" (Bare Naked Ladies). "Day 'N' Nite" (Kid Cudi) is very random and new to me but it really spikes my mood and makes me feel amazing. "Have You Ever Seen the Rain (Creedence Clearwater Revival) is also a big one.

Has there ever been an instance that you'd considered harming yourself (or making other self-destructive decisions), but were able to listen to music instead?

I remember one time I had to call into work. The next day I was so nervous to go in [after calling] and my boyfriend actually put on my playlist for me, and it brought me out of my panic state. Later, after he left I got very anxious again and had a razor in my hand and I remembered music!!!! And I put on my playlist and I didn't end up cutting. It helped me focus. This past year that I've been really good from restraining from self harm, there have been struggles that music has helped a lot with.

When I asked what she thought contributed to her taking medication less often, she replied:

> I never liked the idea of medication. But my boyfriend is really the one that believed in me. Helped teach me meditation, with quiet music.

> I did that for awhile and only took Xanax when I really needed. He helped me with it, and included a lot of music.

What Amy describes here is a familiar phenomenon in the context of using music in mood and emotion regulation, shown through her words using Discharge (in using her playlist to avoid the act of cutting) and Solace strategies. In addition to offering a sense of security that one is not isolated in the world, these music-listening strategies can prove highly effective when applied in social contexts, shown above by the sharing of musical experience with her boyfriend. This is especially applicable for those who suffer from severe anxiety or fears of abandonment: Though it's often unfeasible to remain in proximity to a partner, friends, family, or mental health community at all times, music provides a powerful reminder in the form of autobiographical memories, solace, and perseverance that one is never ultimately alone.

Was there a particularly challenging time in your life that you can recall music really "getting you through?"

> Absolutely, when it came down to it, leaving my partner of 6 years. Music helped me with the decision, staying strong during, and healing in the aftermath.

One thing I want to add that I didn't tell you…I was raped this past Valentine's day.... It was pretty bad. It took me about a month to leave the house after that. Maybe more. But overcoming that so quickly had a lot to do with music…I've come to terms with it, I think.

It was actually by 3 people, I was drugged... My boyfriend actually left work because of a bad feeling and went to look for me after I wasn't answering my phone. Thank God he found me half dressed and drugged outside of a Chevron and took me home. During that time he took about a week off work, my kids stayed with a friend for a few hours a day, and I was an emotional mess.

When my boyfriend had to go back to work, all I could do to stay calm and not cry, not remember, was listen to music. And a lot of it all night, every night.

That first week was really, really bad. Music helped me not cry, helped me put on a smile, and sing, and cook my kids dinner. Helped me to sit outside with them while they played. Helped me to breathe and not wish I was dead. Helped me to feel positive feelings and understand, or forget the pain… Two months later I am here, medication free and working full time!

The above account illustrates not only the undeniable strength shown by Amy through such a horrific tragedy, but the ways in which she (even unknowingly) reports using music in the healing process. In response to the aftermath of her trauma, she used music for the intentional regulation of her feelings and emotions (here resembling Diversion and Solace). What is most crucial to note is her recurring use of the word "help." She does not report that the music *itself* enabled, allowed, or even made possible the going about the personal and maternal responsibilities of her daily life: in each and every instance, music helped *her* accomplish everything from achieving biological necessities such as sleep, to watching her children play outdoors, to feel posi-

tive feelings and move beyond the initially immobilizing pain. Using music as a facilitator and comfort, Amy remained the sole agent in her progress and resilience.

You mentioned in the past you loved live concerts, but could no longer attend them. Do you think this has/could change?

> Actually I'm going to my first concert in about 8 years at the end of the month. I haven't gone because of kids, money, anxiety in crowds, loss of interest… [but] I've been doing better, and my boyfriend wanted me to go to this show coming up with him. Honestly, I'm not super excited, or nervous (she laughs).
>
> But I'm glad I'm not nervous.

> *Note*: On May 22, 2016 during revisions, I followed up with Amy for fact-checking of dates. After a brief and friendly "catch-up," she reported the following: "By the way i finally went to that concert! And [her boyfriend] Travis said I did really good, he couldn't believe how cool I was. It was like I was in my natural habitat!"

Case Study Two

My next subject we will call Jake, a twenty-six year old male. Born and raised in a small community in Colorado, Jake was raised in a conservative, Evangelical environment by his natural parents. He was homeschooled until the eighth grade, at which point both living grandparents passed away and he became temporarily responsible for his own education. Shortly thereafter, he completed high school at a private

Christian school, and later pursued a bachelor's degree at The Master's College in Southern California.

Jake showed promise in music from an early age. Beginning piano lessons at eight years old, he later excelled in songwriting and composition. He recalls some of his favorite pieces to be Chopin's Fantasie Impromptu, "Revolutionary" Etude, Debussy's "Le plus que lente," Mendelssohn's Songs Without Words, Rachmaninov's Preludes in C sharp minor and G major, and the Brahms intermezzos.

When Jake began high school, the recurring theme of losing loved ones that had previously begun to surface only continued with full force. The list is staggering: grandparents, musical mentor, art teacher, aunt and uncle, and Matt, whom he describes as "best friend," - all passing away before he graduated high school. In the years closely following, the tragedies continued: two more classmates, a close friend of the family, and more recently, a dear friend who took his own life. Jake's life was also complicated in other ways, his domestic environment frequently aggravated by turmoil from the mental illness of his former wife, his tumultuous relationship with his father, and his eldest brother's drug-addiction.

Though Jake was never formally diagnosed with any type of mental health condition, he reports a long history of prolonged sadness and depression, as well as extensive battle with self-harm and occasional suicidal ideation. Though he had seen a therapist extensively, he's never taken any type of medication, seen a psychiatric professional, or been hospitalized for self-harm.

I later learned Jake's 'therapist' was a young woman with a counseling license in the state of Colorado. Her credentials include a Master of Arts from a private university. While I'm unfamiliar with her capacity to treat clients at-risk, I later inquired further regarding the lack of any professional action taken to address the self-destructive behavior. Jake stated that as his parents did not approve of the field of psychology as a whole, and were strongly convinced that he would do best under the supervision of a biblical counselor. Jake has expressed a desire to "get help" on numerous occasions over the years, conveying his uncertainty of whether or not his current therapeutic relationship was productive.

Did your counselor, pastor, or anyone in authority (including parents) know you dealt with self-harm?

> Shortly after Matt died, my counselor, pastor, and parents knew that I had been cutting when a wrist band was out of place. They freaked out, and immediately tried to figure out what was going on. Later that day when we got home, I tried to explain to them that it was related to many things, some of it being self-image; a lot of it related to grief and loss and needing to feel something to cope. This went on for months. They didn't entirely understand. At this point, I picked up smoking cigarettes, as I was able to put in music, walk around my neighborhood, and smoke in the middle of the night to push down the urge for self harm. When (soon after) I was told that smoking was compromising my salvation, I was hell-bent. I told them it was the lesser of two evils, that I'd rather smoke than cut. They demanded I quit smoking, so I did. And the cutting got way worse. So I started with smoking again, leading to being kicked out of the house for around three weeks, until me and my parents were able to come to an agreement and I went back home for the remainder of my last semester of high school. Ultimately, cigarettes weren't enough, the self-harm came back and when it did, they didn't know about it. I went from cutting my wrists to cutting upper arms, stomach, back and legs in easily concealable areas.

Jake later explained that though he had been asked to see a pastor and biblical counselor, apart from trips to the emergency room for self-inflicted wounds, he had not been referred to a mental health or medical professional.

What Jake's circumstances show are yet another instance of a flawed system that failed to deliver help to one in critical need of mental health care. Fortunately, some are able to discover the resourcefulness within and around themselves to continue striving forward regardless.

As we continued to speak of the trials he encountered, music was a central theme. For Jake, any challenging time is somehow connected to the music he relied on to 'see him through.' The following is taken from an interview conducted on April 20, 2016. I have noted moments that appear to correspond with strategies of Solace and Discharge parenthetically.

Do you feel music is a large part of your identity?

Yes, it is a significant facet of who I am, what I've become. It's almost always been an integral part of my life.

Do you feel you are affected (either positively or negatively) by music?

I feel both positively and negatively effected by music. Music is something that I seek when I need to find a sound that meets where I am [Solace]. If there is a song or a melody that meets me where I'm at emotionally, I could listen to it on repeat for hours and hours. In some ways, this can magnify a potentially "harmful" emotion, but for myself, even if it intensifies my sadness, it feels more like a comforting dark corner where I can just exist with the feeling, and truly feel it, through the music, and I can just be. Without the self-harm, I can just channel

the emotion and truly feel the emotion without having to resort to self-harm to feel the thing I want to feel [Discharge].

Do you feel that music sometimes magnifies or heightens your current feelings

and emotions?

Music absolutely magnifies the things I'm feeling. As previously stated most often I'll use it to amplify a feeling I'm feeling- in particular when I feel the desperate need to cry, and I can't. Some of the more beautiful times, however, are when music catches me off guard. This happens more often for me when it's something thats instrumental or has very implicit and striking lyrics, but every now and again when the music won't necessarily meet where I'm at on an emotional level, it will sway my emotion entirely and cause healing, or intense emotion, this happens every so often, but its the more potent experience [Solace/Discharge].

Do you sometimes use music for the purpose of intentionally regulating your

moods and/or emotions?

I don't really use music to regulate my mood, more to amplify it. But in a way that is regulating it, because when I experience it in this way it really does allow me to genuinely feel what I'm feeling, I just need the extra push and vibrancy of aural experience to break down the walls [Solace/Discharge].

Do you listen to music to magnify/heighten, or alleviate/lessen sadness? What

about anger?

As far as sadness and anger, I use music, most times consciously and sometimes subconsciously to alleviate anger, and with sadness its different. It's less to magnify or alleviate it, but more just to get to a point where I can truly "exist" in it and feel the emotion for real, and it is alleviating because it brings a sort of morbid, but very significant comfort [Solace/Discharge].

Do you listen to music to magnify/heighten, or alleviate/lessen feelings of

hopeless or despair?

I definitely use music to alleviate feelings of despair and hopelessness. Once again however it is most often to meet the musician or the feeling of the notes on the level that I am. I guess knowing whoever composed the concerto or wrote the indy ballad, or rock riff has felt the way I do in that moment - it's enough [Solace].

What about thoughts of self-harm, or suicidal ideation?

This is a yes to both. There are times that I listen to music to pull my-self out of a suicidal thought, and there have been many times where I listened to it to try and magnify it, but in all cases it has only ever helped me in identifying with my depression, hopelessness or despair and allowed me to feel something [Solace/Discharge].

Has the process of engaging with music helped you in overcoming hardship?

Self-harm is something I have struggled with since about the age of 15. Music ultimately became one of the only things that could calm my mind, and evoke any kind of emotion in me. Over the years I experi-enced loss to an extent that I (either subconsciously or consciously) de-veloped walls that would cause me to shut down, to avoid feeling the full extent of pain in any given terrible situation. The side effect was a crippling inability to cry and release. Listening to music became the tether between myself and my emotions, allowing me to finally cry. To grieve. Playing music on the other hand, became my only way of let-ting my heart…bleed through, to let myself in some way express what was inside through the tips of my fingers across a keyboard. In many ways, in the past ten or more years of my life, playing music is the only way in which I truly feel I can accurately and articulately "describe" my emotions, with or without words.

Has there ever been an instance that you'd considered harming yourself (or

participating in other self-destructive behaviors) but were able to engage with music

instead?

I can think of a few very specific and poignant circumstances. The first one that comes to mind was when I almost killed myself. I was ready to do it - had the knife to my throat, I was listening to music and crying my eyes out. I had my Zune on shuffle, I don't even remember what was playing — I was ready to carry it out. I just remember Elliott Smith coming on: "Miss Misery." Those words hit my ears "I'll fake it through the day with some help from Johnny Walker Red, and the cold pain behind my eyes that shoots back through my head," and I immediately calmed down. The song is sad, but it met me where I was — it let me fake it through the next day, if you will.

The sole lack of emotion that drove my mind toward the idea of suicide and the point of having a knife at my neck was entirely broken apart by becoming vulnerable again —the song made me feel again. Anything. Sadness, vulnerability, feeling. This might be entirely a rabbit trail but I remember it making me think about every last person I knew and what their reaction would be. To a degree it got me outside myself. It broke down walls. Still does. So in a clear as mud way to answer your question, his music ... it sort of shreds the veil. Like, there's this atmosphere that gets broken and feelings bleed through stone.

Often times, music would be the only thing that kept me from cutting. Back in college there was this Eminem song called Deja Vu that I would listen to - something about it, how dark it was, it just comforted me [Solace].

Elliott Smith has probably saved my life more than once, as well as fed my depression in some ways at certain times. Radiohead can always make me cry, and often times thats the emotion I'm needing to feel whenever I've felt the need to cut. Silversun Pickups, Underoath, even classical music. Frightened Rabbit. These are all artists that met me in the shadows and gave my shattered soul a 'shattered sound', and a companion.

Jake's use of Elliott Smith would prove particularly poignant for those ac-

quainted with Smith's work. An indie folk/rock singer-songwriter, Smith was respect-

ed as a profoundly gifted yet troubled musician. Having suffered from depression, al-

coholism, and drug dependence, Smith's lyrics frequently represented the type of

beautiful yet painful turbulence from which he often struggled. Though Smith dis-

played a sincere and valiant effort to become sober throughout, and especially near the

end of, his life, he committed suicide in 2003. He was thirty-four years old.

Smith's untimely death and often dark lyrics could be taken as a less than en-

couraging catalog for young listeners struggling with suicidal thoughts. However, for

Jake (and many others) the intensity and solidarity identified in Smith's music not

only reminded him of "every last person he knew," but how someone else had "been

there too" — that they are indeed not alone. This reminder is many times the type of

gripping, sympathetic solace capable of reaching the subject when little else has.

Jake concludes:

> Any challenging time in my life that comes to mind has some sort of
> connection to the music that got me through it. In my childhood, music
> played a significant role in carrying emotional burdens and offering
> solace in hard times, and shaped the early years of my life. Through
> every color of death, music has held my worlds together. Through the
> battle with mental health issues in my ex-wife and the aftermath of an
> eventual divorce, music has been my constant companion… It hasn't
> always been joyful, but it's never ended in giving up.

Case Study Three

My third subject is Kelty, a twenty-six year old female born in Bellingham,

Washington. Though she never never attended any type of schooling prior to college,

she was extremely bright, and began classes at North Idaho College at the age of six-

teen. A year later, she obtained a birth certificate, social security card, and GED. By

eighteen, she graduated with an Associate's Degree, and enrolled at the University of Idaho later that year. By the age of twenty-one, she had graduated with a Master's of Science in psychology with a focus on chemical addictions.

Kelty contacted me for the first time on November 30, 2011 after stumbling across my music psychology blog on Daniel Levitin's Facebook discussion page. She was reaching out to ask a few questions about the field of neuromusicology. We spoke of various potential graduate programs, and she jovially confided her best asset was likely a "ridiculously inquisitive cranium." Early on, I knew I had found a kindred spirit.

Kelty and I met in person in November, 2012, almost exactly a year after our first correspondence. My first meeting with Kelty confirmed what I had previously observed from afar: this individual was not quite like anyone I'd ever met - more like a character from a child's adventure book, like a female version of *The Little Prince.* She was enigmatic, holding a childlike wonder that made it often seem she was experiencing things for the first time.

Though we'd met only once (she resided in Coeur d'Alene, myself in Los Angeles), she soon began to share portions of her recent life (at time revealing a bizarre resemblance to my own). It seemed we'd both lost our fathers a year prior, just a month apart. Though my own father passed away from cancer, her father eventually died of Huntington's disease. She recalled:

> So this time last year my dad died, which was a good thing, all things
> considered and granted, there was never much love lost between us, but
> ever since then, I've had a lingering awareness of my particular version
> of mortality that I can't quite shake. My loss in this case is my own
> presence of mind. I know better than to dwell on this customized
> tragedy, but it's quite frankly addicting…all told, impermanence is the
> theme of the year. Beauty and going.

After expressing my condolences, she responded "Something Richard Bach said, and it sticks with me: 'The mark of your ignorance is the depth of your belief in injustice and tragedy. What the caterpillar calls the end of the world, the master calls a butterfly.' Also, I'm moving to LA next month :)"

Kelty did move to Los Angeles soon after. She talked about how she'd been to LA twice for extended visits, each time loving how it invaded her sensibilities and captured her completely. I agreed, often finding M83's lyric confession "the city is my church" rather fitting in its strange, chaotic solace. She called it "Culture shock with a dash of Tyler Durdenism."

She later recalls the move:

> It was in March of 2013. I'll never forget it... My first panic attack hap-
> pened while driving, just days before I started the 1,500 mile drive to
> LA. I had no idea what was going on, or even what a panic attack was.
> I thought I was losing my mind. Even more so when I started the drive.
> I thought, 'I have to be crazy to still do this after having an experience
> like that.' These days, I'm better at reframing resilience, thank good-
> ness.

The more I spoke to Kelty, the more my intuitions regarding the extent of this girl's uniqueness were confirmed. On no occasion in particular, we drove to a lookout point at the mouth of Topanga Canyon for stargazing, as had often been my custom.

As the conversation drifted towards various concepts of anxiety and post-traumatic stress, she spoke candidly about her childhood. Years later, in a conversations regarding something likely wholly unrelated, she observed "The crazier it gets, the more you [come to] know yourself…or at least that's my theory…" After learning what she would endure, in retrospect, it's quite apparent why Kelty Walker is one of the most self-aware humans I've ever met.

In an interview Kelty gave the *Spokesman-Review* in July 2011, basic tenets of her childhood paint a chilling picture of what she endured growing up. I referenced the article during our own interview process as a source to generate questions, doing my best to not dredge up painful information already available. The article begins:

> Kelty grew up in an isolated trailer house in the woods outside Blanchard, Idaho.
>
> In that trailer, her father did all he could to block out the world. Kelty and her sister barely left the house. On rare trips to town, they had to wait in the car or stay within three feet of their dad. They never attended school. No one came over. Their mother left to work in town and their father schooled them in the things he thought were important: calculus and the supremacy of white people.[6]
>
> In the article, Kelty describes her father as violent and domineering. He also

suffered from Huntington's disease, a progressive neurological disorder whose symptoms include antisocial behavior, hallucinations and irritability.

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[6] Vestal, S. (2011, July 11). Girl leaves Aryan past behind. *The Spokesman-Review*. Retrieved April 25, 2016, from http://www.spokesman.com/stories/2011/jul/15/putting-past-behind/

In addition to extreme racism, Kelty's father subjected his family to violent abuse in a number of ways. The *Spokesman* continues:

> At night, Kelty said, her mother quietly, subversively told her daughters that there was more to life than their father's views of the world. Somehow – through reading, through her mother's whispered urging, through personal strength – Kelty knew at a young age that she wanted to resist.
>
> For two years, around ages 12 and 13, she stayed virtually silent in rebellion. At other times, she defied her father – sometimes directly, sometimes in roundabout ways. As he got sicker, he became more aggressive. Conflict and anger drifted constantly through the atmosphere. Finally, one day when Kelty was 16 and her little sister was 13, their father became irate and grabbed them by the necks, pinning them hard against a wall.
>
> For Kelty, that was the end. She feared her father would kill her or her sister – or that she'd kill him in self-defense. Soon, she and her mother were planning an escape at nights in her room.
>
> One early morning in June 2006, she and her mother and sister sneaked out the back door while her father slept in a sleeping bag near the front door. They took few belongings, a little food. A neighbor gave them a ride into Sandpoint, where they entered the women's shelter (Vestall, 2011).

Once freed, Kelty knew she wanted to go to school. A self-taught reader, she was highly intelligent but in many ways, society eluded her. She had never learned how to buy groceries, or fill up a tank of gas. After facing the culture shock head-on and earning her GED and Associates degree in 2007, she moved to Coeur d'Alene on her own. In December 2010, she finished her bachelor's degree in psychology, and in 2012, her masters.

As her father's health deteriorated, he was eventually moved to an assisted-living center. He never came after them.

What follows is an interview that I conducted with Kelty online, dated Monday, April 25, 2016.

Based on facts alone, it's blatantly clear that you've done a remarkable and exceptional job academically, intellectually, and in terms of resourcefulness and sheer will. More subjectively, can you tell me a little more about what home life was like, growing up?

> Well, to start off, the Spokesman article was just the tip of the iceberg. I didn't feel like talking about the sexual abuse experienced from my father at that time, and certainly not with seeing it on the front page of the paper in the town I lived and grew up in, so I didn't say anything about it, but that was something that was happening from as early as I can remember (about age 2) until days before I ran away from home at age 16.

> It was a very confusing environment because I was so aware intuitively, and yet so guarded from the outside world. It was like my father was covering up my eyes and ears and mouth and trying to convince me that everything was all good, but my heart was telling me it wasn't, and I went back and forth constantly with self-doubt, resistance towards him, resistance towards myself, shame, anger, helplessness, hopelessness, and so many other feelings. I eventually lost my will to live. Ultimately, a strong sense of self and a desire to live on my own terms and experience more from life won out (it was literally a life or death choice), and finally one morning, absolutely shaking and breathless with fear and excitement, I snuck out the back door of the house I'd been forced to inhabit for so long. Sometimes though, I feel like that door is still right behind me, like I've just now walked out of it.

Have you ever been formally diagnosed with depression, anxiety, or some other mental health condition?

Post-traumatic Stress Disorder

At what point were you diagnosed with PTSD?

It was about a year ago actually, when my relationship at the time was disintegrating, and I was noticing that as things fell apart, I was feeling more intensely than ever before. I went to see a therapist (and never went back, as a matter of fact... as it turns out, I hate when people write in notebooks while I'm talking), and that's when I was diagnosed with PTSD, after I had told them most of my story at intake. I feel that the diagnosis is pretty accurate, although I never use it to define myself, except in moments where I feel myself still deeply affected by trauma.

Have you ever had thoughts of harming yourself?

Not really. I would say music has kept me from the edge many times though, in terms of despair.

Can you clarify a bit what you mean by "the edge"?

Yes, going back to the panic attack... I had no idea what was happening to me, I just assumed I was losing my mind. I read later on that this is actually a feature of panic attacks. I never talked about the experience until after I was sure I wasn't losing my mind, but in the meantime, every night when I closed my eyes to go to sleep, this giant ghost of mockery and meaninglessness would eat up my consciousness. Being a mental health clinician, and looking back on that experience, I feel pretty safe in diagnosing myself with having had experiences of mild psychosis at night for several months. I could feel it, just the feeling of something extremely wrong, total helplessness, racing thoughts, constant strange images and sounds on the edge of perception. That's where the music came in, delivered by iPod and earbuds, usually BT's "This Binary Universe," which had such a wholesome and comforting sound, mingled with overtones of joy and grief. There are many nights I wouldn't have slept at all without it. I haven't had anything like that experience ever since. Although I still love that album, I never listen to it any more. I feel that its work with me is done.

You mentioned in the past that you had written a song? Can you talk a little about that process? Was that cathartic? Do you feel that process helped to fortify your sense of self, or voice? If so, how?

Yes! Yes, and yes. I think it helped me to anchor to grief and loss, kind of in the same way as anger... And more too, just the whole messy experience of being alive, and agreeing to it all. And the fact that it's in a song, which is such an expression of beauty too... I felt some real poetic justice there, like a sort of reverse mockery. Like I was really sticking it to everything I'd been struggling with: depression, anxiety, uncertainty, insecurity, just by identifying with it and accepting it, vocally and with grace and pride. It gives me chills just to think about that, how powerful that is.

Regarding how these activities affect your mood, is there a marked difference for you in playing, songwriting, composing, and listening to music?

Yes. I tend to play instruments solely when depressed or anxious, to connect with something outside of myself, something bigger and warmer and stronger and wiser. I listen in all moods, either to explore or escape certain mental states, or simply to just dive in and enjoy... Or to dance!

Do you feel music is a large part of your identity?

Yes!

Has the process of engaging with music helped you overcome some type of hardship?

Yes. When I was growing up in my abusive home, playing instruments helped me to find my center amidst chaos and pain. Listening to music and being in nature were my sole experiences of joy as a child.

Can you elaborate what you mean by finding a "center?"

I guess I just mean the opposite of dissociating, which was my tendency at any given day and time, due to the nature, frequency and intensity of the abuse that was occurring. Music was the only thing that was physically happening that wasn't abusive. I daydreamed and read and wrote and drew, but none of things were tangible and real to me in the way that music was, they couldn't compete with the abuse for my attention like music could, and did, and sometimes won. When this happened, it was like a light at the end of a tunnel. I knew there was more to life than what was happening to me.

What kind of instruments were you able to play?

My first musical device was a ukulele, when I was 4 years old. It didn't last long in my destructive little hands, but I sure loved it. I played a whole succession of keyboards, as my hands grew bigger, and then started playing guitar when I was 8, which was a real treat. I taught myself out of a guitar beginner's book, but my favorite thing was always playing my own compositions. I've since played drums with a band, and continued self-education and composition with guitar and piano, as well as eternal 'dinking around' with ukulele and harmonica, and pretty much every musical device that crosses my path. I like to make noise, which is kind of funny because I'm a very vocally withdrawn person at this point in my life.

Do you feel you are affected *(physically or emotionally, positively or negatively) by music?*

Yes. I wouldn't say either positively or negatively. For me, there is a much wider range of affect, and sometimes combinations thereof.

Do you sometimes use music to intentionally regulate your moods and/or emotions?

Yes. I find that happy music makes me sad, and sad music makes me happy. I haven't figured that one out yet, but I have some theories...displaced sense of belonging/identification, etc.

Do you listen to music to magnify/heighten sadness?

Yes.

Do you listen to music to alleviate/lessen sadness?

Yes.

Do you listen to music to magnify/heighten anger?

Yes. (Or rather, identify with and accept in myself as a real emotion that I'm really feeling. Helps me to anchor to anger.) Anger was never something it was safe for me to feel... As a child, expressing anger led to intense and sometimes life-threatening physical abuse. I still struggle to express it, although I don't dissociate from it any more, which was my practice for years even after I left home. That's what I mean by anchoring, just not dissociating, like really feeling the anger and letting myself sit in it, not trying to ignore it or make it something else.

Do you listen to music to magnify/heighten feelings of hopelessness or despair?

No. Sometimes it happens as a side effect though, which I don't mind at all.

Do you listen to music to alleviate/lessen feelings of hopeless or despair?

Yes.

If ever, how often do you listen to heavy/intense music?

Not as much as I used to. I listened to a lot of heavy metal, heavy rock, industrial, and "goth" music right after I ran away from home. I felt that it mirrored my feelings (and sometimes, lack thereof) pretty well. These days, I listen to Tool, A Perfect Circle, The Mars Volta, Muse, and Radiohead, to name a few, for the sheer beauty and power of it.

Is there a particular mood or mindset that motivates you to listen to heavy/intense music?

Yes. I like to explore heaviness and intensity, especially from a secure inner place of calm and balance. Same with melancholy, although that's more addictive for me. Also, when I'm depressed, I tend to turn to heavy music to make myself feel something, anything.

Do you find listening to heavy or intense music most often improves, or worsens your mood?

Improves. (There's definitely music out there that worsens my mood though!)

What kind of music worsens your mood? Any particular genre?

Country. Wow, bad memories. It just brings up this feeling of hopelessness. That's what I feel country music does, glorify hopelessness. I guess it reminds me of the people I saw back home, getting stuck in this rut that became their whole life, and trying to make themselves feel better about it. I'm so thankful I never wanted to feel better about that kind of thing. That's worse than death to me.

Of Diversion, Solace, and Discharge, which type of listening to heavy/intense music most improves *your mood?*

Most often solace, sometimes discharge, never diversion.

The final statement of Kelty's preference for the two former methods of music in emotion-regulation is revealing and compatible with prior research, MARQ survey findings, and case studies. For many of those who suffer intense trauma or PTSD, Solace is an effective and frequently-employed strategy. One of the most common remarks to those subjected to negative life events is the assurance that no matter the circumstance, *they are not alone.* Kelty's use of music for Solace in response to trauma

from a young age to adulthood varies in frequency and preferred application, yet remains her most often employed tactic. Though Diversion proved useful to Amy directly after her sexual assault, when it comes to heavy and intense music, she reports preferring Solace and Discharge strategies because they help "get her feelings out" and "make her feel less alone." Of particular interest is her following comment to clarify: "And my feelings are okay, but mostly I guess it kind of regulates them."

For Amy and many others, music listening for the strategy of Diversion can be practical in helping to facilitate daily responsibilities and tasks when one is otherwise lacking the motivation. The ways music affects and acts in accordance with the body, as we will see in the final chapter, are powerful motivators of motivation and resilience. However, for those who have experienced significant trauma, it is ironically not always the feelings that one seeks to alter, such as seen in the goals of distraction in Diversion; it is very often feeling *itself.*

Recalling Jake's intense struggle and desire to end his life, his description of how he was brought out of the act by suddenly hearing the music's lyrics is telling: "The song is sad, but it met me where I was — it let me fake it through the next day, if you will." In meeting Jake on an emotionally compatible plane, the perceived heaviness and intensity of the music and lyrics assisted in metaphorically *grabbing* the subject back from near oblivion to re-join the affected and living—not by dulling or disguising his pain, but almost, in a sense, *matching* it.

In *Memories, Dreams, Reflections*, Carl Jung describes true loneliness less in terms of physical isolation than a lack of social understanding or communication. He recalls:

> … As a child I felt myself to be alone, and I am still, because I know things and must hint at things which others apparently know nothing of, and for the most part do not want to know. Loneliness does not come from having no people about one, but from being unable to communicate the things that seem important to oneself, or from holding certain views which others find inadmissible (Jung, 1963, 356)

Jung's description of loneliness is routinely echoed in accounts of those who suffer from affect dysregulation and self-injurious impulses. The perceived isolation from being unable to adequately articulate one's thoughts, emotions, and needs can leave sufferers feeling as if no one understands, or worse, *will ever* understand. For Amy, Jake, and Kelty, we have seen highly poignant moments of music not affording a distance from the pain, but an often near-magnification, providing a unique and new conception of its (and their) purpose. When one is caught in the midst of extreme hopelessness or despair, music is a distinctly capable tool for not only matching one's high arousal to lower it back down gently to safety, but providing immediacy of action, poignant autobiographical and social memories, and comforting sense of ontological security.

III. RECOVERING THE SELF THROUGH MUSICAL BEHAVIOR

> How does one lose a self? It can be sacrificed at birth to fill up an empty parent. It can be shattered into fragments from unspeakable terrors like abuse, neglect and emotional and/or physical abandonment. It can become numb, deadened to life as the only way to exist in an unsafe environment. Or, essential parts of the self can be hidden away because when they first came forth they were not welcomed, seen, understood and valued, but were judged, shamed and rejected for being too different, too needy, too much. Sometimes, the authentic self retreats into an inner sanctum because it was envied and even hated for the bright light of potentiality it possessed.

> - Diane Austin, *The Wounded Healer*

Abstract

Jungian analysis understands the psyche as encompassing all psychic processes, both conscious and unconscious. Jung maintained that like the body, the psyche is a self-regulating system and is subject to change. In much of modern neuroscience, notions of personality and the self go hand in hand as a set of neural processes in constant flux due to their capacity to learn and remember (LeDoux, 2002). In Catherine Malabou's endeavor to arrive at the intersection of neuroscience, psychoanalysis, and philosophy, she posits the notion of the brain as text, constantly fashioned and shaped by epigenetic modification (Malabou, 2015). When psychic illnesses attack the emotional brain and these processes deteriorate, one's sense of self -- one's very form may soon follow suit. How does one contend this potential annihilation of being; this fragmenting of self-becoming?

As pathological plasticity threatens the very desertion of subjectivity, this contention must arise via embodied consciousness, responsibility, and intentionality. Looking to music as an aid to regulating this process, we consider how sonic gestures appending to identity and emotion may feed off of and complement one another. As we have seen though previous respondents and case studies, music functions as a sign of self and social identity. It therefore also functions as a self-object; reinforcing its function as a sign of identity. Most importantly, music as self-signifier thrives on affective qualities that we experience rising from the inner psyche and body. Just as traumatic experience affects the plastic psyche, music may provide an invaluable capacity to mediate the gulf between affect and the self, profoundly improving self-regulation.

The Plastic Self

In the processual journey from affect to the self, we are sometimes left wounded - neurologically, pathologically, ontologically. While the ontologically secure *self* lies undivided, what hopes remain for those whose subjectivity have been assumed mortally wounded? Can this lesion of identity, this sense of "self" be claimed again not only through the journey of affect to self, but self to affect? Could it be that with music as a source of ontological security, dysregulated affect need not be permanent and unshakeable, but made open and receptive to vital feedback from the self?

In *The Birth of Tragedy* (1872), Nietzsche describes music and art as the ultimate method of coping with life, and traces its height to the Greeks who recognized that the act of creating enabled one's desire to continue existing when otherwise no reason could be found. Just as traumatic experience affects the plastic psyche, music may provide an invaluable capacity to mediate the gulf between affect and the self, profoundly improving self-regulation and resilience.

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In *What Should We Do With Our Brain?* (2008) Catherine Malabou announces "The brain is a work, and we do not know it. We are its subjects - authors and products at once - and we do not know it." This gives way to the parallel in Marx: "Humans make their own history, but they do not know that they make it." Here Malabou reconciles this pertinent analogy: humans make their own brain, but they do not know that they make it. With the aim of her work to awaken the philosophical, scientific, and political implications that *a consciousness of the brain* would entail, Malabou ushers in a humble and yet simultaneously explosive sentiment: "Our brain is plastic, and we do not know it."

What Malabou describes here is not a wholly ignorant understanding of this word. After all, plasticity represents (now, more than ever) one of the most dominant concepts of the neurosciences, spilling over into so many disciplines it becomes difficult to keep up. It is the fear of the unknown; a shying away from the not quite understood; a collective misinterpretation of what it truly means to be plastic beings.

In biology, phenotypic plasticity describes the ability of an organism to alter its phenotype in response to changes in the environment. In both psychoanalysis and neuroscience, a plastic brain or psyche finds the right balance between the capacity for change and the faculty to stay the same, between the future and the past, between the giving and receiving of form. Regarding the *plastic self*, this designation intends precisely the difference in brittle, delicate material that is prone to easy destruction, and the resilient, adaptive, explosive composure of what Malabou labels *plastique*. Taken from the Greek plassein (to mold), plasticity has two basic definitions: to receive form, and to give form. Plasticity in the nervous system resembles an alteration in structure or function brought about by development, experience, or injury. It is within the concept of plasticity that an ecological, self-creating, and emancipatory paradigm of affect might emerge.

In its most rudimentary and optimistic understanding, plasticity offers interminable hope in its positive capacities of creation and rejuvenation. However, it must be noted that plasticity functions on a continuum between two extremes (Malabou, 2008, 5). In *Ontology of the Accident*, Malabou issues a warning: within this plastic transformation also lies the potential to unravel the self in devastating ways. If truly 'we are our synapses' (LeDoux, 2002), this dark side of plasticity leaves us vulnerable to a number of neurological and psychological mutations and monstrosities. We have come to understand the brain as "the privileged site of the constitution of

affects" (Malabou, 2012, 3). What happens when this site, and in turn subject, becomes damaged, fragmented, or most perilous of all: *lost?*

The Destructive Accident: Alienation And The New Wounded

When one is exposed to the occurrence of trauma, loss, or what Malabou terms a *destructive accident,* the subject as neuronal being cannot help but be altered. The accident Malabou refers to may be the product of any number of ills. Socio-political trauma, defined as trauma unlinked to cerebral pathology yet presenting behaviors identical to those of subjects with brain lesions[7] [see Damasio, 1999] may be seen in what Malabou terms "extreme relational violence" from mistreatment, war, captivity, or sexual abuse. Material (or physical) trauma may manifest itself via organic damage to the brain though injury or illness. Cerebral lesions, brain tumors, severe wounds of the mind and psyche revealed through mental illness, or the painful effects of degenerative conditions are all examples of 'ontological violence'[8] to the subject that gives rise to a new being altogether, potentially void of its very agency.

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[7] For explanation of the "lesion method" see Damasio, A. (1999). *The Feeling of What Happens.* San Diego: Harcourt. 13- 15

[8] Here 'ontological violence' may understood as anything that interferes and/or prevents the full "Being" of a being -- whether this is cultural de-personalization; or philosophically, a kind of primordial occurrence that interferes. The violence isn't always something strictly suffered; but also resisted.

In *The New Wounded: From Neurosis to Brain Damage,*[9] Malabou puts forth a specific appellation of patients, designated precisely by the psychic wounds that traditional psychoanalysis "cannot understand." She explains:

> The presence of the new wounded constitutes both a return to the past and an emergent phenomenon. The "new wounded" are also the "old" wounded, people whose pathologies have long been identified. Freud the neurologist knew them on sight. At the same time, these pathologies are "new" to the extent that we are beginning today to appreciate not only their organic but also their psychic effects. Herein lies the new phenomenon: From now on, *people with brain lesions will form an integral part of the psycho-pathological landscape.*
>
> Who are they? They are, as the term indicates, victims of various cerebral lesions or attacks, head trauma, tumors, encephalitis, or meningoencephalitis. Patients with degenerative brain diseases such as Parkinson's or Alzheimer's also fall into this category. In addition, we might think of the patients whom psychoanalysis has attempted to cure without success: schizophrenics, autistics, epileptics, victims of Tourette's syndrome.
>
> The "new wounded" constitute an emergent phenomenon, then, to the extent that this category also refers to subjects who suffer from disturbances that had yet to be identified during Freud's time. For example, one might adduce several recently discovered disorders: obsessive-compulsive disturbances, hyperactivity syndrome with attention deficit disorder, or any of the illnesses identified by the "disabilities movement."
>
> All such people—victims of accidental lesions or chronic illness—suffer, no matter their disparate clinical profiles, from emotional disturbances that essentially consist in the malfunctioning of affective signals necessary to make decisions (Malabou, 2012, 9-10).

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[9] Originally *Les Nouveaux Blessés: de Freud a la neurologie: penser les traumatismes contemporains* (Paris: Bayard, 2007) prior to English translation (2012)

Malabou's *new wounded* in danger of disaffection are not unlike those suffer-

ing from another type of affective volatility. This subject is not the disaffected, but the

labile or *hyper-affected* patient. This spectrum's end of affective volatility varies wide-

ly in severity, and may be seen clinically in cases of strictly organic trauma such as

seen above, issues of sensory processing (such as in ADHD or ASD), mood (affective)

disorders, as well as in both Borderline and Histrionic personality disorders. Be it

trauma from cerebral modification, the rupturing of neural connections — any shock,

severe psychological stress, or acute anxiety always impacts the *affective brain* (Mal-

abou, 2012, xviii).

In *Descartes' Error: Emotion, Reason, and the Human Brain,* Antonio Dama-

sio points out a fatal error too often committed by the public and institution alike:

> The distinction between diseases of "brain" and "mind," between "neu-
> rological" problems and "psychological" or "psychiatric ones," is an
> unfortunate cultural inheritance that permeates society and medicine. It
> reflects a basic ignorance between brain and mind. Diseases of the
> brain are seen as tragedies visited on people who cannot be blamed for
> their condition, while diseases of the mind, especially those that affect
> conduct and emotion, are seen as social inconveniences for which suf-
> ferers have much to answer. (Damasio, 1994).

Malabou agrees, further emphasizing how the border between material and so-

ciopolitical trauma is becoming increasingly porous and clarifying that it is this affir-

mation which opens the concept of "brain damage" to the types of harm not initially

pertaining to neuropathology (Malabou, 2012, 10). Though she acknowledges the

complex relationship between the "normal" psyche's interior and the traumatic event

of an unpredictable exterior is never simple, she maintains that whether these neuronal

changes are the cause of psychic disorganization(such as in cases of neuropathology),

or the consequence of psychic disorganization (such as in cases of sociopolitical trau-

ma), "the same *impact of the event* is at work, the same *economy of the accident*, the

same relation between between psyche and catastrophe" (Malabou, 2012, 11). The

construction of the paradigm of the "new" wounded is possible precisely due to the

point of recognition that "all trauma impacts neuronal organization, particularly the

sites of emotional inductors" (Malabou, 2012, 11). Afforded this paradigm, we may

regard the affective processes of patients suffering from trauma, illness, and abuse in

some cases sufficiently alike to consider common approaches to treatment despite of

cause due to the brain's demonstrated plasticity. It is here that we place our focus, on

the commonality in each of these victims, or *new wounded*: the threat of forsaken

identity, the collapse of subjectivity, and the search for the affective self.

From Affect To Self; Self To Affect

Though the definition and deconstruction of "self" varies over many decades

and disciplines, I offer an explanation drawing upon William James, Carl Jung, and

Carl Rogers, ultimately articulated by Joseph LeDoux, as

> "the totality of what an organism is physically, biologically, psycholog-
> ically, socially, and culturally. Though it is a unit, it is not unitary. It
> includes things [that] we know and things that we don't know, things
> that others know about us that we do not realize. It includes features
> that we express and hide, and some that we simply don't call upon. It

includes what we would like to be as well as what we hope to never become" (LeDoux, 2003).

In imagining the self, several questions may arise: how do genetic, environmental and behavioral factors influence the ways in which the brain processes emotion? What happens when one is affected too deeply, and how does this become actualized into a damage of the self? Once made conscious, how does one navigate such an affect? Most critically, under what circumstances do the enablement of affect to self occur? Eric Shouse emphasizes affect's significant role in determining the relationship between our bodies, our environment, and others (Shouse, 2005, 26). Because of this relationship the sense of self in large part can ultimately be traced to affect. If broken down, the existentially and biologically affective process, comprised of a thousand prepersonal moments, might look like this:

AFFECT TO EMOTION
EMOTION TO ACTION
ACTION TO BEHAVIOR
BEHAVIOR TO PERSONALITY
PERSONALITY TO SELF

Though of course such an oversimplification is innately problematic, consider the implications of this theoretical structure in everything from mental illness to existential freedom. If we are responsible for our actions, and in control of our emotions, our personalities, and ourselves, to what extent does biology sculpt or influence individual behavior? Can we regulate our affective responsivity in the space between stimulus and response? It is possible that were we to claim our plastic agency, the aged

"stimulus-response" model might be further problematized for the better, uniquely fostering potential for the reversal of this very process?

Before one attempts to navigate the chasm between affect (prepersonal stimulus) and effect (personal response), one looks to the type of cause which might determine e(a)ffect. Long before genetically-crafted proteins influence the way neurons are wired, one's ultimate pathology may be linked to various genetic vulnerabilities influencing autonomic reactivity and general arousability[10]; the latter of which provides susceptibility for potential affect dysregulation. The inability to properly regulate affect may lead to abnormal self-development in childhood or surface in early adulthood and is associated with an increased risk for mood affective and/or personality disorders and/or maladaptive traits (e.g. neuroticism and stress reactivity), especially after exposure to physical or psychic trauma (Kuepper, et al. 2012).

In conceptualizing the types of damaged affectivity so often seen in these *new wounded*, the possibility arises to narrow down and isolate certain predetermined factors, environmental conditions, or life events which may influence the development and/or fragmentation of the self. As LeDoux (1998) explains in *The Emotional Brain,* "Nature and nurture are partners in our emotional life. The trick is to figure what their unique contributors are." Thomas Lewis describes in *A General Theory of Love* (2007), "Everything a person is and everything he knows resides in the tangled

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[10] see S-allele of the 5-HTTLPR, see Kuepper, Y., Wielpuetz, C., Alexander, N., Mueller, E., Grant, P., & Hennig, J. (2012). 5−HTTLPR S−allele: a genetic plasticity factor regarding the effects of life events on personality?. *Genes, Brain and Behavior*, 11(6), 643-650.

thicket of his intertwined neurons. These fateful, tiny bridges number in the quadrillions, but they spring from just two sources: DNA and daily life. The genetic code calls some synapses into being, while experience engenders and modifies others." We are a product of both our genes *and* environment, and we forget this at our own peril.

In *Feeling, Emotion, Affect* Eric Shouse describes Spinoza's *affectus* as an ability to affect and be affected. He clarifies *affect* as a "prepersonal intensity [quantity] corresponding to the passage from one experiential state of the body to another" (Shouse, 2005). The very fact that our environment and interactions hold such critical weight in the formation of affect, personality, and the self is catalytic evidence against the fatalistic determinism[11] of the oversimplified stimulus — response approach.

The contagious impact of such debilitating, reductionist thinking remains a devastating misunderstanding to arise in tandem the disability acceptance movement. While the campaign to abolish stigma and discrimination in mental health is a noble and desperately-needed venture, the onslaught of apathy spread in social and cultural memes that naively claim absolute and willful helplessness at the hands of impulsivity or chemical imbalance is out of control. The repeated dogma of exclamations "It's a brain/chemical flaw, not a choice, this is who I am, and there's nothing I can do to

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[11] here understood philosophically as the doctrine that all events, including human action, are ultimately linked to causes external to the will. Some philosophers have taken determinism to imply that individual human beings have no free will and cannot be held morally responsible for their actions.

change it" only stand to weaken the prior stories of struggle and ultimate triumph of 'wounded healers' like Carl Jung, Kay Redfield Jamison, and Marsha Linehan. The long-prevailing "left-brain, right-brain" paradigm which indoctrinated so many to believe they had a 'weaker' side of the brain is only one example of the damage overly-reductionist views ensure.

If not every aspect of what comprises our reactivity to stimuli is strictly biologically-based or determined, is it possible we might have more agency than once imaged; more power than we've sought to claim? Could it be that these anxieties from which we suffer, and these affective neuroses that seem to paralyze are not simply and irrevocably our impenetrable fate?

Regarding the obscure transitions from prepersonal affect to personal response, how does the subject under attack reclaim their sense of self; their sense of agency? At which point might the feedback from the sense of self *back* to affect occur? Stern (1986) notes that one of the most important roles affect plays is in tune with the development of the varying senses of self. However, despite their gravity, affects do not unilaterally determine the content of emotions, nor do they govern action - and the inverse is simultaneously true. In the search to understand how nature and nurture's unique contributors manifest their pathology through affect, it is not entirely surprising that the opposite might simultaneously occur: the unmasking of certain epigenetic experiences with *formative* potential: thus enter journey of response from the self back to affect.

Shouse (2005) asserts that one of the simplest ways to understand the affective

process is to examine an individual with a faulty system, and similarly references

Sacks' experiences as a neurologist with such a person:

> She was an elderly patient who had suffered a hip fracture. The fracture
> resulted in the immobilisation of her leg for an extended period of time.
> At the time Sacks began working with her, the woman hadn't regained
> feeling in her leg in three years. She was not able to consciously move
> her leg and she felt that it was "missing." However, when she heard
> music she would involuntarily tap her foot to the beat. "This suggested
> the possibility of music therapy – ordinary physiotherapy had been of
> no use. Using support (a walker, etc.), we were able gradually to get her
> to dance, and we finally achieved a virtually complete recovery of the
> leg, even though it had been defunct for three years" (Shouse, 2005,
> 2-3; Sacks, 1998, 170-1).

Shouse explains the woman described could not move her leg because it had

become disconnected from her "a-conscious awareness of her body, or 'propriocep-

tion" (Shouse, 3). "Affect adds intensity, or a sense of urgency to proprioception

which is why music - the recollection of which is partially stored in the body - could

move this women's leg when the will alone could not" (3). He continues, citing

Tomkins:

> The affect mechanism is like the pain mechanism in this respect. If we
> cut our hand, saw it bleeding, but had no innate pain receptors, we
> would know we had done something which needed repair, but there
> would be no urgency to it. Like our automobile which needs a tune-up,
> we might well let it go until next week when we had more time. But the
> pain mechanism, like the affect mechanism, so amplifies our awareness
> of the injury which activates it that we are forced to be concerned, and
> concerned immediately (Tomkins, 1995, 88)

In this way, affect *is* this intensity that without which feelings do not feel, and critical situations are not urgent.

Music and Affect

Returning to our endeavor to perturb the basic model of stimulus and response, consider the ways music plays this part. In *Music in Everyday Life*, Tia DeNora recounts her experience interviewing fifty two British and American women between 1997-1998. This exploratory research examined musical behavior in daily life as well as in social practice. For example, interviewee Becky turns to different types of music to 'reconfigure' herself. DeNora explains that in this case, music is used as a "catalyst that can shift reluctant actors into 'necessary' modes of agency, into modes of agency they perceive to be 'demanded' by particular circumstances" (DeNora, 2004, 54). Implications for those who suffer from social anxiety would seem a worthy consideration for this type of self-regulation, yet it need not be restricted to those of a tangible pathology, for who has not experienced the calming of nerves before or during some sort of social gathering with the explicit addition of music?

DeNora continues that Beatrice, on the other hand, a quiet, American college student who enjoys playing Bach preludes and fugues on her piano, relays her home venting process using loud music as an act parallel to punching a pillow, she states, "because it really makes me feel that I'm taking the anger away. I don't know how it happens, but it really works" (57). DeNora's next example explains that punk (or any

type of anti-establishment music) enables a sort of identification, but also capacity to

"diffuse your mood because you sort of listen it out…rather than just going and hitting

someone or doing something like kicking the door" (57). DeNora explains:

> Music gives respondents a medium in which to work through moods. It provides a way of transferring their means of expression from the 'real', physical realm ('hitting someone or doing something like kicking the door', 'punching a pillow') to the imagined, the virtual. Music thus provides a virtual reality within which respondents are able to express themselves in a (symbolically) violent manner, for example by choosing 'aggressive' or 'anti-establishment' music, or by playing music at full volume. This virtual realm is a haven for angry individuals; within this haven, they adopt the position of being in control of the symbolic and physical environment.
>
> In this sense music is both an instigator and a container of feeling – anger, sorrow and so forth. The natural history of the practices and processes in and through which feeling states are identified and 'expressed' (that is, enacted to self or other over time) is a key topic for the sociology and social psychology of subjectivity. (DeNora, 2004, 56).

The control of which DeNora speaks is a tremendously prevalent and recurring

theme in theoretical literature, empirical studies and field work in regards to emotion

regulation.

It must be noted that in none of these examples, DeNora explains, does music

simply act upon individuals as a stimulus: "Rather, music's 'effects' come from the

ways in which individuals orient to it, how they interpret it and how they place it with-

in their personal musical maps, within the semiotic web of music and extra-musical

associations" (61). Susan McClary argues that like any social discourse, music is

meaningful to the extent that people believe it is and act in accordance with that belief:

"Meaning is not inherent in music, but neither is it in language: both are activities that are kept afloat only because communities of people invest in them, agree collectively that their signs serve as valid currency. Music is always dependent on the conferring of social meaning —as ethnomusicologists have long recognized, the study of signification in music cannot be undertaken in isolation from the human contexts that create, transmit, and *respond* to it" (McClary, 1991, italics mine).

Given a more nuanced understanding of the stimulus-response approach, it is imperative to stress that though music (or other environmental stimuli or interactions) may affect us substantially, we are by no means powerless to provide feedback from whence it came. It is the way in which we appropriate such environmental, interactional and musical stimuli and meaning that leaves us as the ultimate and sole executers of our journey back from self to affective response.

Recovering The Self Through Sonic Gesture

Looking towards additional ways in which musical behavior might aid in regulating this affective journey, consider how both the elements of music appending to identity and emotion may feed off of and compliment one another. As we have seen with Amy, Jake, and Kelty, music functions as a sign of self-identity and social identity, it therefore also functions as a self-object. In functioning as a self-object, it reinforces its function as a sign of identity. Most importantly, the notion of music as self-signifier thrives on emotional qualities that we experience rising from the inner psyche and body. The process of transforming sound into music is not completely unlike that which turns behavior and bodily movement into action. "In order to interpret someone

as performing an action, we must regard this someone as a subjective agent. Action involves intentions, beliefs, and desires on the part of the agent" (Volgsten, 2013, 349). As most meaningful interaction between the self and the other is immersed in affective experience (be it within the context of mood, atmosphere, or object) one can begin to unravel the invaluable capacity music may hold in mediating the gulf between affect and the self.

In addition to conscientious music listening as self-regulation, recent years have shown promising developments for the use of musical behavior in direct integration with psychoanalysis. In both *In search of the self: The use of vocal holding techniques with adults traumatized as children* (2001) and *The Wounded Healer* (2002), Dr. Diane Austin (founder, The Music and Vocal Psychotherapy Center in New York) describes various theoretical perspectives of trauma and the self, emphasizing the pivotal role music may play during transference and countertransference of the therapeutic relationship. She explains:

> "Different manifestations of "self-loss" have been given different labels
> by the psychiatric community over the years. Narcissistic, Borderline,
> Schizoid and other personality disorders are the terms that have been
> used to describe the wide range of symptoms and defenses that occur
> when connection to one's authentic and vital center of being is
> broken" (Austin, 2001).

Developed by Austin, vocal psychotherapy is a modern model of music psychotherapy which uses music within a client and therapist relationship to promote the client's emotional, psychological, physical and spiritual growth and healing. This

method combines instrumental and vocal improvisation, singing, songwriting, listen-

ing to recorded music, and talk therapy (Austin, 2015). Operating on her basis of the

voice as a (if not the) primary instrument, she posits that singing is one of the most

effective practices in building a bridge between the self and the other. Vocal Psy-

chotherapy uses the breath, natural sounds, vocal improvisation, songs and dialogue

within the client and therapist relationship to facilitate "intrapsychic and interpersonal

change and growth" (Austin, 2015). Combining elements of depth psychology with

more generalized music therapy, the model more specifically includes "vocal holding

techniques, free associative singing, and other techniques for accessing conscious and

unconscious feelings, memories and associations."

In a 2011 interview with Austin, she describes the process of vocal holding in

depth:

> It's the use of two chords, or sometimes a drone, but usually two chords
> and the therapist's voice, to create a stable and consistent, safe musical
> environment. And it's used most often to form a bond with the client or
> create a reparative experience…you don't have to be a singer to do this;
> it's not about having a beautiful voice. It's about forming a connection,
> a relationship. I've had so many clients who had years of analysis and
> could name every complex they had, but they hadn't worked through
> the feelings associated with their injuries because they stayed in their
> heads or the wounds were preverbal so they were still suffering and not
> getting to the core of their issues, not really healing. So, coming from a
> jazz background I've always loved vocal improvisation but there can be
> a lot of thinking involved, at least in the beginning. Thinking about dif-
> ferent scales, ideas … I figured if there were only two simple chords,
> that would help clients to just relax, not worry about a scale or making
> a mistake, and just sink into their bodies, and they could sing whatever
> vowel sound they felt like, "ahh, oooh,"—and then I'd sing with
> them… Harmony would be, say, you're starting to separate but you're

still not ready to go it alone. Grounding - when I hold the tonic and the clients can explore and improvise and when they need to they can come back, touch base-then go off again- is like rapprochement (Austin, 2001).

Austin goes on to stress the importance of the congruence in mind and body in the recovery of one's true voice, or *self*. Dissociative defenses initially constructed to protect the psyche from annihilation often result in a fragmented and/or fatigued self. A full embodiment requires the courage to recall and encounter the affects that were once overwhelming due to a lack of ability to translate such intensity (Austin, 2001). In allowing a sort of "stream of consciousness" affective experience, these and other types of sonic gestures facilitate a space for the unconscious to emerge, as well as dissociative states resulting from trauma to be returned to the body in a safe and healthy manner. Austin describes:

> "Singing, being physically based, enables a severely dissociated client to re- enter her body and access and give voice to what was previously inexpressible. Through free associative singing, the music allows the words to become embodied and linked to feelings so that clients can more easily heal splits between thinking, feeling and sensation" (Austin, 2001).

For many (such as those seen in our case studies) who have sustained seemingly irreparable trauma and/or loss, psychological survival may stand to depend strongly upon the ability to disconnect affect from feeling and emotion; the ability to distance oneself from the traumatic event. Interruptions to these types of attachment bonds caused by emotional, physical and/or sexual abuse can fracture the integrity of self. This process can result in a complete split of the ego or personality, with the self in

turn forfeiting its own voice for the purpose of any means of survival - a place pathology thrives to arise and forfeit its own consistency. As practices such as music psychotherapy have shown that facets of the self can also be projected onto the physical voice, music and musical instruments (Austin, 1993), a safe yet challenging environment of utilizing the subjective (and physical) voice to 'reclaim' the sense of self can be most effective in interventions with traumatized individuals.

The Self And The Other: Music As Ontological Security

Wittgenstein once asserted there are no entirely private languages. That being said, one could question: are there entirely private ways of experiencing music? "Because affect is unformed and unstructured (unlike feelings and emotions) it can be transmitted between bodies" (Shouse, 2005, 26). In the dyadic process of music becoming a core-other with which we engage, music again functions as self-object in that it fortifies the sense of self. "The sense of a subjective other, as we have seen, involves the distinction between the physical stimulus (the bodily behavior, the musical sounds) and the affective experiences of oneself and that of the other" (Volgsten, 2012). By placing ourselves in new and imaginative cultural and social narratives, music not only allows us to test out new ways of being ourselves (Frith, 1996) but provides an *other* with which to coexist in times of distress and physical isolation, thus forming the catalyst for what some would term *ontological security*.

In addition to the evolutionary value of providing a means of communicating focal information as well inducing a nourishing variety of emotions and *affects*, one of music's great catalysts lie in its enriched mechanisms of bonding and attachment. According to Volgsten (2013), the source of our human ability to identify sound as music most likely springs from musical interaction of our earliest social development.

> Our ability to experience music is to a certain point identical to experience or sense *an other*. The ability of a human being to sense an other is a sense that develops in parallel with the sense of self. In other words, our developing sense of a 'core self' necessarily involves a simultaneous development of a 'core other,' against and with which our subjectivity is articulated. We develop our sense of being a 'subjective self' in relation to our sense of there being a 'subjective other.' Moreover, the relationship that enables the articulation of a self and other is *dialogical* in a way that is crucial also for music (Volgsten, 2013).

In *The Music Between Us: Is Music a Universal Language?* Kathleen Higgins outlines how musical experience produces the feeling of ontological security as it "reinforces our sense of comfort in the world, replenishes our sense of life, and invigorates our recognition that we share the world with others" (Higgins, 2012, 144). She points out that according to R. D. Laing, this concept centers around the feeling of belonging to the same world as others:

> A basically ontologically secure person will encounter all the hazards of life, social, ethical, spiritual, biological, from a centrally firm sense of his own and other people's reality and identity. It is often difficult for a person with such a sense of his integral selfhood and personal identity, of the permanency of things, of the reliability of natural processes, of the substantiality of natural processes, of the substantiality of others, to transpose himself into the world of an individual whose experiences

may be utterly lacking in any unquestionable self-validating certain-ties" (Laing,1960, 39)

According to Laing, the term "schizoid" speaks to an individual suffering from two main splits in experience: in his relation with his world, and in his relation with himself (Laing, 1960). This individual does not experience himself 'together with' others but in despair and isolation; an incomplete person 'split' in various ways. A modern interpretation of the term includes "psychology of or relating to a personality disorder marked by dissociation, passivity, withdrawal…"

Via Laing, this lack of ontological security causes profound disturbance be-yond then-defined states of *schizoid* and *schizophrenic* (which he points out represent-ed, at least during the time of authorship, sane and psychotic positions respectively) - the implications are wider-reaching. He soon clarifies that his usage of these terms in *The Divided Self* will refer less to their usual context clinically, and more phenomeno-logically and existentially. As we now understand the diagnosis of borderline personal-ity disorder (BPD) initially was described to "border" on or overlap with schizophre-nia, non-schizophrenic psychoses, and neuroses such as anxiety and depressive disor-ders, it is no challenge to see the influence the concepts of ontological security (or lack thereof) has had on modern psychiatry's understanding of diagnostic etiology.

In Fragmented selves: Temporality and identity in borderline personality disor-der, Thomas Fuchs illustrates the borderline personality via what he understands as the 'fragmentation of self':

> Giving a general characterization, we may say that patients with BPD lack the strength to establish a coherent self-concept. Instead, they adopt what could be called a post-modernist stance towards their life, switching from one present to the next and being totally identified with their momentary state of affect. This results in a temporal splitting of the self that tends to exclude past and future as dimensions of object constancy, commitment, responsibility and identity. Thus, borderline individuals exhibit what may be called a *fragmentation of the narrative self.* (Fuchs, 2007).

Here, the 'fragmented self' of the borderline personality closely aligns with the type of dissociation and unstable relation of self to other portrayed in Laing's lack of self-validating certainties. Continuing Higgins' discussion of ontological security, she points out Laing's experience with one of his psychotic patients, who found he could be at ease only in musical situations. "There was only one situation as far as I could judge in which he could let himself go without anxiety at not recovering himself again, and that was in listening to jazz" (Laing, 1960, 50). Laing explains music as a special circumstance for these patients in fear of "any potential danger to the self," which Higgins adds affords what they are otherwise "almost completely incapable of do-ing—overcoming a sense of deep isolation and a desperate need for protection" (Laing, 1960, 50; Higgins, 2010,146).

Throughout her work, Higgins argues that music (of which listeners are famil-iar) is capable of breeching defenses enacted by both clinical and normative popula-tions because of its ability to promote a basic sense of security (147). She references Oliver Sacks' "man who mistook his wife for a hat" to highlight one of the many ways in which music can counter dissociative symptoms that are also characteristic of cer-

tain mental disorders sometimes developed in response to physical or psychological trauma. She goes on to suggest additional bases for music's capacity to instill a sense of security: the physiology of hearing, which allows a feeling of support by an active, shared world, the experience of musical dynamism outside our bodies as the "original means whereby we become aware of and bond with distinct agents in the social world," the repetitive nature of music that offers comfort in familiarity, and the sense of "community membership" music facilitates, and the protection that involves (168).

DeNora (1999) points out music not only enables the testing out of possible identities, but serves as an emotional memory, a resource for retrieving and reinforcing our self-identities - how the "past 'comes alive' to its soundtrack" (DeNora, 2004, 67).

> Indeed, the *telling* about the past in this way, and of music's ability to invoke past feelings and ways of being, is itself part of this [aesthetic agency's] reconstitution. The telling is part of the presentation of self to self and other(s)…In this sense, the past, musically conjured, is a resource for the reflexive movement from present to future, the moment-to-moment production of agency in real time. It serves also as a means of putting actors in touch with capacities, reminding them of their accomplished identities, which in turn fuels the ongoing projection of identity from past into future. (DeNora, 2000, 66).

Here, music is understood as the production of agency in real-time, a means of reminding us of our potential, and fuel for the projection of identity from the past to the future. As music increasingly fortifies the sense of self, one becomes closer to a place of internal stability. Of course, this ontological security is not the panacea that prevents us from experiencing negative emotions, nor is it an instant miracle to shield us from trauma. It is "the presupposition of being able to confront disturbing emotions

without being devastated by them" (Higgins, 2010, 154). It remains up to us to claim the sole agency of our subjectivity, allowing music's 'invasive' characteristic to enter in and aide this process, if we so choose.

Contending this annihilation of self, how does one reach to a subject who's lost sight of their agency, particularly when the self sought lies fragmented, or hidden deep within? Though some healthy individuals might prefer music listening strategies such as Diversion to modulate or distract from negative emotions, aesthetic intentionality and creative posturing enacted by methods such as Discharge and Solace can prove critical when appointed to alter, create, or re-imagine the self. If one's fragmented or broken sense of self prevents them from writing, speaking, or singing, they might reach to music - if only at first to listen. Through our case studies and personal narratives we observe the strategies of Solace and Discharge more effective than Diversion in the arduous battle against dissociation. One need not escape the pain of trauma indefinitely, but meet it consciously and willingly with the understanding that hope and resilience will be forged. Until one is able to find and grasp their *own* voice, the emulation of deeply affecting musical intensity can provide a cathartic outlet for dissociation's defeat, paving the way for one to begin again in the ontological composition and reparation of the self.

CONCLUSION

In the narratives presented throughout this thesis and in those of Amy, Jake, and Kelty, we have seen the personal strength of young individuals overcome the most harrowing of circumstances. They have survived a litany of trauma, abuse, and hardship, often fighting at one time or another for their lives. In each case certain similarities shine though, visible in facets of everything from their music-listening preferences to the ways in which they faced their unique challenges: They *chose* to keep going. Not by ultimately distracting themselves from the overwhelming obstacles presented, but by consciously feeding their inertia of will, many times using music as the most reliable or only tool available. When Amy found herself immobilized by traumatizing memories, she instinctively turned to music to help her continue her responsibilities as a mother until strong enough to do so "on her own." When Jake suffered a suicidal ideation that finally threatened his life, the whispered music of Elliott Smith reminded him at once of his connection to everyone he knew, reinstating an affective vulnerability swift and forceful enough to stay his hand. When Kelty battled feelings of hopelessness and dissociation as a child, she recalled "music was the only thing physically happening that wasn't abusive," and "real in a way that nothing else was." For these subjects, music served as an anchoring *other,* reminding them of the ties that ultimately bind us all—that there is more to life than the horrors they endured.

These stories of resilience provide evidence that we should never hold hard and fast to the limits of our bodies and selves. After all, *no one has seen what a body can do.* But not only do we need plasticity, we need consciousness of this plasticity. The one least aware of their surroundings is often the most vulnerable to destruction, and the same may be said of their subjectivity and identity. As one grows more stable and receptive to what they are inherently capable, the less divided the self becomes. With a claimed agency, motivation, and will to change comes the greater-fortified self. The stronger the self, the more powerful its ability to provide intentional feedback with the capacity to alter not only the states that follow affect, but the very self from whence it came. *In Man's Search for Meaning*, Viktor Frankl famously writes, "Between stimulus and response, there is a space. In that space lies our freedom and power to choose our response. In our response lies our growth and freedom."

Throughout this work, we have seen music determined fit as an instrument of fostering motivation, action, resilience, survival; even as a tool for rendering vulnerability. What is it about music's *power* that seems to elude every intellectual, musical, and literary attempt that tries to define it? What affective, emotional, social or biological mechanisms are at play that allows music to find its object so pliable?

Moving past the tired debate of whether music's moving faculties are at once wholly positive or destructive (we have seen that they may be either both or neither, depending on the affected agent), consider what is it that *reaches* the deserted or wounded subject when sometimes all other mediums and therapies prove unsuccess-

ful. What is it about music's 'disarming' capacity that can usher in the type of meta-morphic process capable of (to quote Oliver Sacks, 1973) transforming one from re-ceptive patient to active agent?

Over the course of this study, I've become increasingly convinced there *is* in fact something about certain types of music - especially in the form of intensity - that seems to render its subjects unguarded; almost childlike in their capacity to experience wonder and be moved. I do not refer here to a music which one either finds wholly unrelatable or unbearable from elements such as loudness or style, but one that seems to penetrate the affective psyche, evoking descriptors such as "overwhelming" and "overpowering."

We have seen throughout each chapter how music infiltrates people's defenses from the basis of its provision of familiarity and safety, or ontological security. One might infer that these experiences (sometimes described as sublime or affording a sense of intense emotion, awe, or beauty), though vulnerable, are mostly positive in nature. Jeanette Bicknell affords a thorough and stirring treatise of such encounters in *Why Music Moves Us* (2009). Upon her reminder that "powerful responses to music are related to individual psychology, but cannot be reduced to psychological peculiari-ties of those who undergo such experiences" (20), Bicknell chronicles Edmund Burke's treatment of subjective human passions, specifically the beautiful and the sub-lime. For Burke, the distinction lies in that the former is founded on pleasure, the latter on pain, and the major source of the sublime is terror (more specifically that which

produces the ideas of danger or pain). She writes, "Terror, when it does not press too closely, always produces delight" (28). The feeling of the sublime occurs in the forms of astonishment, admiration, reverence, and respect. She further explains Kant makes a similar distinction between beauty and the sublime: While judgements of the beautiful are solely pleasurable, sensations of the sublime include an element of unease mingled with pleasure. For Kant, the feeling of admiration or respect gleaned from the judgement of the sublime or "negative pleasure" is both terrible and attractive. Bicknell concludes "The mind is alternately attracted and repelled by the sublime object" (34).

An early conversation with Catherine Malabou produced somewhat similar sentiments: she confessed that she often did not like music, because she found it *invasive.* In time I began to understand that her strong distaste for music seemed to stem, not from an immediate dislike for all music, but from its power to seize her senses. After later correspondence humbly found her expressing a fondness for one of my own musical compositions, my suspicions were confirmed. Similarly, some have remarked Carl Jung at one point felt a similar distaste for music, even that "it exhausted and irritated him." However, it was later speculated that this distaste stemmed also not from caring too little, but caring *too much*.

As an English concert pianist and head music therapist of the Langely Porter Clinic in San Francisco, Margaret Tilly became interested in experimentation with the therapeutic value of music when used specifically in certain cases. This interest grew

out of her own experience with Jungian analysis, and Miss Tilly was urged by analysts

to acquaint Jung with her work. In 1956, while in Geneva to give a concert on the ra-

dio, she decided to send Jung some papers that she had written. A reply came by return

mail, from Jung's secretary, asking her to come to Kusnacht two days later.

What follows is a condensed portion account of Margaret Tilly's meeting with

Jung, included in the memorial pamphlet at Carl Jung's funeral, reprinted in *CG Jung,*

Emma Jung and Toni Wolff: a collection of remembrances (Mullen, 1982).

> We sat at a round table in the window of his study. My papers were ly-
> ing in front of him and he seemed to be literally bursting with interest
> and curiosity. He said, "I have read and heard a great deal about music
> therapy and it always seemed to me so sentimental and superficial that I
> was not interested. But these papers of yours are entirely different and I
> simply cannot wait to hear what you do — I can't imagine what it is.
> You must please use your language, not mine." I didn't immediately
> understand what he meant by the last sentence, but said, "Before I talk,
> Dr. Jung, may I ask what your own relationship to music has been?"
> And his replay was a surprise.
>
> "My mother was a fine singer, so was her sister, and my daughter is a
> fine pianist. I know the whole literature — I have heard everything and
> all the great performers but I never listen to music any more — it ex-
> hausts and irritates me." When I asked why, he replied, "Because music
> is dealing with such deep archetypal material, and those who play don't
> realize this." And then I understood at last why the idea has grown up
> that Jung is not particularly sympathetic to music. *He cares too much,*
> *not too little.*
>
> We had a gay and delightful time around the fire. Dr. Jung was full of
> fun and charm and as I swallowed my last drop of tea, he said, "I can't
> wait another minute — let's begin, but you use your language." I said,
> "Do you mean you want me to play?" and he said, "Yes. I want you to
> treat me exactly as though I were one of your patients. Now — what do
> you think I need?" We both roared with laughter and I said, "You really
> are standing me up, aren't you?" He said, "Yes, I am; now let's go to

the piano. I am very slightly deaf, so may I sit close?" And with that he sat down just behind me, so that I had to turn around a little to see him.

Feeling slightly as though I were living a dream, I began to play. When I turned around, he was obviously very moved, and said, "Go on — go on." And I played again. This second time he was far more deeply moved, saying, "I don't know *what* is happening to me — what are you doing?" And we started to talk. He fired question after question at me, "In such and such a case what would you try to accomplish — where would you expect to get — what would you do? Don't just tell me, *show* me — *show* me"; and gradually as we worked he said, "I begin to see what you are doing — show me more." And I told him many case histories and we worked on for over two hours.

He was very excited and as easy and naive as a child to work with. Finally he burst out with, "This opens up whole new avenues of research I'd never even dreamed of. Because of what you've show me this afternoon — not just what you've said, but what I have actually felt and experienced — I feel that from now on music should be an essential part of every analysis. This reaches the deep archetypal material that we can only sometimes reach in our analytical work with patients. This is most remarkable."

In his autobiography *In My Own Way* (New York, 1972), philosopher

Alan Watts refers briefly to Margaret Tilly's meeting with Jung and adds:

Shortly afterwards, Jung's daughter said to Margaret, "Perhaps you don't realize that you did something very important for me and my father. I have always loved music, but he has never understood it, and this was a barrier between us. Your coming has changed all that, and I don't know how to thank you."

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In *Ontology of the Accident* (2012) Malabou offers a critical phrase: "One cannot be without being affected." It is similarly often those most affected who have the

greatest capacity *to affect* in return, capable of perturbing the Sisyphean cycle of negative stimulus to conditioned response.

Beyond the realization that we may never fully comprehend these musically affective phenomena (which of course only adds to its illusive power), my answer must remain that music is at once neither inherently good nor bad, and just like everything else, depends wholly on how it is used. Not even music can compel us to act in ways we do not choose. To concede we are slaves to our passions is to forfeit every ounce of subjectivity and agency we have as rational, free-thinking beings. It is within the beauty of plasticity that lies our hope and freedom. The urgency of the matter is not found in the pursuit to unlock music's unique power to exploit and modify our feelings, affects, and emotions. The urgency - what is truly at stake - is that if *we* so decide, it can.

For those who have been touched by trauma, the embodied notions of music, affect, and plasticity afford an irrepressible hope: the capacity for heuristic anticipation, the graceful presage of bodies in motion, and for some, the very idea of freedom from an enslaving stasis. These new wounded need no longer be bound to their hideous or beautiful injury, destined to fear the intense vulnerability of their affects and emotions. Plasticity cannot be domesticated — the brain is ever-changing; so then must our conception of it be also. As one shreds the veil of disaffection, she ceases to be a patient, passive and fated, transformed into an agent — awakened and free.

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