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"It's Not Addiction Until You Graduate": Natural Recovery in the College Context

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"It's Not Addiction Until You Graduate":

Natural Recovery in the College Context

by

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TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

ABSTRACT

Natural recovery is inhibition or moderation of problematic substance use without employing the use of formal addiction services. A neuroanthropological approach to natural recovery highlights the importance of both social and biological aspects of achieving this "self" led process of change. Throughout this project I take a critical anthropological approach to natural recovery, which explores a more holistic conception and historically situated view of current natural recovery theory. This research project employs a neuroanthropological perspective to assess how college students perform natural recovery. Using ethnographic methods, which highlight the social and physical experience of moderation, I discuss how students negotiate pathways for cessation/moderation within the university structure. The university is increasingly a neoliberal space, which influences the way key stakeholders (faculty, staff, and students) perceive and pursue pathways for cessation/moderation. Thus, I found students pursue natural recovery by pulling on recovery capital, facilitated by the university, but outside of traditional cessation pathways, to stop problematic use. Additionally, I employed Bourdieu's notions of practice and habitus to highlight how students negotiate their lives within this structure and pull on their recovery capital to mitigate cues, proposing a biocultural perspective of natural recovery. The goal of this research is to show how students leverage social relationships and cues in ways that are meaningful to sustaining abstinence/moderation without formal guidance or structure. This work contributes to the small body of literature already established around natural recovery and cue reactivity, and shows how ethnographic methods can and should be applied to both of these fields of research.

CHAPTER ONE:

INTRODUCTION

"If the paper had acid we'd never get better"

-Anonymous

Impetus for this study

The first book I read in preparation for this study was *Coming Clean: Overcoming Addiction Without Treatment* (1999) by Robert Granfield and William Cloud, which details how people do what has been termed "natural recovery". As I opened up the tattered copy I got from the university library and began to flip through the pages I noticed something odd in the front inscription. On the information page, where publication and author information is listed there is a small section written about the type of paper the book was published on, "This book is printed on acid free paper." This inscription is common on books and is a methodology used to preserve the text for long periods of time. Scribbled under this statement in black marker is a small bit of commentary, "If the paper had acid we'd never get better". At first I chuckled, acknowledging the vandal's funny play on acid consumption, which is typically dosed on small pieces of paper. Then, I thought about what the unknown author was implying. How does one "get better" when constantly surrounded by something? How does someone stop doing drugs when they are in an environment steeped in cultural ideologies of use, where access is abundant?

I find this to be an apt metaphor for what I have tried to accomplish in this thesis on college student substance use and recovery. Natural recovery is when someone stops problematic

1

substance use without employing formal addiction services. In learning about natural recovery I was drawn to the college student population because of the strong traditions of use, but low diagnosis of addiction in college. According to the Substance Abuse and Mental Health Services Administration in 2014 "The highest rate of current illicit drug use was among youth ages 18 to 20 (22.7%), with the next highest rate occurring among people ages 21 to 25 (21.5%)" (SAMHSA.org 2016). The Substance Abuse and Mental Health Services Administration also note that people within this age range have some of the highest rates of drug abuse, and are at risk for adverse outcomes including increased risk for physical and mental health issues, and even death via overdose (SAMHSA.org 2016; SAMHSA.org 2017). Data collected in 2017-2018 indicates that around 42% of college students have tried any illicit drug (Schulenberg et al. 2018). However, studies have found that college students, when compared to their non-attending peers, are less likely to be diagnosed with substance use disorder (Slutske 2005). This creates a very interesting narrative of problematic substance use and recovery for those within the college environment.

The narrative of natural recovery is strikingly similar to what I watched peers do in my time as an undergraduate. The natural recovery narrative is as follows: use starts and over time increases enough that it is considered by the user (or others) to be problematic. Subsequently, a decision is made to cut back (moderate) or eliminate use all together, typically by getting heavily involved in another aspect of life. This narrative seemingly happens quite casually as compared to formal recovery rhetoric, which emphasizes struggle, powerlessness, and necessary abstinence (Cain 1991). I watched peers during my undergraduate career pursue a similar narrative: during their first few years of college they would start and gradually ramp up their use, to a point where it was problematic. Then, somewhere around their third or fourth year, they would decide to cut

2

back and pursue their education, job, or other aspect of post-graduation life in place of substance use. While this is just anecdotal evidence from my personal experience, other scholars have noted similar trends.

In a 2007 paper, physician Donald Misch engages with the topic of natural recovery in college student populations. He ends his article with a particularly compelling call to action for researchers and administrators interested in substance abuse prevention in college populations. He notes,

> Those college administrators who believe that student growth and development can be precisely micromanaged are at odds with both the data and everyday experience. In particular, the blind application of more programming or more rules is unlikely to result in effective change. Nonetheless, the correct conclusion is not that growth and development cannot be directed or nudged in particular directions; it is that efficacious interventions will most likely result from appropriate research applied thoughtfully to real campus communities. One avenue to success is to observe the phenomenon of early cessation or natural recovery from excessive alcohol consumption among college students and then identify and extract the active ingredient(s) of that transformation… (Misch 2007, 216-217).

Misch's assessment of the importance of understanding *how* students do natural recovery and the applications of this research are points I emphasize in throughout project. College students with problematic substance use, I have found, sometimes follow the same general narrative of use, and perform natural recovery. However, the college experience is unique in the strong local traditions and scenes of use. Calling back to the vignette I used to open this chapter: how do students do natural recovery when they have abundant access and are surrounded by cues to use? This project broadly seeks to address how this form of change happens by interrogating both the social and biological aspects of student substance use cessation.

Addressing Change

Anthropologists are broadly interested themes of structure and agency. In her classic paper, *Theory in Anthropology since the Sixties,* Sherry Ortner examines major movements within anthropological theory through 1960's and the late 20th century. Specifically, she discusses how anthropological theorists, from Levi-Strauss to Marx, have emphasized different approaches to structure. Ortner continues on to highlight what was a turn in the field at that moment, attending to practice, which theorists have since employed as a way reconcile debates of structure and agency (Ortner 1984). However, since her initial paper in 1984 a certain political economic structure has emerged that has shaped contemporary conversation on structure and agency.

In the 2016 update to this paper, Ortner notes that since the 1980's "…neoliberalism as a new and more brutal form of capitalism was [and is] expanding rapidly over the globe" (Ortner 2016, 48). Scholars, since the 1980's have fixated on studying neoliberalism as a political economic structure that illuminates issues of power and inequality. Ortner connects the scholarly neoliberal obsession with the turn toward "dark anthropology". Dark anthropology "…focuses on the harsh dimensions of social life…" (Ortner 2016, 47). Anthropological scholarship has been increasingly focused on those perceived marginalized and powerless through neoliberal governance. At the same time, Ortner posits an anthropology of the good (studies of happiness, well-being, ethics, etc.) which emerged in opposition to dark anthropology (Ortner 2016). Despite that throughout this study I highlight neoliberal structures and issues of agency, I perceive it to fit within the realm of the anthropology of the good. This work as an anthropology of the good highlights how those in neoliberal structures manage, resist, and negotiate their lives

in a positive manner. Rather than fixating on the suffering being, this study emphasizes how agents strategically position themselves within structures to perform self-change.

Employing Bourdiue's notions of habitus and practice, this study examines a particular change: change from user to non-user. Specifically, I ask how students, who are in a very specific bounded physical and social environment do this change. I ask how these agentive beings pull on the neoliberal structures in which they are embedded to reform their lives and investigate their practice to understand how this change is embodied.

This project is unique in that it is an anthropological approach to natural recovery and cue reactivity, two concepts that (to my knowledge) have never been studied from an anthropological perspective. Applying the holistic anthropological framework to these two distinct fields of research will fill gaps in the literature in both of these fields, and interrogates these processes in unique ways. The subsequent five chapters of this thesis compose an ethnographic picture of natural recovery in the college environment.

Outline of Chapters

In chapter two I discuss the literature that informed this research. This is broadly split into two sections. First, I examine scholarship and theory that have been proposed within natural recovery literature. Second, I detail an anthropological approach to natural recovery. Here I propose why an anthropological approach, which considers a holistic being, might be better suited to understanding the actual process of natural recovery. I specifically pull on literature from neuroanthropology to frame this, as it is situated as a biocultural subfield, which accounts for both the brain/body and the social/structure that is involved in problematic substance use.

5

In chapter three I detail the methods used in this study. I begin this chapter by discussing the setting in which this study took place. In this study I pulled on classic ethnographic methods like participant observation and semi-structured interviews. I also conducted social network analysis with participants and in this chapter discuss how participants created what have been termed "participant aided sociograms" (Hogan et al. 2007). I also detail how I analyzed this data, utilizing mainly thematic coding and interpretive measures of the sociograms. Finally, I discuss my own positionality and study limitations.

Chapter four broadly examines the structure of the university. In this chapter I detail the data collected in interviews with faculty/staff and the participant aided sociograms student participants created. This chapter answers my first research question: what types of recovery capital do students use to do natural recovery? Capital is the tangible and intangible resources that people possess which facilitate their place within a structure. This chapter outlines the neoliberal university, the broader structure within which students are doing recovery and how this larger structure conceptualizes student recovery. In contrast, my data discussed in this chapter shows how some students may use the structure differently, highlighting the role of student specific recovery capital. I conclude this chapter by discussing how students work within this structure and pull on unique forms of recovery capital to perform natural recovery.

Chapter five examines participant action and forms of practice that mitigate cues. This chapter discusses a neuroanthropological approach to natural recovery in the college context. Specifically, I discuss how the concept of cue reactivity highlights the way students engaged with their social and physical environments to mitigate cues. Cue reactivity is a paradigm that describes how exposure to meaningful cues after a period of abstinence can lead to relapse. I draw on Pierre Bourdieu's notions of habitus and practice to highlight how students negotiate

6

their daily lives within the structure to mitigate cues. Finally, I conclude by discussing a biosocial approach to cue reactivity and natural recovery.

I have conceptualized chapter four as broadly considering structures, while chapter five examines agents on a closer level. However, it's important to note that throughout the research process that it became clear that there is no distinct line between structure and agency. Students, staff, and faculty, all grappled with structure and agency, albeit in different ways. I mean only to broadly frame chapter four as highlighting a specific structure while chapter five illuminates how particular agents negotiate that structure.

Finally, in chapter six I discuss my broad conclusion that natural recovery is a biocultural phenomenon and framing it as such could be important for continuing research on the topic. I detail the applied outcomes of this project and how I plan to use my data to contribute to better understanding the larger theoretical position of natural recovery, and student substance use at the research site. I also discuss the limitations present in this study. I close the thesis by suggesting directions for future research.

Throughout this thesis I use vignettes and other ethnographic moments that highlight what it is like to be a problematic substance user in the college environment. Due to the sensitive nature of this information, I have taken precautions to protect the identity of participants. I use a pseudonym for the University site at which I conducted this research, Southern State University. Additionally, throughout this thesis, I have changed any identifying information to protect the identities of participants. At the same time, I preserved the sentiment and key information students discussed about their substance use, while taking precautions to obscure their identities in real life. Additionally, since there are few employees at SSU that deal directly with student substance use, there is the possibility that their identities could be revealed based on relatively

little interview information. To prevent any possibility of jeopardizing their employment status I chose to speak more broadly about themes I gathered across these interviews in order to paint a picture of substance use within this structure. This approach allowed me to discuss the themes these participants talked about while mitigating the possibility of revealing their identities.

It is my hope that readers will walk away from this thesis understanding how both large structures and embodied practices are equally as important for those performing natural recovery. The narrative of natural recovery suggests that social actors pull on social resources and connections to institutions in order to do recovery without formal treatment. I want to provide a more nuanced view of the actual experience of natural recovery that accounts for both the social and biological nature of human beings and complicates the narrative of natural recovery.

Overall, I want to bring light to an oft-overlooked process of change. Because this happens outside of a legitimate institution (but is by no means institution-less), natural recovery is often overlooked, disregarded, or thought of as impossible. I was told several times over while conducting this research that natural recovery is impossible. This view comes from a culture that is heavily socialized to look only at institutions as a legitimate form of recovery. My goal is to challenge this conception of recovery. I find that by studying those that exist on the cultural fringes (though by no means numerically) of the concept of recovery, we can see how structure and agency unite under the phenomenon of substance use cessation, and how remitters employ ingenious yet unconscious strategies to stop using substances on their own.

CHAPTER TWO:

LITERATURE REVIEW

Introduction

In this chapter I review select literature that informed this research study. I begin by discussing the history and foundation of natural recovery and briefly review the concepts of structuration and social capital, as they form the basis of recovery capital theory. Subsequently, I propose the necessity of an anthropological approach to natural recovery, which employs ethnographic methods and a holistic perspective that goes beyond these simply social theories. To create this holistic approach I employ the use of neuroanthropological theory, which addresses the biocultural nature of substance use and cessation, specifically when applying the cue reactivity framework. Finally, I use the theoretical concepts of habitus, practice, and embodiment to tie together structure, agency, and the experience of natural recovery. Together, these perspectives inform my approach to natural recovery in the college setting. Namely, this exploratory research highlights how the social and biological come together in student substance use cessation.

Natural Recovery

Natural recovery is a model for a pathway from addiction in which a "self-remitter" (a person who does natural recovery) achieves abstinence or moderation from problematic substance use without formal addiction services or therapy. Previous research has found that

between 70% and 80% of study participants resolved problematic alcohol and drug use through natural recovery (Granfield and Cloud 2001; Sobell et al. 1996). Up until this point, research on the phenomenon has generally come from sociological (Granfield and Cloud 1999; Granfield and Cloud 2001; Granfield and Cloud 2009;) psychological (Briedenbach and Tse 2016; Biernacki 1986; Zinberg 1984; Sobell et al. 1996) and self-help (Peele 2004a; 2016) perspectives. Scholars have approached natural recovery, employing its concepts to help create treatment programs and conceptualize social healing (Boeri et al. 2011; Boeri et al. 2014; Boeri et al. 2016; Lyons 2010; Meyers 2015). These programs and perspectives are based on social factors that facilitate recovery. This, I have come to find, is the emphasis of the natural recovery literature. As I will review, natural recovery theory specifically emphasizes a social perspective of drug use and addiction. This social perspective, and rejection of the disease concept of addiction, has shaped subsequent theory in natural recovery. I argue that while the social perspective is important, humans are at once social and biological beings. Making change, as a self-remitter, pulls on both social and biological aspects of life.

Early scholars of natural recovery emphasized theories that moved away from strictly a drug centered view of addiction and created the space for natural recovery theory, as it exists today. By highlighting ideas such as social context (Waldorf et al. 1991; Zinberg 1984) and identity (Peele 2004b; Biernacki 1986), these scholars turned attention to first the possibility for recovery without treatment and second how social life might play a role.

Expanding on similar themes in their book *Coming Clean: Overcoming Addiction Without Treatment* (1999), authors Granfield and Cloud specifically lay out the role they view that social structures play in addiction and recovery. They spend a large portion of the book discussing social capital which they define as, "the social relations within which individuals are

embedded and the resources that potentially flow from these relations" (Granfield and Cloud 1999, 25-26). They highlight three types of social capital in their participants' lives: stability, ideology, and maintaining relationships. They argue that social capital, whether it is connections to a job or other important institutions, help maintain a sense of stability in the self-remitter's life. They also elaborate on ideology in their participant's life and how it ties an individual to something other than themselves, like religion or obligations to other people. Finally, they discuss maintaining relationships that had existed before, throughout, and after addiction. They propose that these relationships provide resources, both emotional and physical such as support and money, which help the person experiencing addiction pursue natural recovery (Granfield and Cloud 1999). By the end of the book they expand beyond social capital, to recovery capital.

In later literature, Grandfield and Cloud elaborate on recovery capital, which has become the predominant theory within the natural recovery literature. Recovery capital, is "the sum total of one's resources that can be brought to bear on the initiation and maintenance of substance misuse cessation" (Granfield and Cloud 2009, 1972). They breakdown recovery capital into four main components: social capital, physical capital (tangible resources), human capital (knowledge, skills, and other personal attributes) and cultural capital, (drawn from Bourdieu, "values, beliefs, dispositions, perceptions, and appreciations that emanate from membership in a particular cultural group") (Granfield and Cloud 2009, 1974). The authors argue that these specific forms of capital facilitate movement within the social structures in which all people are embedded, and that movement facilitates recovery. This capital centric view forms the basis of natural recovery theory.

Recovery capital is rooted in theories of structure proposed by Anthony Giddens and Pierre Bourdieu. Specifically, Giddens theory of structuration is fundamental to how natural

11

recovery scholars conceptualize structure and agency. Structuration proposes that people are made and at the same time make the structures in which they are embedded. "All organizations or collectivities 'consist of' systems of interaction, and can be analyzed as structures: but as systems, their existence depends on modes of *structuration* whereby they are reproduced" (Giddens 1976, 227). Here, Giddens gets at the crux of his theory of structuration which posits that structures dictate lives but those lives also in turn dictate structures in a mutually reproducing fashion, accounting for both structure and agency. While Giddens proposed structuration to reconcile structure and agency he noted that agents are limited in choices they can make by the structures in which they are embedded.

Granfield and Cloud adopt Giddens approach to structure and agency in recovery capital theory. They argue that users are at once constrained and participate in creating the structures that facilitate a life of substance use (Granfield and Cloud 1999). In their interpretation of Giddens work, Calhoun et al. (2007) note, "Giddens defines structure as the 'rules and resources' that act as common interpretive schemes in a particular social system" (221). Thus, for Granfield and Cloud, problematic substance users are operating according to the interpretive scheme of drug users. "Applied to our research, structuration theory suggests that the patterns of use, the social meaning of substances, the approaches to personal transformation, and the emergent identities associated with self-healing are mediated by the larger social context in which individuals are embedded" (Granfield and Cloud 1999, 132). The authors view structural location as key to self-remitters ability to do natural recovery and insist that those who have more "life options" (better structural positioning and access to capital) are more likely to be able to do recovery.

They use Bourdieu's concept of social capital (discussed at the beginning of this chapter) to reconcile structure and opportunity for self-remitters to make change. They argue that place within structure determines access to capital, and access to capital is the key to change. Capital serves as a concept that mobilizes the "life options" remitters have to do recovery. Thus, structure determines the setting and opportunities while capital determines the moves that remitters can make within that setting. They propose that addiction is a social construct that is in part a consequence of place within the structure, and to move through this structure one must first possess capital they can draw on to sustain recovery. "Just as drug use is mediated by the structured relations in which one is embedded, so too are opportunities for personal change and recovery" (Granfield and Cloud 1999, 138-139). By possessing capital and thus status within these structures, remitters are able to pursue self-change.

The capital centered view of substance use insists that person's position within the broader structure is what shapes their capacity to use in a problematic manner. Those with less capital, and less options in life (think street drug users), the authors propose, are less likely to be able to pull themselves out of use because they simply do not have the capital (financial resources, social support, basic needs met, etc.). However, those who enter problematic substance use with an abundance of capital (think Wall Street banker) have access to capital that facilitates their recovery. Recovery capital theory proposes that capital is used to facilitate movement within the structures that addicts are embedded. Those who don't have capital cannot move within the structure, from user to non-user. However, those that do have capital can make this transition easier. This movement, Granfield and Cloud argue, is how persons experiencing addiction do recovery. They specifically propose that those who do natural recovery make this change on their own, where others might seek access to capital through formal recovery

13

programs. Those who do natural recovery form a "stake in conventional life" and use this as both a catalyst and anchor by which they reshapes their lives around cessation or moderation (Granfield and Cloud 1999). Self-remitters "stake in conventional life" is tied to access to different structures and social worlds. By leverage their recovery capital self-remitters can gain access these structures. Subsequently the recovery capital framework has been has been applied elsewhere (Penn, et al. 2016; Cano et al. 2017; Laudet and White 2008; Connolly and Granfield 2017), perpetuating a discourse that emphasizes the key to recovery lies in the remitters ability to negotiate structured social relationships.

Recovery capital theory, though serving as a novel approach to theories of recovery, also reflects certain beliefs about the basis of addiction. Recovery capital theory insists that addiction is a consequence of modernity. "…modern life has become increasingly crisis prone as its social institutions have lost their solidifying capacity" (Ganfield and Cloud 1999, 134). They propose that substance abuse is a coping mechanism through which people deal with the pressures of modernity and structural location. Granfield and Cloud posit a social view of substance use, similar to other social scientists that have examined the role that socioeconomic status plays in substance abuse (Bourgois 1995; Bourgois and Schonberg 2009). Similarly, Granfield and Cloud describe addiction as a social construct and a problem of social structure. This is the crux of the social concept of addiction, which emphasizes the various ways social-political structures construct addiction. Recovery capital then is a social theory of recovery, and thus addresses a social solution to their proposed social concept of addiction.

This perspective draws a stark contrast to the chronic relapsing brain disease theory of addiction, which places the brain and biology at the center of studies on addiction. In the 1997 article, *Addiction is a Brain Disease, and it Matters,* former director of the National Institute on

14

Drug Abuse Alan Leshner turned the nation's attention to a biologically based narrative of addiction. Throughout his paper Leshner calls for people, policy, and physiology to consider a brain centered view of addiction. He ends his piece with a particularly apt statement, "If the brain is the core of the problem, attending to the brain needs to be a core part of the solution" (Leshner 1997, 47). Though studies on the brain and addiction go back further than Leshner's 1997 article (Liebman and Butcher 1973; Yokel and Wise 1975), renewed emphasis on neurobiology at the center of addiction has shaped the discourse surrounding recovery.

The brain disease approach to addiction has implications for approaches to recovery. Proponents of the brain disease approach argue that addiction should be viewed as a chronic illness; similar to that of type 2 diabetes or asthma that has significant environmental and biological factors. For instance, one study discussed the characteristics of addiction (diagnosis, heritability, etiology, and pathophysiology) and how they could be compared to other chronic diseases. They discuss how addiction compares to asthma, type 2 diabetes, and hypertension, and conclude that addiction can and should be assessed similarly to other chronic diseases (McLellan et al. 2000). As an implication for treatment, they argue that since addiction is biological, specifically making many lasting impacts in the brain, it should be treated via similarly biological pathways. For instance, they suggest physicians prescribe medications for opioid, alcohol, and stimulant dependence. Thus, this perspective argues that addiction should be considered a chronic disease and even goes so far as to suggest it would be unethical to not consider treating a chronic disease medically. Would you send someone with type 2 diabetes to a 30-day rehabilitation program and talk therapy? Thus, interventions within the medical profession usually focus on targeting different biological pathways, though specifically emphasizing how to change the "addict brain".

These co-evolving discourses created a dichotomous view of addiction, as either a brain disease or a social ill, which has shaped the content of natural recovery literature. Specifically, theories of natural recovery are less about how people do recovery and more about developing the social perspective on addiction. By this I mean the theory, and the specific realms it considers relevant, is rooted only in social considerations. Rather than considering factors outside of the structure and social embeddedness of the self-remitter, this theoretical angle further reinforces their point of addiction as a social disorder, and a consequence of modernity. Though some are similarly skeptical of the brain disease approach to addiction, because it does not acknowledge the social/cultural dimensions of use (Cunningham and McCambridge 2011). I too understand the way people actually do natural recovery quite differently that the dichotomous view. Coming from a biocultural theoretical perspective, I view recovery as cessation or moderation of formerly problematic use that people do, at least in part, by engaging in their social world as a mechanism to avoid meaningful cues that are embedded in problematic substance use.

I find that although recovery capital is important and quite relevant to the participants' lives, the theory emphasizes this false social versus biological dichotomy. Recovery capital argues for a social concept of addiction, which is very much opposed to the role of biology in addiction. Creating this recapitulated nature versus nurture dichotomy skews the actual experience of addiction and recovery. Humans are biocultural beings that exist in a biocultural world. This is why, going forward, I propose an anthropological approach to natural recovery. This approach, pulling on the holism anthropology is lauded for, considers how the social and structural become important biologically. Specifically, by looking at cues important to addiction and recovery I aim to show how the social and biological might come together in natural recovery. To accomplish this, I employ the use of ethnographic methods and study people in

their own context. By interviewing, mapping networks, and literally "hanging out", I've come to see that there is possibility to explore a biocultural concept of natural recovery that goes beyond the biological versus social arguments.

Anthropology of Natural Recovery

In this section, I detail how I conceptualized an anthropological approach to natural recovery. Specifically pulling from neuroanthropology I discuss how neurobiological theories of addiction and ethnographic methods have been combined. Additionally, I discuss the cue reactivity paradigm and how it is, despite some theoretical flaws, a suitable framework for a biocultural approach to natural recovery.

Anthropologists have long been interested in addiction. Scholars have studied everything from political economy and the impact of social-structural systems on drug use (Bourgois 1995; Bourgois and Schonberg 2009; Knight 2015) to different substance use treatment paradigms, like Alcoholics Anonymous (Garcia 2010; Garcia and Anderson 2016; Bateson 1971; Cain 1991) and even interrogated the cultural concept of the "addict" (Singer and Page 2014). Medical anthropologists have taken particular interest in the subject, since it is viewed as an increasingly medicalized experience steeped in cultural traditions of use (Garriott and Raikhel 2015). However, one area that remains relatively untapped is biocultural assessments of addiction that illuminate the both embodied experience of addiction and the cultural aspects of use (Lende and Smith 2002).

Anthropology as a field has not quite reached a conclusion of what it means to be biocultural or do biocultural work. In their bibliometric analysis of the term biocultural within anthropological publications, Wiley and Cullin (2016) note the lack of consensus with which the

term biocultural is employed. In this study I use the term biocultural as a framework that shapes the way I understood the process of natural recovery as a phenomenon that interacts both biologically and social/culturally. I specifically employ a neuroanthropological approach, which is biocultural in its equal consideration of the brain and culture. The advantage of a neuroanthropological approach to any human phenomenon is the dedication to highlighting both the social and lived experience and its intimate ties to biology. I find this perspective to be particularly helpful to understanding natural recovery, a phenomenon I have come to understand as equally tied to social structures and capital as it is to biological experiences of cue reactivity.

Neuroanthropology is better positioned to address a biocultural approach to addiction because it pulls on neurobiological theories of addiction in conjunction with investigation on social and cultural environments of use. Daniel Lende, cofounder of the field of neuroanthropology, has described how habit and wanting come together in substance use (Lende 2005; Lende 2012). In these papers pulling specifically on a neurobiological model of addiction that pushes beyond the reward paradigm, Lende highlights the contextual yet biological nature of addition. Drug wanting and habit are two key aspects of addiction, he proposes,

> …habitual patterns, are not content-free; rather, they work within the sociocultural dynamics that specific individuals both must go through (school or being on the street) and seek out (places to use drugs, with other drug users there). Together, the compulsive involvement that marks addiction, that can lead it to such destructive ends, is jointly defined by the neurocultural dynamics of desire and habit. (Lende 2012, 340)

Wanting, or craving, Lende highlights, is neurobiologically mediated by incentive salience (Lende 2012). Terry Robinson and Kent Berridge, proposed incentive salience theory in their 1993 paper entitled *The Neural Basis of Drug Craving: An Incentive-Sensitization Theory of Addiction.* Robinson and Berridge use this theory of dopamine to address both behavioral and neurobiological components of addiction. The authors begin by discussing the importance of

18

sensitization, "which refers to a progressive increase in a drug effect with repeated treatment" (Robinson and Berridge 1993, 249). They discuss how the nervous system becomes sensitized to drugs after repeated presentation. The authors propose that that "the defining characteristics of addiction (craving and relapse) are due directly to drug-induced changes in those functions normally subserved by a neural system that undergoes sensitization related neuroadaptations" (Robinson and Berridge 1993, 249). The nervous system literally changes in this sensitization process. Further this sensitization is not only associated with the action of the drugs, but also comes to be associated with drug related stimuli such as drug paraphernalia, places, or even states of mind.

One important note that the authors make is that there is a distinction between "wanting" a drug and "liking" a drug. Specifically, they tie incentive salience to wanting (craving). Other papers also address the discrepancy between "liking" and "wanting". For instance Wyvell and Berridge (2000) specifically note the role of dopamine release the nucleus accumbens in facilitating the sensation of wanting, rather than liking in incentive salience theory. Wyvell and Berridge discuss how the physiological experience of incentive salience is not related to pleasure, but related to what is neurologically meaningful. This distinguishes incentive salience theory from other theories that emphasize dopamine as a pleasurable reward that entices prolonged use. Robinson and Berridge argue that drug use is less about pleasure and reward, and more about wanting. Put another way, in a 2005 paper *Wanting and Drug Use: A Biocultural Approach to the Analysis of Addiction,* Lende notes that this wanting serves more as a indicator of what behaviors to engage, evolutionarily what is important in the environment, and what will sustain life (Lende 2005). Incentive salience theory thus shifts the role of dopamine from pleasure (oh, that drug is good) to wanting (I have to have it).

19

Robinson and Berridge ground the theory of incentive salience in neurobiology. And, although they do not indicate dopamine as the pleasure neurotransmitter, as it is often conceived, they reinforce the role that dopamine plays in incentive salience. "…it is hypothesized that the neural substrate for incentive-sensitization (that is the neural system(s) that normally attributes salience to incentive stimuli and becomes sensitized by addictive drugs) is the mesotelencephalic dopamine system" (Robinson and Berridge 1993, 250). They argue that "manipulations that increase dopamine neurotransmission in the ventral striatum potentiate the incentive properties of conditioned reinforcers and manipulations that decrease dopamine neurotransmission in the ventral striatum block these potentiating effects" (Robinson and Berridge 1993, 262). Thus dopamine acts on the mesotelencephalic dopamine system, specifically in the ventral striatum, to produce the effects of incentive salience.

Though Lende used incentive salience to better understand a broader framework of wanting and habit, incentive salience has also been indicated as the neurobiological basis of cue reactivity. Cue reactivity is the observed phenomenon of reaction to stimuli in the environment that has been conditioned by past substance use. Conceptually, conditioning is from classical conditioning in which a previously unconditioned stimulus is presented and draws a conditioned response repeatedly until there is an association drawn between the unconditioned stimuli and conditioned response. Cue reactivity is based on the assumption that "addicts are particularly vulnerable to drug use when in the presence of stimuli related to previous episodes of use" (Carter and Tiffany 1999, 327). Thus, when encountering stimuli that they have been associated with use, a person with substance use disorder literally feels something. This "something" is more commonly described as craving, the sensation to use. And further, the theory postulates that cue reactivity and the craving associated with it are enough to encourage someone to use. It

20

is this phenomenon that in part makes drug use continuous and compelling. Based on the Pavlovian theory of classical conditioning, cue reactivity also serves as a model for relapse. Cues in the environment have been studied to specifically look at how these cues trigger relapse, and has even been proposed as useful for addiction treatment paradigms (Drummond et al. 1995).

Cue reactivity theory thus is a concept that captures how the environment and behavior become embodied in addiction and relapse. By linking cues in the outside (and internal) world with the concept of wanting, it becomes clear how experiences in association with substance use get under the skin. However, cue reactivity theory too has flaws. To turn to a more recent paper written by Robinson and Berridge (2008)"…addicts in the real world are not S-R [stimulus-response] automatons; they are, if nothing else, quite resourceful" (3138). Cue reactivity theory does a really good job at explaining how stimuli relate to internal processes, but it does not do a good job at getting at how people go about pursuing drugs. Put another way, the experience of addiction is not just about craving but also about habitual use. Lende in *The Encultured Brain* proposes that craving, the feeling ascribed to cue reactivity, is not the same thing as habit. In fact, habit has been indicated elsewhere in the brain. Research indicates that habit lies more in the dorsal striatum (Lende 2012). These are two distinct processes: wanting (craving) and getting (habit). Studies of cue reactivity also discuss this shortcoming. Although results have been mixed (Witteman et al. 2015), some studies have actually indicated that cue reactivity and craving are two distinct pathways in which measurements of cue reactivity correlate with relapse, but measurements of craving do not (Rosenow Et Al. 1994). This distinguishes between the want to use and the actual use. Cue reactivity is as much about attention as it is about making use enticing. Habit makes use happen.

21

Simply being interested in something does not necessarily mean getting it. For example, just because you might be craving a slice of pizza, does not mean you will get that pizza and consume the entire pie. Just wanting is not enough; there have to be steps involved in seeking and obtaining (calling the restaurant and placing your order, then picking up the pizza). It is here between, wanting and habit, where cue reactivity, although a compelling theory falls short of the human experience of addiction. It describes why and how certain things become meaningful in substance use even well after they stop (wanting). However, it does not explain well how and why people might seek out substances even after a period of cessation, or might encounter a cue and decide not to seek out substances. It's a good theory for understanding the meaningfulness of use, but not patterns of drug seeking.

I find that cue reactivity, despite its shortcomings, is an apt framework for my study on natural recovery because my research is based on looking at users in their context of use and how they mitigate the sensation of wanting through their social context. Cue reactivity provides a framework for understanding how drug users engage with their environment and substance use cues that trigger that wanting. My research, particularly the methodology, addresses why they do not do drug seeking. By understanding how self-remitters mitigate cues, I found that I could interrogate a biocultural conception of natural recovery that accounts for biological, personal level interactions, and the social structure in which participants are embedded. Further, I employ the concept of habitus, as a sight of biocultural change.

Habitus, Practice, and Embodiment

Habitus is one (of many) theoretical paradigm that bridges the gap between structure and the individual, and even further, their biology. Bourdieu theorizes "The conditionings associated

with a particular class of conditions of existence produce the habitus, systems of durable, transposable dispositions, structured structures predisposed to function as structuring structures, that is, as principles which generate and organize practices and representations" (Bourdieu 1990, 53). Habitus elaborates on how social structures shape individual lives, which then reproduce social structures. Bourdieu specifically argues that habitus is illuminated through practice, and he proposes that to study habitus one needs to specifically investigate practice (Bourdieu 1990). Practice has been broadly defined as "anything people do" (Ortner 1987, 149). For Bourdieu practice illuminates "…the choices that actors make that signal their positions to one another in symbolic terms" (Calhoun et al. 2007, 261). Thus, the site of practice (the things that people do) is how actors, act out their habitus.

Downey takes habitus further and argues that it can be examined through a neuroanthropological lens, which evokes both the biological and social constructions of human practice (Downey 2014). Downey's neuroanthropological research on Capoeira, an Afro-Brazilian danced martial art, demonstrates how practice as a sight of examination not only illuminates habitus, but also the physical embodiment of habitus.

> …the shared mimetic forms of learning in both capoeira and more mundane corporeal techniques, and the influence of bodily training on capoeiristas' perceptions, suggest that the confrontation between the style of movement taught in capoeira and the everyday habitus might highlight how embodied knowledge shapes the subject. Practitioners repeatedly asserted that learning capoeira movements affected a person's kinaesthetic style, social interactions, and perceptions outside of the game. (Downey 2010, S23)

Similarly, Loic Wacquant, apprentice of Bourdieu, notes "The social agent is before anything else a being of flesh, nerves, and senses…a 'suffering being' who partakes of the universe that makes him, and that he, in turn, contributes to making, with every fiber of his body and his heart" (Wacquant 2004, vii). Like Downey, Wacquant pushes readers to consider how the personal and biological can interact with social and structural. These authors both do

23

extensive research on the corporeal, embodied experience of habitus, noting how it shapes and changes the physical body. For Downey, this comes in the form of an enculturated equilibrium system that shapes the way capoeiristas' engaged with their world, both in and out of play. Similarly, Wacquant notes the bodily changes and the pugilistic habitus he comes to embody in his time as an apprentice boxer. These authors employ Bourdieu's practice to extend the site of empirical investigation beyond illuminating the social-structural composure of actors to the corporeal affects of habitus.

Sherry Ortner proposes that "…modem practice theory seeks to explain the relationship(s) that obtain between human action, on the one hand, and some global entity which we may call 'the system,' on the other" (Ortner 1987, 148). I find that practice, specifically as it relates to notions of embodiment and habitus captures what I seek to explain with natural recovery. Structuration, the theory proposed by Giddens and employed by Granfield and Cloud, only captures the interaction between capital and structure. This framework proposes agents as purely social being and assemblages of their capital. Bourdieu's framework, however, highlights "what people do" (practice) and connects those actions to the broader structures in which they are embedded. Additionally, these theories have been furthered to consider the corporeal aspects of practice and how it becomes embodied. In this thesis I make a similar argument. I propose that the biological individual is an important site for understanding the larger habitus of a non-user. Specifically, I argue that the changing habitus from user to non-user functions in part to mitigate sensations of cue reactivity. By addressing habitus, practice, and embodiment, I examine how what people do connects broad structural forces and embodied practices to suggest a biocultural theory of natural recovery.

Conclusion

In this chapter I have detailed the history and foundation of natural recovery theory, specifically highlighting the social nature of recovery capital. I also discuss how this social theory of recovery is tied closely with a social concept of addiction. By proposing an anthropological approach to natural recovery I suggest a more holistic perspective that considers both the social and biological. To accomplish this, I draw on scholarship in neuroanthropology and suggest that the cue reactivity paradigm aligns well with a biocultural conception of natural recovery. Finally, I propose that employing habitus, practice, and embodiment bridges the gap between structure, agency, and the lived experience of natural recovery.

Natural recovery theory proposes a social perspective of addiction that specifically highlights the social structural position of the self-remitter and the capital they possess. This theory addresses how social agents negotiate a social world. However, it does not consider the biological agent. Going forward I understand and employ recovery capital in the same manner in which it was theorized. In chapter four I discuss the forms of capital (social, physical, human, and cultural) and how they specifically related to college student self-remitters. However, in chapter five I apply the habitus framework to highlight, through the examination of practice, how these forms of capital interact with the experience of natural recovery.

In the next chapter I detail the methodology used in this project, however here I would like to briefly note the role that ethnographic methods have played in this study. As is the specialty of neuroanthropology to look at phenomenon "in the wild", applying ethnographic methods to these theories was a tool that captures what cue reactivity and natural recovery theories miss, context. Both natural recovery and cue reactivity have not been studied in context. By using ethnographic methods, especially participant observation, this study addresses what

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research in natural recovery and cue reactivity have missed: the contextual factors that contribute to how people stop and sustain recovery. Utilizing an ethnographic neuroanthropological approach, this study suggests sites (more than can be covered in this study alone) for further inquiry into these phenomenon that go beyond the laboratory, or one time interviews/surveys. An anthropology of natural recovery hinges on bringing together these disparate discourses and theories using ethnographic methods, to build a better (more holistic) theory of natural recovery.

CHAPTER THREE:

METHODS AND ANALYSIS

Introduction

This chapter details the methodology I used to approach natural recovery in the college context. I specifically discuss the setting and population, how I recruited participants, the logic behind my inclusion criteria and methodology, and data analysis. Additionally, I discuss my own positionality as a researcher and conclude with a brief discussion of my findings and outline the remaining chapters of this thesis.

Research Setting and Population

I conducted this research with students and university employees at Southern State University (a pseudonym). I am using a pseudonym for the university and research participants as a way to protect the confidentiality of student and employee informants. The topics discussed with students at points were particularly sensitive, and potentially incriminating. Using a pseudonym for participants and the university adds an additional layer of protection for student identities. Additionally, as many employees hold very public positions, I wanted them to feel comfortable discussing their thoughts and opinions with me. By using a pseudonym, employees could discuss their opinions about their place of employment in a more candid manner. Additionally, throughout this thesis I employ the use of composite character (chapter 4), and have changed details that could reveal participants identities. A composite character combines

27

the narratives of several different research participants to create one cohesive narrative that highlights main themes while obscuring participant identities. However, the content of their stories and data related to natural recovery remains unchanged.

Southern State University (SSU) is a large, state school in the southeastern United States. There are several reasons I decided to investigate student drug use cessation at SSU. Prior connections with university employees and students facilitated my research, and supported my recruitment methods of snowball and targeted sampling.

Additionally SSU, as a public institution and research one university, has a large and diverse student population of over 40,000 students. A large university provides ample opportunity for student involvement and ample staff dedicated to student success. There are over 600 registered clubs and organizations at SSU that students can join and a large university faculty/staff of about 14,000 employees. Particularly important to this project was analyzing how the university framed and facilitated substance use/cessation. Part of this was looking at the role of clubs and organizations, and dedicated offices for student drug use prevention and cessation.

Recruitment Strategy and Inclusion Criteria

I recruited student participants through snowball sampling, E-flyers posted on Facebook, and flyers posted in university buildings. Students were directed to email me in order to express their interest in participating in this study. I specifically recruited men and women in their second, third, fourth, or fifth year and graduate students who have performed natural recovery. To determine if students had performed natural recovery I used three criteria determined elsewhere in the natural recovery literature (Breidenbach and Tse, 2016). First, substance use had to be in some way termed problematic. Second, the self-remitter must have been abstinent or

28

heavily moderating their use for a specified amount of time. Last, the self-remitter must not have used any formal addiction services. I based the inclusion criteria for this study off of these guidelines.

To get at the first part of these guidelines, problematic use, I created a modified version of the CAGE-Adapted to Include Drugs (CAGE-AID) questionnaire (Brown and Round 1995). Historically, the CAGE-AID questionnaire has been used in medical settings as a screening tool to assess whether patients may be experiencing substance use disorder. The CAGE-AID consists of four yes or no questions. As is standard in clinical practice, two yes responses to any of the four questions indicated the possibility of substance use disorder. If participants were moderating their use the CAGE-AID was issued twice. The first time, referring to their past use (before moderation), and second, referring to their current level of use (see table 3B in appendix for details). The CAGE-AID was issued to participants after obtaining verbal informed consent to participate in the project.

To address the other two parts of the criteria for natural recovery I added two questions that were asked directly after issuing the CAGE-AID. First, I asked how long they had been abstinent/moderating their use. The minimum criterion for this study was that the student had to have been doing natural recovery for at least one month. This allowed me to capture variation in the duration of natural recovery between students. Additionally, students were asked if they were currently participating in any rehabilitation programs (ie: in/outpatient rehab, Narcotics Anonymous, other support groups). Students who were currently participating in programs were excluded from the study.

While substance use in college is prevalent across different types of drugs, and polydrug use is common, I began my project specifically hoping to focus on prescription drug use. I found

29

prescription drug use to be particularly interesting because there are both licit and illicit uses for prescription drugs, and access to and use of prescription drugs is particularly high in college populations (SAMHSA.org 2015). However, I decided to be flexible in this inclusion criteria for two reasons. I was interested in finding out what types of drugs students tended to use at problematic levels and decide to cut back on. And second, because of sampling availability, being a bit more open with already quite strict inclusion criteria made it a bit easier to do recruitment. In the end I found that study participants actually used marijuana, alcohol, prescription stimulants, opioids, and tobacco.

In the end, eight students participated in the study. My methodology was quite time intensive (over 12 hours required by each participant over one semester), which I kept in mind during recruitment by only requiring eligible students to participate in interviews and the social networking activity (about 2.5 hours). Participant observation was optional. In the end eight students participated in the interviews and social network analysis components, and six of those participants completed participant observation hours. Something else that is important to note is that most participants ended up being graduate students at SSU. While I had initially expected to recruit more First Time In College (FTIC) undergraduate students, the nature of sampling and availability for this project led to mostly graduate participants. Table 1 details student participant demographics.

Table 1: Student Participant Demographics

School Level		(N/8)	(%)
	Graduate	6	75%
	Undergraduate	2	25%
Gender		(N/8)	(%)
	Male	2	25%
	Female	6	75%
Age		Years Old	
	Average	27	N/A
Number of Problematic Substances reported		N/8	(%)
	1	5	62.50%
	2	2	25%
	3	1	13%
Positive CAGE-AID Responses (for all substances reported as problematic use)		(N/12)	(%)
	C	12	100%
	A	9	75%
	G	12	100%
	E	12	100%
Average length of Cessation/Moderation (at time of interview)		Years	
	Average	2.25	N/A
Participation in rehabilitation/therapy programs		(N/8)	(%)
	No	8	100%
Primary Problem Substances		(N/8)	(%)
	Marijuana	5	62.50%
	Alcohol	2	25%
	Opioids	1	12.50%
Secondary Problem Substance		(N/3)	(%)
	Adderall	2	66%
	Tobacco	1	33%
Third Problem Substance		(N/1)	(%)
	SSRI	1	100%

I also interviewed six university employees who hold various positions within the university to get a better idea of student drug use perception and prevention programs. I recruited employees through targeted sampling based on publicly available information on SSU websites.

31

I found that these interviews gave insight into what programs are currently employed on campus and where employees think the institution is lacking. These interviews also highlighted discrepancies in what resources the university provides for substance use cessation and how students actually preformed natural recovery. Additionally, these interviews gave me direct insight into the applied outcomes of my project by asking administrators how they think this project could help them, and then giving them feedback on student drug use cessation at the end of the project.

Methods and Procedure

I used three different methods to ethnographically address natural recovery in the university setting. Primarily these methods addressed how participants practiced moderation (through participant observation), how recovery capital influenced moderation (through social network analysis), and how participants understood and discussed recovery (through interviews).

After obtaining verbal informed consent and confirming eligibility, all participants completed a semi-structured interview lasting approximately one hour. For employee participants, this was the extent of their participation in the project. After the interviews, students participated in the social network building activity and a short follow up interview for about one and a half additional hours. Finally, six students participated in participant observation for an average of about four hours.

Semi-structured Interviews

While there are many different types of interviews, for this project I chose semi-structured interviews. "In semi-structured interviewing, the interview guide includes a list of

questions and prompts in order to increase the likelihood that all topics will be covered in each interview in more or less the same way" (DeWalt and DeWalt 2011, 122). I found that the semi-structured format was particularly important for discussing substance use cessation because participants stories generally varied, so the less confined nature of the questions allowed me to cover the same topics but explore individual experiences more in depth. I sat down with each participant in a private setting and conducted interviews. In total I did eight interviews with students and six interviews with employees.

For student populations, I used these interviews to assess the components of recovery capital in college student populations. These questions addressed the forms of capital students have and how they employ them. Additionally, semi-structured interviews addressed how students pursued naturally recovery, the way that students understood their environment as related to natural recovery, and concepts of cue reactivity. Table 2B (appendix) lists the specific interview questions asked.

For the employees I used these interviews to understand the programing SSU uses to address student substance use and cessation. Additionally, these interviews addressed how administrators view the role that substance use plays in student life. Table 4B (appendix) details the specific questions I asked employees.

Social Network Analysis

Social network analysis is "the study of the pattern of interaction between actors" (Bernard and Gravlee 2014). Drawing from past scholarship, which details the benefits and methodology of hand-constructed networks, I used ego-centered social networks in order to assess social capital present in student's natural recovery (Hogan et al. 2007; Bagnoli 2009;

33

Reyes 2016). Ego-centered network analysis focuses on building the network of a single individual. In this case, the ego was the participant, and the alters were all of the other people in their network. Creating social networks by hand was particularly important because it provides a space for participants to show and discuss what relationships they felt were important to sustaining their abstinence/moderation.

The approach I used started by gathering basic data about the student. Initially, I asked questions relating to physical, human, and cultural capital (see table 1 in appendix). Addressing these questions first allowed me to collect basic data about the student and their use, and also how the components or recovery capital related to their life. I then elicited alters by asking name generator questions, which are general information questions that probe them to think of people in their life (ie: who do you talk to about important matters? Who do you talk to on a weekly basis? etc.). Participants were directed to use pseudonyms for their alters as a way to protect the confidentiality of the alters. I then went through the process of name interpretation with participants as a way to get a little more context about those in the network. Name interpretation solicits information about the alters, in order to understand specific characteristics of interest, called conditional variables. The conditional variables that I used in this study were "drug user" or "non-drug user" (denoted by an asterisk), and relationship to ego (family, college friend, pre-college friend, work friend, and other) - denoted by color. Participants were asked to write these names on small Post-it notes (color-coded by conditional variable, and marked with an asterisk to denote drug use). Once they finished all of these, participants were asked to place the names on a map of four concentric circles. These circles represented the ego in the center, and their feelings of closeness to alters were represented by how far away from the ego the Post-it notes were placed. I found that the map of concentric circles was a clear way to assess how close or

34

distant egos felt from their alerts, which was interesting to look at because it showed how people moved through networks during pre and post cessation. I also had participants arrange the Post-it notes on these rings by group (ie. moving people more closely associated with each other, closer together). Finally, I had them draw lines between the Post-it notes as a way to depict relationships and circle specific groups of names to denote cliques. It is important to note that three participants did not end up drawing lines between alters showing connections, though they completed the rest of the networking activity in full. These participants did not have time to finish this piece. However, I still included their networks in the analysis because I did not end up utilizing the connections between alters data. Participants were allowed as much time as they needed and were allowed to adjust Post-it notes as they felt necessary. I found that on average this activity took about one and a half hours. I also had participants narrate while they did this activity. This gave me a way to understand better the logic they used to place different alters. This process got the participant actively involved in the construction of their network and was eventually used as a prompt in the follow up interview questions.

Follow up questions to building the sociogram addressed social capital using the three components of social capital as outline by Granfield and Cloud (1999): stability, ideology, and relationships. I used the sociograms as a prompt to ask questions about these three areas. I found that the participant aided sociograms were more conducive to interpretive analysis than quantitative analysis. These networks reflected how participants pictured their network changing during natural recovery.

Participant Observation

Participant observation, colloquially referred to as 'hanging out', is when a researcher spends time with participants in their own setting. "For anthropologists and social scientists, participant observation is a method in which a researcher takes part in the daily activities, rituals, interactions, and events of a group of people as one of the means of learning explicit and tacit aspects of their life routines and their culture" (DeWalt and DeWalt 2011, 12). I conducted participant observation with six of the students that I interviewed previously. Participant observation provided me with a perspective on what students actually engaged in to mitigate cue reactivity (wanting and habit) and embody a new habitus. Specifically, it showed me, apart from interviews, what students chose to engage and not engage with, and helped me understand the logic of not using in the college context. Thus, participant observation was crucial for getting at cue reactivity and the exploratory neuroanthropological aspect of this research by addressing what students engage with, what students avoid (what makes them want to use), and how they negotiate the sensation of wanting.

Analysis

I analyzed my data in two ways. First, I did thematic coding of interviews and field notes. I coded interview notes for common themes that highlighted how participants discussed experiences of cue reactivity. Pulling from Lende (2005) using ethnographic methods to assess incentive salience, I examined the ways that students described cue reactivity/craving, the context of this phenomenon, and how they mitigated it. Further, I looked for themes that discussed how participants pursued substances in the past and what strategies they employed to avoid them in the present. I used the same thematic coding in field notes from participant

observation. Specifically, I noted how students situated themselves to avoid substance use, what alternative activities they took place in, and how they change physical and social environments in order to avoid wanting and pursuing drugs.

My interviews also covered aspects of recovery capital. I used thematic coding for the specific parts of interviews that related to the four areas of recovery capital (social, cultural, physical, and human). I looked at how participants describe the resources they used and the people they connected with that influenced their experience of natural recovery. This included whether their friends also pursued natural recovery and how that shaped their experience of natural recovery.

Second, I conducted social network analysis of the participant aided sociograms created by participants. Social network analysis methods have been used within public health efforts (Valente and Pitts 2017), and specifically applied to drug use (Valente, Gallaher, and Mouttapa 2004) in order to assess how social networks influence health outcomes and prevention. They have also been used to assess social capital. As Lin notes, the "focal points for analysis" of individual social capital are "how individuals invest in social relations" and "how individuals capture the embedded resources in the relations to generate a return" (Lin 1999, 32). In my project, social network analysis primarily served as a tool to probe participants during interviews on the meaningfulness of relationships and leveraging social capital.

Carrasco et al. (2008) used social network data to assess how social relationships map onto travel behavior. In the same spirit, I analyzed participant aided sociograms to assess how social networks mapped onto drug use behaviors. Several metrics I used to measure from the social networks included a break down the conditional variables into drug user/non drug user and relation to ego (family, college friend, pre-college friend, work friend, or other). I used these

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conditional variables to create a comparison across networks to analyze what proportion of networks had alters that used drugs and what proportion of networks were connected to certain institutions. I also analyzed general network attributes like the number of alters each ego had, as well as the number of connections egos had. Similarly, I analyzed how these relationships changed over time, specifically in relation to the number of users closer to the ego and what institutions these alters were connected with. I found that this analysis illuminated the attributes of networks and how they influence the process of natural recovery, specifically in relation to social capital.

Researcher Positionality

I find it is important to acknowledge my own positionality both personally and theoretically. First, my identity as a straight, white, cis-gendered female plays a role in both how I move through the world and through my research. It is possible that this played a role in who initially felt comfortable participating in my research. However, I found that participants from many different backgrounds seemed able to talk with me with relative ease about their history of substance use, abuse, and cessation.

Additionally, it is important to mention how deeply personal the subject matter is and the role it played in my research agenda. Much of my life has been surrounded by persons close to me experiencing substance use and cessation. This is undoubtedly what has piqued my research interest in substance use and recovery. My experiences standing by the side of friends and family members getting into and out of substance use heavily influenced how I understood the experiences of the participants. Namely, I related to many of the experiences participants discussed, as it echoed so much of the experiences I saw people in my life go through. I found

38

that sharing these experiences with participants helped them feel more comfortable discussing their use with me. Anthropologists, as both research instruments and real humans, bring much of their lives into the field and vice versa. For me too, at times the lines felt a bit blurred, which made this research difficult and emotional but more importantly, impassioned and impactful.

Finally, my work has theoretical biases. Most of the theory I have based this project on is postmodern theory that acknowledges the way that structures influence everyday lives. However, this theory tends not to account very much for personal agency. In my project I accounted for this by looking not only at structural variables but also the lived experience of participants. By researching how participants negotiate their lives around these structures they are assumed more agency, rather than focusing on how these structures dictate their lives.

Limitations

There were several limitations to this study. The first of these is time and resources. In an ideal world there would be unlimited amount of time and resources to pursue this study, spend more time doing observation, and to pay/have more participants. I found that participants were very generous with their time and still dedicated themselves to participation in this project when their schedules allowed.

Another limitation of this study was the sample size and location. Only eight students from one university participated in this study. To apply the conclusions more broadly it would be interesting to find comparison populations at other universities around the United States and observe these phenomena across more student participants. However, I found that although this sample was rather small, it still captured variation in natural recovery duration and types of substances used.

Additionally, most of the participants were graduate students. To have better, and more representative data, it would be ideal to have more undergraduate participants. Since I unintentionally acted as my own "gatekeeper", I had a hard time accessing undergraduate populations. In the future, it would be best to have an undergraduate student "gatekeeper" to facilitate snowball-sampling practices.

One methodological limits of this project is that although I am trying to address a biocultural theory of natural recovery, all of my methods are social methods. I unfortunately do not have the resources or training at this time to pursue biological measures of cue reactivity. However, I find that the combination of methods gets as close as possible at describing the experience of cue reactivity and in future projects plan to integrate social and biological methods.

Another methodological limitation of this study was my use of social network analysis technique that I used. This technique mainly solicited interpretive information and very little quantifiable data. For the purposes of this project, this was beneficial as it allowed me to illuminate certain interpretive moments that would not be captured in more traditional social networks. More traditional/quantitative social networks may have illuminated phenomenon that could be measured across networks that were missed with the more subjective method I used. In the future there may be other social network analysis techniques that get at both interpretive and quantitative measures of networks.

Results

The rest of this thesis is dedicated to discussing the results of this research. In the remaining chapters I detail how participants used their capital, discussed in interviews and the

social networking activity, to facilitate a changing habitus of non-user. Pulling on data gathered in staff/faculty interviews I discuss the structure of the university and frame substance use cessation in this light. Additionally, I pull on data gathered from interviews and participant observation to discuss how students mitigate cues and they unconsciously reform their habitus.

CHAPTER FOUR:

THE STRUCTURE OF THE UNIVERSITY

Introduction

This chapter details the university structure and the unexpected ways it facilitates substance use cessation. Specifically, the neoliberal university structure shapes the opportunity for natural recovery over other recovery processes within the university system. I also detail the ways that students create and pull on recovery capital within the university system, noting the specific capital students use and how it aligns with natural recovery theory. Finally, I conclude by discussing how the university exists as a paradoxical setting in which students pursue natural recovery.

The Neoliberal University Structure

Initially, when I started this project, I expected to recruit mostly participants who had started using as undergraduate students at SSU and subsequently, as upperclassmen, stopped or drastically reduced this use. However, as is common in ethnographic research, fieldwork did not happen in the ways I expected. Keeping this original framing in mind, I optimistically set off across campus to interview faculty and staff to understand how they perceived substance use at SSU. I quickly realized that the role that the neoliberal university structure plays in substance use treatment on campus was much more fruitful an insight into how I understood student substance use and recovery. Specifically the role of audit and accountability in institutional management

and how that affects the way faculty and staff view and pursue their own positions in relation to student substance use was quiet interesting.

In the end most of the participants (6/8, 75%) ended up being graduate students who had pursued most of their use and beginning of cessation at other universities. Additionally, all participants began using before college. So, in lieu of listing statistics about undergraduate student substance use at SSU (and rejection of audit culture), I have decided to frame the information gathered from interviews conducted with faculty and staff within the larger schema of the neoliberal university, and the role that this governance plays in the options students have for formal and informal treatment at SSU. The structure of the university is such that it facilitates few pathways for substance use cessation. This highlights why students might be more inclined to do natural recovery in the first place.

Recent scholarship in the anthropology of higher education has come to focus on how political economic discourses have infiltrated higher education in the United States and abroad (Canaan and Shumar 2008; Shumar 1997; Levinson and Holland 1996; Shear and Hyatt 2015; Shear and Zontine 2015; Davis 2015). The neoliberal university is a reflection of globalization and privatization of the traditionally public sector. Since the 1980's the university has been undergoing a similar process. Increasingly, the university is treated as a money generating entity. Canaan and Shumar (2008) note that while the university has never existed as a space of altruistic knowledge production and consumption, there has been a significant turn toward the commodification of education.

> Higher education is imagined and structured according to at least two neoliberal assumptions: first, that its institutions should compete to sell their services to student 'customers' in an educational marketplace, and second, that these institutions should produce specialized, highly trained workers with high-tech knowledge that will enable the nation and its elite workers to compete 'freely' on a global economic stage (4-5).

43

The expansion to a neoliberal university structure has been marked by several different phenomenon experienced by those working and studying within these institutions. Specifically, some have turned their eye toward audit and accountability as a form of surveillance (Shore and Wright 2000, 2004, 2015; Strathern 2000). I find that applying a similar framework was helpful in understanding how a student might do recovery in college, specifically at SSU, and why students might be incentivized to seek alternative forms of recovery, like natural recovery.

I propose that employing a neoliberal lens aids in understanding what might make natural recovery a more viable process for students struggling with substance use issues. In my research I found that the broad neoliberal university structure dictated certain substance use recovery pathways within the university setting. Specifically, by looking at the space and resources dedicated to substance use at SSU, we can see that in some cases, natural recovery becomes the only option within the university setting. In this section I am specifically pulling from literature on the neoliberal university in comparison to my interviews with faculty and staff members at SSU as well as my own experiences at SSU to demonstrate the influence the neoliberal university has on recovery pathways.

However, I must add a caveat. Data collection, in terms of time and volume, did not yield enough data to draw any astounding conclusion about the large and ominous structure that has come to be known as the "neoliberal university" specifically as it relates to student services and its impacts on student practices. Going forward I mean only to suggest some possible implications of this structure and how it may have influenced student choices to pursue natural recovery, as evidence from my interviews and observations suggested.

44

The "Southern State Shuffle"

Through my interviews and time at SSU I found that the neoliberal university structures worked in two ways: first, through audit and accountability practices by the state and second, by using these practices to shuffle students through the university system. The auditing framework that the state proposes for universities, has served to invest time and resources into student success initiatives surrounding substance use and mental health. This is relevant to this study because examining student metrics and where universities place value, has become important to understanding how resources related to substance use and mental health are distributed throughout SSU and the effect this has on student choices for recovery.

In order to improve individual and statewide university metrics, in the last 15 months (since the time of writing), the state system in which SSU participates has begun an initiative to improve student success metrics (i.e. retention, graduation, etc.) by specifically targeting student substance use and mental health. This programming has pushed money and other resources into student substance use programs on campus, encouraging employees involved with student substance use to form networks (as I learned in an interview with a staff member) and partner with community members for other substance use resources. Fundamentally, this is not a bad initiative. However, it has facilitated very specific pathways for students who want to stop using during their time at the university.

Based on my interviews with faculty and staff members, I have found that there are generally two ways in which a student might come to encounter the university in terms of their substance use. In the first model, let us pretend that a student has recognized they have a substance use issue and asked for help and the student is also very knowledgeable about the resources available to them on campus (which is not always the case). If a student felt their use

45

was problematic and decide they wanted to get help, they would generally start with on campus counseling or the Student Recovery Support Group (a student run 12 step program on campus). The campus counseling center offers free hour-long sessions to students at the university. Students have the opportunity to sit down with a counselor one-on-one and discuss any type of concern. If a student went to the counseling center, they could talk about their use. Then, they could continue sessions, use local resources, or get involved with one of two student recovery support groups on campus. However, if their substance use is serious enough, they might be directed toward off campus therapy or rehabilitation.

The second way students come to encounter the university and substance use is through being reported to the university for their substance use. In this case, there is a resource office on campus that takes a triage approach on behalf of the university and reaches out to students whom are reported by faculty and staff (e.g. Greek life, professors, staff members, resident assistants, police, etc.) for reasons of concern including substance abuse but other physical and mental health conditions as well. The resource office will reach out to the student, set up a meeting with them, and then discuss/refer them to the counseling center or student health center. If the student got caught using substances illegally, they might also be dealing with campus and local judicial systems.

The resource office tends to be the end of the road in the eyes of academic staff members for student substance use. Academic staff members commented that once they refer a student to the resource office, they are not quite sure what happens. Practically, this is probably to protect student confidentiality, but this also seems to cause some distrust between the academic affairs and student affairs sides of the university. Academic affairs professionals shared with me their concerns that students seem to be passed from office to office, getting a small bit of help from

46

each, much like an assembly line. It seems that the few offices on campus that deal with substance use are really the only designated spaces on campus that are substance free or for students in recovery. If students do participate in these programs, that means tying their substance use to the auditable gaze of the neoliberal university, and possibly even having to embrace the identity of addict, which may be unappealing for student users who see their use as problematic, but not a permanent state of being.

If a student wanted to pursue a recovery process that consisted of more than counseling or the twelve-step program -which is loaded with its own specific impactful rhetoric (see: Carr 2010)- offered on campus, they would be suggested to seek help outside of the university. I find that this is one reason why it may be more accessible for a student to pursue something like natural recovery. There may be many problems with access to one of these outside institutions, including problems with insurance, taking them away from their schoolwork, etc. However, natural recovery is a framework that works within the university setting. If students do not want to participate within the formal structures the institution has in place, they have to create an alternate space for recovery. Fortunately the university exists in a dual manner that's amendable to students creating their own spheres of recovery. The university is a capital-intensive space, where access to recovery capital is fairly easy. As I detail below students leverage the university in unexpected ways in order to create the space outside of the auditable gaze of the neoliberal university to achieve and maintain moderation or abstinence from substance use.

"Natural recovery-for a *true* addict- is impossible."

One of the most impactful moments of my research was in one of my first interviews with a staff member at SSU. Sitting in her office, I began to describe my project. I explained that

47

I was studying students who had quit using substances without using rehabilitation. I had come to interview Sherry, an employee at the university, who works with students that have substance use issues. As I described my project, I saw her facial expression change. Her eyes narrowed, her lips pursed.

"Natural recovery- for a *true* addict- is impossible." She quickly stated as I finished describing my project.

This was not the first (nor the last) time I got this reaction from persons when discussing natural recovery. Even some of the participants, who approached me to participate in this study and were pursing natural recovery, echoed this sentiment in interviews.

As we continued throughout the interview I asked Sherry how she believed that students solve problematic substance use. She began to list out what she saw as the ingredients to recovery. First, she believed that abstinence is necessary, which she noted is difficult on a college campus, where there are not a lot of specifically sober spaces. She then went on to note that social support is key.

"It takes a team," Sherry noted. "We need an addiction team" she repeated.

Finally, she insisted that students need therapy. She explained that they needed therapy in order to assess and understand the underlying cause of addiction, primarily a comorbid mental health issue like anxiety or depression, insisting that substance use was usually a byproduct of or co-occurring with some other type of mental health issue.

As she told me all of this I realized the three things she noted that were required of students to do recovery is generally what persons doing natural recovery already do, without the guise of a formal rehabilitation program. Though flexible on the point of abstinence (some choose to moderate their use), solving or getting into good health (building human capital), and

48

creating social support (through social capital) are main themes that I saw participants do to pursue natural recovery. They just pulled on institutions in different ways. Formal rehabilitation programs (in theory) work to build these types of capital. However, the university also offers access to capital in abundance. I saw more similarities than differences between what Sherry described as the traditional path of recovery, and what participants did. The structure of the neoliberal university and constructs of recovery insist that recovery must happen in a certain fashion. Self-remitters just utilize the institution in different ways, though pulling on the same general forms of capital, and apply different labels.

In all cases, I saw the student participants in the study do the "impossible". They defied cultural norms and perceptions (sometimes even their own heuristics) of substance abusers and remitters. I have found that there is a lack of understanding about how self-remitters do recovery, and how similar the principles of formal rehabilitation are to the principles that those who do natural recovery tend to gravitate toward. What makes this particularly salient is the college environment. As I will detail in the coming sections, the college environment specifically provides access to capital, which facilitates recovery. The university provides, in unexpected ways, the means and materials to do recovery, even if students do not realize that is what they are doing.

Broadly, access to resources like health centers, social clubs, and academic goals helped these students to pursue natural recovery. In this way, what the students experienced, and the broad themes that Sherry described, align well with what natural recovery theory proposes. Student's use of capital in specific ways, in a capital-intensive environment, helped them enact change in their patterns of substance use. Within the broader structure of the neoliberal university, the ability to leverage the capital offered by being a college student is important for

49

those who choose not to seek formal rehabilitation (either inside or out of the university) for the myriad of reasons discussed in the previous section. By looking at those who pursue informal recovery within the university I demonstrate how students leverage their capital, without necessarily realizing they are doing so, creating another pathway for recovery that circumvents the auditing, neoliberal university structure.

Harnessing Capital

Recovery capital theory insists that those who pursue recovery do so by pulling on the different forms of capital in their life. To review, broadly these forms of capital are social, human, physical, and cultural capital (Granfield and Cloud 1999; 2009). In the second half of this chapter I detail the various ways students used these types of capital, specifically breaking down each type of capital and the forms that the students used to help sustain natural recovery. This analysis is based on social network data and interviews collected from eight participants. Here I describe the components of recovery capital and discuss the unique ways students use each component. They are similar to the ways Granfield and Cloud discuss forms of capital: however, the university plays an important role in facilitating certain types of capital.

Social Capital

> As we have demonstrated, self-remitters develop a stake in conventional life that provides them with satisfying relationships and new involvements in social life that are incompatible with their addictions. This emerging stake in conventional life was mediated by the larger social context in which our respondents were embedded (Granfield and Cloud 1999, 159).

Because of the small sample size and interpretive nature of the social network activity I conducted, I am unable to do any sort of legitimate statistical analysis to draw conclusions on the

50

data I collected. However, I find using an interpretive framework for the analysis, and watching participants conceptualized their own network, helped me to better understand the social capital they used in their natural recovery processes. Namely, the ways participants understood the changing nature of their relationships and how that related to their recovery process was illuminated by the social networking activity and follow up interview. I found that the data I gathered was similar to the way Granfield and Cloud conceptualize social capital. They argue that change is possible through self-remitters using their social capital in order to move through the structures in which they are embedded. By moving through structures they mean that users grasp onto relationships within their network that connect them to institutions and resources that tether them to a "conventional life" and recovery, rather than substance use. Thus, self-remitters move "up" through the structures from user to non-user. Having participants construct their social networks was a tangible way of displaying the changing nature of these relationships as they moved through and sustained natural recovery. More so, ties to institutions influenced the spheres of involvement in participant's lives. Changes in these spheres of involvement, I found were often how participants were able to maintain natural recovery. Or, in the words of Granfield and Cloud (2009) this is how participants develop a "stake in conventional life".

One question I asked participants after they finished constructing their network was "how has the network you pictured here changed since you stopped or started moderating your use?" All eight participants noted three changes: Some people who they used to be close with were no longer pictured, some had moved further away from them, and others had grown closer or joined the map entirely since moderating. This was an important distinguishing feature of doing a more interpretive social networking activity and having a maps of four concentric circles on which participants placed their "alters" according to how close they feel to them. These maps indicated

the changing nature of relationships during natural recovery. To further illustrate this I use vignettes to elaborate how participants experienced these changes.

The following is the narrative of a composite character I have created out of participant data that illustrates how participants changed their networks, relationships with institutions, and subsequently their spheres of involvement. I decided to use a composite character here first, because it highlights the main themes that participants discussed throughout their interviews and social networking activity. Second, by creating a composite character I am adding an additional level of protection for student participant identities.

I broadly discuss the common narrative arc of substance use: trying substances in high school but ramping up use in college, then later in the college career transitioning out of substance use by pulling on important relationships, which facilitate involvement in other spheres of interest. I specifically place my composite character in graduate school, since most of the participants are graduate students. Additionally, I use the pronouns she/her/hers, since almost all participants identify as female. Finally, I base this character's problematic use off of that of marijuana, which was the highest reported problematic substance in my study. Figure One (at the end of this chapter) provides pictures of several networks collected during this study as an example of some of the maps participants created.

Emma is a graduate student at SSU. Emma first started using alcohol and marijuana in high school, but found herself heavily using these substances when she moved away from her hometown to attend college. Emma still recounts the sensory memories of her first college party, a bonfire at a local fraternity house. She notes the slight chill in the air as she breathed deeply after walking into the back yard to find several students gathered around a fire pit. For Emma,

this breath was physically refreshing, and symbolic of the freedom she was finding after moving away from home for the first time.

Over the next three years, Emma would grow deeply embedded in a network of friends that included a ritual of use. This ritual: a joint in the morning before class, then meeting up with friends after class to smoke. Occasionally, even smoking with coworkers behind the dumpster at work. Then, on the weekends, she would engage in serious binge drinking at the local bars interrupted only by pot to mellow the subsequent hangovers. During this time she would also engage in poly drug use trying party drugs like ecstasy and cocaine, if others offered it to her.

What Emma described is similar to Moore's concept of "Scenes". Particularly Moore more accurately describes subcultures of drug use as scenes, which are "…cultural, social, temporal and spatial zones in which diverse people interact and contest the meanings of their actions" (Moore 2004, 201). Emma, like many other participants, was deeply involved in a scene of use in which group practices shaped her use, experiences, and what she found meaningful.

After three years of steady use of marijuana and other drugs, she decided that she no longer wanted to keep up the lifestyle she was living, and instead wanted to focus on her schooling. She eventually moved to a different university closer to home, so she moved back in with her parents.

"Once I ended my relationship [with a significant other at the time] and moved, that ended my relationship with the entire city." Emma told me in our interview.

Emma at this moment in her life felt lost. She was starting over at a new university with a very small network of support including three family members and just three friends from high school. However, over time Emma would build new relationships through connections through volunteering, work, and her new university. Though she was still using substances and smoking

53

marijuana regularly when she moved, she began to seek out other opportunities in this new town. She quickly got involved with research at her new university where she found a mentor. Over time, she grew closer with this mentor, who helped her realize her passion for research. This led Emma to pursuing a graduate degree at SSU where she was able to do more research related to her major to further develop this passion. At the same time as Emma moved, she slowly began to run out of time and money to continue smoking marijuana. Her work hours increased while simultaneously pursing her bachelor's degree and volunteering. With little time and money her patterns of use began to change. Eventually, she stopped using marijuana all together.

When conducting the social networking activity with Emma, she talked about how her network seemed to change along with this move and redirection in her life. She noted that the people she used to party with at her former college were not pictured on the map. She effectively abandoned that "scene" and the systems of value it implied.

"All my friendships before [moderation] were bullshit."

What replaced these "bullshit" relationships are relationships with persons she works, goes to school, and volunteers with. She noted how each of these groups helped her sustain her moderation in different ways. She noted that her academic colleagues,

"Set the bar for a level of performance that I should be performing at." For Emma, meeting the expectations set by her classmates keeps her both physically busy but also mentally invested in something other than use.

"It helps me maintain because I have to take responsibility for time spent doing school work versus investing time elsewhere."

Additionally, her connections to and involvement in work keep her quite busy, as her hours at work can be long and erratic. She notes that even just the schedule keeps her from

54

consuming substances, because she simply does not have the time within her work schedule to "party."

Finally, Emma discussed at length the role volunteering and research gave her. She spends much of her free time dedicated to this organization and her research.

Much like Granfield and Cloud propose, Emma's ties to certain people and subsequently institutions helped her to develop this "stake in conventional life" that pulled her away from use. Emma specifically moved out of her primary environment (scene) of use to do this, and she counts that as, in part, helpful to her sustaining her cessation of marijuana. However, the network she has created since moving out of this town and the primary institutions in her life have helped her to cultivate new spheres of involvement that for many reasons pulled her away from use.

I use this example to highlight the changing nature of social networks and the institutions students were tied to that helped them moderate/stop using. The one theme that ran throughout every social networking activity was change in the networks. All participants reported these changes. However, it was also their ties to the institutions, especially investing in their education that helped them achieve this "stake in conventional life" that Granfield and Cloud conceptualize. These networks, and the interpretive nature of the project helped to illuminate the ways in which students actually used their social capital to make change. By specifically looking at social networks participants can literally map the relationships and institutions that became central in their life in order to sustain recovery. I continue on in this chapter to highlight the other forms of capital students pull on to sustain natural recovery.

Physical Capital

Granfield and Cloud (2009) also note the importance of physical capital, which they define as "…economic or financial capital, includes income, savings, property, investments, and other tangible financial assets that can be converted to money" (1973). They note that this capital can support self-remitters while they pursue natural recovery, that physical capital provides the means to be mobile if necessary, or move away from the environment of use.

In some cases, having this physical capital was helpful to sustaining recovery. For instance, one participant, Lauren, had parents supporting her by paying her rent so she could relocate to a different university. Or Max, who drew on the physical capital offered by his mother and grandmother to afford a one-bedroom apartment, so he did not have to live with his former drug dealer. The ties to people within their network absolutely facilitated access to physical capital, which certainly helped them sustain recovery. In fact, six (out of the eight) participants lived either with family members or a significant other, who in some way provided physical capital during the process of natural recovery (not necessarily always directly monetarily but sometimes by contributing to supporting the household itself). The participants, as college students have relatively little in terms of physical capital compared to most in the full time workforce, but did have physical support in terms of having reliable resources to meet their basic needs.

Another source of this capital actually came from the university itself. The university served, for many participants as an employer, which offered them physical capital, and access to free or low cost resources, such as health clinics and counseling resources. For participants, access to this type of capital was also key in sustaining recovery. For instance, while pursuing recovery, one participant took a job with the university recreation center teaching fitness classes,

and also utilized university counseling services offered at her undergraduate institution to address her anxiety. It is important to note here, that while this participant did attend counseling she specifically did not use counseling for its recovery services, but rather access to other mental health resources. This was true of several other participants who saw mental health professionals, but distinguished between their time in therapy and their recovery process. The importance of mental health to natural recovery is discussed further in the next section.

All participants had relatively good access to physical capital. Just being in college gave/gives them greater access to resources and other forms of physical capital that those outside the institution might not have access too. In addition, many were supported by parents or loved ones, and found access to physical capital in those ways. In this sense, physical capital played a role in offering security and stability for participants while they pursued natural recovery.

Human Capital

Granfield and Cloud (2009) define human capital as "…a wide range of individual human attributes that provide one the means to function effectively in contemporary society, to maximize individual benefits associated with membership in that society, and to attain personal goals" (1974). While they list off several forms of human capital, from the broad "employability" to the even more broad "heredity", I have decided to highlight one key piece of human capital that was specific to participants and their positionality as students: mental health. Mental health is one of the top concerns for policy makers when considering campus substance use. State policy makers who oversee SSU have made addressing mental health and substance use a priority and have dedicated much time and resources to it, as reported by my interviews

with faculty and staff. How participants negotiated mental health, specifically in the university, is important to understanding how they leveraged their human capital.

Of the eight participants in my study, four mentioned improving their mental health as part of pursing natural recovery. I still count these participants as pursuing natural recovery because their therapy was not specifically for substance use. They did this in different ways. One participant, Olivia pulled directly on the university resources to help facilitate her mental health treatment for anxiety and depression. Two other participants, Hannah, a 27 year old SSU graduate student and Joe a 32 year old undergraduate student pursued mental health services outside of the university, but none the less, found similar results as Olivia. Using these institutions to enhance their human capital facilitated natural recovery.

Chelsea, another participant found this same result: emphasis on her mental health helped sustain her natural recovery. However, she went about this in a totally different way. Chelsea is a 28-year-old graduate student at SSU. She pursued her mental health by using psychedelics drugs. The use of psychedelic drugs for substance use and mental health treatment has become more prominent in popular (Pollan 2018) and scientific literature (Winkelman 2014). She noted how using psychedelics helped her explore some of the anxiety she was experiencing and helped her facilitate her cessation of substance use. For much of her life Chelsea suffered from extreme anxiety. For ten years she took SSRI's in order to keep her anxiety in check. However, she decided she did not want to take SSRI's anymore. She also decided to quit smoking cigarettes and drinking alcohol, the primary problematic substances in her life. She was introduced to psilocybin mushrooms by a friend, and after doing some research online decided to use the mushrooms in order to go on a journey to reckon with her mental health and addiction issues.

She noted that she went on a "trip" that helped her figure out and understand better the emotions she was feeling. It was during these trips that she developed a different perspective on her experiences and anxiety. After coming out of the "trips" she was brought a substantial amount of clarity in her life that, that first helped her manage her anxiety without medication, and second pursue natural recovery. For her, she no longer felt the need to use substances in order to help manage her mental health issues. It is important to note here that her use of psychedelic drugs is not problematic, as determined by the CAGE-AID issued during our interview.

While participants may have gone about managing their mental health in drastically different ways, I found that this was a common theme amongst participants, and pursuing their mental health along with natural recovery contributed significantly to this human capital.

Cultural Capital

"Cultural capital includes values, beliefs, dispositions, perceptions, and appreciations that emanate from membership in a particular cultural group" (Granfield and Cloud 2009). In their 2009 paper, Grandfield and Cloud discuss how they saw their participants using their cultural capital by pulling on the social norms in which they are embedded to pursue recovery. I saw this work in two ways within the university setting. First, by being apart of an institution of higher education, students are specifically building cultural capital, which, according to Bourdieu, will position them more advantageously in life (Bourdieu 1984). Bourdieu proposes that possession of cultural capital, specifically through education, facilitates access to economic capital. However, cultural capital also acts in other ways. Scholars of higher education have noted how cultural capital instills and reproduces societal values, and those who possess these values are in

59

more advantageous positions (Levinson and Holland 1996). The university structure creates individuals who align with specific ideals of the educated citizenry. In part, the university structure and the capital that follows creates a certain identity of the typical college student, one that emphasizes exploration and making mistakes in the liminal space that is college.

Studies in natural recovery have emphasized identity as a facilitator of cessation, in which they conceptualize the addict identity as a hindrance to recovery. For instance, Peele notes "The very word 'addict' confers an identity that admits no other possibilities. It incorporates the assumption that you can't or won't change" (Peele 2004b, 43). Throughout the rest of this paper, Peele highlights how change can happen if one doesn't believe in the artificial limits that the addiction discourse places on them. Biernacki notes how identity is tied to relationships in social worlds (Biernacki 1986). He argues that through natural recovery, identities shift and rearrange in a way that makes people able to participate in other social worlds, which help to sustain their remittance of substance use. Still today, some studies use the concept of identity and the self as part of what leads to self-change in natural recovery (McIntosh and McKeganey 2000). Carol Cain, in her chapter *Personal Stories in Alcoholics Anonymous* (1998), details how inclusion within Alcolics Anonymous facilitates the addict identity, which she proposes changes the way that participants act and view the world.

Similarly, throughout my research and talking with participants, I have come to realize that there is something unique about being in college. In college, students are encouraged to try new things and fail to find and create their own identity in this liminal space. It seems to me that this is in part what contributes to student substance use and recovery in such a nonchalant manner. The university is fundamentally set up for learning, making mistakes, failing, and starting over again. In an interview with an employee working with incoming freshmen, we

discussed a phrase thrown around in higher education, "fail forward". This phrase alludes to the idea that as a student you're going to make mistakes, you're going to fail, that's inevitable. But the important thing is to learn from it.

In a paper on ritual of alcohol abuse in college, Crawford and Novack remark that "The concept of liminality is also of relevance to the American college experience… many students perceive themselves to be in a unique situation, albeit temporary, within which heavy drinking is both an acceptable and desirable activity" (Crawford and Novack 2006). In the college environment, because of the ethos that surrounds use and just general experimentation, there is a specific identity created that even when students do use, they avoid the addict identity. While this is certainly not true of all college students, most of the students I interviewed would not have identified with the "addict" identity. Though they all acknowledged their problematic use, they did not necessarily conform to the addict archetype. One of my student participants (in the middle of our interview discussing her problematic use of marijuana) when referring to occasionally binge drinking stated, "It's whatever though, I'm in college". She played on the college student identity that combines liminality and a space for experimentation and learning to avoid the problematic drug discourse and label of 'addict'. Other participants echoed similar sentiments. They discussed in various ways how their use was just a part of their college experience, and they viewed this as a time to "fuck up".

The college environment, then, in one sense helps participants mitigate the addict identity, which could be indicative as to how doing natural recovery in college is a bit easier (more feasible). By adhering to the cultural norms of the college identity that literally makes actions seem less serious, remitters played on the identity facilitated by this cultural capital to do natural recovery. In the university space students are not bound to the same type of permanence

and identities associated with problematic use as those outside the university structure are. This combination of cultural capital, identity, and liminality makes it easier for students to do natural recovery.

Discussion

This chapter covers a fairly wide breadth of information. The goal of this chapter is to show how first, the university frames student substance use on a broad scale, and how this might incidentally provide a space for students to pursue natural recovery. The neoliberal institution only gazes upon what is measureable. Statistics and student outcomes related to student success like retention and graduation rates, take precedence over actual student experiences. This informs the university's approach to substance use, and how the university is structured to handle problematic substance use. However, it is also the rejection of this very framework that makes natural recovery an attractive option for students who are experiencing problematic use. Just like there are many reasons those outside the university decide not to seek formal addiction treatment (Granfield and Cloud 1999), there are many reasons students might also choose not to seek the formal services that the university offers. This may be disruptive to their schoolwork, or they may not even see it as a necessity (embodying the liminality of substance use in college). Thus, students turn to the university in different ways to do natural recovery.

The university is both a space that causes mental health issues (a number of participants used substances to manage school related stress) and at the same time provides an abundance of support and outreach services dedicated to student health and wellness. At once, it takes physical capital, in the form of tuition payments and student loans, to access the university; but once you're in, you are provided with an abundance of "free resources" (paid for by tuition money).

The cultural capital that produces and reproduces the educated citizenry puts students ahead in society, only so they can go compete in the neoliberal market place, which provides its own pressures on what it means to be a successful person after graduation. It is within this paradoxical landscape that many students learn and unlearn substance use. Navigating both the formal and informal structures that surround them is not necessarily always easy, or conscious, but students who do natural recovery are actually capitalizing on the university in interesting ways. It is at this intersection between structure and capital that change happens. The university structure makes very specific forms of capital available, and even advantageous. Self-remitters are able to grasp onto the recovery capital offered under the structure of the university to pursue change.

Based on the data I gathered in interviews and social networking activities, I have found that student use the university structure in unique ways that align with recovery capital theory. They leverage their social capital to facilitate involvement in the university and other institutions. These institutions, especially the university, help develop the students "stake in conventional life". At the same time, being a part of a university system allows access to physical capital and other resources like "free" counseling or other health services. Students also depended on significant others and families to provide physical capital. Human capital, I found, was mostly emphasized as students used university and other resources to facilitate their mental health. Finally, by being a part of the broad university structure, students are enmeshed in a liminal space, which allows them time to build and play with a flexible identity. This allows them to avoid, if they so choose, the addict identity, which has been suggested as part of what facilitates natural recovery.

63

Together, university students make an excellent case study to look at how structures influence substance use and cessation outside of traditional rehabilitation settings. In the next chapter I detail how students may not only use this capital to navigate this paradoxical structure, but also to avoid cues that trigger wanting and habit, important components in the biological experience of substance use recovery.
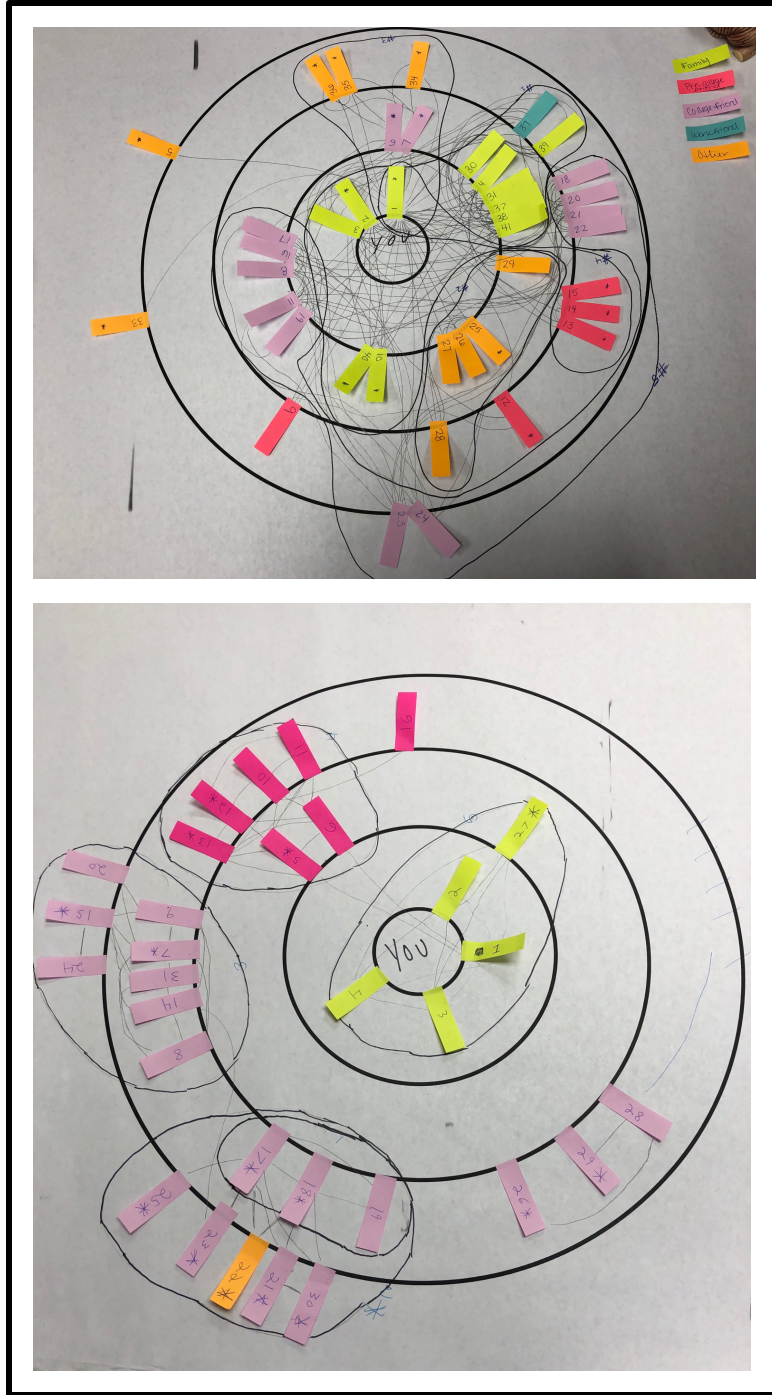
Figure 1: Sample Social Network Maps

CHAPTER FIVE:

NEUROANTHROPOLOGY OF NATURAL RECOVERY

Introduction

In this chapter I discuss how students experience substance use cues in natural recovery. First I discuss how cue reactivity fits into this study, and frame the model of cue reactivity that I employ. I then go on to detail, based on interviews data, how students engaged with cues and mitigated them. Finally, I discuss Bourdieu's concept of habitus and connect the practice I observed during participant observation to the ways students discussed mitigating these cues.

Cues in the College Environment

In conceptualizing this study, I was interested in understanding the role that cues played in the negotiation of the physical and cultural environment of use. This is, in part, why I chose to use the cue reactivity framework. Cue reactivity theory emphasizes the roles that cues (signals of value related to past use) play in addiction and recovery. Additionally, cue reactivity theory is a theory of relapse. I find this framework critical to understanding how people prevent their own relapse, and the roles that cues play in potential for relapse. It is critical because it proposes a framework that addresses how meaningful stimuli and behavior come together in the lived experience of recovery. This view is opposed to natural recovery theory, which specifically focuses on the social concept of addiction. I find that the theoretical framework allows more

66

room for looking at the actual process of recovery and relapse, rather than a reflection on the social-structural implications of addiction.

The cue reactivity framework gets at the corporeal, lived experiences, and the practices of people actually doing natural recovery. Also, my approach is unique in that most studies of cue reactivity are primarily run through psychological methodology, most of the time in a laboratory or otherwise controlled settings (Rohsenow et al. 1994; Verdejo-Garcia et al. 2012; Sinha 2007; Conklin and Tiffany 2002) with some studies utilizing journaling as a method of data collection (Witteman et al. 2015). Using ethnographic methods to study cue reactivity is a novel approach, and reveals data that cannot be gathered in the laboratory setting. Thus I find that framing this study in terms of cue reactivity is ultimately important in creating a holistic concept of natural recovery that considers both the social and the biological components of use and cessation.

As I remarked in the previous chapter, another important part of how I conceptualized this study is that I was expecting to recruit students who were both becoming users and doing natural recovery in the same university environment. However I found that, first, most participants (7/8, 87.5%) started using before college. Second, almost all participants ended up being graduate students (6/8, 75%), whose peak use was during their undergraduate career and subsequently performed natural recovery before or during their graduate careers, often, having switched universities and scenes of primary use. Thus, where I was looking to find students struggling to reconcile the same setting with very new behavioral patterns, I found students who instead were learning to negotiate the university structure broadly, and the student identity (discussed in the previous chapter). However, as literature on substance use/abuse and cue reactivity highlights, it is not only the environmental cues that trigger use or wanting (Greely and Ryan 1995; Tiffany 1995; Vardejo-Garcia et al. 2012). Rather, it is a myriad of internal and

external cues that signal the want to use, sometimes bound environmentally but often it comes down to meaning rather than place. By this I mean, that there are almost infinite things that could trigger wanting, anything that is meaningful to use -physically, sensationally, or psychologically- can become a cue.

As I detail in the following sections, I found that students, despite an average of over two years of abstinence/moderation, were still "triggered" by many cues. Music, changes in the weather, time of day, and stress were just of the few cues that participants discussed. Cue reactivity is far more complicated and nuanced than a stimulus-response paradigm. These cues were informed by the student's experiences and the culture of student drug use. Specifically, I found that cues were connected in meaningful ways to the college lifestyle and the ethos of college. With this in mind, the rest of this chapter discusses how students experience those cues and pull on their social capital to mediate them.

Model of Cue reactivity

In his paper *What Does Cue-Reactivity Have to Offer Clinical Research?* Drummond critiques the simple disease model of cues in favor of a more complicated model of cue reactivity. The simple model asserts that cues lead to craving which leads to relapse. In the more nuanced cue reactivity model, Drummond divides cue reactivity into three different types: symbolic-expressive, physiological, and behavioral (Drummond 2000). Symbolic expressive, broadly described as craving, is the sensation of wanting to use a substance after cue exposure. This would be like craving a drink after passing a bar, or seeing an alcohol advertisement. Behavioral cue reactivity is the drug seeking behavior; going into the bar to get that drink. Physiological cue reactivity is the autonomic reactions people have in reference to substance use

such as: salivation, skin conductance, heart rate, and other physiological responses to cues. The three different types of cue reactivity described within this model highlight the various ways cues are experienced, that goes beyond a simple stimulus-response paradigm.

This distinction between symbolic-expressive cue reactivity and behavioral cue reactivity is similar to how Lende describes the difference between wanting and habit. In his chapter, *Addiction and Neuroanthropology,* Lende illuminates how the social, biological, and environmental come together to influence addiction. He breaks down incentive salience as "literally, determining which incentives or indicators for eventual reward are salient to the individual in a particular environment" (Lende 2012, 343). Incentive salience is the neurological basis of cue reactivity. Researchers have connected the experience of cue reactivity to dopamine in the mesolimbic dopamine system, specifically noting, as Lende does, the contextual nature of dopamine responses in the brain (Robinson and Berridge 2008).

The concept that there are biological cues for wanting is important, especially considering the bounded environment that is a college campus. Using drugs within this specific environment could help develop biological cues for wanting, incentive salience. But, wanting does not necessarily mean getting. To tackle this, Lende notes the importance of habit. Habit here is the building of repetitive or ritual use, which is reinforced both by the social and physical context, through which people come to learn to pursue drugs (Lende 2005; Lende 2012). I point out this distinction here because in studies of cue reactivity there has been a failure to correlate drug craving and relapse (Witteman et al. 2015). Specifically, scholars have noted that even subjective (symbolic-expressive) measures of cue reactivity do not correlate to rates of relapse in persons who have been studied during and after participating in recovery programs (Rohsenow et al. 1994). This is pertinent to my study because the questions I asked participants were able to

69

get at the distinction between craving and behavior. The participants discussed wanting to use drugs (the symbolic-expressive type of cue reactivity). However, they also discussed how they avoided using, and how they mitigated the behavioral cue reactivity, by leveraging their social capital and reforming their new habitus of non-user (or in some cases, moderator). In this chapter I detail how this reformed habitus not only reflects the social-structural implications of substance use cessation but also reflects, in part, on the biological experience of cessation. Specifically, I note how these social management techniques also effectively work to manage the cues that participants experienced.

Because of the nature of my study, I can only address two of the three aspects of cue reactivity discussed in this model. In my study, I did not measure any physiological variables related to cue reactivity. However, in future studies, measuring physiological cue reactivity could be important to drawing additional conclusions about the nature of cue reactivity and relapse. I spend the remaining portion of this chapter specifically discussing the symbolic-expressive and behavioral forms of cue reactivity.

Symbolic-Expressive and Behavioral Cue Reactivity

In this section I discuss how participants expressed symbolic-expressive cue reactivity and the interesting ways students discusses behavioral cue reactivity. I found that students, when asked if they ever wanted to use, answered with a resounding yes. They would then go on in great detail about all the things that made them want to use. They could describe exact moments or situations when they wanted drugs. Here I highlight three different participant's responses to this question.

Max, a 25-year-old graduate student who has been moderating his use for about three years, remarked that the smell of marijuana (the primary problematic substance he used) makes him want to use. He talked about how whenever he smells it in public or even other plants that smell similarly in the springtime, he feels the urge to use again. He also talked about how rap songs about smoking make him want to smoke. Olivia, a 22-year-old graduate student who hasn't used in over two years, felt similarly, though for her, she mainly got the urge to use when she saw other people using. For Chelsea, another SSU graduate student who has not had alcohol for over a year, remarked that when she got stressed during a family holiday party, she almost stopped at the local bar for a drink. Each participant told similar stories about how they managed not to use when they were craving, relaying a similar sentiment around this symbolic-expressive cue reactivity. However, when it came to drug seeking they all told remarkably similar stories about how they did not use, about how they mitigated the behavioral cue reactivity. To highlight how students did this I am specifically going to tell the story of Nick, who expressed to me very clearly the distinction between drug wanting and drug seeking.

Nick is a 28-year-old graduate student at Southern State University. He first started using drugs at 8 years old, when a childhood friend's older brother gave him and his friends drugs.

"Marijuana, pills, alcohol…" he listed off the drugs when I asked him about when he started using. "But none of the hard stuff." In this case, the hard stuff he was referring to were psychedelics and other "party drugs" (those would come later). Throughout his teenage years he would continue to use and try many other drugs.

His use accelerated over the span of his undergraduate career and finally peaked in graduate school. He noted how every morning he would wake up and smoke marijuana. After class, and sometimes in between classes, he would smoke. He was high all the time. He

expressed how it relieved the stress of school, helped him write, and deal with family trauma he was experiencing. However, after his first year of graduate school Nick decided he wanted to stop using.

"It [use] made me feel like a loser." He said as he talked about how he gradually decided to stop using. He remembers thinking about quitting a lot, but not acting on the idea right away. Overtime, Nick disassociated from his drug dealer, and slowly started to run out of his supply. When he reached his last nugget (the colloquial term for a small portion of marijuana), Nick remembers saying to himself, "alright this is the last one." He knew it was over.

Since that last "nug", about a year ago from the time of our interview, he has not used marijuana. When I asked him, like I asked everyone else, if he ever wanted to use he paused.

"No…not really." I was surprised. He was one of my last interviews and up until that point all participants had answered that question consistently and positively.

Nick continued. "I mean I might be tempted…but I wouldn't act on it. So would I be tempted? Yes. Craving? No."

"Well, what's the difference between tempted and craving?" I asked.

"Well craving is like 'oh, I need that'. You know? You're more likely to act. But tempting is like 'I want that but I'm not going to act'" he explained.

What he explained, is similar to the distinction between wanting and drug seeking others highlighted in their interviews. Though Nick called it differently (temptation rather than craving), he is highlighting the distinction between the symbolic-expressive cue reactivity (that 'want' to use) that is distinguishable from that drug seeking behavioral kind of cue reactivity.

He then went on to say, "I've moved on. That used to be me." This was also a common occurrence across all of my interviews. Participants separated themselves from their past use,

72

almost like a former self. They would talk about this former self, and the former position of their lives almost longingly. I have come to call this the nostalgia factor.

When I asked participants why they don't use, my quick follow up to the "do you ever want to use?" question, they noted something akin to nostalgia about their past use. They would talk about how they were tempted to use, but couldn't see themselves using again (or, for moderators, using as much as they did). They would remark how they couldn't go back to the same time and place that they used to use, and feel the same way. They reminisced about the sense of freedom they felt in their lives when they were at their peak of use, usually as undergraduate students. All aside from one participant (whom specifically used substances for schoolwork) remarked that their school work or life responsibilities now are too much for them to be able to go back to that same place. For many of them, this is the reason they stopped or started moderating in the first place.

Hannah, a 28 year old SSU graduate student, remarked "I'm too old for it now" when I asked her why she doesn't use. "I already had that experience. I feel like I need to be responsible."

Olivia too, "I wish I could still do it without freaking out. It's just not me anymore." And in another interview, later "I think a lot of my drug use was because I felt like I was stuck. It was the perfect time for me to try drugs but it was the worst time because I was depressed. But now its like I don't have time, I'm moving. I just don't even have time because I have so many responsibilities…I don't even have time to let loose with alcohol…This is the most sober I've ever been in my life. I don't even have time to get drunk" (Olivia's former and current rates of alcohol use are not problematic as determined by the CAGE-AID issued during our interview).

Participants tended to talk about the new pace of their lives. Most of them spoke about how busy they were with the new things that they were doing in life. Course loads, teaching exercise classes, jobs, research, new friends, new activities that all became part of their new "selves", that substance use no longer fit into.

At first these answers were confusing to me. I wrestled with what it meant to be so nostalgic about use, about a certain time and place of use, that it drew a stark division between the symbolic-expressive (wanting) and behavioral (seeking) types of cue reactivity. However, after understanding the practices of participants, I began to view this rhetoric of nostalgia as representative of the move from the habitus of a user to a non-user.

Changing Habits-Changing Habitus

The language students used to describe the distinction between wanting and behavioral cues, particularly the nostalgia that separated their former self as user from their current self as a non-user (or moderator), coincides with the changing nature of practices students engaged in. Social theorist Pierre Bourdieu reconciled structure and agency through the concept of practice.

> "The theory of practice as practice insists, contrary to positivist materialism, that the objects of knowledge are constructed, not passively recorded, and contrary to the intellectualist idealism, that the principal of this construction is the system of structured, structuring dispositions, the *habitus* [emphasis original]*,* which is constituted in practice and is always oriented toward practical functions" (Bourdieu 1990, 52).

For Bourdieu, the concept of practice revealed how actors act within a field based on their social structural positions. He proposes, more or less, that by studying practice an actor's habitus is revealed, and thus proposes that one can better understand how the agentive being acts within a structure. The habitus represents a set of loose guiding principles that helps guide decision making of the agentive being (Bourdieu 1990). Neuroanthropologist Greg Downey has

74

reconciled the unconscious nature of habitus, proposed by Bourdieu, and notes that embodied knowledge can be learned both consciously and unconsciously (Downey 2010). Here I use a similar framework, while many participants made a conscious decision to quit, the way they pulled on their recovery capital, and the way that shaped their habitus seemed to be quite unconscious.

Following in Bourdieu's footsteps, Loic Wacquant (2004) employed the concept and site of practice to understand the pugilistic habitus, I spend the remainder of this chapter discussing the participant observation I conducted and how I understood the practices of participants as they came to embody their new habitus as non-users (or in some cases moderator). I specifically talk about two participants, Max and Olivia, with whom I conducted participant observation. I detail the instances of participant observation and discuss how they leveraged their recovery capital to change their habitus, and the implications this had on their experiences of cue reactivity.

Olivia's Story

Olivia started using drugs in college. She told me about how she tried alcohol (in her first semester at college) and marijuana on her first college spring break.

"It was fun, I was with my friends and it was just a week of partying."

After spring break, she started smoking marijuana daily. A bowl in the morning, and a joint with her roommates after class, her use was almost ritualistic and consistent.

"I was a fully functioning smoker. People didn't even realize I was high… because I was high ALL [emphasis original] the time."

This started her yearlong affair with marijuana, and eventually acid (LSD), MDMA (Molly), and cocaine. Olivia decided to stop after overdosing on Molly at a music festival, which

left her with severe trauma. So much so that she found using any substances gave her intense panic attacks that left her feeling like she was dying.

For Olivia, quitting use was a dramatic moment of change. Once she decided to stop using, Olivia quit using substances "cold turkey". Her primary problematic substance was marijuana. She remembers vividly going through what she considers withdrawals including sweating, anxiety in public, and insomnia. To manage this, Olivia relied on various forms of recovery capital. This included reconnecting with old friends, and avoiding those who used substances (social capital). She used guided meditations to help her sleep, and renewed her emphasis on schoolwork (cultural capital). She also got involved in various forms of exercise. In hula-hooping for fun and teaching group fitness classes at the university, she found an outlet to emphasize her health (human capital) and a way to bring in more money (physical capital).

Slowly, Olivia started to leverage these forms of capital to shape her habitus as a non-user. I observed this when I attended a yoga class at SSU led by Olivia one afternoon. In the basement of the rec center, I joined a handful of other amateur yogis for a gentle yoga class. Olivia opened the class with a guided meditation where she challenged us to connect with our thoughts, feelings and bodies. She reminded us that throughout our session, listening to our bodies would be key to performing a good practice. The rest of the class proceeded like yoga classes do, striking poses, sometimes quite awkwardly in my case, and focusing on our breathing along the way. Olivia, employing her calmest voice and gentlest guidance when needed, led the class through an hour routine, after which we all quietly packed up our mats and left the room.

After yoga I had a chance to catch up with Olivia. We discussed classes, homework, deadlines, and other things that were happening in our lives over dinner at a local restaurant. Olivia began to tell me how she planned to attend a music festival in late April, the first since she

overdosed on Molly, and she was quite nervous. But, she expressed all the other things she planned to do over the three-day weekend instead. She noted how she planned to bring a bottle of wine to drink, but also how she was excited to hula-hoop, something she'd picked up in place of use. She also noted how a close friend would be with her, and how she relied on him for support in times of anxiety and stress, especially surrounding substance use. Though she was definitely anxious to be in the setting again, she discussed all the ways (and forms of capital) she planned to leverage to avoid using.

Max's Story

Max is a 25-year-old graduate student at SSU. Max started using substances in high school. However, in college his use began to accelerate quickly, with use of both Adderall and marijuana becoming problematic by his junior year of his undergraduate career. Max in part attributes his substance use to the fact that he lived with his drug dealer. As he put it,

"I wouldn't say there are gateway drugs, I would say there are more like gateway people."

Here Max highlights how the people in his network, and their own involvement with drugs, influenced his propensity to use. He had virtually constant access to drugs, and even started producing (growing) some drugs himself. This was until he decided to study abroad. During his time abroad Max did not have access to drugs or these networks, so he could no longer use. He noted that, oddly, during his study abroad trip (one summer for several months), he had quite a bit of free time that he ended up spending watching videos of people play video and board games online. When he returned from his trip he began to use less and play video games more with friends from high school he had grown distant from when he started using

marijuana and Adderall heavily. These friends began to draw closer as his university friends began to slowly move out of his network.

When Max decided he wanted to pursue graduate school, he decided that he needed to cut back on his use. He "didn't want to fuck up" graduate school (human capital). He used this transition to move into an apartment on his own supported in part monetarily by his mother and grandmother (physical capital) and put his time into his schoolwork instead. During this time, he would also develop connections with friends who regularly played tabletop board games, in a setting where being on drugs is very frowned upon. His involvement with these new friends helped him move away from substance use, and dedicate more time and energy to schoolwork (social and cultural capital). Though he was initially out of the context of use when he stopped using, he was quickly thrown back into the same context as he pursued long term moderation where he leveraged the interests he had built while abroad in his home environment to stop using.

While interviewing Max, we discussed the things he is currently involved in that help him moderate his use. He noted that most of his time is dedicated to school work, but he spends his free time playing a particular table top game. This is when he first began to discuss with me his involvement in a tabletop board game. In this game, a storyteller leads a team through a story and through the game. Max often played the role of the storyteller, which means he had to create the players and the story line. Max regularly participates in one to two games a week. He invited me to join him for a game to conduct participant observation.

The game took place in a public community lounge on campus on a Saturday night. Myself, Max and two other players gathered to play. We sat down at a table with snacks and supplies and began our adventure. We all had created our characters beforehand, so getting into

78

the game was easy. There is a set of complex rules and dice rolling, that I learned along the way. It was my first time playing this particular game, so the pace was slowed a bit to accommodate my novice questions (I was a "noob" as they would say in the gaming world). The game was a detailed story Max created, and myself and the other players played through the story he created (including a fair bit of improve when we made moves he did not expect). The story Max created, which, among other things, had us battling anthropomorphic fish creatures, looking for clues in old book shelves in abandon dungeons, and creating allies with creatures we met in the local tavern, caught our interest for close to six hours. Our session only interrupted for brief bathroom breaks and to grab more snacks. All of our attention was fixed on the world that Max was creating before us. Finally, when much more time had passed than we all realized, we packed up the game, only to pick it up a few weekends later in a similarly gripping adventure. In the end, I spent over twelve hours conducting participant observation with Max.

A few days after the game I ran into Max on campus and we discussed how much fun we had while playing. He noted that for every hour of game play, there is about two hours of prep work for the storyteller. During this conversation I realized how much time Max must have spent preparing for our game play, and the other games he participates in weekly. However, after reflecting on the experience of playing the game, I can also see how entirely gripping the game is, and how using substances would not be conducive to the intensity of the game. For Max, he pulled on the capital provided by his new friendships and his goals to focus on school, rather than substance use, to spend his free time engaged in something that keeps his attention entirely. It's clear, after participating in this game and talking with Max, that the cues he experienced are easily mitigated by the levels of involvement he now puts into his graduate coursework and this game. Other anthropologists have noted the social and psychological implications of engrossing

play. Stromberg (2009) in the book *Caught in Play,* argues that play has impacts on personal psychology and a role facilitating our social world. Play is a sight of fundamental social and neurological overlap that engages participants, and shapes them in changing what they attend to and how. This was clear in my participant observation with Max. Play, and involvement in this game and the forms of capital it connected him to helped facilitate natural recovery.

Discussion

In the first part of this chapter I detailed how participants engaged with and avoided cues, and how their rhetoric (and nostalgia) surrounding cues shaped their perceptions of themselves. In the second half of this chapter I detail how students negotiated a changing habitus grounded in instances of practice. These examples show how participants unconsciously leveraged their recovery capital to form a new habitus of non-user. In my participant observation sessions I watched and participated in these new fields of practice, and came to understand how participants embodied this new habitus. Further, I would like to take a step here to connect this back to neuroanthropology through cue reactivity. Participants, through embodying this new habitus (leveraging their recovery capital), are at once shaping behavioral cue reactivity. They are actively engaging in behaviors that mitigate that drug-seeking component.

For Olivia, she discussed her plans to return to one of her most common sites of use, but in the same breath detailed all of the other forms of capital she would be using not to use, even though she expected the cues to be abundant (expressed through her anxiety about the weekend). With Max, I participated in what I can only describe as an incredibly gripping tabletop game, which took him literally twenty-four hours to prepare and twelve additional hours to conduct over our two sessions. In these sessions, I realized how corporally engaging this activity is, how

it shapes perception of time, and the intensity it demands of your concentration (it is fair to say I was sufficiently exhausted after playing for six hours). Though the culture of the game, according to Max, discourages use, I can imagine that any substance that might take away from concentration dedicated to the game would not be conducive to planning or execution. For Max, this intense involvement in school and the game helped reshape his lifestyle in order to mitigate cues.

Participants across my study employed similar techniques. They significantly reformed their lives, and the spheres on involvement. In their practice (new activities), I could clearly see how they were reforming their habitus to that of non-user. By unconsciously pulling on recovery capital to reform this habitus, they were also shaping their engagement with meaningful cues. Though they all still discussed moments of wanting, this new habitus facilitated a way to engage in their lives that mitigated the drug seeking cue reactivity that baffles so many that study cue reactivity in the laboratory.

CHAPTER SIX:

CONCLUSION

"It's not addiction until you graduate"

-Anonymous

Summary of Conclusions

When I was an undergraduate I once heard a fellow student say "It's not addiction until you graduate!" as he was discussing his drinking habits and those of his peers. This statement always stuck with me, and thus why it became the title of this thesis. There is something about the university setting that fundamentally changes perceptions of student drug use. The college environment and the strong cultures of use offer a specific space in which substances are consumed. Conceptualizing this study on natural recovery brought me back to this quote. What is it about the college environment that makes substance abuse different?

To better understand this I investigated patterns of student substance use and abuse, specifically looking at how students stopped using. I found that the theoretical framework of natural recovery provided space to address the social/cultural aspects of problematic substance use in college and how students stop/moderate. I also wanted to understand how the bounded physical and cultural space of the university influenced the biological dimensions of quitting use. I began this project with the wildly optimistic idea that I could create a biocultural approach to natural recovery. In reading about natural recovery, I found that the theories fell far short of the actual physical experience of natural recovery. I wanted to bring the holistic anthropological

82

framework to natural recovery that reconciled structure and agency in the context of real life change. So, I set out to create a neuroanthropological approach to natural recovery that considered with equal weight both of these theoretical paradigms. However, due to my small sample size, and limited time frame, I cannot make any tempting, grand theoretical generalizations. Instead I have decided to discuss three main takeaways of this research project.

First, the university exists as a paradoxical institution that facilitates both use and recovery. The strong cultural traditions of use and pressure of the neoliberal university system, I found, can push students toward use. Most participants discussed how trying drugs was viewed as part of the traditional "experimental" college experience. However, students also tied habitual and problematic use to stress relief from the pressures of school. The university tries to combat problematic use by investing in programming and monitoring student success statistics as proof of their efforts. This creates a dichotomous space, one in which students can pursue formal recovery within the institution (likely being pushed out of the institution to "community partners") or students can leverage their capital within this structure to do natural recovery. I propose that being part of the university provides ample recovery capital that in part facilitates student substance use cessation.

The second take away of this project is that cues matter. My research showed that students very much experience substance use cues related to their use while in the university setting. However, my research also highlights the distinction between drug wanting and drug seeking that has been discussed elsewhere (Lende 2012; Rosenhow 1994). While I cannot draw any grand conclusions about cue reactivity in natural recovery, I can say that ethnographic fieldwork is likely an important and effective way to understand what distinguishes wanting and habit (symbolic-expressive vs behavioral cue reactivity). For participants, they highlighted

83

feelings of nostalgia that stopped them from drug seeking. I suggest that further ethnographic research on the subject may illuminate what stops others from drug seeking when cued. Applying ethnographic methods to psychological theories could highlight how people actually operate, "in the wild" and could apply those results to treatment paradigms.

Finally, the third take away is that natural recovery may be a biocultural phenomenon. Due to the limitations of my data, I cannot fully conclude and construct the model of natural recovery that I may have dreamed. However, I can say that my research indicates that there is some interaction between the sociocultural and biological dimensions of natural recovery. By highlighting practice and the changing habitus, I have demonstrated that there is some type of embodiment component happening within natural recovery. This idea too lends itself to additional research. Habitus serves as an excellent framework to reconcile structure and agency, while practice highlights how the individual actually lives these experiences out. I find that the practices of self-remitters indicate that there is more than just interaction with the social life that influences their propensity to use and stop using. As biological beings operating in a social world, we are fundamentally biocultural.

Applications of this Research

There are four main applications of this research. The first application pertains to students and staff at SSU. During my interviews with staff members at SSU I asked them what they thought would be a good applied outcomes of this research project. I plan to compile a list of these outcomes and create a short report based on what I found in my research. Many of the staff participants were interested in learning more about natural recovery and the outcomes of this project. I hope to create a report that gives more information about natural recovery and a simple

report of my main conclusions. Through this report I'm hoping to address two main points: First, natural recovery happens, and second, the forms of capital students pull on. It is my hope that this will help professional staff understand a bit more about what students might be experiencing, and how the different resources the university offers are being employed. This will benefit staff and students as staff will hopefully understand the student experience in a different way, which might help improve the way students are viewed within the university structure.

The second applied outcome of this research is it gives an example of how to apply new methodology to areas of study in which they have not yet been applied. Applying ethnographic methods like participant observation and social network analysis to natural recovery theory elucidated a bit more the phenomenon that natural recovery scholars already discuss. I found that these methods could be really useful in addressing some of the main theoretical constructs that have not been examined outside of semi-structured interviews. Additionally, cue-reactivity is rarely studied outside the controlled laboratory setting. Applying ethnographic methods, as I have discussed, seems to be an effective way to capture aspects of the phenomenon that still baffle those who do cue reactivity research. This thesis shows that these methods can and should be applied within other realms of research.

The third applied outcome of this project is the theoretical development it alludes to. Though theory does not necessarily seem like an applied outcome I argue that the theoretical holes I have explored, if further developed, could contribute to more effective treatment programs in the future. In this thesis I attempted to address a more biocultural perspective of substance use cessation. By breaking down and examining the theories relevant to natural recovery, and bringing together disparate discourses I have highlighted the importance of considering the holistic being in recovery. One of the goals of this project was to build a better

85

theory of natural recovery. It is my hope that this research continues to lead to the development of a more accurate theory of natural recovery that goes beyond a purely social dimension. Eventually, this theoretical development may inform treatment pathways and help those struggling with problematic substance use.

The fourth and final application of this study is to suggest a better name for natural recovery. Those in the field have long noted how the term "natural recovery" is not a great name, but have found no better options to replace the term (Granfield and Cloud 1999). This term is confusing for a number of reasons. It has long been noted how important language is to addiction and recovery (Cain 1991; Carr 2010). From a linguistic perspective, the current terminology implies that there is something innate in those that do "*natural*" recovery, as opposed to those who pursue formal recovery programs. Recovery suggests that the person who is pursing cessation is something that was lost, but through sobriety will be recovered. I find the many possible interpretations of this terminology and what it implies about self-remitters troubling. I suggest instead we might consider calling the phenomenon informal cessation/moderation. I find this may be more fitting because the distinction between those doing "natural recovery" and those pursing a rehabilitation program is the guise of formality. Both practices seem to operate by similar broad principles, those who do "natural recovery" just do it informally. I suggest that going forward "informal cessation/moderation" could be applied in place of "natural recovery".

Limitations and Future Research Directions

As I assume happens with most research projects, I have ended this with project inspired by more questions than I had when I started. One of the limitations of this study is that I have employed mainly social methods. Subsequently, an area of future research would be to further

86

develop the biocultural approach to informal cessation, employing both biological and social methodology. Taking physiological measurements, or even conducting a more empirical research study informed by this work may better assess the biological components at play in informal cessation. Inserting biological methods into a similar project might yield interesting results that better indicate the actual process of cessation.

Another area to explore would be looking at how the pressures of the neoliberal institution become embodied. Due to the limited nature and time of this project, I could not explore the deep impacts of the neoliberal university system. While this research touched a bit on the implications of neoliberalism on the university and student support services, there needs to be more research done in this area. Specifically, to look at how this affects the way student participate (and choose not to participate) in university resources. Additionally, it would be interesting to explore how this structure promotes stress and poor student mental health. Other scholars (Trembath 2018) have noted the toll that neoliberalism takes on faculty mental health, it would be interesting to apply this framework to students as well.

Finally, future research needs to be done on the distinction between behavioral and symbolic-interpretive cue reactivity. In this study, again due to the nature of the time limits, I examined merely one small instance of the distinction between these experiences. Further ethnographic research could yield results that draw out this distinction and how to mitigate it in formal or informal recovery.

Conclusion

Broadly, this study is framed as a way to look at personal change. I have used the concepts of structure and agency to look at how college students do change. Specifically, I look

at what has been culturally conceived of as one of the most difficult changes to make, to quit using drugs without formal rehabilitation programs. Overall, I highlight the role that structures play, sometimes unexpectedly in this change, and how students unconsciously pull on these structures. I also highlight how as individual agents they renegotiate their lives to mitigate the cues that could otherwise facilitate use. Change, for the individual, comes in negotiating this space between the structure and their own experience. The university serves as a unique paradoxical setting where practice unites structure and agency/ biology and culture/ nature and nurture. Thus illuminating how students seemingly negotiate problematic drug use in college so casually. After all, it's not addiction until you graduate.

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APPENDIX A:

UNIVERSITY OF SOUTH FLORIDA INSITUTIONAL REVIEW BOARD - STUDY

APPROVAL LETTER

USF
UNIVERSITY OF
SOUTH FLORIDA

RESEARCH INTEGRITY AND COMPLIANCE
Institutional Review Boards, FWA No. 00001669
12901 Bruce B. Downs Blvd., MDC035 ● Tampa, FL 33612-4799
(813) 974-5638 ● FAX (813) 974-7091

10/26/2018

Breanne Casper
Anthropology
724 Turnberry Lane
Lady Lake, FL 32159

RE: **Full Board Approval for Initial Review**
IRB#: Pro00036466
Title: Natural Recovery in the College Context: Moderating Use without Formal Addiction
        Services

Study Approval Period: 10/19/2018 to 10/19/2019

Dear Ms. Casper:

On 10/19/2018, the Institutional Review Board (IRB) reviewed and **APPROVED** the above
application and all documents contained within, including those outlined below.

Approved Item(s):
Protocol Document(s):
Protocol V1 10.23.18

Consent/Assent Document(s)*:
Verbal Consent Form-Faculty.staff V1 8.20.18 docx**
Verbal Consent Form-Students V1 10.23.18.docx**

*Please use only the official IRB stamped informed consent/assent document(s) found under the
"Attachments" tab. Please note, these consent/assent documents are valid until the consent
document is amended and approved. ****verbal consent forms are unstamped**

Your study qualifies for a waiver of the requirements for the documentation of informed consent
as outlined in the federal regulations at 45CFR46.117(c) which states that an IRB may waive the
requirement for the investigator to obtain a signed consent form for some or all subjects if it
finds either: (1) That the only record linking the subject and the research would be the consent
document and the principal risk would be potential harm resulting from a breach of
confidentiality. Each subject will be asked whether the subject wants documentation linking the

subject with the research, and the subject's wishes will govern; or (2) That the research presents no more than minimal risk of harm to subjects and involves no procedures for which written consent is normally required outside of the research context. This waiver of documentation of informed consent is granted to allow the study team to obtain verbal consent.

Please submit a Reportable Event application (Other) informing the IRB about the progress of the research following the completion of observation procedures with the first two study participants.

As the principal investigator of this study, it is your responsibility to conduct this study in accordance with IRB policies and procedures and as approved by the IRB. Any changes to the approved research must be submitted to the IRB for review and approval via an amendment. Additionally, all unanticipated problems must be reported to the USF IRB within five (5) business days.

We appreciate your dedication to the ethical conduct of human subject research at the University of South Florida and your continued commitment to human research protections. If you have any questions regarding this matter, please call 813-974-5638.

Sincerely,

Kristen Salomon, Ph.D., Chairperson
USF Institutional Review Board

APPENDIX B:

INTERVIEW MATERIALS

Table 1B: Social Network Construction Guide.

Step	Goal	Details
1. Ego Questions	Get information about ego and human, cultural, and physical capital.	For specific questions see table 2B
2. Alter Elicitation	Obtain a list of people within ego's network	1.Please list all the people you talk to about important matters 2. Please list all the people you talk to on a weekly basis 3. Please list all the people you hang out with on a weekly basis 4. Please list all of your friends 5. Please list all of your acquaintances
3. Alter Interpretation	Code alter by meaningful conditional variables	Conditional Variables: Drug use: Drug user or non-drug user (indicated by *) Relationship: family, college friend, pre-college friend, work friend, and other.
4. Create Map	Arrange network on premade map	Ego will place Post-it notes on a map of three concentric circles with ego name in the center. Ego will be instructed to place Post-it notes based on feelings of closeness and alter groups.
5. Alter-tie Evaluation	Display ties between alters	Ego will be instructed to draw circles around groups of people and connections between connected alters.
6. Assess Social Capital	Follow-up questions, based on map, to assess ego's social capital	1. Relationships: Has your network as pictured here changed since you started moderating your substance use? Are certain people closer now? Are certain people further away now? 2. Stability: Who in this network do you attend classes with? Who in this network do you study with? Do you find being closer to these people helps you maintain your substance moderation? Who in this network do you work with? Do you find being closer to these people helps you maintain your substance moderation? 3. Ideology: Does anyone in your network depend on you (either emotionally or physically)? Do you think these relationships helped you moderate your substance use? Did your interest in your major/future career help you moderate your use? Was there anyone in your network that helped you with this?

Table 2B: Semi-Structured Student Interview Questions.

Please tell me about yourself and your history of substance use. (How long, when, where, times, general location?)
Walk me through a typical day of use/time of use. What does it feel like to be in that space?
Please tell me about how you stopped or reduced your substance use.
Did you find that you were using anything in particular to help you stop? If so, what was that? How?
Do you ever find yourself still wanting these substances? What does that feel like? What strategies do you employ to stop this?
What do you think makes it hard for people to stop?
If you had to design tips for recovery what would you say? What about a drug prevention program?
Walk me through a typical day now. How do your days now differ from when you used drugs?
Tell me a little bit about any campus activities you're involved in. When and why did you get involved with these activities? How did this change when you stopped or reduced your substance use?
What kind of worries or problems do you face on a regular basis? How do you deal with these problems? (Such as fiscal or health problems).
Tell me a little bit about your friend group. How did you meet them? Was/is using substances a part of that group?

Table 3B: Original and Modified CAGE-AID Questionnaire.

Original CAGE-AID Questions	Modified CAGE-AID Questions
Have you ever felt that you ought to cut down on your drinking or drug use?	In the past, did you feel that you ought to cut down on your drug use and then do so?
Have people annoyed you by criticizing your drinking or drug use?	In the past, were you ever annoyed by people criticizing your drug use?
Have you ever felt bad or guilty about your drinking or drug use?	In the past, did you ever feel bad or guilty about your drug use?
Have you ever had a drink or used drugs first thing in the morning to steady your nerves or get rid of a hangover (eye-opener)?	In the past, did you use drugs first thing in the morning to steady your nerves or get rid of a hangover?
N/A	How long has it been since you stopped or started moderating your drug use?
N/A	Are you currently participating in a drug rehabilitation program?

Table 4B: Interview Questions for Southern State University Employees.

Order	Question
1	Please tell me a little bit about your office/department and your role?
2	In your opinion, what is the climate of student drug use at this University?
3	What does your office do in relation to student drug use prevention?
4	How could the university do more to prevent and reduce drug use?
5	What interventions do you think are necessary?
6	What do you think would be an applied outcome of this project?