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The Local Neurologies of Substance Use Triggers

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by

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DEDICATION

This dissertation is dedicated to the people of Sunshine.

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ABSTRACT

Substance use triggers are largely understood to be embedded in drug use contexts and to be a major precipitator of relapse. Yet, the relationship between triggers and future instances of drug use is not quite clear– particularly in understanding the nuances of when triggers are "triggering" and when they are not. Additionally, there is little ethnographic work that explores how individuals interact with triggers in contexts related to substance use, particularly during periods of active use. This project employs ethnographic and survey research methods to interrogate substance use triggers in the harm reduction context. In doing so, it answers the three main questions. How do people who inject drugs in local harm reduction programs come to know triggers? What is the "harm reduction context," and what is the "local"? And what are the local neurologies of substance use triggers in harm reduction? The answers to these questions come from 13 months of fieldwork with 130 people who inject drugs and participate in a syringe exchange program in the state of Florida, U.S. Through semi-structured interviews, observations, and a salience survey, this project found that people who inject drugs enact triggers differently in harm reduction than in other contexts such as substance use treatment or laboratory research on triggers. Interactions with triggers, this work suggests, are bound to local "sites." De-centering the notion of a geographically bound field site, this work highlights how other "sitings," namely the War on Drugs and Opioid Crisis, shape practices related to injection drug use and harm reduction. The harm reduction context, then, is not simply a physical space but in constant interaction with larger social, cultural, and political institutions that shape drug use. Ultimately, this work suggests that in harm reduction, triggers are at once very visible and conceptually

irrelevant. In essence, triggers disappear. To understand this better, this work interrogates "wanting" in harm reduction which is part of a larger dynamic of tolerance, withdrawal, associative learning, and substance use maintenance. I suggest it is these dynamics that comprise the "neurologies" of triggers that are relevant to the harm reduction context. This work contributes to broader scholarship in anthropology that seeks to unsettle the divide between nature and culture. Employing a synthesis of the multiple ontologies and local neurologies approaches, this work highlights an ethnographic interrogation of biocultural processes and further suggests a need to account for specific and general biology, in addition to considerations of how to ground objects and practices locally. Ultimately, this work is one of the first applications of the local neurologies framework and provides a path forward for future researchers interested in studying the intersections of the brain and culture.

CHAPTER ONE:

INTRODUCTION

Introduction

This is a dissertation about objects. Specifically, this is a dissertation about how objects change in practice and what such practices can teach us about local neurologies. I explore substance use Triggers to understand these objects in practice and their neuroanthropological implications. Triggers then, are a lens for understanding *how* local neurologies may come into being.

Let me quickly explain the distinction between Triggers (as a concept) and triggers (as an everyday experience)[1]. Anthropological research on triggers proposes that triggers are relational, exemplifying the complex relationships that exist between individuals who use drugs and the environments in which they use (Dennis 2016). This type of trigger is exemplified by a participant, Maria (a pseudonym), below.

> "When me and my husband were homeless, there was a McDonald's that we always used to use in. The lady that worked there, the manager, she was really nice. She knew what we was doing. She's not stupid. She would always give us a sandwich and a free frappe.

[1] You may notice my use of both capital and lowercase letters when writing about Triggers/triggers. I use this convention to distinguish between when I'm referring to Triggers as concept (which in this study I am taking as "object"), and triggers as everyday relationships between more tangible items such as drug paraphernalia or even emotions. In other words, triggers often have more tangible, material qualities while Triggers describes intangible, conceptual dimensions. While both are relevant to this dissertation, I focus primarily on capital T, Triggers to interrogate local neurologies.

> Yeah, really nice. An older lady, Miss Green. And we'd go in the bathroom and use. And, you know, so when I got sober. And I went there. And I told her, you know, that I was sober and she started crying. And then I was kind of like, 'wow,' and she goes, 'you're starting to sweat.' And I said, 'Am I really?' and I was. I didn't even know I was sweating. I was like, 'wow.' And she's like, 'I think you need to leave. I feel like you being here is gonna cause you to relapse.' And I was like, 'You know what? I think you're right.' I could taste it in my mouth. I could taste the heroin in my mouth. And she asked me not to ever come back to that McDonald's again."

In this story, Maria recounts a time when she was sober and experienced a trigger. The trigger is signified in two important ways. First, it is a place where she used to use, thus there are environmental factors which draw significance to past episodes of use– the McDonalds and the bathroom of the McDonalds. Second, she recalls her body physically reacting to the environment (sweating, the taste of heroin in her mouth)—preparing for the possibility of injection drug use.

This moment reflects a specific refrain from substance use treatment programs that participants often noted defined triggers for them: "people, places, and things." The concept of Triggers, it seems, is tied closely to this mantra. It is widely understood that these factors have the potential to cause a lapse during times of sobriety (Drummond et al. 1995). Yet, this dissertation is not focused on the variable "people, places, and things" that make people want to use – at least, not in the usual way. This dissertation ethnographically interrogates the changing nature of the concept of Triggers. It questions when "people, places, and things" related to past use draw significance, and when that significance disappears. This dissertation investigates how "people, places, and things" do not always lead to use, but can garner other, meaningful associations.

A Note on The Evolution of this Project

This dissertation started in my bathroom. In the Summer of 2020, I conducted preliminary research for this project through a series of interviews with people in substance use treatment. As this was still amid the COVID-19 pandemic, I had to conduct these interviews from home, over the phone. At the time, there was a high-rise condo being constructed in the empty lot in front of my apartment, dwarfing the 100-year-old, two-story building I lived in and making every day full of a cacophony of bangs, yells, and mechanical whirs. The bathroom was the only place quiet enough to conduct phone interviews.

It is quite fitting, that the work started there, because as I would later find in interviews, bathrooms are often considered highly triggering for people who use drugs. Like Maria in the example above, many participants told me that they would inject in public bathrooms or their bathroom at home. For one participant, taking oxycodone in the bathroom became the only sense of peace in her life after the pandemic turned her world upside down– having to balance her full-time job and homeschooling her children. The shower, even more specifically, was considered highly triggering for one participant whose veins dilated under the heat of the water– enticing them back to injection drug use. An unavoidable trigger.

It was during these preliminary interviews that I came to better understand how spaces and places related to past use matter. I initially conceptualized this work as looking at triggers in "every day," settings. Yet, it seemed that within the "everyday" there were limitless context where triggers appeared– places where they were drawn to relevance, like the bathroom, and places where they were drawn upon, like substance use treatment. Yet, there was something

different about the "triggers" I learned about in preliminary field work and the concept of "cue reactivity" that I had read about in my psychology class.

I was initially interested in studying "cue reactivity," a concept from psychology that describes how stimuli related to past use drive future instances of use. As I interviewed individuals, the project quickly changed to a study of substance use "Triggers". This switch represented two essential findings in preliminary research and was confirmed later in my long-term fieldwork. First, that participants never talked about "cues," rather, "triggers" is the more culturally salient way to discuss stimuli related to past use. Second, I found that Triggers were not just one thing that could be neatly defined. In essence, Triggers change.

When asked about Triggers, preliminary interview participants would often provide for me a list of things they found triggering, like needles, bathrooms, or their own veins. They might also discuss their experience with Triggers in substance use treatment programs, such as talk therapy sessions focused on significant triggers or exercises in which they are asked to list out their triggers. The way these preliminary interview participants practiced Triggers – literally how they enacted the concept of Triggers – it seems was quite distinct from the Triggers of the people who inject drugs (PWID), with whom the fieldwork of this project took place.

When I began conducting interviews with participants who inject drugs and participated in a local harm reduction program, Triggers seemed to disappear. Participants often told me they did not have triggers, even though we were in a "place" with all the "people and things" (such as syringes and other PWID) that might inspire someone to inject. They would also talk about common things that were considered "triggering," like needles, chronic pain, and trauma. Yet, they would insist that they did not have any triggers. I had to drop every notion of Triggers I had

previously held to begin to understand the ways in which Triggers were enacted in harm reduction.

In doing so, harm reduction became my "every day." Instead of tracking triggers through mobile assessments as I had originally intended, it became clear to me that in this space Triggers were transformed. For people who inject drugs, needles are often understood as a potent trigger. As I later discuss, participants in interviews often emphasized needles as such a potent trigger that even injecting water could elicit a high-like feeling. But, in harm reduction, syringes garnered no such associations. Interestingly, as I conducted ethnographic research in harm reduction, I noticed that the things that I had been told were triggering in my preliminary interviews, were not triggering to people in active use. In fact, they emphatically denied this. In harm reduction, the concept of Triggers changed. It became apparent that the way Triggers are practiced shapes what they are, and the meaningfulness participants garner from them in their everyday lives.

To understand practice more deeply, I frame Triggers as an "object." This Framework is drawn from Annemarie Mol's (2002) ontological assertion that objects are not objective, "out there to be known," but rather that objects are created and enacted in practice. The utility of such a framework creates space to interrogate variation and alterity in objects and thus the multiplicity in objects. This dissertation attempts to untangle the web of Triggers (Figure 1.1), asserting that Triggers are an object, and therefore, Triggers are many.

In this dissertation I aim to untangle how triggers are differentially meaningful in different places. I aim to understand how triggers change in context and in practice. Further, I distinguish triggers (as things or items) from Triggers (as a concept) and attempt to better understand the relationship between the two. What I aim to show through this ethnography of

substance use triggers in harm reduction is that Triggers, as a concept, are flexible according to the practices which enact triggers as items. The implications of such an approach highlight how Westernized, biomedical ideas of concepts can change through practice. Focusing on practice, and how objects are enacted can expand our understanding of concepts– can allow them to multiply, and thus can help us better understand the ways in which concepts become meaningful.

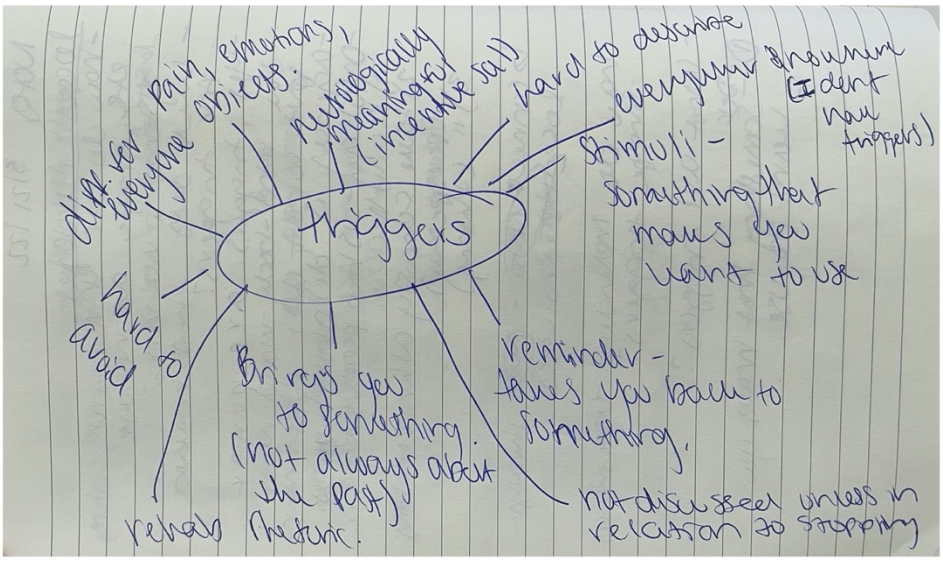

Figure 1.1. Early fieldnotes about what Triggers "are," a web of relations. Rather than linear, or innate, Triggers are many things (though not infinite) at once.

An Anthropology of Triggers

There is very little scholarship in anthropology that specifically addresses substance use triggers, and none that specifically frame substance use Triggers as an “object”. Dennis (2016) explored the concept of triggers as experienced by people who used drugs in the United Kingdom to argue that triggers exemplify relationships between drugs, the world, and the body.

> …triggers do not suggest someone’s learnt connection to a ‘thing,’ but rather their very relation with that ‘thing.’ This is much more than the drug, ‘thing,’ and brain as separate interacting entities. Instead, they are relational and form one another. Participants’ bodies are intimately intertwined with other bodies, of which neither an account of autonomy nor addiction can do justice. (135)

For Dennis, understanding triggers as relational to spaces, people, emotions, and material imbues a sense of agency often obscured by traditional stimulus-response approaches to cues studied in psychology (and reviewed in Chapter Two of this dissertation). This relational view is a step forward in understanding how individuals relate to their own individual triggers in their everyday lives. However, I employ a multiple ontologies approach, inspired by the work of Annemarie Mol (2002), to propose Triggers as "objects" enacted in various practices. In this way, Triggers are operationalized. This is different than saying a different word can have different meanings in different contexts. Through this dissertation I argue that it is not just the language that people use that differentiates Triggers in treatment or a psychology lab from Triggers in everyday life, but the practices people do in relationship to these concepts have the power to fundamentally shape the ways individuals engage with the world.

As discussed, Triggers were never experienced by participants as just one thing, and thus, Triggers are *relational* in as much as they are *contextual* and *practical*. It became apparent that in the harm reduction context, where this fieldwork took place, Triggers were changed and sometimes "disappeared" altogether. This fluidity in the concept of Triggers in harm reduction presented a perfect place to study how objects and concepts collide. In essence, it is this somewhat oxymoronic space where triggers (tangible, items) are numerous, but Triggers disappear that highlight how practice (literally engagements with) shapes objects. In this project attending to these practices provided a way to understand how Triggers are enacted in the harm reduction context.

Goals and Questions

There are two main goals of this project. First, this project presents an ethnography of Triggers and harm reduction. I focus specifically on people who inject drugs (PWID) and participate in harm reduction programs. This population specifically sits at an interesting crossroads with substance use Triggers/triggers. As I discuss throughout this dissertation, PWID at once know Triggers through practices in recovery and through everyday experiences of triggers which regulate use. Moreover, their interactions with everyday triggers in harm reduction, showed how individuals enact Triggers in one local context. This study represents the first of its kind to do such work. Specifically, Triggers are often studied in psychology labs or in substance use treatment settings. Such approaches represent hegemonic, biomedical views of Triggers-as-stimuli. By looking at occurrences of and interactions with Triggers in "everyday" settings, this project represents a major advancement in the ways we understand triggers, and moreover concepts of Triggers.

One major argument this dissertation makes is that concepts have flexibility. Researchers often recognize the mutability of triggers– in essence, because patterns of drug use differ across individuals, researchers recognize that everyone is going to have different things that "trigger" them. Yet, the concept of Triggers– the paradigm that explains why different stimuli often provoke instances of use – is understood as stagnant; a biological and psychological universal. This dissertation instead represents Triggers in practice to understand how different enactments of triggers inform different concepts of Triggers. As I discuss in Chapter Seven, such a conclusion can have significant contributions to scholarship in the field of neuroanthropology.

Second, this project seeks to further theory in neuroanthropology, namely, local neurologies. Local neurologies is a new concept that proposes a way to understand neural

development in interaction with small scale, situated sociocultural and ecological dynamics (Lende and Downey 2020, Downey 2021, Casper et al. forthcoming). This project is concerned with the ontologies of Triggers, and argues that a multiple ontologies approach can complement, and expand the explanatory capabilities of local neurologies. In short, one outcome of this project is recognizing the utility of multiple ontologies for neuroanthropological theory, to understand how alterity can become embodied.

To accomplish these goals, I ask the following questions:

1. How do PWID in local harm reduction programs come to know Triggers?
2. What is the "harm reduction context"? And further, what in that context matters? In other words, what is the "local"?
3. What are the local neurologies of substance use Triggers in harm reduction?

To answer these questions, I conducted an ethnography of a harm reduction program for thirteen months in Florida, United States (US). Throughout my time with Sunshine Syringe Exchange (a pseudonym), I worked as a harm reductionist, embedding myself fully in the daily activities of the site and its participants. I conducted interviews, took diligent fieldnotes, and issued a salience survey. Collectively, this ethnographic work helped me to better understand substance use Triggers and the everyday lives of people who inject drugs.

Outline of Chapters

The second chapter of this dissertation provides the theoretical backdrop for this work. I employ a triangulation approach (Lende et al. 2021) to bring together theory from multiple fields. Cue reactivity and learning theory in psychology provide an understanding of the history of research on Triggers. Incentive salience theory provides one way to think about how Triggers

are neurologically meaningful. In anthropology, I specifically focus on neuroanthropology and ontology. I discuss the foundations of neuroanthropology and the biocultural approaches taken in the work. I reflect on critiques of the field and draw on Lende and Downey's (2020) early conceptualizations of local neurologies to address those critiques. I then explore the ontological turn in anthropology, and the broad focus on "alterity" and the nature-culture divide in modern science. There are many "turns" within this larger turning toward ontology. I specifically talk about a multiple ontologies approach, or an approach that considers multiple, changing concepts of the body. Finally, I conclude by discussing how local neurologies and multiple ontologies could be compatible theoretical constructs.

Chapter Three provides an overview of the setting, population, and methods employed in this project. I give more detail about Sunshine, and the state in which it operates. Additionally, I provide descriptive and demographic details about the population at the site, more generally, and the subpopulation that participated in this project. I detail the ethnographic methods used in this work, including participant observation, semi-structured interviews, focal follows, free lists, and an incentive salience survey. I provide more information on how all qualitative and quantitative data were analyzed. Finally, I conclude the chapter by discussing the ethics of this work, and my own positionality as an ethnographer and harm reductionist.

Chapter Four answers the question, what are Triggers? In this chapter, I pull heavily from Annemarie Mol's (2002) *The Body Multiple: Ontology in Medical Practice.* Ontology in anthropology is interested in alterity, and specifically interrogating the artificial divide between "nature" and "Culture." Mol's specific ontological approach employs a practice-based lens to understand *how* "objects" are enacted in practice, in order to unsettle the nature-culture divide. Thus, employing Mol's ontological approach, I reframe Triggers as an object enacted in practice.

I specifically focus on how Triggers are enacted in the labs where they are studied, rehabilitation where they are "treated," and the everyday where they are lived. Throughout this chapter, I intersperse quotes from semi-structured interviews to highlight the multiple ontologies of Triggers.

It is important to note here that it might sound contradictory to discuss different practices (what people do) based on interviews (what people say). In anthropology, we have a long history of methodologically splitting the "doing" and "saying" between interviews and observations to recognize the discrepancies between words and actions. Unfortunately, twelve months and a global pandemic did not afford me the space or time to see all of the "doing" that is done in the lab or in treatment. Instead, I rely on individuals' stories of events, as indicative of the practices that inform Triggers in these spaces. As Mol insists, "it is possible to listen to people's stories as if they tell about events. Through such listening an illness takes shape that is both material and active" (Mol 2002, 20). I listened patiently to the stories of Triggers in rehab and treatment and noted diligently the stories that scientists tell us in their publications on incentive salience and cue reactivity. I suggest that, in lieu of access, these events give us the best proxy for the multiple ontologies of Triggers.

Chapter Five establishes the local in this study. Drawing from Emily Yates-Doerr's (2017) scholarship on local biologies, this chapter situates the "local" as ontologically partial. Yates-Doerr argues that the ethnographer enacts the field site. In this dissertation, I draw attention to three "sitings" that comprise my field site, using notes from participant observation and focal follows. First, I discuss the War on Drugs in the United States, and the implications that this has for participants. In addition to encounters with the carceral system that impacted participants' everyday lives, the War on Drugs is also intertwined with moral models of

substance use in the United States. Participants constantly negotiated the "junkie" identity, shaping the ways they thought about themselves and others.

The second siting is the Opioid Crisis in the United States. The Opioid Crisis is how many participants came to their use, either through prescriptions or easy to access pills on the street. The crack down on "pill mills" pushed people toward illicit substance use and sometimes injection drug use. For many participants, changes in (or lack thereof) prescriptions, or status as a "patient," and higher tolerances lead to injection drug use as the only sustainable option to care for their chronic pain. For others, episodes of acute pain, historically also treated with highly addictive pharmaceutical opiates, led to lifelong habits. This leaves the exchange as one of the only spaces where participants could get any sort of treatment for their chronic pain after being excluded from broader health care institutions. Harm reduction programs, then, become the frontlines of fighting the ill effects of the War on Drugs and Opioid Crisis in the U.S.

The final siting is harm reduction. I provide a short vignette of my time at a harm reduction conference, which establishes harm reduction as a series of practices. I then provide notes from my time in the field highlighting different instances of harm reduction. Harm reduction, I propose, goes far beyond simply providing safe injection materials. Harm reduction is instead about the care, love, and sense of community that comes through upholding these practices. The harm reduction siting is powerful and actively attempts to use these practices in order to empower (not punish) and care for (not abandon) people who inject drugs. Collectively, these sitings establish the "local" which this dissertation seeks to interrogate.

Chapter Six, the final data chapter of this dissertation, describes Triggers in harm reduction. This chapter provides an overview of incentive salience theory and associative learning, before discussing the results of the salience survey. Scores from the salience survey

were used to indicate interesting patterns of wanting across participants. Interestingly, no matter how robust these experiences of wanting are in everyday life, participants described very little wanting in the harm reduction context. Triggers, it seems, disappear.

Participants, as I elaborate in Chapter Six, engage with experiences of withdrawal, pleasure, pain, tolerance, and maintaining their use. Such dynamics help to understand what "neurologies" are relevant to Triggers in the harm reduction context. For instance, associative learning is incredibly important to how participants enact Triggers in the harm reduction context.

Free list data, discussed in chapter six, elaborates on why this might be so. Using participants' three most salient triggers (people, stress, and pain), I discuss how typical triggers may be transformed in the harm reduction context. Further, I discuss how associative learning paradigms may provide a useful framework for thinking through these changes. I propose that perhaps the exchange does not eliminate Triggers, but instead provides new associations, impacting the low subjective salience that participants discuss at Sunshine.

Chapter Seven provides a discussion that links each of these chapters together and discusses how they collectively answer the questions proposed at the beginning of this chapter. I also detail the theoretical contributions of this project. I return to local neurologies and Downey's insistence that the ontological turn is "excessively idealist" (Downey 2021). I suggest that a multiple ontologies approach is less "idealist" and more in touch with the materiality of the body. I suggest that scholars in the ontological turn and neuroanthropology are interested in unsettling the same fundamental divisions between nature and culture. Both local neurologies and multiple ontologies can provide stronger conceptualization and localization tools, enabling ethnographic researchers to answer questions that span culture and the body.

Finally, I conclude this dissertation with Chapter Eight, which discusses contributions to anthropology. I suggest that this work pushes the local neurologies approach forward, providing a holistic theoretical framework for answering questions about our embodied nervous system. This project also provides new ways to think through addiction ontologically. Ontology, studied through the multiple ontologies approach, could provide better ways for understanding how addiction is enacted in different places at different times and how that matters to the people that experience it.

Grounding these results in the everyday lives of individuals who use drugs is also incredibly important to me. I discuss how data collection itself was an applied anthropology project as I applied my anthropological skills as a harm reductionist with Sunshine. Further, syringe exchange programs (SEPs) may apply some of the outcome of this dissertation to their continued work. Specifically, they may interrogate how they can help individuals who express varying levels of salience with their experiences of everyday wanting, providing opportunities to re-learn new associations and be connected with other institutions that can assist them toward their goals.

Finally, I discuss the limitations of this project and future research directions. I highlight specifically the impact of the COVID-19 pandemic and the theoretical limitations of this work. Namely, Mol's ontological approach resists generalization, which is both important to understanding objects in a particular context at a particular time and limiting for broad application of the work. Instead, I suggest that future research should be taken to address Triggers in rehabilitation, to understand how this work relates to and is distinguished from other local spaces. I also discuss time, a theme I was unable to elaborate on in the main text of this dissertation but that presented throughout my fieldwork. There are many other directions and

limitations of this work, I am sure. I do hope that by the time you are done reading this work you are inspired to think of everyday objects in new ways and pursue similarly unorthodox questions.

CHAPTER TWO:

LITERATURE REVIEW

Introduction

This dissertation is primarily situated between neuroanthropological and ontological theory. Neuroanthropology, as I will explain, seeks to explore interactions between the brain and culture. Ontology explores alterity. Recent debates in the field of neuroanthropology have argued against the use of ontological theory, as it is presented as a merely conceptual exploration of alterity. However, as this chapter argues, a *multiple ontologies* approach makes space to engage with both materiality of the body, and practice surrounding objects of interest. Ontological and neuroanthropological theory, I propose, can be quite complementary.

To frame this study of substance use Triggers I begin by providing an overview of approaches to studying Triggers in psychology and neuroscience. I specifically highlight the relationship between cues and context (something I also explore later in this dissertation) via incentive salience theory and associative learning. Additionally, I describe the concept of cue reactivity and the relationship between cues, substance use treatment and relapse prevention. I use this discussion of cues to talk more broadly about ethnographic approaches to studying substance use and other approaches to understanding drug use situated within medical anthropology.

This chapter also provides an overview of theory in neuroanthropology and ontology as it relates to this dissertation. I specifically discuss the evolution of neuroanthropological theory,

including *local neurologies,* the main theoretical concept with which this dissertation engages. I also discuss critiques of neuroanthropology, asking how ontological theory could fill gaps in the field. Similarly, I provide an overview of the intellectual movements that inspired the ontological turn in anthropology, and a more recent "turning," specifically engaging with scholars of science and technology studies (STS). Finally, I conclude by proposing how these diverse theoretical constructs can become complementary.

Cues

Substance use cues are considered potentially troublesome for people who are trying to stop using drugs because of their relationship to relapse (Drummond et al. 1995). Particularly, cues are considered compelling stimuli with both biological and psychological significance. Here, I discuss the neurobiology of substance use cues and the theories that underpin this stimulus-response paradigm. Then I discuss the relationship between cues and context, namely, how cues become context through learned associations. It's important to note here that I specifically focus on "cues" as one way to understand the biological process that underlies triggers, though later on I complicate the relationship between cues and Triggers.

The Neurobiological Basis of Cues

The neurobiological basis of cues is related to dopamine action in the brain. Historically, scholars were interested in models that focused on subjective experiences of pleasure in substance use (Yokel and Wise 1975). This theory proposed that the neural basis of addiction had to do with these so-called "pleasure receptors" and an individual's desire to keep feeling the pleasure that drugs bring. This was considered the "positive reinforcement" model of addiction,

in which it was proposed that people and animals continually seek out and use substances because of their pleasure-related qualities. The pleasure model is often contrasted with other theories that propose that addiction is based on withdrawal.

A negative reinforcement view of addiction proposes that drug-seeking is based on the need to cope with the "dark side" of addiction, including withdrawal symptoms experienced by people who use drugs and regulation of negative affect (Koob 2018). These reward-based approaches to understanding addiction are critical to understanding the motivations that keep someone in use, as I discuss in Chapter Six. However, other theories of addiction focus more heavily on how contexts comes to matter in substance use.

In 1993, Terry E. Robinson and Kent C. Berridge proposed their "incentive-sensitization theory of addiction" (Robinson and Berridge 1993). This incentive salience approach to addiction distinguished between wanting (also known as craving) and liking. Specifically, Robinson and Berridge propose that dopamine is responsible for *wanting* rather than liking. Liking is the hedonic impact, that subjective pleasurable feeling of the drug, while wanting "or incentive salience refers to attention grabbing and motivational features of rewards and their learned cues" (Olney et al. 2018). Thus, incentive salience proposes one way to link sensitization in the brain to subjective feelings of wanting.

Incentive salience conceptually links neuroplastic systems in the midbrain to context to propose a more motivational approach toward substance use. The incentive salience theory explains how hedonic reward models and models that only rely on withdrawal do not capture the lived experience and behaviors associated with addiction. This also helps us understand why people relapse, long after they have been sober. Robinson and Berridge propose that the changes

in these systems could potentially be permanent, (though it is clear now that these systems respond to both long-term potentiation and depression see: Rich et al. 2019).

> The Incentive-Sensitization Theory was introduced as a 'neuroadaptationist' model. It posits that repeated intermittent drug use results in incremental and persistent changes in a neural system that mediates craving for drugs; to be more precise, in a neural system responsible for the attribution of incentive salience (not pleasure) to stimuli (Robinson and Berridge 1993, 255).

The neural system referred to above is the mesotelencephalic dopamine system. This system, deep in the midbrain, is said to be responsible for attention, motor coordination, and projects dopamine and serotonin neurons into the frontal cortex (Everitt and Robbins 2016). These brain areas have also been tied to neurobiological theories of learning.

While Berridge and Robinson (1998) distinguish between the pleasure of reward, incentive salience, and learning models, others see these as complementary theories. Specifically, Temporal Difference models help understand the activity of dopamine in the brain related to reward and behavior. Temporal difference models highlight reward prediction error in which the release of dopamine is correlated with reward anticipation, rather than the actual reward itself (Colombo 2014). These models show that reward is less about the pleasure that comes from the stimulus, but the anticipation of that reward. McClure et al. (2003) propose that computational models of these mechanisms are complementary, rather than distinct theories of dopamine in the brain.

> To clarify, we propose that the concept of incentive salience is the expected future reward. In addition, we propose that the role of dopamine in learning to attribute such expectations to situations that are predictive of reward and in biasing action selection towards such situations serve as the formal counterpart to the ideas of Berridge and Robinson about the role of dopamine in attributing and using incentive salience. (425)

Thus, these theories connect the neurobiological function of dopamine with Pavlovian learning paradigms where stimuli become increasingly incentivized and entice interaction.

Associative learning theories suggest how associations between context and cues become meaningful in substance use. The associative learning paradigm helps us understand how experience becomes meaningful in our everyday lives. Further, associative learning highlights the importance of being able to interpret what in any given context is meaningful. "The ability to search out rewards like food and avoid threats like predators can only be achieved by learning predictive relations between rewards and threats, on the one hand, and events that are reliable signals of them on the other hand" (Shanks 1995, 2). Learning is critical to how humans navigate their environment. I discuss models of associative learning in more depth in Chapter Six.

Cue Reactivity

Cue reactivity describes what happens when individuals call on learned associations in cue encounters. "Cue-reactivity is defined here as a series of responses (physiological and/or the subjective verbal report of drug 'craving') that can be evoked by drug-related stimuli." (Troisi 2013, 3) Several models of cue reactivity have been proposed. A simplified model of cue reactivity is the stimulus-response paradigm which asserts that cues lead to craving, which leads to relapse. This model assumes that the only reaction to cues is relapse. As Robinson and Berridge (2008) note, "…addicts in the real world are not S-R [stimulus-response] automatons; they are, if nothing else, quite resourceful." (3138) There is far more dimension to cue experiences in real life. Thus, an alternative, more complicated model has been proposed which attempts to account for multiple dimensions of reactivity.

Drummond (2000) proposes a model of cue reactivity comprised of separate not necessarily distinct models of reactivity: symbolic-expressive reactivity (craving), physiological reactivity (autonomic arousal), and behavioral reactivity (drug seeking). Research on cue

reactivity generally takes place in laboratory settings in which participants (generally previously or currently addicted) are exposed to cues and assessed on different variables of interest, including the variables outlined by Drummond's model (craving, heart rate, skin conductance, etc.) (Monti et al. 1987; Rohsenow et al. 1994; Herrman et al. 2000; Conklin and Tiffany 2002; Sinha 2007; Verdejo-Garcia et al. 2012; Norberg et al. 2018; Conklin et al. 2019). These various measurements are then usually correlated with long-term outcomes like rates of relapse to investigate potential sites of intervention (Carter and Tiffany 1999; Witteman et al. 2015). Some studies have used more creative measures like journaling as a method of data collection (Witteman et al. 2015). Others have utilized Ecological Momentary Assessment (EMA) to understand cues in context (Shiffman et al. 2008; Warthen and Tiffany 2009; Wray et al. 2015). Studies of cue reactivity then are mostly focused on behavior and outcomes, with little mention of context or the meaning of cues beyond a simple stimulus-based definition.

Cues and Recovery

Cue reactivity has been an unhelpful concept when applied to substance use cessation practices. While scholars have proposed that cue reactivity is a potentially useful paradigm for substance use treatment, it has not yet been proven so (Bouton 2000; Troisi 2013; Mellentin et al. 2017). Conklin and Tiffany (2002) detail an approach to Cue Exposure Therapy (CET) in rehabilitation settings where individuals are exposed to cues in order to extinguish the reactivity. They note that there are a few reasons that the classical view of extinction training might not be an effective approach to treatment. First, spontaneous recovery of cue association has been reported in several studies. Cues that were extinct spontaneously resurfaced after doing

extinction training. This indicates that extinction training likely does not happen in the way that this theory had postulated.

> However, current concepts about extinction resemble more closely the original ideas of Pavlov (1927), who postulated that repeated unreinforced exposure to the CS [conditioned stimulus] does not break original CS–US [unconditioned stimulus] learning, but rather serves to mask it (Robbins 1990). Therefore, the conventional notion that extinction is unlearning has been replaced with the position that extinction is new learning that is, during extinction, CS–US learning remains intact, but new associations develop to the original CS. (Conklin and Tiffany 2002, 159)

As this quote indicates, extinction training is actually more about learning than it is about extinguishing a behavior. Put another way, behaviors are extinguished by learning a new behavior. This concept is important to both cue reactivity and recovery as it indicates that cue exposure therapy on its own is not effective. Something needs to be learned within a recovery regime that facilitates cessation. Thus, recovery programs instead focus on teaching people how to cope with these cue encounters.

Relapse Prevention

Preliminary research made it clear that, for those who are trying to stop using, cues are the biggest target of intervention. Often, this is referred to as relapse prevention, which is a cognitive behavioral framework for determining high-risk situations and how to mitigate them (Marlatt and Donovan 2005). Marlatt and Witkiewitz (2005) propose certain "environmental risk" factors that contribute to potential relapse, including "social influences, access to substances, and cue exposure" (2). Additionally, affective states and stress are also closely linked to substance use. For instance, we suspect that experiences like stress can impact neural plasticity and contribute to substance use issues (McGrath et al. 2019). At the same time, scholars suggest that "social plasticity," (a combination of one's social environment, experiences, and neural

responses), can contribute to resolution of problematic use (Cousijn et al. 2018). Having positive social relationships and interactions can buttress the impacts of cues including stress.

Alcoholics Anonymous (AA) proposes another strategy for relapse prevention with the mnemonic H.A.L.T. (Hungry, Angry, Lonely, and Tired) (Reed 2022). The H.A.L.T. strategy serves two distinct purposes. First, it's an immediate reminder for people, that when they feel they might need to use, to first stop- literally halt. Then, it reminds people that the feeling to use (i.e. wanting) might be mitigated by first trying to meet other needs. Hunger (and eating) might stymie physical sensations of craving and provide emotional comfort. Indeed, at Sunshine, we provided participants with sugary sweets and snacks in attempt to temper some of the effects of withdrawal they may have been feeling.

According to the AA philosophy, anger is an emotional stressor that might be exaggerating cue experiences. Similarly, loneliness, they propose, could be indicative of your internal, affective state. Marlatt and Witkiewitz (2005) note that many studied have found affect to be the strongest predictor of relapse. To H.A.L.T. and process, provides space to work through complex emotions, instead of managing such emotions with substances. Finally, good sleep hygiene is understood to prevent "sleep-related relapse risk" (Reed 2022). Being tired impairs decision making skills and may lead someone toward using. To sleep and sleep well mitigates some of the risks of using.

Relapse prevention is not, however, value free. Such approaches come from the field of addictions treatment often called "recovery." For brevity, I do not detail the entire history of substance use treatment in the US in this dissertation. However, I find it is important to acknowledge the politics of such practices and that "recovery," as a term indicates that individuals who use drugs are in some way lost and need to be "recovered". Though I use the

term throughout this dissertation (as it is often the term my participants used) I do want to recognize the politics enmeshed in using such a seemingly innocuous term.

Meta-analyses of research on "recovery" reveal that there is little consensus on definitions of "recovery" for both empirical research and measuring treatment outcomes (Inanlou et al. 2020; Witkiewitz et al. 2020). Further, there is a dearth of research on long-term outcomes (Stokes et al. 2018; Bjornestad et al. 2019; Pettersen et al. 2019) and most of these studies focus only on measurements of abstinence (Kelly et al. 2018). It is, however, clear that definitions of "recovery" are enmeshed with the history of substance use treatment in the United States.

Mutual Aid societies, like Alcoholics Anonymous, typically emphasize this model where "recovery" can only be achieved by remaining abstinent from all substance use (el-Guebaly 2012). Additionally, in 1982, the American Society for Addiction Medicine defined "recovery" as complete abstinence from substance use, while "remission" was a reduction of symptoms of drug use (el-Guebaly 2012). Similarly, a 2007 Consensus panel held by the Betty Ford Institute defined "recovery" as "…consisting of three parts: sobriety, personal health, and citizenship. Sobriety refers to abstinence from alcohol and all other non-prescribed drugs; personal health refers to improved quality of health; and citizenship refers to living with regard and respect for others" (Dodge et al. 2010). In addition to sobriety, these definitions focus on "recovery" as becoming a worthy individual.

It is clear that "recovery" is not only about sobriety, but about participating in social life in an appropriate way (i.e. citizenship). For the Substance Abuse and Mental Health Services Administration "recovery" is "a process of change through which individuals improve their health and wellness, live a self-directed life, and strive to reach their full potential" ("SAMHSA's Working Definition of Recovery", SAMHSA.gov) where substance use is

necessarily a limit to living a full life. Another example is the Diagnostics and Statistics Manual-V (DSM-5) definition of addiction and "recovery". In the DSM-5, criteria for addiction include failure to meet social and work obligations and using at times that are socially unacceptable (like non-mealtimes) in addition to perpetuated use, and withdrawal symptoms (DSM-5). The DSM-5 defines early remission as the absence of such symptoms for 3-12 months (with the exception of craving) and sustained remission as 12 months or more without symptoms (Witkiewitz et al. 2020). This approach creates a complicated picture of substance use and treatment that includes both social and biological selves.

Anthropologists have studied such cultivations of selves in substance use treatment programs. For instance, anthropologists have employed Foucault's notion of biopolitics to examine medication assisted treatment programs in the U.S. (Bourgeois 2000; Schlosser 2018). Participants in such programs, theorists have argued, become biopolitical subjects as they are tethered to local clinics where they may get their daily dose of methadone or buprenorphine. Such practices intertwine bodies with the political and governmental institutions that sanction these programs and create a moralized subjects through his use of politically sanctioned technologies of "recovery."

Harm reduction programs, on the other hand, focus not on relapse prevention, "recovery," or treatment, but instead on preventing harm to people who use drugs. As such, the target of intervention is not wanting or abstinence, but positive health outcomes regardless of patterns of (often illicit) substance use. Anthropologists have long expressed interest in understanding substance use patterns (Bateson 1971). The next section discusses ethnographies of substance use, paying particular attention to how individuals experience substance use, and the formal and informal structures that surround substance use and addiction in North America.

Ethnography of Substance Use

This dissertation is situated within a broader discussion of substance use and addiction within the field of anthropology. Many anthropologists have specifically employed ethnographic research methods to understand substance use, especially in the United States. Perhaps the most notable of these, and the first ethnography I ever read, comes from Phillippe Bourgeois and his study of the political economy of drug use in El Barrio (1995). Bourgeois' fieldwork followed a group of street level drug dealers in New York and detailed the complex political-economic relationships that possessed the streets of East Harlem in the 1980's. Other work by Bourgeois and colleague Jeffery Schonberg (2009) follows street drug users, self-proclaimed "righteous dopefiends," and their illicit substance use in San Francisco. This photo-ethnography exemplifies the moral economy of use and cooperative survival of individuals perched on the ledge of social abandonment.

Still, other scholars have conducted similarly influential and important work on substance use in the North America. Angela Garcia (2010) details life in and outside of addiction treatment in Northern New Mexico and leverages her position as a "detox attendant" to explore the intricacies, intergenerational trauma, and institutions that shape the lives of people who use drugs. Other scholars have worked at the intersection of gender and drug use. Knight's (2015) *addicted.pregnant.poor* explores the lives of women who are negotiating their role as both mother and drug user in San Francisco's Mission District. More recently, Jennifer Syvertsen (2022) presented an ethnographic account of women who engage in sex work and their non-commercial partners in Tijuana. Entitled *Dangerous Love*, the book explores how couples negotiate "risk" in intimate relationships, and how they depend on "love" as a means for survival.

Each of these ethnographies, in some way, has had a profound impact on this project. For instance, Bourgious, Schonberg, and Knight provide a visceral look into street drug use that I found coincided with the experiences of my participants. Whereas Bourgeois and Schonberg acknowledge their role as "outsider," Garcia negotiates an insider-outsider perspective as both an employee of a treatment center and an ethnographer. I, too, walked the line between harm reduction staff member, providing critical services, and ethnographer. Finally, Syvertsen places love at the center of what one might call an "ethnography of the good." In many ways, I resonate with this approach, especially as I write about the work of harm reduction and harm reduction philosophy. Collectively, these ethnographies of substance use have informed the work presented here.

Substance Use and Medical Anthropology

Traditionally, work on substance use has been situated more broadly within medical anthropology, and specifically Critical Medical Anthropology (CMA). CMA is a theoretical perspective which seeks to understand the relations of power relative to health and disease (Singer and Baer 1995). For instance, in 1996, Merrill Singer published his work on the Substance Use, Violence, and HIV/AIDS (SAVA) syndemic framework which proposed an analytic strategy for thinking about how disease and social conditions interact, often causing harmful, if not life-threatening, conditions to those who experience them (Singer 1996). Many scholars have looked at the intersection of disease and drug use (Page et al. 1990; Koester and Hoffer 1994; Sterk and Elifson 2000; Buchanan 2006; Schensul et al. 2010; Singer 2012), biopolitics and addiction (Bourgeois 2000; Jöhncke 2009), language and the self in substance use

treatment (Bateson 1971; Cain 1991; Carr 2010), and addiction trajectories (Raikhel and Garriott 2013). Still, others have questioned the medicalization of substance use and addiction.

Contrasting moral models of substance use (Singer and Page 2012), the Chronic Relapsing Brain Disease (CRBD) model puts the brain at the center of discourse, research, and treatment of addiction (Leshner 1997). The CRBD model sought to de-stigmatize substance use, promote neuroscientific research into addiction, and eventually, improve treatment strategies (Berridge 2022). Recently, scholars have pushed back on the CRBD model arguing that this model ignores the social and political contexts of substance use and treatment. Instead, they suggest a harm reduction and social justice framework for responding to substance use which "prioritizes the health and social inclusion of people who use drugs" (Lie et al. 2022, S105). This dissertation, as you will read, attempts to balance a neuroanthropologically informed, harm reduction approach to understanding substance use triggers.

Studying the Brain and Culture

Thirty-three years ago, President H. W. Bush declared the "Decade of the Brain," in which research funding and initiatives pushed scientists to study the brain as the basis for behavior and disease (Goldstein 1990). This push toward studying the brain hoped to help humanity understand something (or somethings) of our true essence as humans-- "that our brains hold the key to whom we are" (Rose and Abi-Rached 2013, 1). This initiative, and similar movements within the larger research community, inspired paradigms such as the Chronic Relapsing Brain Disease model of addiction and medicalizing issues formerly attributed to learned (encultured) behavior or ideas of morality.

This movement similarly inspired research on interactions between the brain and culture. Many researchers have been interested in studying interactions between the brain and culture, not least of which are cultural neuroscientists who seek to understand how culture shapes the brain (Reynolds Losin et al. 2009; Chaio et al. 2010; Xu et al. 2022). Scholars of cultural neuroscience are broadly interested in studies in which method and theory from anthropology, psychology, genetics, and neuroscience are combined to assess neural substrates of human behavior. With this work predominantly originating as a subfield of neuroscience, much of the questions asked emphasize the applicability of results from fieldwork to the laboratory space.

Anthropologists, on the other hand, have expressed interest in studying the production of the brain and behavior in neuroscience. This work is situated in the field of Science and Technology Studies (STS), a research area which focuses on "studying the processes and outcomes of science…" (Sismondo 2010, vii). STS scholars have focus on the production of science and have often embedded themselves within laboratory or similar environments (Martin 2022). For example, Dumit (2004) writes about the digital life of PET scans, the meanings they bring to researchers, and the brains (and thus "types" of people) such images portray. Similarly, Rose and Abi-Rached (2013) outline what they call a new "neuro-ontology," one in which research on and about the brain suggests that humans understand themselves and humanity in a new way. This neuro-ontology proposes that humans are not beholden to an inaccessible neural anatomy but that understanding the brain, and indeed, your own brain can help you change it. Plasticity, then, is not physical, but ontological. In other words, these scholars suggest that how we study the brain changes not only how we know or construct the brain, but how we enact the brain in research and everyday life.

Roepstorff and Frith (2012) use these studies of the brain and neuroscience in anthropology to advocate for the field of *experimental anthropology.* Experimental anthropology, they propose, examines the production of knowledge in experimental settings to ultimately understand how to formulate research questions and translate findings from the lab to the field. Further, Roepstorff and colleagues (2010) argue that culture can become embedded into the brain through *pattern practices*. Behavior, and particularly suites of behavior dictated by culture, shape the way people engage with the world. Subsequently, they propose that these pattern practices shape internal, biological processes and neural networks. Such pattern practices, they argue, can "inform experimental design and participant recruitment" (Roepstorff et al. 2010, 1052), to better study encultured social interactions from a neural-networks perspective.

Similarly, Seligman's (2018) "looping" or "bio-looping" suggests another way to understand how pattern practices become embodied. For instance, Seligman argues that spirit-possessed mediums in Brazil employ regulation of the autonomic nervous system that produces a "looping" pattern in which "the qualities of particular bodies figure as both causes and effects of experience" (Seligman 2014, 422). Finally, the capacity for features to become embodied, can be understood through a cultural affordances framework. Cultural affordances are the "natural" and "conventional" possibilities for action which structure human lives. Cultural affordances, provide a framework for understanding the possible ways that culture and material environments can shape options for human cognition (Ramstead et al. 2016). Where pattern practices and looping seek to connect behavior to the embodied nervous system, affordances attempt to connect embodiment and cognition through examination of engagement, attention, and learning.

The decade of the brain inspired much research across disciplines that seek to put the brain, nervous system, and cognition at the center of understanding human behavior.

Anthropologists have been particularly fixated on two domains. First, the construction of the brain/mind/personhood in the lab, where STS-oriented researchers have focused on the lab as a field site. And second, on connecting culture, and the things people do, to an embodied nervous system.

The work presented in this dissertation is partially inspired by such approaches. For instance, in Chapter Four, I discuss studies of cue reactivity in the lab and how such studies enact Triggers in particular ways. Additionally, I am interested in understanding ontologies of the brain, and employing a plasticity-oriented approach toward Triggers. I also find myself aligned with scholars who are asking questions about embodiment, and how what we do as humans comes to matter to our encultured nervous system. Much of the work of this dissertation is focused on unsettling the unrealistic divide between the brain and culture.

At the same time, these works do not necessarily provide a framework for understanding how Triggers, as more than one object, become embodied. It is the multiplicity of Triggers that makes them complicated to study, and not conducive to all theoretical perspectives. Pattern practices and looping could provide interesting ways to frame human behavior, but ultimately, they rely on individuals repeating, often together, the same patterns over time. One of the goals of this project is to show that Triggers are not a stable object, nor are they enacted the same in every context. The ontological multiplicity of Triggers is certainly grounded in practice, and perhaps over time and contexts, one could look for patterns in these practices represented across neural imaging. But research on cue reactivity indicates that this is not simply a one-way exchange—that the reactivity of the body and culture collectively create a "developmental spiral," as Downey might call it (Downey 2021).

This dual feedback mechanism is slightly more reminiscent of the "bio-looping" proposed by Ramstead and colleagues. However, looping is more state specific, whereas Triggers are more context specific. Similarly, affordances might provide a better way to model triggers. While this dissertation is mainly focused on Triggers (as an object), triggers (as everyday encounters) are a similarly interesting subject. People who experience addiction or people who treat addiction often say, "everyone's triggers are different." To a large extent, this is true. What you encounter during times of use and your personal history will have a huge impact on what objects, emotions, and thoughts become triggers. Perhaps an affordances perspective could produce an interesting analysis of cognition of triggers, and what in the environment is cognitively meaningful in any given trigger encounter.

Neuroanthropological theory, specifically local neurologies, provides a better fit for understanding Triggers in the harm reduction context. While there is much research in anthropology interested in the brain and culture, neuroanthropology specifically offers a framework that can at once accommodate the materiality of the body and evidence from neurobiological research, and the multiplicity that comes from enacting objects in different ways. The following section of this chapter discusses neuroanthropology as a school of thought.

Neuroanthropology

The term "neuroanthropology" was coined in 2009 by an Australian graduate student, Juan Dominguez, and their colleagues. Dominguez proposes that the purpose of neuroanthropology is to solve two key problems, the "culture in the brain problem," or how culture shapes the structure and function of the nervous system, and the "brain in culture problem," or how the brain shapes culture (Dominguez et al. 2009). Of the scholars covered in

the previous section, few would identify as "neuroanthropologists" or doing neuroanthropology. In fact, some even reject the field entirely, (See: Roepstorff 2012), a critique I discuss later in this chapter. Nevertheless, their work sits at the crossroads defined by Dominguez- the intersection of the brain and culture.

At a similar time that Dominguez and colleagues were first writing about neuroanthropology, Daniel Lende and Greg Downey were also beginning to think about ways to synthesize work that encompassed the brain and culture. Greg Downey, in his work on the vestibular system, employed a phenomenological approach to understand how Capoeira, a form of Brazilian dance martial arts, socially and physically shaped its practitioners. With a strong interest in social theory, phenomenology, and neuroscience, in 2005, Greg published his book *Learning Capoeira: Lessons in Cunning from Afro-Brazilian Art*.

At the same time, Daniel Lende was conducting his doctoral fieldwork at Emory University, a program with an innovative biocultural lab led by Carol Worthman, one of Lende's intellectual mentors. The other intellectual mentor, Lende's advisor, E. O. Smith came to research with a strong evolutionary background and interest in primates. This heritage is clear in Lende's early published work, which emphasized evolution (Lende and Smith 2002), development, and biocultural approaches to substance use (Lende 2005). Lende specifically studied youth in substance use treatment who describe the experience of wanting in addiction, "querer más y más". This framework aligned with a new theory of the neurological basis of addiction, incentive salience theory.

When Lende and Downey both took jobs at Notre Dame with offices kitty-corner to each other, they began to explore the burgeoning field of neuroanthropology, and a shared interest in the encultured brain. Lende and Downey furthered the neuroanthropological approach,

particularly spurred on by their Encultured Brain conference, subsequent edited volume (Lende and Downey 2012), and popular PLOS blog (neuroanthropology.net). In more recent scholarship, Lende and Downey have employed principles of neural plasticity and human variation to understand the brain and culture (Lende and Downey 2020). Research in neuroanthropology has explored subjects as diverse as post-traumatic stress disorder (PTSD) and veteran re-assimilation (Collura and Lende 2012), humor and cancer diagnosis (Bouskill 2012), racialization in the opioid crisis (Hansen and Skinner 2012), and more.

The Lende and Downey neuroanthropological school of thought focuses very much on taking what scholars have learned in the lab (usually psychology and neuroscience) and comparing it to individual experiences "in the wild." In a recent publication, we called this process "Triangulation" (Lende et al. 2021). A triangulation approach serves two functions. First, to bring together theory and methods from multiple fields. As such these theories and methods can be complementary, providing additional forms of evidence or ideas to create a more holistic picture. Second, triangulation serves to buttress biases that come from relying on one single data source. While a phenomenon might look one way in the lab, field-based methods might reveal an entirely different reality.

In this dissertation, I employ the use of theoretical (or conceptual) triangulation, using theory from anthropology, psychology, and neuroscience to better understand substance use Triggers. From anthropology I use ontological theory and local neurologies theory- these theories work together to help answer questions about what triggers "are" and why they matter. From psychology I use cue reactivity theory, the theory that first set out to explain triggers and provide some sort of framework but is often tied to Triggers in the lab. Finally, from

neuroscience I use incentive salience theory, a theory that provides one way to understand how learning, attention, and stimuli translate into concrete (and complex) messaging in the brain.

In addition to triangulation, the Lende and Downey school of thought provides a theoretical basis for thinking about plasticity, development, and human variation. For instance, in a recent book chapter, Lende and Downey (2020) write about the complex variation that has been found in cross-cultural comparisons of skill, where the context and content of any given learning experience can fundamentally alter "how our nervous system responds to basic stimuli" (279). Lende and Downey suggest that neuroanthropological research is particularly attuned to understanding how such experiences get under the skin by "exploring 'brains in the wild'" (280). By focusing on development, they suggest that we can better understand "local neurologies," or how interactions between sociocultural and physical contexts can shape embodied learning.

Of course, this approach should be contrasted with more determinist approaches which focus on how social structures reflect cognitive and brain structures, searching for human universals in cognition (Winkelman 2019). Where determinists might argue for a universality in the brain, or that individual difference (i.e., culture) stems only from the brain, the neuroanthropological approach to plasticity and development focuses more on how to eliminate these sorts of arguments. Tackling the WEIRD problem, that is the problem that most individuals in psychological research come from Western, educated, industrialized, rich, and democratic (WEIRD) backgrounds, the goal of the neuroanthropological project is to unsettle any ideas of whole predetermination or universality in the human nervous system (Lende and Downey 2020). In the same way that Gravlee (2009) argues that race *becomes* biology, a neuroanthropoloigical perspective focuses on the mechanisms that make variation possible, and indeed, probable. Yet not all scholars agree that neuroanthropology is well suited to answer such questions.

Critiques of Neuroanthropology

Some scholars are skeptical of the synthesis of neuroscience and anthropology. For instance, Roepstorff and Frith (2012) warn of the inability to apply ethnographic methods to laboratory settings. In essence, they argue that often, the ethnographer and their methods do not integrate well, in, say, psychology labs which have different standards of practice, reproducibility, and the like. Instead, they argue that the value of neuroanthropology is the ability to study such spaces. They propose that the real contribution of neuroanthropology is not neuroanthropology at all, but experimental anthropology (outlined above). Roepstorff and Frith note, "we are not convinced that what the field currently needs is the naming of a new hybrid discipline such as neuroanthropology. This suggests a grand theory of how, on an abstract level, the cultural, the experiential and the neurological relate to each other" (108). They suggest instead that an experimental anthropology might yield "models that can be tested in the field and the lab" (pg 108). The tension between the field and the lab is also present in other possible critiques of this work.

For instance, Dumit or Rose and Abi-Rached, and similar STS-aligned scholars might argue that neuroanthropological work does not consider the constructed-ness of the data we use in triangulation. Where these scholars are more aligned with understanding how neuroscientific knowledge comes to be, the Lende/Downey neuroanthropological approach is more likely to accept the conclusions of the laboratory insofar as they explain what they are seeing in the field. In this dissertation I seek to interrogate how Triggers are practiced *and* what we can use from the lab that is meaningful to the experiences of my participants.

I have also received critiques personally that neuroanthropology doesn't consider factors such as the political economy, and other institutions typically interrogated by critical medical

anthropologists. Though there are publications in the field that I think prove otherwise (See for example: Lende 2012b), institutions and structures of power do a lot of work to shape how humans move through the world. The encultured brain is certainly also an institutionalized brain. In Chapter Five, I discuss how certain structures of power shape the context in which I examine Triggers.

On Process

Despite these critiques, I choose a neuroanthropological approach because of the ability to consider process, and thus ask questions that connect the ontological and material. Often, within research in medical anthropology, the physical materiality of the body is dismissed– the mechanisms by which culture gets under the skin are not elaborated clearly. Scholars in medical and biocultural anthropology have attempted to account for these gaps.

Fausto-Sterling (2005) elaborates on the relationship between bones and constructions of gender and sex. Fausto-Sterling notes the many ways that culture and practice become embodied. For instance, practice of intense athletics creates denser bones. Additionally, there are notable differences in bone density between men and women. Women are more likely to break bones at older ages, while men are more likely to break bones at young/middle age due to activity and sport. Much of this difference in bone density is attributed to osteoporosis in women, commonly understood to be caused by menopause and changing hormone levels. Yet, Fausto-Sterling notes, the links between hormones, menopause, and osteoporosis are not entirely clear. Further, much of the increased diagnosis of osteoporosis in women with lower bone density may be due to the advent (and marketing) of new pharmaceutical treatments and technologies to treat porous bone. Fausto-Sterling instead suggests a systems thinking approach to understand how culture (such as

gender/sex) and biology interact over an individual life course. “The sex-gender or nature-nurture accounts of difference fail to appreciate the degree to which culture is a partner in producing body systems commonly referred to as biology—something apart from the social” (1516). Certainly, gender matters, but to what extent and why? It seems that not only embodied difference but encultured difference shape bone density in men and women.

Other biocultural work has created models to fill this gap as well. Worthman’s (2019) analysis of peptic ulcers elucidates similar connections between the body and culture. In the common lexicon, ulcers are often attributed to stress. However, a biomedical perspective attributes ulcers to bacterial infection- removing idioms of stress from any sort of etiology, diagnosis, or treatment. Yet, human behavior, and what people think and do, still shape potential for ulcers. What people eat, where they live, how they express symptoms all contribute to an eventual diagnosis and treatment of peptic ulcer. Worthman’s approach echoes that of Fausto-Sterling, both of whom seek to understand how to speak to the gap between the body and culture, where both the body and culture are complexly entangled.

The process approach in neuroanthropology highlights the gap between the body and culture. As a way to think through the relationships between the body and culture, process works to capture the mediators between the brain and environment (i.e. mind, cognition, extended nervous system).

> “Field-based research in anthropology has often focused on higher-level sociocultural phenomena. Through process, neuroanthropology draws on biology, cognition, and development to better understand human variation and outcomes in real-world settings. Process brings attention to how things happen, not just to what people say and do” (Lende at al. 2021, 3).

This process approach lets us consider what is happening between the brain and culture, and what in these interactions matter. The question then becomes, *where* do such considerations matter?

Situated Biologies & Local Neurologies

Situated biologies is a theoretical concept which locates bodies within a particular space and time (Lock 2017). Lock's notion of situated biologies suggests that bodies are not the same everywhere, all the time, nor are they infinitely mutable. Bodies at once adapt to their environments, constraints, individual experiences, and at the same time share much in common, including ecologies, catastrophes, and histories (Niewöhner and Lock 2018). The situatedness of bodies demands that biology, bodies, and experiences should be considered relative, not universal. One way to understanding how bodies are situated is by looking at "local biologies."

According to Lock (1993), local biologies is a theoretical concept that should "…seek to situate bodies in time and space, thus bringing to the fore the inevitable coalescence of material bodies in environments, histories, social/political variables, and medical knowledge of all kinds" (Lock 2017, 5). In their research on menopause in Japan, Canada, and the United States, Lock and Kaufert (2001) argue that biologies, often considered universal in the biological and life sciences, are shaped by their localities. More specifically, they noticed that menopausal symptoms are not universal, especially when they compared North American and Japanese populations. Lock and Kaufert discuss these differences as both conceptual and developmental. *Konenki* is a culturally and physically distinct experience, for instance, with only 19% of women in *konenki* experiencing hot flashes, as compared to 60% of Canadian women who participated

in the study. Much of this difference is attributed to the Japanese diet which is typically rich in phytoestrogens.

Local biologies functions as a retort to universalist or determinist views of a single, immutable human biology and seek to situate bodies within the contexts that shape them. If we are to understand where we are the same and where we differ, we need to situate biologies within the contexts that matter. Another way to situate bodies, then, particularly the embodied nervous system, is through local neurologies.

Local neurologies, a relatively new theory in neuroanthropology, proposes, like local biologies, "to capture the integration of social with biological forces" (Lende and Downey 2020, 280). Previous research in psychology and neuroscience has fixated on understanding humans and the embodied nervous system more broadly, as Lende and Downey (2020) highlight. Local neurologies seeks to highlight human variation and plasticity between individuals, across many different contexts. Local neurologies is a framework that can highlight how local developmental pressures and constraints can shape individuals and groups.

Anthropology is particularly attuned to understanding these issues as "anthropology can demonstrate how living differently generates diverse forms of human being, including distinctive local neurologies" (Downey 2021, 3). This "living differently" is key to the neuroanthropological project. Yet, living differently has to have some sort of boundary, or one could argue that everyone (presuming no one has ever lived the exact same way) has their own, local neurologies. Triangulation is useful for understanding how such differences arise. Neuroscience and psychology research are particularly adept at finding patterns in behavior. For instance, Robinson and Berridge (1993) find that *wanting* and incentive salience drive addiction. Data from neuroscience and psychology can inform basic processes- how one thing works in one particular

place. Neuroanthropology, then, assesses these processes in everyday, field-based settings. For instance, Lende's (2005) assessment of wanting in substance use among adolescents in Colombia. It is in depth, ethnographic fieldwork that is essential to understanding how living differently creates these distinct local neurologies.

But what exactly is the "local"? Is it merely a geographical designation? For Lock and Knaufert (2001), "local" is a comparison between populations in Asia and North America. That's not exactly "local," especially when considering that as anthropologists, we know that most variation is within group, rather than between groups (Gravlee 2009). Also, how can something be truly "local" in our globalized, highly interconnected world? Defining the "local" is not necessarily straightforward. Niewöhner and Lock (2018) suggest that situating biologies provides space to consider a highly interactive world though this linguistic change does not entirely resolve how to scale the local.

Emily Yates-Doerr (2017) presents one solution to this problem with her notion of "siting," or the places in which the "local" comes to be. In her study of nutrition in Guatemala, Yates-Doerr recounts small villages, geopolitical relationships, and even global conferences as "sitings" in which the local is enacted. There have also been discussions of scale within neuroanthropology. While most work in neuroanthropology has taken place at distinctly local levels (i.e., working with veterans in on gym training in Brazilian Jiujitsu (Collura and Lende 2012)), culture is not always attributed locally. For instance, Lende et al. (2021) outlines symbolic/interpretive approaches, political-economic approaches, and ecological approaches which all could be considered on different levels- from macro to micro, and even mental levels.

The "local," as I will discuss in Chapter Five, is not just about a bound geographic site – but is the context(s) that enable a certain skill, behavior, or practice. For Downey (2021), in his

example of echolocators, the "local" is not any one place where someone is echolocating, but rather the use of echolocation in cultural spaces where making such noises is understood as "weird". Further, such skills are enabled by physiological context– in particular, the plastic brain, which is shaped in reference to practices and engagements. As Downey notes, practices of echolocation cause persistent changes in visual cortices. Thus the "local" is in the very least about places or spaces, but instead about what is relevant to any given sort of engagement.

Research on local biologies and local neurologies, then, I suggest should ask first, what skills, practices, or behaviors are being interrogated in this study? And second, what contexts are directly relevant to the development of such skills? In this study, the practices being interrogated are those that enact substance use Triggers. The context, where I attend to such enactments is harm reduction. Yet, the local is not just Sunshine, a harm reduction program, but harm reduction as a broader practice, which enables certain engagements with the world. Further, the local is the bodies which engage in everyday substance use and plastic brains which interact with and enact substance use T/triggers.

Answering these questions takes quite a bit of neuroanthropological tact. Rather, doing the ethnographic work informed by psychology and neuroscience helps to determine what neural processes gain relevance in any given situation. For instance, Hertzmann and Boyce (2010) note that social systems become embodied overtime in what they know as "biological embedding." Yet, such embedding does not happen all at once or even equally across the life span. Instead, embedding happens during certain critical periods of human growth and development and, in particular, of neural circuitry. The neuroanthropologist, who makes their home at once in anthropology and between fields must make informed choices about what contexts activate what neural responses (or plasticity) at any given time. Psychological and neuroscientific research,

paired with excellent ethnography are necessary for understanding the relevance of any given social and biological system. For Lende (2005), that required the in-depth ethnographic work with adolescents in Colombia whose language and experience matched well with what people were saying in the lab– that addiction is much more about wanting, attention, and seeking than it is about pleasure. In other words, the ethnographic work demonstrated what they were seeing in the lab.

Another question is how does one conduct an ethnographic study of a specific "neurology"? Downey has offered some explanation here. His 2021 paper argues for an *ontogenetic* approach to assessing local neurologies. For Downey, understanding behavioral-developmental spirals (where behavior and development are mutually reinforcing), is key. Using the example of echolocation among the blind, Downey notes "Human worldings differ, not just because of conceptual variety, but because we inhabit the world with profoundly different bodies, specifically in terms of trained capacities for action, perception, experience, and expression" (Downey 2021, 6). A "neurology," then, can be understood as what becomes embodied in relation to the specific skills, training, or practices that specific individuals enact. In essence, the "local" enables the "neurology."

This dissertation is interested in the local neurologies of substance use Triggers. To understand this, I must first ask what are the specific trainings or practices that are enacted in relation to Triggers? And what are Triggers themselves? Are they the many different "things" that people find triggering? Are they a concept that individuals use to understand their physiological responses to stimuli related to past use? Are they something in between? Here, ontological theory offers a bit of clarity in understanding Triggers as an object.

The Ontological Turn

The ontological turn in anthropology is primarily interested in critiquing the culture concept in anthropology. As Darnell (1997) describes, the culture concept received criticism for its realized inadequacies. The idea that culture and ethnography could describe all the variation within society exacerbates colonial (or neo-colonial) tensions and proposes knowable social and natural realities. For ontologists, the issue is what Vivieros de Castro terms "multiculturalism," that there exists one knowable nature of the world, but many cultures (Vivieros de Castro 1998; 2014). The multicultural problem is not so much a problem of culture, but a problem of culture as a constant explanatory mechanism- that any human difference is *only* cultural.

Along the same lines, Latour argues that *We Have Never Been Modern* (1993) where modernity is the separation of natural and the social worlds. This idea proposes that those who are "non-modern" (read: non-Western) have a different understanding of the interrelations of nature and social worlds, but the hallmark of a "modern" society is the dialectic nature versus social. Descola too pushes us *Beyond Nature and Culture* (2013) to consider the history of this binary distinction, and proposes his own ontologies which place perspectives of interiority and physicality on a spectrum beyond the binary.

Thus, as anthropologists study peoples around the world, the concept of nature (no matter the "natives" perspective), stays the same, but culture relative. As much as anthropology claims to take seriously any "alterity", scholars of the ontological turn propose that it does not take seriously alternative views of nature. To consider another way, as conceptions of nature differ, anthropologists often consider such differences *cultural* artifacts—not natural difference.

Instead, Vivieros de Castro (1998; 2014) proposes "multinaturalism" which purports to understand the relative nature of nature. An ontological approach to nature posits that nature, is

in the eye of the beholder and thus, is relative to the perspectives, practices, and experiences of any certain group. This is particularly relevant for those who study animism (Descola 1994; Descola 2011; Descola 2013; Vivieros de Castro 1998; Vivieros de Castro 2014). Though peoples might understand the nature of spirits that exist in animals as quite robust, the non-ontological anthropologist would ascribe that they misunderstand the true nature of animals and their interior lives. For some ontologists, this is a methodological challenge that gets at *how* to push anthropologists beyond cultural relativism. Holbraad and Pedersen (2017) argue that the ontological approach is about de-centering the anthropological gaze. The challenge of seeing the world as your participants come to see the world, they argue, is a critical exercise in ontological thinking.

For others, ontology enables researchers to see beyond humans. Kohn (2015), an ardent researcher of life in the Anthropocene, elaborates ontology as,

> …not generically about 'the world,' and it [ontological anthropology] never fully leaves humans behind. It is about what we learn about the world and the human through the ways in which humans engage with the world. Attention to such engagements often undoes any bounded notion of what the human is. Ontological anthropology is for the most part post-humanist but that does not mean it sidesteps humans and human concerns altogether. (313)

For Kohn, ontology is a framework for understanding how humans and nonhumans live together in the human epoch. His deconstruction of life in the Amazon proposes an anthropology "beyond humans" by specifically understanding the semiotic relationship between human and the non-human beings (Kohn 2013). Here ontology is a lens that allows him to explore the way "forests think", taking seriously the lifeforms of the Amazon and their symbolic communication and eliminating the distinction between humans (with culture) and non-humans (without).

In many ways, the "beyond human" approach exists as a critique of social constructionist views of the world. Berger and Luckmann (1966) argue that humans are social actors that

practice certain behaviors (habits). When humans come together and interact, these "habits" become institutionalized (institutions). And as these institutions grow and are reinforced, they appear as an objective reality, rather than a socially constructed institution. For people who study drug use, a social construction perspective might look something like Singer and Page's (2014) *The Social Value of Drug Addicts: Uses of the Useless,* where the book examines how the category of "the addict" is created through historical social, and political values. They conclude that "the addict" is something of a constructed category used to differentiate the value of individuals versus the Other. Here, the level of analysis is the institutions and interactions between individuals that shape the Others. This explicit focus on reality as a social construction renders any study beyond the human irrelevant. For Kohn, how do you study the symbolic interactions between a thinking forest and humans, if you only view reality as socially constructed between humans (Kohn 2015)? Certainly, conclusions would revolve around the forest's value to humans, rather than the forest as an agentive being. Thus, ontology differs itself from social construction by expanding its view from purely human-constructed realities to work that considers how human and non-human realities are intertwined.

Other research areas, such as multispecies ethnography, have been wrapped into the ontological turn as they make a similar cognitive move in eliminating the dualistic view between humans and non-humans and focus on the relationships that exist there (Haraway 2003; Haraway 2008; Tsing 2015). Preoccupation with the Anthropocene and ecological concerns are also a common focus of those who employ ontology in their research (Latour 1998; Kohn 2013; Kohn 2014; Yates et al. 2017; Chandler 2018). Additionally, much of the work in ontology focuses on non-western peoples and societies, as mentioned above, who have a much less dualistic view of

"nature" and "culture" (Henare et al. 2006; Descola 2011; Descola 2014; Chandler and Reid 2018).

This much less dualistic view of nature and culture is relevant to scholars that seek a coherent solution to problems that span the body and culture (i.e., Lock 2017). The artificial divide between nature and culture is an unnecessary barrier to understanding humans from a holistic perspective. In other words, nature/culture is a conceptual constraint. An ontological resolve to the nature and culture problem centers the discourse of different experts-- those who experience different natures.

However, such a perspective is difficult. To look between nature and culture, from an ontological perspective, requires a commitment to alterity, and acceptance that nature and culture have simply always worked together. It is the "modern" perspective (Latour 1993) that convinces us otherwise, and this modern perspective is often where we (Western anthropologists) are starting. Taking seriously that nature is flexible, and that there may be multiplicity in nature opens many questions about the human body, and especially neural processes.

The ontological perspective centers unique natural experiences. In this dissertation, I attempt to do the same. I center the experiences of participants and take seriously what they tell me about T/triggers to understand the relative nature of Triggers. Where they are, what and how they engage with the world around them informs Triggers. Local neurologies, then, provides a framework for looking between nature and culture, in the spaces and practices in which both are equally relevant and inextricably linked.

Critiques of Ontology

Downey (2021) critiques this model of ontology as too theoretical to deal with the materiality of the human body. In his paper, *Echolocation Among the Blind: An Argument for an Ontogenetic Turn,* Downey argues that the ontological turn is "highly conceptual." For Downey, arguments made by ontologists, particularly the ones above who speak of animism and multiculturalism, do not take seriously the embodied variation experienced not just between species but within our own species. "The result is that bodily difference *within* our species are not afforded the same significance as those *between* species. For our species alone, variety in our concepts, not our bodies, causes us to inhabit various realities." [emphasis original] (Downey 2021, 2). Downey argues that this ontological approach to the body often obfuscates what we know about how experiences become embodied over developmental time. For instance, Downey (2021) gives the example of a Piro woman in the Peruvian Amazon, who states that her body differs in relation to experiences of diarrhea. Vivieros de Castro, Downey argues, states that this is not a physical or biological difference in bodies but a conceptual difference in bodies. That the Piro woman understands corporeal difference, differently. Downey argues that this misunderstands what we know, that bodies are highly attuned to our local environments, through local biologies. Downey further argues that, because of this merely conceptual framework, the ontological turn is not compatible with work that deeply engages with the materiality of the body.

Similarly, Harris and Robb (2012) note that while concerned about "nature" and "culture", ontology makes little room to analyze the materiality of the body. Moreover, they argue that typical ontological projects cannot account for change or conflicts in ontological perceptions, nor a singular body. For instance, they give the example of the dead body in 17th-

Century Britain. They argue that in this period bodies were at once, religious, scientific, social, and magical. The body was a material object that was treated with specific rites and rituals for burial. At the same time, dissection of the dead body led to great strides in human understanding of anatomy and physiology. The hand of a corpse, at this time, was thought to hold healing powers. There also existed important social rules about how to treat a body after death, "theological discourse held that God could resurrect the dead regardless of the state of their body, but in social discourse fragmenting the dead body by dismembering or dissecting it was a severe punishment for criminals" (Harris and Robb 2012, 671). The body, throughout history and today, is never a static concept. Instead, they propose "multiple ontologies," in which they argue that the body is "…always ontologically multimodal." Highlighting specifically, how "the body" changes over time in both social and material manner, they propose, "that ontologies are always bound up and inseparable from the material world, not determined by it but not independent, either. These ontologies are sprawling, multifarious, and often contextually applied" (Harris and Robb 2012, 676). This "Multiple Ontologies" approach outlines a way to take seriously alterity and biology while also giving researchers the ability to explore how both social and symbolic meaning construct bodies in a biocultural world.

For Triggers, to be able to discuss materiality is critical. Triggers often hold a material significance. For substance use, triggers are often tied to the materials of consumption (bottles, syringes, spoons, plastic baggies, etc.). Such objects and their material value inform how people who use drugs engage with the world, what has significance and where. Natasha Dow Schüll (2012) explores these material qualities in her writing on machine gambling in Las Vegas. The physical make-up of the machine, the quality of its lights and sounds are critical for keeping

people engaged. As discussed at the beginning of this chapter, triggers (cues) have material significance to the body, via cue reactivity and incentive salience.

Yet, such materials are also relational. As Dennis (2016) notes, triggers are a sort of symphony of interactions between the body, drugs, and the world. Moreover, in an ontological enaction of the body, such relations are inextricable. It is not simply that drugs and the world collided in such a way that caused the body to be triggered. Triggers represent relationships between drugs, the body, and the world, interactions that form and inform one another. Additionally, where such triggers are encountered, and Triggers are enacted matters. In Chapter Five, I discuss "sitings," that is, the places where these objects draw particular relevance.

It is also this relational perspective that helps us understand how triggers and Triggers relate. The places in which triggers are encountered and conceptualized shape how individuals come to enact Triggers. In Chapter Four I discuss how such different enactments are possible. In summary, however, it is the multiple ontologies approach that provides a framework to speak at once of materiality and variation.

Multiple Ontologies

Annemarie Mol (2010) is concerned with the multiple ontologies of the human body, or as she calls it *The Body Multiple*. Intellectually, Mol's approach to ontology is tied to science and technology studies. Particularly, Mol asserts that her approach is an "ontological politics" of medicine through which she scrutinizes the way medicine practices objects. "A politics that has to do with the way in which problems are framed, bodies are shaped, and lives are pushed and pulled into one shape or another" (viii). Mol is not concerned with how the human body comes to be *known*, but rather the practices that enact the body (or bodies) in particular ways.

The relationship between ontology, practice, and objects is just this: the reality (or realities) of objects are brought into being by the practices that surround them, or as Mol insists, enact them. This is a radical reconceptualization of what we often assume are "natural" categories. Often, diseases, for example, are assumed to have been present before diagnosis. For instance, cues are often understood to be present far before one attends rehab, though they are brought to the fore in rehab. Mol argues, however, that such practices obfuscate the ontologies of any one object. That this suggests a prescribed reality to the objects we study, and thus an assumption of what is "natural" and what is not. Mol instead suggests that we attend to how objects are enacted in practice to understand them. Knowledge, then, is not "referential," as Mol says, but is generated in part with the object in practice.

By attending closely to practices, we can begin to understand the ontologies of an object. Here, the plural and singular are paired. As Mol expertly argues throughout the text, it is through viewing the object—in her case, atherosclerosis—that she finds that attending to practice reveals multiple atherosclerosis. And thus, the *body multiple.* The atherosclerosis diagnosed in the clinic by the clinician asking questions to a living patient about how long they can walk without pain in their legs, followed by feeling for a pulse and measuring a patient's blood pressure differs vastly, Mol argues, from the diagnosis in the lab, in which a disembodied calf and foot are sliced, to reveal swollen and calcified veins, confirming the presence of constricted blood flow as atherosclerosis. In Hospital Z (where Mol's research took place), between departments, atherosclerosis is presented as a unified concept, but when practices are examined, different atherosclerosis appear. Mol argues this is not just about epistemology, or "perspectivalism"—how different departments *know* atherosclerosis, but how they *enact* their own atherosclerosis.

Mol treats each enactment of atherosclerosis as its own practice. For instance, patients coming into the clinic complaining of leg pain and trouble with walking, is one enactment- the enactment of living with an atherosclerosis that is not visible. As such, the clinician follows suit, they measure pulse, they watch a patient's gait, another enactment still. By considering such moments as enactments, the object multiplies. Atherosclerosis is pain for the patient, and about pulse for the practitioner. Thus, multiple atherosclerosis appear. But there are not infinite atherosclerosis.

> "Blow up a few details of any site and immediately it turns it into many. The ethnographer who counts ways of enacting atherosclerosis, who counts atherosclerosis enacted, won't find an infinite number of variants for the simple reason that there is an end to the number of events that occur in a single hospital- though far earlier there is a limit to her own observation time. But before this limit is reached, the differentiation can go on and on. So what I am trying to relate is not that there are two, five, or seventy variants of atherosclerosis, but that there is multiplicity." (51)

And yet, Mol argues, these atherosclerosis hang together.

> "The word "is" used here is a localized term. Ontology in medical practice is bound to a specific site and situation. In a single medical building there are many different atherosclerosis. And yet, the building isn't divided into wings with doors that never get opened. The different forms of knowledge aren't divided into paradigms that are closed off from one another. It is one of the great miracles of hospital life: there are different atherosclerosis in the hospital but despite the differences between them, they are connected. Atherosclerosis enacted is more than one- but less than many. *The body multiple* is not fragmented. Even if it is multiple, it also hangs together. The question to be asked, then, is how is this achieved. How are different atherosclerosis enacted in the hospital related? How do they add up, fuse, come together?" (55)

Mol answers this question by returning to how atherosclerosis are diagnosed and coordinated across the hospital. A patient's pain when walking is *coordinated* (Mol's term) with blood pressure measurements and the pathologists' report. But what happens when these objects disagree? When a patient's low level of pain does not match up with the extraordinarily low blood pressure in his feet? Then, one explanation wins out. Inconsistency is explained. In the case of Mr. Iljaz, a patient at hospital Z, doctors explain the lack of pain as a problem of muscle

metabolism in the leg, or a problem of translation in the clinic (Dutch isn't his first language). And in the end, all inconsistencies are considered, weighed, or discarded to create a single treatment decision and the façade of a single body.

Attending to practice, Mol diligently notes the discrepancy in practices and objects, and the way they are brought together, translated, or explained away—to highlight that there is "manyfoldness, but not pluralism" of atherscleroses. And despite the inconsistencies, the differences between the atherscleroses, a unified concept is presented. "The manifoldness of objects enacted does not imply their fragmentation" (pg 84). I see the same tensions are exacerbated in understanding Triggers. In the same way Mol follows atherosclerosis through Hospital Z, I follow Triggers from the lab and treatment to the harm reduction context. In doing so, I am attempting to understand how Triggers are enacted differently in different spaces, and thus, multiple, but not fragmented.

Such different enactments also call for different, though not necessarily coordinated approaches to treatment. For instance, Mol notes "So the disease diagnosed *may* be the same disease treated, but this *doesn't need* to be the case. In Hospital Z it isn't" (94). In Hospital Z, Mol explains that atherosclerosis in one setting is practiced as difficulty walking, while the in another setting it is practiced as plaque in blood vessels of a disembodied calf. There are however, ways to treat difficulty walking. Walking therapy is one intervention that seems to work well for people with atherosclerosis. Yet often intensive surgical intervention is often favored.

Harm reduction works much the same way. While the diagnosis is an issue with persistent substance use, harm reduction seeks to treat factors other than consumption. Harm reduction offers a preventative approach to bodily harm through substance use. Little of the

focus is on the substance use itself, but on the practice of injection (where to inject and how to do so safely), hygiene (cleaning the injection site), and infectious disease (treating the symptoms of or limiting the spread). As such, addiction in the clinic is about a connection to a substance and T/triggers. In harm reduction, addiction is about anything but. Triggers are no longer the center of practice and discourse in the same way. As I discuss in Chapter Six, Triggers are transformed in harm reduction.

Mol's approach to the "body multiple," or multiple ontologies, has greatly inspired this work. Specifically, this contributes to how I write about and understand Triggers, not as one concept, but an object that is enacted through practice differently, in different contexts. This dissertation, therefore, is not about how people who inject drugs know (t)riggers, but about how they enact (T)riggers in various spaces. Triggers, in treatment, in the clinic, and even in everyday life appear as a unified concept, but when you break down the practices that surround Triggers, you begin to see that Triggers, as an object, are multiple. I discuss this more in chapter four.

Local Neurologies & Multiple Ontologies

Local neurologies offers a framework to *do* neuroanthropological research. Specifically, local neurologies offers a framework for answering questions that span the brain and culture. Specifically, the neuroanthropological consideration of process is a way to connect biology and anthropology. For instance, Downey (2021) argues that we must look specifically at "biosocial becomings," (2) or the behavioral developmental spirals that human enact in interaction with specific contexts and constraints. Considering process, then, is a way to capture behavior and development in one, reflecting how both are subject to biological and cultural processes.

Downey argues that an ontological perspective is merely conceptual, and cannot speak to the materiality of the body, nor any of the developmental changes that individuals can experience in interaction with constraint and context. He uses echolocation among the blind to exemplify this. For some individuals who are visually impaired, echolocation serves as an excellent way to navigate space without sight. Additionally, employing echolocation can make perceptual and material changes in the brain. Yet, echolocation is not necessarily how those who are visually impaired are taught to navigate the world. Often, due to cultural conventions of blindness and behavior, individuals are encouraged not to use the tongue clicking and other techniques that would facilitate navigation by echolocation. Cultural processes constrain the natural ability to echolocate. Thus, we can look at the specific local neurologies that arise (changes in brain and perception), via behavioral-developmental spirals that are activated in populations that do and do not echolocate. The ontological turn, Downey argues, treats embodied variation as simply conceptual, obfuscating material human variation.

Triggers, however, create a conceptual challenge to notions of process. As I detail in Chapter Four, participants did not necessarily present a coherent concept for Triggers. Or rather, Triggers were not presented as a coherent object. Triggers were fragmented. Not simply because individuals all have different objects that are considered triggering, but that Triggers are an object in themselves that differed depending on context, constraints, and related practices. Concepts are not stable. Triggers changed from the lab to rehabilitation and treatment, and even in everyday life. Thus in studying process, which processes are we to attend to? The processes as explained by research in psychology and neuroscience? The processes explained by participants who have a range of experiences and enactments of Triggers?

The expressed objective of this project is to understand the local neurologies of Triggers in the context of harm reduction. To do so, I argue, we must account for the object-ness of Triggers in harm reduction, and how they are practiced in this space. Getting at practice is essential for understanding the processes that take place between the brain and culture. What people do in relation to Triggers, as I hope to show, fundamentally changes Triggers and how individuals process them.

Moreover, practice does not take place in a vacuum. Practice is constrained by the site. This is very clear in the example of echolocation. A local neurologies perspective highlights how location (cultural and geospatial) matters for echolocators. Being able to employ this technique is as much about what you are taught and how you learn, as it is about where it is employed. Situating, or siting, practice helps to understand how specific processes come to be and under what conditions they are shaped.

Further, siting, as I discuss in Chapter Five, presents an important way to think through theory. Yates-Doerr (2017) argues that field sites are portrayed into being by the ethnographer. In the same way, theories are portrayed into being in any given study. The siting perspective offers one way to understand how portraying theory shapes objects in any given context. I apply this to my understanding of substance use Triggers and harm reduction.

In this project, attending to the practice of objects and where they are sited provides insight into how they are processed in a specific context. Employing local neurologies and multiple ontologies, therefore, not only gives a clear understanding of Triggers but also of the local. As Mol (2002) interrogates Hospital Z, so do I interrogate Sunshine Syringe Exchange as one site in which triggers themselves are transformed and have the potential to transform others.

Conclusion

This chapter provided an overview of the theories and concepts that inform the work presented here. I specifically call attention to cues and cue reactivity theory to understand how Triggers are biologically meaningful. Further I consider how cue reactivity and relapse prevention strategies inform the way we think about treating T/triggers. I frame this work broadly as an ethnography of substance use and discuss where this work is situated within medical anthropology.

This chapter also provides an overview of neuroanthropological and ontological theory. Specifically, I discuss the history and development of both fields. I also offer critiques of each field. For neuroanthropology, scholars critique the usefulness of neuroanthropology to research in psychology and neuroscience and instead argue that neuroanthropology should go "experimental." Others might critique neuroanthropology, suggesting a lack of critical engagement with neuroscientific knowledge and structures of power. Critics of the ontological turn emphasize the inability of the field to account for multiplicity in objects and bodies, and ability to speak to the materiality of these objects. To rebut these critiques, I offer local neurologies and multiple ontologies. Local neurologies offers a framework for understanding how neural embodiment can happen in interaction with specific contexts and constraints. A multiple ontologies approach fixates on objects and practice, providing a grounded way to study ontologies in action. Collectively, I argue that these theoretical perspectives present a more holistic approach to understanding substance use Triggers in context.

CHAPTER THREE:

METHODS

Introduction

This chapter details the methodology I used to approach Triggers in the context of harm reduction. I specifically discuss the setting and population, how I recruited participants, the logic behind my inclusion criteria, the methods I used, and data analysis. Additionally, I discuss my own positionality as a researcher and the ethics of working with people who inject drugs. Finally, I conclude with a brief discussion of my findings and outline the remaining chapters of this dissertation.

Setting and Population

This project took place at Sunshine Syringe Exchange (a pseudonym), in a large metropolitan city in the state of Florida, United States (US). Florida has only recently established a legal pathway to provide harm reduction services for people who inject drugs. In 2017, Governor Ron DeSantis signed the Infectious Disease Elimination Act (IDEA) into law in Florida. This allowed for legal syringe exchange programs to be established and aimed to reduce the transmission of diseases commonly associated with injection drug use such as Human Immunodeficiency Virus (HIV) and Hepatitis C (HCV).

There is great need for these specific harm reduction programs for injection drug users in Florida. According to data from the Centers for Disease Control (CDC), the US south has among

the highest number of HIV cases in the nation with 51% of new HIV diagnoses in the nation coming from the US South ("HIV in the United States by Region: HIV Incidence," 2020). Additionally, rates of HCV have continued to increase within Florida as a whole, and within injection drug using populations ("Viral Hepatitis Surveillance Report 2018 — Hepatitis C," 2020). While the IDEA legislation aims to suppress transmission of viral disease, there are other health issues experienced by people who inject drugs (PWID) that need urgent attention.

Rates of overdose in Florida have risen steadily throughout the opioid crisis. The Florida Department of Health notes that rates of overdose in the state more than doubled from 2014-2016 ("Florida Drug Overdose Surveillance and Epidemiology," 2020). Additional rises in rates of overdose deaths since 2020 have been attributed to the COVID-19 pandemic. Rates of overdose deaths in the United States have risen sharply since 2020, with at least 40 states citing increases in rates from 2019 to 2020 and specifically in the American southeast (Ahmad et al. 2021). The COVID-19 pandemic has had an acute impact on Floridians who use opiates with some counties reporting an almost 40% increase in overdose deaths from 2019 to 2020 (Project Opioid 2020). For these reasons, syringe exchange programs, which provide access to life saving care and overdose reversing drugs (i.e. Narcan) are a critical site of intervention to meet the needs of people who use drugs in Florida.

Sunshine was established in response to these public health needs and legislative action. Sunshine's primary objective is to serve as a site for safe disposal of syringes, and a 1-1 exchange program through which participants get one syringe in exchange for each syringe they turn in. In addition to safe disposal of syringes, Sunshine provides safe injection supplies such as cookers, cottons, and sterile water, and other tools needed to prevent infection. Sunshine also provides first aid services for wounds, mental health counseling, HIV/HCV testing and

treatment, food and snacks, referrals to health insurance enrollment, referrals to substance use treatment programs, referrals for housing and transportation, and more. These services are part of Sunshine's harm reduction approach to treating substance use.

Harm reduction, broadly, is an approach to substance use that focuses on reducing *harm* rather than reducing substance use (Marlatt 1996). Harm reduction is contrasted with abstinence-based approaches which encourage people to stop using (Marlatt 1998). Harm reduction is a popular strategy in sex education, for example, which encourages people to use protection and birth control strategies, rather than be abstinent from sex (Sansone et al. 2022). Further, harm reduction perspectives have been employed at the intersections of sex work and drug use, where personal risk is considered quite high (Margolin 2003, Cusick 2006). I discuss the history of harm reduction in Chapter Five.

Sunshine employs a harm reduction framework and seeks to "meet people where they are at," a common refrain in the harm reduction community. These services seek to lift the population, regardless of their drug use status. Such programs often focus on providing supplies and services tailored to the needs of people who use drugs. For instance, syringes are of vital need for people who inject drugs—reusing or sharing syringes can lead to abscesses or contraction of infectious disease. The material interventions of harm reduction are critical for reducing the disease burden related to injection drug use.

However, harm reduction is also about social and cultural interventions. For instance, people who seek social services are often treated with a 'you get what you get' attitude. Often when people engage with social services, they have limited agency. At Sunshine, participants are asked what supplies they would like, and have a choice of what size syringe they would like. Additionally, individuals are encouraged to actively participate in the direction of the program.

Staff at Sunshine often ask participants, “What can we do to better serve you?” These social interactions are critical, and it is these social interactions that participants often found potentially transformative. A moment I captured in my fieldnotes summarizes this well.

Mary, a participant I spent a lot of time getting to know at Sunshine, walked up to me to tell me about what she had seen on the news. From my notes,

[Mary] sits down and intently starts telling me about report she saw on the news. She said the report talked about expansion of harm reduction programs and was debating them. She looked upset and frustrated, her arms crossed and slightly pouting as she talks. She said that people don’t look at the positives of harm reduction. “It’s not just about the needles and that’s what people need to understand” she continues “You guys are so caring and non-judgmental; you might be the final push between someone choosing to stop.”

This interaction with Mary highlights exactly what we aimed to do at Sunshine. To help people achieve wellness (a wellness they define), and provide critical, and sometimes, lifesaving supplies. But more than that, harm reduction at Sunshine is about connections, agency, social mobility, and care.

Recruitment and Inclusion

This project took place at the Sunshine Syringe Exchange Program’s mobile exchange units, which are located within communities of high need (high injection drug use), three times per week. Data collection for this project took place over the span of thirteen months at these sites from June 2021 through July 2022. The population for this project encompassed individuals who inject drugs and are members of Sunshine Syringe Exchange Program. Participants were recruited from the SEP by word of mouth by Exchange staff or volunteers. If individuals were

interested in participating, they would talk with me and I would discuss what their participation would entail (i.e. short interview, survey, etc.). Once participants acknowledged that they were ready to proceed I would obtain verbal consent for participation. Table 3.1 features the demographics for the individuals who participated in at least one phase of this evaluation project.

In total, 130 individuals were recruited for this project. Forty-one people participated in semi-structured interviews, 103 people participated in surveys, and twenty-three participated in focal follows. It is important to note that some people participated in multiple phases of this research, while others participated in only one. I tracked participants across the multiple phases of research using unique participant IDs. Participation in multiple phases of this project helped to achieve greater depth of data. For instance, seventeen people who participated in interviews also completed the salience survey. In Chapter Six, I use interview and survey data to provide a better understanding of how individuals experience salience.

Participants in this sample had an average of twenty-two visits to the sites with the minimum being one and the maximum being ninety-five. Demographic data (pictured in Table 3.1) was collected by Sunshine employees and volunteers upon a participant's first visit to the site. Several months into this project the instruments for data collection at the site were changed, resulting in missing demographic data from some participants. In addition, on some occasions participants would not finish their entire enrollment form, which also resulted in some missing data from this sample. This missing data primarily impacts the demographic table (Table 3.1) below, as only participants who completed the salience survey were included in the analysis of salience survey data, and only two of those participants were missing enrollment (demographic) data entirely. Demographic data was also used as part of the quantitative analysis, detailed later in this chapter and Chapter Six.

Table 3.1. Overall participant demographics drawn from data collected at enrollment. *

Variable	N=130	%	Variable	N=130	%
Enrollment Location	**n=128**	**%**	**Are you currently experiencing homelessness?**	**n=99**	**%**
Turtle Road	105	82	Yes	43	43
Rooster Ave	18	14	No	56	57
Outreach	5	4			
Racial Identity	**n=129**	**%**	**Have you ever needed Narcan/Naloxone administered to you?**	**n=97**	**%**
White	115	89	Yes	33	34
Black/African American	4	3	No	62	64
Asian American	1	1	Don't know/Refused to answer	2	2
Native American	5	4			
Multiracial	2	2			
Prefer not to say	1	1			
Other	1	1			
Ethnicity	**n=114**	**%**	**How long have you been injecting drugs?**	**n=103**	**%**
Non-Hispanic	86	75	Less than one year	3	3
Hispanic	28	25	1-5 years	32	31
			6-10 years	35	34
Gender	**n=130**	**%**	11-15 years	12	12
Male	68	52	16-20 years	9	9
Female	61	47	21-25 years	6	6
Non-binary	1	1	26-30 years	3	3
			Over 30 years	3	3
Sex at birth	**n=124**	**%**			
Male	65	52			
Female	59	48			
Sexual Orientation	**n=122**	**%**	**Current drug of choice?**	**n=103**	**%**
Straight/Heterosexual	101	83	Heroin	36	35
Gay/Lesbian	4	3	Fentanyl	36	35
Bisexual	14	12	Prescription opioids	11	11
Questioning	1	1	Methamphetamine	13	13
Declined/Refused	1	1	Cocaine/crack	1	1
Don't know	1	1	Upper and downer ("Speedball")	6	6

* Percentages rounded to the nearest whole number.

Overall, a majority of participants were white (89%), straight (82%), cis-gendered male (52%) and females (47%). This is fairly representative of Sunshine's population as a whole, which is majority white (87%), straight (89%), cis-gendered individuals (98%). It is important to note that the site (while I was collecting data) lacked significant racial and ethnic diversity. While I cannot be certain why this is, research suggests that Black, Indigenous, and People of Color (BIPOC) individuals may not have equal access to SEPs and harm reduction services (Rosales et al. 2022) and are less likely to receive harm reduction training than their white counterparts (Jones et al. 2021). One imagines this is the result of long present systemic racism in health care that has become even more evident throughout the COVID-19 pandemic (Gravlee 2020). However, the pandemic has also drawn attention to the need for new forms of care and innovation health care equity, especially for addiction treatment (see for instance: Suarez et al. 2023).

Participants ranged in age from 24 years old to 71 years old with the median age being 42 years old and the average age being approximately 43 years old. Most participants were recruited at the Turtle Road site (82%), which makes sense as it is the site at which the mobile unit stays the longest and serves the most participants week after week. At its height, the Turtle Road site served over 100 people per week. Almost half (43%) of the participants in this project were experiencing homelessness at their time of enrollment. However, this number could be underreported, as many individuals only identified as homeless if they were living unhoused, on the street or in shelters. Many participants discussed non-permanent living situations with friends or family members or living in hotels. According to the U.S. Department of Housing and Urban Development, individuals in these precarious living situations could also be experiencing homelessness (42 U.S. Code § 11302, 2011).

The majority of participants in this project have been injecting drugs for 1-10 years (65%). High rates of infectious disease and overdose may explain why there were fewer participants who had been injecting longer than ten years. Finally, participants injected mostly opioids (81%), with fewer people injecting amphetamines or other "uppers". Interestingly, there were several participants who strictly (always) did "speedballs," a combination of uppers and downers, such as fentanyl and methamphetamines.

The inclusion criteria for this project were quite simply participants of the exchange who injected drugs. I did not exclude people based on type of drug used for several reasons. First, many users were poly-drug users, meaning they do not specifically only use one drug. Even if a participant had one drug they favored over others (or drug of choice), that does not necessarily mean they always or exclusively used that drug. This is especially true in injection drug using populations where "speed balling" is common. People's "drug of choice" also changes over time, with individuals changing types of drugs injected as supply and financial means dictate. Second, I was interested in seeing if there were any differences in the ways individuals enact Triggers by types of drugs they use, and moreover, how they use them. I discuss this more in Chapter 6.

Methods and Procedure

Previous research on cue reactivity and substance use triggers has mostly fallen to the domains of psychology and neuroscience. Specifically, research in these areas has mostly been bound to laboratory environments, with some employing ecologically valid methods for assessing cues (see, for example: Shiffman et al. 2015). Dennis (2016) conducted a study of substance use triggers employing the use of semi-structured interviews and body mapping techniques to understand a drugs-body-world entanglement. This project follows previous work

in neuroanthropology by specifically employing an ethnographic approach. The methods employed in this project include long term participant observation, semi-structured interviews, focal follows, and a salience questionnaire. Demographics by method are pictured in Table 3.2.

Table 3.2 Demographics by method drawn from data collected at enrollment. *

Interviews	**N=41**		**Focal Follows**	**N=23**		**Salience Survey**	**N=103**	
Racial Identity	**n=41**	**%**	**Racial Identity**	**n=23**	**%**	**Racial Identity**	**n=103**	**%**
White	37	90	White	22	95	White	92	89
Black	3	7	Other	1	4	Black	3	3
Native American	1	2				Native American	4	4
						Asian American	1	1
						Multiracial	2	2
						Prefer not to say	1	1
Ethnicity	**n=38**	**%**	**Ethnicity**	**n=17**	**%**	**Ethnicity**	**n=90**	**%**
Non-Hispanic	31	81	Non-Hispanic	7	41	Non-Hispanic	67	74
Hispanic	7	18	Hispanic	10	58	Hispanic	23	26
Gender	**n=41**	**%**	**Gender**	**n=23**	**%**	**Gender**	**n=103**	**%**
Male	20	49	Male	11	48	Male	53	51
Female	20	49	Female	12	52	Female	50	49
Non-Binary	1	2						
Sex at birth	**n=39**	**%**	**Sex at birth**	**n=19**	**%**	**Sex at birth**	**n=100**	**%**
Male	20	51	Male	8	42	Male	52	52
Female	19	49	Female	11	58	Female	48	48
Sexual Orientation	**n=37**	**%**	**Sexual Orientation**	**n=18**	**%**	**Sexual Orientation**	**n=98**	**%**
Straight/Heterosexual	29	78	Straight/Heterosexual	15	83	Straight/Heterosexual	85	87
Gay/Lesbian	3	8	Bisexual	3	17	Gay/Lesbian	1	1
Bisexual	4	11				Bisexual	10	10
Questioning	1	3				Refused/Declined	1	1
						Questioning	1	1

*Percentages rounded to the nearest whole number.

Participant Observation

Participant observation is a fundamental method in ethnographic research. First employed by Malinowski in the Trobriand islands while stranded during World War One, participant observation allows researchers get at what people do (Bernard and Gravlee 2015). Participant observation has been used often in anthropological research on drug use (Lende 2005; 2012, Meyers 2013, Raikhel and Garriott 2013, Bourgeois 2003, Bourgeois and Schonberg 2009). For

this project, participant observation was employed from June 2021- July 2022. During this time, I became part of the harm reduction operation—my first experience with harm reduction programs.

The first four months of this project were spent doing only observation. During this time, I participated in the daily goings-on of the exchange, doing intakes, stocking supplies, giving referrals, and the like. I essentially filled the role of a volunteer. This time allowed me to get to know participants and build their trust. Building trust with participants was fundamental to making this project successful. Individuals who use drugs have many reasons not to trust, especially with inquiring individuals, given the treatment of people who use drugs in the United States (Singer and Page 2014). This time allowed me to integrate into the community before jumping into interviews. Because of the sensitive nature of this work, it was important to take this time to gain the trust of the individuals and organization before pursing this work. As this project progressed and I added interviews and other approaches, I kept an observational eye, looking out for themes that presented in interviews as they presented in real-life interactions such as mentions of T/triggers, or harm reduction in action (actions between staff and participants). I kept several, well-loved fieldnote journals, which were transcribed after finishing fieldwork.

Initial conceptions of this work sought to understand substance use in everyday environments. However, in pursing this work, it became clear that being with everyone, everywhere, and capturing triggers in all contexts simply was not possible, nor would it have been meaningful. Instead, I choose to focus solely on the harm reduction context, a context, I quickly came to learn, in which T/triggers were not easy to see. One limitation of participant observation and focal follows in this setting is that I could not really tell when people were

"triggered." Triggers are, after all, ambiguous. They are not always apparent, nor are they always even "realized" by the "triggered" in the moment.

Thus, instead of searching for T/triggers in the landscape, I started noticing how the harm reduction context became meaningful to myself and participants. I started to attend to what interactions in this context were like, and what about them made them meaningful. Then, I used semi-structured interviews and survey data to try to assess the impact of harm reduction more broadly.

Semi-Structured Interviews

Once established at the Exchange and having built enough rapport with participants, I transitioned into conducting interviews. For this project, I used semi-structured interviews to address participants' experiences with drug use, wanting, and T/triggers. To do this, questions in semi-structured interviews were phrased in such a way to get at emotional, cognitive experiences, and the things people do in relation to triggers (see questions in Appendix One). For instance, interviews asked individuals to explain their experiences of wanting through several questions including: when do you want to use? What is happening in/around you when you want to use? What does wanting feel like? And how do you know when it is time to use? All of these questions aimed to address the subjective experiences of wanting.

Throughout this project, I conducted 41 semi-structured interviews with Exchange participants, which lasted around a half hour each. I would have liked to spend more time with participants in interviews. Indeed, some interviews were close to an hour or longer. However, with this population, time is often of the essence—particularly if someone is experiencing (or anticipating experiencing) symptoms of withdrawal. Thus, people generally were not willing to

sit for me with longer than thirty to forty minutes. While this could have limited some of the depth in interview data, I did find that having the multiple strategies of data collection, and especially months of informal conversation in observation, helped me to achieve more depth without burdening participants.

I mostly used snowball sampling to recruit for interviews. I started with participants who were very familiar with me and my work. They then referred their friends to talk with me. Other times, Sunshine staff would suggest that a particular participant talk with me. In cases like this, I let participants approach me. I was very cognizant of not trying to push anyone into doing an interview, and checked in with participants often, getting continued verbal consent. When I had collected about twenty interviews, I noticed that I had oversampled males. To correct this, I tried to sample more female participants. Additionally, I tried to talk with people from diverse racial and ethnic backgrounds, though it is worth noting that over 80% of the Sunshine population is White, thus it is possible that the perspectives represented in this dissertation represent a majority White sample population. With consent, interviews were recorded and later transcribed.

Focal Follows

Traditionally, behavioral observations are used to quantify participant behavior. This is something we see often in primate research in which a researcher tracks a primate through a forest, diligently recording primate interactions at specified intervals. In other cases, they might continuously record the behavior of their subject. One type of behavioral observation is called ecological momentary assessment (EMA). EMA has been used in previous research on substance use cues to understand participants' interactions with cues. Questionnaires serve as snapshots of participants' daily interactions with cues. Initial conceptions of this work included an EMA

component; however due to time, financial, and practical limitations, this was not possible. Instead, I decided to conduct "focal follows" with participants during their exchanges, to better understand behaviors and interactions that individuals have as they come to the needle exchange.

Instead of quantifying participant behavior, I was specifically interested in capturing moments of "harm reduction," in which participants were engaging with harm reduction education, treatments (like first aid or testing/referrals), and what the dynamic between a staff/volunteer and a participant looks like. I wanted to understand how the harm reduction context was created in these actions--- and what impressions that might leave on participants. In all, I conducted focal follows with 23 participants. At the end of follow experiences, I also engaged in casual conversation with participants discussing their impressions of harm reduction programs, specifically, what they thought was good or what they might change, and their thoughts about triggers at the exchange. Focal follows were recorded in my fieldnotes and transcribed following fieldwork.

Incentive Salience Survey

Incentive salience theory proposes a location and mechanism for dopamine action in the brain that accounts for the attention and associated drug wanting fundamental to sustaining addiction (Robinson and Berridge 1993; 2008). There have been many studies in neuroscience and psychology that attempt to measure experiences of salience by stimulating dopamine release in the midbrains of animal subjects (Wyvell and Berridge 2000; Smith et al. 2011; Olney et al. 2018). To study neurological activity in human populations, researchers have used neuroimaging and electrophysiological measurements to assess incentive salience of cue associations (Vollstadt-Klein et al. 2011; Gray et al. 2014; Zilverstand et al. 2018; Fleming et al. 2020).

Other approaches to studying incentive salience include using scales that measure behavior. There are many scales that assess craving either for particular substances or drugs in general (Anton 2000; Bohn et al. 1995; Tiffany et al. 1995; Weiss et al. 1995; Somoza et al. 1995; Singleton et al. 1996; Flannery et al. 1999; McEvoy et al. 2004; Morgan et al. 2004; Sussner et al. 2006; Bonfiglio et al. 2019). The specific scale employed in this project is Lende's incentive salience scale developed in his research on adolescent substance use in Colombia (Lende 2005; Lende 2012a). Employing a novel biocultural approach, Lende developed an incentive salience scale to measure salience in youth who used drugs.

> In essence, each method built on the other. The broad but superficial information provided by the questionnaire gained ethnographic depth through the first interview covering adolescent motivations. Together, these two methods supplied the materials used to create the incentive salience scale, which was then included in the risk factor survey. Finally, the second interview provided the ethnographic detail on incentive salience to complement the quantitative analysis done with the risk factor survey. (Lende 2005, 106)

To develop the incentive salience scale specifically, Lende used information from interviews that discussed wanting, shifts in attention, and drug-seeking. Specifically, interview data highlighted common experience for youth who used drugs, including the experience of wanting more and more (querer más y más) and expressing urgency in getting drugs. Additionally, they described getting lost in their substance use and being in the moment of use. These sentiments were used to derive statements that aligned with the experience of incentive salience according to the youth.

This scale was issued, along with other assessments, to students both in schools and recovery and indicated that incentive salience, substance-using peers, and violence were associated with substance use. This approach is relevant to my research in that it is an assessment that can be easily and rapidly issued to capture subjective experiences of salience. While this approach does not directly measure neurobiological function, but rather subjective attributions of

salience through the concept of "wanting". By focusing on the measurement of wanting and craving, scales can get at the phenotype of incentive salience.

The scale issued by Lende (2005) served as the prototype for the scale employed in this project. The scale used in this dissertation project was created in consultation with Daniel Lende and after the 41 semi-structured interviews were conducted. Since the initial scale was in Spanish, and informed by interviews with Colombian teens, we wanted the scale to make sense to the language used by the participants at the Exchange- mainly replacing "consume" with "use" and adding some detail to clarify statements, such as "When I am using, I can feel completely *absorbed* in the moment" rather than "completely in the moment." Updating the scale after conducting the interviews was critical to making sure that the scale fit the context in which it was issued. This translation fundamentally alters the scale – interpreting it for a new context and new audience. However, we tried to keep the scales as similar as possible to maintain fidelity to the original scale and so that future research may compare data across groups. The original and adjusted scales are pictured in Table 3.3.

Table 3.3. Original and updated incentive salience scales.

Original Scale (Lende 2005)	**Updated Scale (Lende & Casper 2022)**
At times I have started to consume and consume without thinking about anything else	At times I have started to use and use without thinking about anything else
When I have consumed, at times I have felt completely into the moment	When I am using, I can feel completely absorbed in the moment
In the moment of consuming, the sensations feel very present.	When I am using, I sometimes feel like nothing else exists
At times what has mattered most to me is the desire to consume	At times what matters most to me is the desire to use
At times consuming feels like you want more and more	At times using feels like I want more and more
At times when I have wanted to consume, I have wanted to do it immediately	At times when I feel the urge to use, I want to go use immediately
At times with consuming, I have felt that nothing else exists except the sensations of the moment	Sometimes all I can think about is using
At times when an opportunity to consume has come along I have not been able to focus on other things	When an opportunity to use comes along, it can be hard to focus on other things

Participants were asked to say how well each phrase described their experience with injecting drugs. Participants were given a Likert scale under each question with a rating of one, "very well" to five, "it does not describe it." In addition to the salience scale, other data collected through this questionnaire included two free lists, one on wanting and one on triggers. Participants were asked to list the things that made them want to use and then to list their triggers. Participants were also asked how long they had been an injection drug user, and what drug(s) they injected most often. I asked these two demographic questions specifically because they were not asked at enrollment, and I thought these variables might influence experiences of salience. Table 3.4 at the end of this section provides more detail on the demographics of the salience survey population as it pertains to their drug of choice.

All questions were read aloud to participants, in a private space, away from other participants, volunteers, and staff. Participants were allowed to look at the sheet and were able to point to or write their answers. Once each survey was complete, I entered them into a spreadsheet which was used later for analysis. The full salience survey can be found in Appendix Two. While the surveys and interviews provided data on how context mattered to participants, there were also limitations to the execution of these methods. A better approach, to understand salience in the harm reduction context, would have been to specifically adjust the scale to assess participant experiences of salience while at the site. This would have provided a better proxy for understanding perceived salience in the harm reduction setting.

Qualitative Data Analysis

Qualitative data (semi-structured interviews and fieldnotes) was transcribed following fieldwork. I used OtterAI to transcribe semi-structured interviews, and transcribed fieldnotes directly into Word documents. To conduct thematic coding, I used NVivo (version 1.7). There

were several codes I used that related directly to my research questions. For instance, I used the code "triggers," approximately 210 times, as Triggers are the main subject of this dissertation.

Table 3.4 Demographics by drug of choice drawn from salience survey data. Percentages rounded to the nearest whole number.

Opiates (Heroin, Fentanyl, or Prescription)	**N=83**		**Uppers (Methamphetamine, Cocaine, or Crack)**	**N=14**		**Speedball (Both)**	**N=6**	
Racial Identity	**n=83**	**%**	**Racial Identity**	**n=14**	**%**	**Racial Identity**	**n=6**	**%**
White	73	88	White	13	93	White	6	100
Black/African American	2	2	Black/African American	1	7			
Asian American	1	1						
Native American	4	5						
Multiracial	2	2						
Prefer not to say	1	1						
Ethnicity	**n=71**	**%**	**Ethnicity**	**n=14**	**%**	**Ethnicity**	**n=3**	**%**
Non-Hispanic	52	73	Non-Hispanic	12	86	Non-Hispanic	1	33
Hispanic	19	27	Hispanic	2	14	Hispanic	2	66
Gender	**n=83**	**%**	**Gender**	**n=14**	**%**	**Gender**	**n=6**	**%**
Male	41	49	Male	9	64	Male	2	33
Female	42	51	Female	5	36	Female	4	66
Sex at birth	**n=80**	**%**	**Sex at birth**	**n=14**	**%**	**Sex at birth**	**n=4**	**%**
Male	41	51	Male	9	64	Male	1	25
Female	39	49	Female	5	36	Female	4	75
Sexual Orientation	**n=80**	**%**	**Sexual Orientation**	**n=14**	**%**	**Sexual Orientation**	**n=4**	**%**
Straight/Heterosexual	70	88	Straight/Heterosexual	12	86	Straight/Heterosexual	3	75
Gay/Lesbian	1	1	Bisexual	2	14	Bisexual	1	25
Bisexual	7	9						
Declined/Refused	1	1						
Don't know	1	1						

I would specifically highlight participants' discussions of triggers from interviews or mention of triggers by individuals on site that I captured in my fieldnotes. I also noted interaction with items that individuals commonly labeled as triggering (i.e., needles) and noted this in my fieldnotes. Another key theme was "harm reduction," which was coded ninety-four times in this analysis. Similar to triggers, I highlighted individual's discussions of harm reduction and key interactions individuals on site had that would be considered actions of harm reduction. The last key code that I used was for "incentive salience." I coded incentive salience 94 times throughout the

analysis. Interestingly, incentive salience was a nested code, meaning there were other codes that fell under the broader umbrella of incentive salience. For instance, "attention" and "wanting" are key features of incentive salience. I also nested levels of salience (high to low), under the broader salience code. This allowed me to compare content of interviews across salience scores. This approach to the salience scale pushes these scores beyond their numerical value. Coding participants into salience group, and pairing the qualitative and quantitative data, reveals the scale's interpretive value. In short– salience scores revealed more than just wanting. Salience scores and interviews revealed patterns of wanting amongst users in different score quartiles. I discuss these patterns in more depth in Chapter Six.

In the end, I created 20 main codes (some of which were nested). All codes, in some way or another, related to the main themes and questions asked by this project. There were some codes that were more "ad hoc." For instance, I had codes for "policy" and "stigma." These were codes that presented throughout fieldwork and specifically highlighted the political nature of substance use, and the stigma that PWID face every day. A summary of the codes used as they relate to the questions asked by this dissertation are in Table 3.5. The full codebook can be viewed in Appendix Three.

Qualitative data collected from the free listing activity was analyzed using Visual Anthropac (version 4.98). To do this analysis, I followed the approach set forth by Dengah et al. (2021), which gives specific instruction on how to navigate the Anthropac software, input, and interpret free list data. I describe this process and the results in more detail in Chapter Six.

Quantitative Data Analysis

The remainder of the salience survey data and survey data collected at enrollment were analyzed using SPSS Statistics (version 28.0.1.0). All data from the salience survey and enrollment survey were entered into an Excel spreadsheet, which was then opened in SPSS. Initially, all data was cleaned and checked for accuracy. I also noted any missing values and provided labels and codes for all other values.

Table 3.5 Codes most directly related to answering the questions posed by this work.

Question	Codes
How do PWID come to know triggers?	Triggers
	Treatment
	Cue Reactivity
	Regulation
	Withdrawal
How are triggers enacted in harm reduction?	Triggers
	Harm Reduction
	Policy
	Stigma
How do harm reduction programs shape local neurologies of substance use triggers?	Triggers
	Incentive Salience
	Chronic Pain

Following Lende (2005), I re-coded the salience survey data so that the scale measured from a score of one (being the lowest endorsement of the salience statements) to five (being the highest endorsement of the salience statements). I then ran descriptive statistics and frequencies for all variables, including calculating quartiles for salience scores. In addition, I verified the reliability of the salience scale through a reliability analysis using Chronbach's Alpha. I was specifically interested in assessing any correlations between salience score and variables provided by Sunshine data collection (such as length of enrollment or number of visits). To

better understand how participation in harm reduction programs impacted salience scores, I performed a correlation on all enrollment variables and salience scores. I detail the results of these analyses in Chapter 6.

Ethics

This project sought to improve the lives and conditions of the syringe exchange program (SEP) participants and was conducted as part of a program evaluation of the SEP. Particularly, this evaluation was conducted to assess the effectiveness of the SEP. This project is an extension of that evaluation, asking how the SEP programs impact everyday experiences of substance use Triggers.

To carry this out, the methods used in this project were non-invasive and heavily dependent on continued verbal informed consent of participants. Before each stage of the research, participants were explained what the research entailed and asked to give verbal consent. This prevented participants from having to sign any forms, which could further protect their identities. Additionally, participants knew they could stop at any time, and did not have to talk about anything that made them feel uncomfortable. For instance, in several interviews, participants got emotional discussing their use, or sensitive subjects such as trauma or overdose. Anytime a participant got even slightly emotional, I would stop the interview and ask if they wanted to take a break. Sometimes they did, and I would suggest they talk to the counselor on duty. Other times, participants were adamant that discussing these topics were important to them and that they wanted to share their stories.

This is not uncommon in ethnographic research, in general, or in ethnography with people who inject drugs. For example, Bourgeois and Schonberg (2009) discuss similar themes

of agency and respect of individuals who inject drugs. For instance, justifying the stories and photos they share, they write that their participants "struggle for self-respect and feel that their stories are worth telling" (9). Similarly, I found that most people wanted their stories to be told and hoped that people would listen to them and take them seriously. Often, individuals who use drugs are treated as "useless," un-agentive beings (Singer and Page 2014). Participants enthusiastically agreed to give interviews or do surveys. They had stories they wanted to tell that are often disregarded. Participants were also equally interested in understanding substance use and Triggers. Through this process, I tried to respect their boundaries while upholding ethical standards of ethnographic work. While I did tell their stories, I also made sure to take definite steps to protect their identities.

To respect the confidentiality of participants, no information disclosed in interviews was discussed with any other participant or SEP staff member. Additionally, to respect the anonymity of subjects, participants were only identified with a coded ID number. This is how I got to know them, and to this day I do not know participant names or other identifying information. Additionally, where necessary in this dissertation, I employ the use of pseudonyms to further ensure anonymity. I also recognized that participants were giving me their very valuable time and expertise. To show appreciation for this, participants were compensated with small gift cards ($10 or less) to local grocery stores or gas stations.

Finally, and probably the most practical ethical consideration are the legal dimensions of this work. Fortunately, syringe exchange programs operate legally in the state of Florida. While participants may have battled legal challenges outside of the exchange, Sunshine was the one place where their injection drug use was not demonized or treated as a criminal act. Instead, participants were met with kindness, compassion, and support for their own personal health and

wellness goals. Any discussion of legal troubles was left out of this dissertation to protect participants and respect the legal processes they may be dealing with.

The guiding ethical principle of most research is generally to "do no harm." I suggest that instead we should push further with our work. Instead of just doing no harm, we should be actively working to reduce the harms our participants experience. As an applied anthropologist, I am committed to taking anthropology into the everyday and using it to help the individuals I work with. Every day I spent at Sunshine, whether I was gathering data or not, I was also working to reduce the harms that Sunshine's participants experienced. This work is deeply personal to me, and the ethical standards I held myself to while conducting this work are inextricably connected to my own positionality as a harm reductionist.

Positionality

Each death is a tragedy in a sea of tragedies experienced by people who inject drugs. Throughout the progress of this work, I found myself constantly questioning and challenging my own ideas about drug use, morality, and mortality. I am not sure I was quite prepared for what I encountered at Sunshine- nor am I sure that I could have ever been properly prepared. I am a mid-twenties, white, cis-gendered female with no history of substance-use issues. I have never experienced addiction. I have not experienced the world in the same way the people described in these pages. Wrapping my head around what I was seeing every day at Sunshine was difficult.

Many conversations I had with participants centered around death and overdose. Sometimes we'd talk about their own experiences with overdose, thankfully brought back from the verge by a friend who had Naloxone (an overdose reversing drug) from the exchange. Other times we talked about the overdoses of loved ones, of the memories of the people that they had

lost. Every day, I heard new stories of new traumas participants experienced, their mistreatment by the very institutions that have sworn to protect people, like law enforcement or health care workers.

After a while, these daily encounters with trauma took a toll on my own mental health. For a brief period, a few months into my work with Sunshine, I would return home to my safe and secure apartment, on the "nice" side of town, and I would feel like everything I had just experienced at Sunshine was a video game. Everything I had encountered felt like a distant, hazy memory. It seemed as if what I saw, heard, and felt, could not have possibly been real. I was experiencing symptoms of dissociation. Looking back now, it feels as if my brain was trying to reconcile the trauma and tragedy that I became witness to with the comparatively "cushy" lifestyle I lived. For a while, all I could see was the sadness, discrimination, death, and fear that lingered around my field site.

Some can only understand harm reduction and syringe exchange programs as spaces of death and decay. For instance, *The Economist* recently published an article claiming, "America's syringe exchanges might be killing drug users." Perhaps a younger, more naïve version of myself would have read this article with the shock and horror that I'm sure many of its readers felt. How can giving people syringes be a way to solve their substance use issues? Of course such services run the risk of increasing overdose deaths! It's worth noting here that this article cites deeply flawed research that has since been retracted.

Nevertheless, people who inject drugs in the United States, occupy what João Biehl might call a "zone of social abandonment," or a space that "lack[s] medical and governmental attention and are ultimately treated as 'dump' sites for the ill, the impoverished, the mentally challenged, the jobless, and the homeless" (Selimović 2006, 300). People who inject drugs are

often socially outcast and othered. The everydayness of the tragedies experienced by Sunshine's participants was astounding. For example, one participant had one of his fingers cut off in a fight and tried to sew them back on himself. He was homeless and seeking emergency care would mean facing a sometimes-hostile medical system and leaving all his possessions with little chance for anything to be saved. This was not an anomaly. Many participants had deadly infections or diseases that they could not seek treatment for.

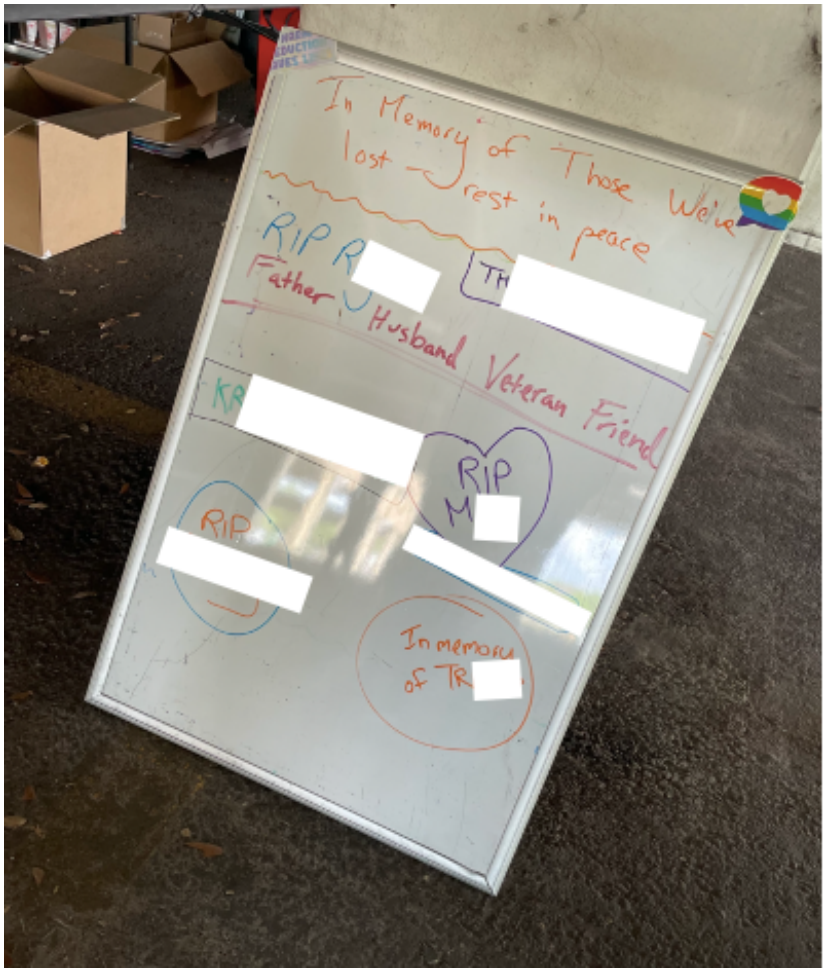

Figure 3.1. Photo of a memorial at Sunshine for participants lost in 2021.

Participants talked frequently of assaults and abuse. They talked of life on the street, not sleeping for days and getting their possessions stolen. They savored their snacks from Sunshine, which might have been their only meal of the day. They had lost loved ones and homes. They grieved for lost relationships with parents and children. Life as an injection drug user has the potential to be filled with sadness, tragedy, trauma, and death.

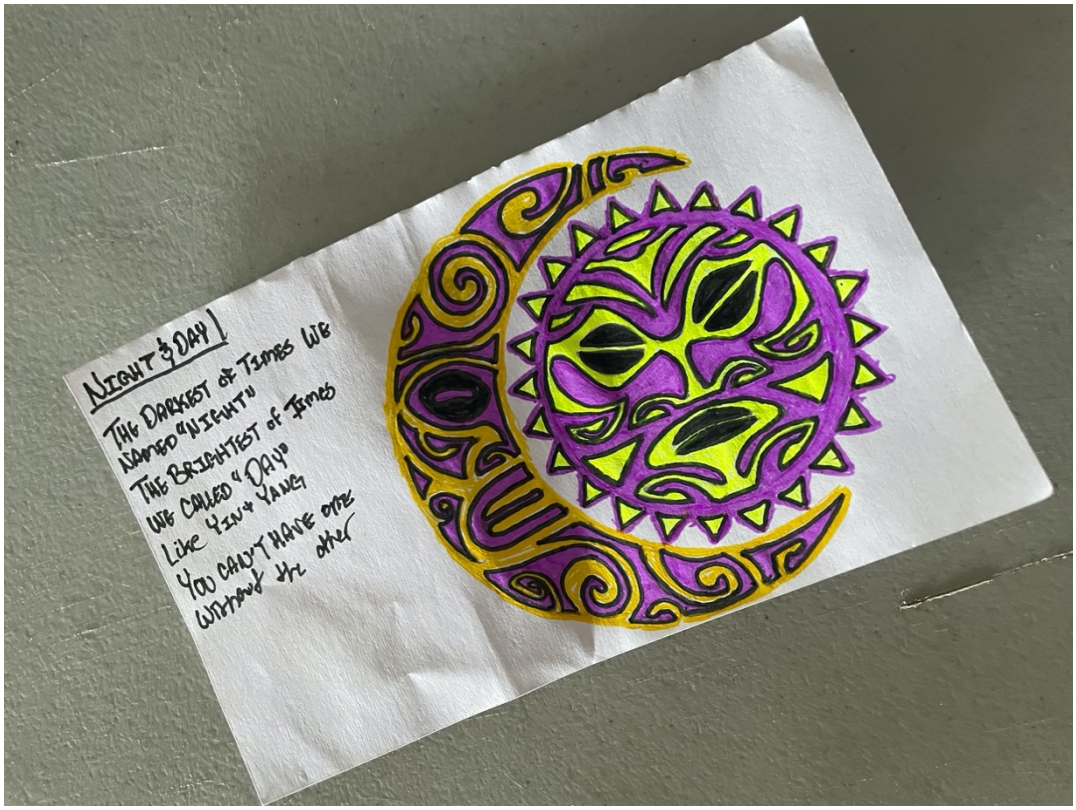

Figure 3.2. Photo of a poem written by an exchange participant entitled "Night and Day."

Yet, when I look back now, I see Sunshine as a ray of hope in an otherwise dim situation. There is so much beauty at Sunshine. The more time I spent at the site, the more I came to see this. Harm reduction, as I learned, has the potential to change people's lives. The staff at Sunshine (including myself) built deep and meaningful connections with participants. I will carry

the stories of these people with me forever. Sunshine provided participants a space to share the weight of their traumas, injuries, and overdoses. This sense of community and reciprocity helped to distribute the weight and burden of living as a PWID. Sunshine was also access to care and justice, not only physical but emotional. I witnessed how powerful it was to engage with a community of people who cared, who wanted to call attention to the zone of social abandonment that participants occupy.

Over the span of this project my passion for and interest in harm reduction has only grown. I am not an impartial observer of harm reduction programs. To the untrained eye, harm reduction programs might seem "dangerous," yet much of the danger to the participants (and sometime the program itself), comes from failures of institutions to treat all peoples with justice. Put another way, people who participate in harm reduction programs are often subject to many insidious forms of structural violence (Rylko-Bauer and Farmer 2016). Failure comes from the institutions that punish people who use drugs. I discuss these institutions more in Chapter Five.

Throughout my field work I transformed into an ardent supporter of these programs and the overwhelmingly positive work they do. This perhaps informs how I understand and discuss harm reduction in this dissertation. Maybe by the end of this dissertation, you too will be convinced of their benefit. I want to be clear, though, that that is not what I set out to do here. In this dissertation, I set out to understand how one object (Triggers) is experienced in one specific context (harm reduction). I say this here mainly to acknowledge that I have a bias toward what I understand as the positive and crucial work that harm reduction programs can do.

Results

The remainder of this dissertation discusses the results of the project described here. Chapter Four provides a framework for understanding Triggers as an object. This conceptualization is fundamental to how I explore Triggers through the rest of this dissertation. In Chapter Five, I question the "local" in local neurologies. I talk specifically about Sunshine as a field site and describe the "sitings" that comprise Sunshine. Chapter Six discusses the neurologies of substance use Triggers. I specifically use data from the salience survey, free lists, and interviews to understand the local neurologies of substance use Triggers in harm reduction. I end this dissertation by discussing how ontology and local neurologies are compatible as theoretical concepts.

CHAPTER FOUR:

TRIGGERS AS OBJECT

> "The ethnographic study of practice does not search for knowledge in subjects who have it in their minds and may talk about it. Instead, it locates knowledge primarily in activities, events buildings, instruments, procedures, and so on. Objects, in their turn, are not taken here as entities waiting out there to be represented but neither are they the constructions shaped by the subject-knowers. Objects are-- well, what are they? That is the question." (pg 32)
>
> -Annemarie Mol, *the body multiple: ontology in medical practice* (2002)

On Objects

Annemarie Mol's *the body multiple* argues that multiple ontologies are created in practice, which can be made visible by attending to objects and the practices that enact them. "This is the plot of my philosophical tale: that *ontology* is not given in the order of things, but that, instead, *ontologies* are brought into being, sustained, or allowed to wither away in common, day-to-day, socio-material practices" (Mol 2002, 6). This chapter seeks to establish Triggers as object that are enacted in particular practices. Much like Mol follows atherosclerosis through Hospital Z, this chapter follows Triggers from the lab to the field, and the spaces in between- where they are created, practiced, and sometimes even disappear entirely.

This chapter argues that the concept of substance use Triggers, are many, though not infinite. I find that participants always wanted to discuss the varied quality of triggers. For instance, when discussing triggers, I often get a response that resembles this, from one male

participant, Doug, who had been injecting for six years, and had been to rehabilitation several times:

"Triggers, triggers. I don't know. Cuz that's such a broad word, I guess for some people…"

He pauses, and then continues,

"Because everybody's just going to be different, everybody is gonna have different triggers, you know? Whether it's like an emotional thing for some people, or whether it's a physical, you know, thing for others. You know, some people might have, like, you know, someone being abused or someone having, you know have lost a loved one or something tragic in their life, you know? That could be their trigger, because that's why maybe they started. Or, you know, others are just something to get away from their reality, that can be a trigger for someone else, because they started using drugs just to get away from their reality of where they are, where they live, and what they do."

Doug describes the perceived multiplicity of triggers– that triggers can be anything to anyone. Such variation, it is well understood, comes from the fact that everyone's drug use experiences are going to be, more or less, unique, and thus the stimuli related to episodes of their use are going to be highly variable. In many interviews, participants told me of deaths of loved ones and tragedies they had lived through. Drawing on these particular events often informed their sense of wanting and attention toward use.

When speaking about the multiplicity of Triggers, this chapter does not aim to describe all the infinite things that could be triggers, like the "emotional things" or the "something tragic," although those do indeed exist. This chapter does not try to articulate a certain number or categories of triggers. Such an approach to Triggers would be more representational than

practical—where Triggers are comprised of suites of triggers. Instead, I aim to do something different. This chapter examines how Triggers are practiced in laboratory–based research on cue reactivity, in substance use treatment paradigms, and in everyday life– articulating the object-ness of "Triggers" itself. By attending to how individuals *enact* triggers and Triggers this chapter seeks to highlight the multiple ontologies of Triggers.

In a move away from epistemological explanations of Triggers, this chapter resists re-naming (or re-knowing) Triggers. One could easily separate these practices by name: cues (in the lab) versus triggers (in treatment) versus drug seeking or wanting (in everyday life). But this implies a simple, semantic, and epistemological difference between these objects. That the way they are *known* shapes the object. Instead, this chapter aims to give a glimpse into how one object (Triggers) changes in these contexts as it is distinguished in *practice*. Thus, I suggest, the way the object is practiced shapes how it is known.

Learning about Triggers

This chapter primarily draws on the 41 semi-structured interviews I conducted while at Sunshine to understand how triggers are negotiated in different spaces and how, ultimately, Triggers as a concept is employed through these various practices. I want to take a moment to detail here the first interview I conducted at sunshine to give more understanding of what these interviews were like and how these interactions in themselves shaped how I learned about Triggers. Upon reflection this interview highlights a pivotal moment for me in this project, about my own understanding of Triggers.

The interview, like all of my interviews, took place in the parking lot during an exchange one Thursday afternoon. I sat across a wobbly wooden folding table from Gerrit, a 30-year-old

man with long, greasy black hair who had been injecting drugs for thirteen years. My recorder was perched between us while he drank a generic brand orange soda and munched on some Doritos– snacks he got during his exchange. Gerrit was incredibly talkative. I had worked with him to complete his initial enrollment at Sunshine about four weeks earlier. It took us nearly an hour to finish his enrollment survey (it normally only took about 15 minutes). During his enrollment we had talked about his theories on drug use and addiction. He was one of several participants who told me that one day he intended to write a book about addiction.

We were sweating in the Florida heat, but he was incredibly patient with me as I stumbled through my interview questions. My voice quivers in the recording as I ask him about his history of substance use. He tells me about his lifetime of chronic pain due to an accident that he was in as a young kid, which left him with lingering, but intense, back pain. He no longer had access to pain medication or even primary health care services for that matter. His life, he explained, became a constant battle with pain for which heroin was his only solace.

I thought he would be great to talk to about triggers, as he had been so excited to talk about addiction, surely, he would have a lot to say. About twenty minutes into our interview, I asked him if there is anything that made him want to use. He proudly responded,

"I don't have triggers"

"What?" I questioned over the pounding sounds of Bad Bunny being played from a car passing through the parking lot.

He repeated, "I don't have triggers."

I was a bit struck. How could he not have triggers? I had learned that triggers were everywhere– the stuff of daily use. I had most certainly learned in my preliminary interviews that needles were a very salient trigger– and he had just spoken about his patterns of daily use, the way he set up

his station, prepared for use in such a ritualistic manner, laying out his drugs, needles, preparing to inject. He had also talked a lot about his chronic pain. Was that not at least a trigger to use?

This was the first, but not the last time that participants told me that they did not have triggers. Triggers, as I discuss in this chapter were not immediately obvious to the participants I talked to at Sunshine– either in their everyday life or at Sunshine. When participants did talk about triggers, they mostly just talked about recovery.

When I was designing this project, I had tried to use experience near interviewing techniques to frame the questions. I thought focusing on their experiences would give a glimpse into "triggers in the everyday," as I had put it in my proposal. However, it was the failure of this approach that illuminated and equally interesting theme in my research. Triggers, as a concept were not apparent at Sunshine, but triggers, as things (like needles) were. Asking about triggers was helpful in so far as it helped me understand how people employed the concept of Triggers and the relationship between practices that enact concepts.

Following this first interview, and a few others like it, I realized I had to create new ways to ask about triggers to make them accessible to our discussion. For instance, I added questions about defining triggers generally, "if you could create the Webster's Dictionary definition of triggers what would it be?" I also asked about recognizing triggers in others. This led to greater understanding of when participants were putting T/triggers into practice. Further I had to find new ways to understand what Triggers "were" in this context, increasing my emphasis on focal follows and participant observation of interactions with triggers.

In many ways, the structure of this chapter reflects my own learning of T/triggers. I start by discussing Triggers in "the lab." This is where I first encountered Triggers- in my readings during my psychophysiology course in graduate school. This is where I first learned about

"cues," the things that make people return to use over and over again. I then move to Triggers in treatment– the space that is both informed by the people I interviewed for preliminary and dissertation research. As you will learn throughout this chapter, for many people, Triggers are cognitively bound to treatment. Yet, triggers still float through everyday settings and are a part of everyday use. I focus on two potent triggers– that of needles and "the flash," and how participants' enact Triggers in their everyday lives.

Practices in the Lab

As discussed in Chapter Two, social scientists have long expressed interest in studying laboratory settings as spaces of knowledge production and construction. For instance, in her paper, *Toward a Critical Neuroscience of 'Addiction,'* Nancy Campbell (2009) is embedded in the 'Amygdala Lab," a neuroscientific laboratory that seeks to better understand addiction through neuroimaging. Campbell seeks to highlight how addiction became placed in the brain, in an attempt to "displace it from the social body" (i.e., moral models of substance use) (90).

Research on addiction started in the early 1900's at U.S. "Narcotic Farms," which sought to "cure" addiction. Finding relapse a particularly tricky problem to solve, strategy then changed to attempting to understand "the neurophysiological mechanisms of drug dependance" (Campbell 2009, 94). Such mechanisms were connected to social processes by Abraham Winkler in the 1940's who "recognize(d) that 'cues' to resume use were embedded in the social worlds to which addicts returned when they left the institution" (Campbell 2009, 95). This line of scientific inquiry, in addition to Pavlovian principles of learning (Shanks 1995), led to the development of theory in neuroscience and psychology in which people sought to understand how these "cues" are embedded in the brain and the social environments of people who use drugs.

One way to understand how cues are embedded in the brain and social environments is through the incentive salience paradigm (Berridge 2012, Robinson and Berridge 1993; 2008). Incentive salience theory proposes a link between contexts of use and the brain via dopamine action in the midbrain. Sensitization, specifically, calls attention to how reward works in ways that are not just about pleasure but are about meaningful engagements with the environment (Lende and Smith 2002). Other researchers have sought to understand how cues shape engagement with social environments.

For instance, Natasha Dow Schüll (2012) in her book *Addiction By Design: Machine Gambling in Las Vegas,* details the intense operant conditioning employed in machine gambling. Not only are the noises, lights, and buttons meant to cue players toward use, but the "convoluted" layout of the casino floor, limited lines of sight, and otherwise compressed feeling are designed to keep people in. Other researchers too have applied these principles more broadly. David Courtwright writes of how capitalism shapes our landscape such that we are constantly cued to engage with "vices" from video games to porn (2019). Eugene Raikhel (2010) writes of "placebo therapy," employed in Russia and used as a potent tool for negative reinforcement learning for people who use alcohol. Such approaches to associative learning and reward are important for understanding substance use more broadly and have been critical to the development of research on addiction (See for example: Di Chiara 1999; Di Chiara et al. 1999; Everitt et al. 1999).

Here I choose to focus specifically on *cue reactivity* rather than associative learning more broadly. Cue reactivity is a concept used in research on addiction that attempts to describe what happens when individuals encounter stimuli related to past drug use. Where cues are mostly focused on built associations, cue reactivity studies seek to understand how such associations

relate to actions surrounding cue exposure. Cue reactivity in the lab is often *coordinated* with Triggers, which share common concepts such as wanting, craving, and drug seeking. In fact, researchers have employed cue reactivity ecological momentary assessment (CREMA) studies to assess cue reactivity in everyday settings (Warthen and Tiffany 2009, Wray et al. 2011, Gass et al. 2012, Wray et al. 2015; Lammers 2017, Tomko et al. 2020).

Efforts to coordinate cue reactivity in the lab and Triggers in everyday settings resemble Mol's discussions of atherosclerosis in the clinic, pathology lab, and operating theater. Mol proposes that interactions between departments, translations between tests, examinations, and surgeries, even if they do present conflicting atheroscleroses are coordinated into one, coherent object. To exemplify this, I use cue reactivity theory as employed in substance use treatment.

Troisi (2013) explores extinction-based cue exposure therapy (CET), a therapeutic approach to treat Triggers which seeks to eliminate reactivity through repeated exposure to relevant stimuli. For instance, for those who experience problematic drinking, the strategy suggests putting a bottle of alcohol in front of them until they no longer feel a sense of craving when they see a bottle of alcohol. Such strategies for treating substance use have not been very successful (Bouton 2000; Troisi 2013; Mellentin et al. 2017) as even "extinguished" triggers may re-appear (spontaneous recovery), can be easily relearned (reinstatement), or even re-appear in a separate, but similar context (context renewal) (Troisi 2013). Instead, Troisi proposes a "heterogeneous operant chain" model of cue reactivity in which a series of operant stimuli, conditioned reinforcers, and choreographed responses provide a model of understanding how "cues" draw someone in over time. This proposes a much more complex series of stimuli and interactions that lead from initial stimulus (cues) to drug seeking or taking (reactivity). Troisi

provides a helpful example of how a heterogeneous operant chain might appear outside of experimental settings.

> "A light that reads 'Open' posted outside of a bar, club, or pub signals (i.e., sets the occasion for) the availability of alcohol, which then sets the occasion for a series of complex operant responses, including pulling up, walking in, sitting down at the bar, ordering a draft from the bartender, and consuming the draft. This sequence is then followed by the pharmacokinetics and dynamics of the alcohol effect (the reinforcer). If we further assume that an individual is 'hot,' 'thirsty,' 'angry,' or even celebratory, the responsiveness to the 'Open' sign may be greater" (10).

It is a complex series of stimuli and interactions (cues) and reinforcers, he proposes, that more realistically lead people toward use (reactivity). Triggers here are enacted as a complex series of stimulus and behaviors, which, if presented in the right order at the right time, lead toward substance use.

Interestingly, Troisi cites a number of studies from psychology that conclude that "relapse does occur without cue-reactivity, and cue reactivity does not always culminate in relapse" (9). For instance, Drummond (2001) notes that the construct of craving, does not always coincide with drug taking activity. Triggers then, even within this model do not present as one object. In some cases, Triggers lead to relapse, while in others they do not. Further, some people relapse without Triggers. Despite such insistence that Triggers propose an explanatory mechanism for substance use, this is not always the case. Even still, there is coordination between objects in the lab and in treatment. As discussed later in this chapter, Triggers are one of the main subjects of practice in rehabilitation programs and are understood to prevent relapse.

Other enactments of Triggers in the lab depend on the neuroimaging processes. For instance, Campbell (2009) observed that the goal of the Amygdala Lab is to "[use] neuroimaging technologies to visualize what happens in the brain just before drug 'craving' becomes conscious" (90). Triggers then are enacted as images of brains alit to display unconscious

processing. Other researchers have conducted similar studies. For instance, Regier et al. (2021), employ the use of functional magnetic resonance imaging (fMRI) technology to "investigate the brain response to drug cues in cocaine patients as it relates to future cocaine use" (2). Functional MRI is a neuroimaging technique that uses powerful magnets to reveal differential levels of oxygenated blood in the brain. As such, areas with more blood are assumed to be more active. Studies using fMRI typically include tasks that participants are directed to do while in the machine. Thus, more active areas of the brain (revealed by color-coded photos) are presumed to be involved in completion of the task.

In the Regier et al. (2021) study, fMRI was used to assess participant reactions to neutral, cocaine-related, sexual, and adverse stimuli. The study then followed the patients for eight weeks, collecting urine samples to test for cocaine use. The study found that individuals who had decreased reaction to repeated cues (i.e., less reactivity in the target brain regions upon presentation of an image they had already seen) had better outcomes (i.e., less cocaine use over the eight-week trial period). It is worth noting that, in this study, individuals who did not attend follow-up appointments were assumed cocaine-positive.

Thus, the authors propose that individual responses to such activities are indicative of their potential for relapse. "The evidence suggests the dynamics of cue reactivity may themselves constitute a biomarkers of relapse vulnerability" (7). In this example Triggers then are not just a stimuli, but are enacted as a bio-marker, a way to visually represent an ingrained propensity for relapse. Further, Triggers are enacted through the fMRI process which makes them visible in specific regions of the brain through pictured patterns of blood oxygenation.

Other researchers have enacted Triggers through alternate models of reactivity. In his article *What does cue-reactivity have to offer clinical research?* Drummond (2000) proposes that

there are three different types of reactivity: symbolic-expressive, physiological, and behavioral. Symbolic-expressive, broadly described as craving, is the sensation of wanting to use a substance when triggered. 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 the salivation, sweat, increased heart rate, and other physiological responses you might feel as you draw nearer to that beer.

This three-pronged model, Drummond suggests, may make Triggers amenable to the clinical space, a way to translate Triggers from the lab to treatment. He specifically cites craving as the greatest space of potential clinical intervention.

> "The development of the cue-reactivity paradigm has added a further dimension to the study of craving and relapse. Cue-reactivity offers the opportunity to study the antecedents of relapse (including cue-elicited craving) and is a model with a firm basis in widely studied general theories of behavior" (S141).

Here, craving is understood to be most accessible to the person who uses drugs. Further, craving represents unconscious intention to use, and thus, a fundamental component of Drummond's cue reactivity model. Through craving, Drummond enacts Triggers as an accessible, everyday encounter. Further, he enacts Triggers to be of use in clinical practice, where craving can be the target of future intervention. I use Drummond's three-pronged model to explore how participants enact Triggers in their everyday lives before moving on to talk about Triggers in treatment.

The Lab and the Field

When I first got to the field, I was looking to see what I had learned in my psychology class replicated in front of me via interviews and observations. However, getting at Triggers was not easy, as I discuss at the beginning of this chapter. Further, Triggers in the lab did not always

appear in the same way in the field. In this section I detail how participants experience Drummond's model of Triggers presented in everyday life. Though the patterns I discuss below were common across participants, I focus on several specific interviews to highlight the ethnographic nuance of triggers outside of the lab.

What I intend to show in this section is that the practices in the lab make certain components of cues more visible than others. For instance, the fMRI machine makes physiology more visible perhaps than Drummonds physiological craving model of reactivity, yet these are all models of Triggers. This became clear in my interview with Claire.

Claire was a beautiful 23-year-old woman with long, curly brown hair, who at the time of our interview injected meth every three hours. Claire was first offered to smoke meth by a friend. But, after smoking her first time, she was thoroughly unimpressed.

"The first time was kinda like this really happening. Okay. Let's see if everyone's right about what it feels like. But I was so disappointed."

"Really?" I ask,

"Yes. I was like those motherfuckers are whimps. They're like [imitates coughing] like it's so intense. And I'm just sitting there like, are you fucking kidding me?"

"So it was, it was less intense than you thought it would be?"

"Yeah."

Yet, she kept using. Over time the smoking became less and less effective. Eventually she tried snorting the meth but, in her words, "that shit hurts." Eventually she moved on to injecting meth regularly – as this was the most economical way to consume. In short, like many users, she found that through injecting she could use less of the drug with the effect greater effect (high). She

found injecting helped her lose weight, and she liked that feeling. But over time, she started to use more and more, and relied on use just to get out of bed.

"I don't use to get high anymore. I use to maintain."

And this maintenance, this normal routine of use, for her comes with very little reactivity– particularly physiological reactivity.

"Do you physically feel anything right before you use? Like your heart doesn't race or your thoughts don't race?"

"No. Your heart races after [laughs]."

For Claire, physiologically reactivity was not very relevant. Her use was so regulated, every three hours, that she did not feel any noticeable physiological symptoms before she used or in relation to anything that one would consider a trigger.

Other participants echoed this sentiment that drug use did not seem to arouse any particularly noticeable physiological responses. And further, such signs and symptoms might be hard to draw attention to in everyday life. For instance, on site I was not measuring heart rate or skin conductance, yet I could see that almost all participants were always sweating at the exchange. This is likely because we were meeting outside in the Florida heat, and they had often traveled on foot or bike to get to Sunshine. In short– we were all sweating, all the time. Sweating can indicate physiological reactivity, but it can also be indicative of withdrawal, or recent exercise.

There are many explanations for this differential experience of physiological reactivity of Triggers. Some researchers propose that Triggers need to be practiced into awareness via mindfulness-based relapse prevention (Witkiewitz et al. 2013). Or, as Campbell notes, some researchers consider physiological reactivity below awareness (2009). Further, these are

reflections on practices, not the practices themselves, so it is possible that participants were not immediately drawing to mind the physiological reactions they feel as they are just about to use.

In discussing craving (another type of reactivity in the Drummond Model), participants similarly did not relate. Only three participants mentioned craving in their interviews. For Cindy, another participant, "craving" did not seem like an appropriate term to describe what moved her toward use. Cindy was a 42-year-old woman who had been injecting opioids for eight years at the time of our interview. She experienced, like many participants, chronic back pain and injected regularly, every five hours. Like Claire, she was mostly using to maintain and avoid withdrawal.

"As soon as I wake up, I have to get high because I get sick. And then a couple hours go by and get high again, and pretty much all day long. Every couple of hours or so."

Being sick caused her to "need" to use, but for Cindy, craving was obsolete.

"There's not really there's not really like a craving to me like I don't crave it or anything. It's just when I'm sick like then I need it. But if I'm not like, if I'm not sick if I'm just fine like I am right now, like, there's nothing in my mind that's going like, 'Oh, I wish I had some' or like, 'oh, I want to get high right now' like, yeah, I don't really get that craving."

Craving, as she posits above, is associated more closely with random times that might entice use. Participants simply did not see themselves as "craving." This is perhaps thanks to a level of regulation on their part. Many participants had been using for so long that they had built up schedules and routines. They did not feel craving because they did not really need to. This was not really described on site either. Participants did not seem to express any craving at the site of the syringes or other supplies.

In research on cues, there are epistemological disagreements on how to understand craving. Drummond (2000) illustrates some of the trouble with craving. "Notably in recent studies of drugs aimed at attenuating drinking behavior the term "craving" is seldom defined and is used loosely and in different ways across studies" (S130). Still contemporarily, there are many different models of craving; affective models, cognitive models, mindfulness-based models, and biological models (Witkiewitz et al. 2013).

Wanting– attributed to incentive salience– seemed to be the most robust and relatable form of craving discussed by my participants. Ninety-three percent of interviews discussed wanting as relevant to their substance use. Studies of incentive salience often measure factors like attention (DeTommaso et al. 2017; Anderson et al. 2020; Albertella et al. 2021) or intensity of wanting and attribution of salience (Mahler and Berridge 2009; Meyer et al. 2012; Tibboel et al. 2015). Participants in this project, however, often discussed the way wanting made them feel.

I return to my interview with Gerrit who explains quite well what that wanting feels like.

"When I wake up, I want to use the most. And I am in a lot of pain. My back's hurting. When I wake up in the morning, I do not look like I do now. I look like a sixty-year-old man, I wake up, I'm hunched over, it's hard for me to walk, I have to like grab stuff to move until I could do a hit. And then I just put it in my muscle and sit there and just literally just sit there for ten minutes until it takes effect. And then I can stand up and go do things like a normal person. So, I'm just not a normal person until I can do it."

For Gerrit, wanting is so closely tied to pain, it is like the wanting disappears entirely. Yet for others, the sense of wanting haunts them. Another participant, Winston, who did not experience chronic pain, expressed wanting differently. Winston was a 38-year-old man who had first used drugs at 9 years old when he smoked weed with his mother. Winston did not seem to

have one single “drug of choice” but instead often did uppers or “speedballs,” a mixture of an upper and downer.

“Let me say this, I don't do no prescription drugs. No oxys (Oxycontin), no xans (Xanex), no percs (Percocet). I don’t do none of that. All uppers. The only downers I do is Heroin and fet (Fentanyl). You know what I mean? And I mix that, I mix that with uppers, if I got it.”

“So, you speedball?”

“Yeah”

He attributed his use to his history with his mom, and other female figures in his like whom his relationships with frequently caused him to fall into depressive episodes. For him, his struggle with substance use reflected his struggle with the “storm inside” himself.

“It's always a tempest on the inside like always, always a storm, it's *always, always, always* raging on the inside.”

Winston was something of a poet and philosopher. He saw humans as not creatures of habit, but “creatures of habitat.” For Winston, his childhood and his “habitat” as a homeless drug user prevented him from finding peace, from being able to combat the storm.

“That's the battle that's always raging…It's like, it's almost I have to have a perfect life in order for me to not use but that's impossible though.”

It was this storm inside him the drove his use. And for Winston, the sense of wanting came from deep inside himself.

“So do you feel anything physically like when you're when you really want to use like, what does that want to feel like physically?”

“It’s kind of, it's kind of like, it’s kind of like an intangible pull. It's easier to describe it because I'm kind of like, kind of feeling it right now. It's like an intangible pull. Know what I'm saying? That's the best way I can describe it. It's like a pull. It is intangible meaning you can't grab it but you still kind of feel it. You know what I'm sayin'?”

Winston, as he described this near constant sense of wanting repeatedly balled his hand up and motioned in a circle over his chest and stomach– as if this sense of wanting, this “intangible pull” was buried deep inside of him.

This “intangible pull” does not quite align with how Robinson and Berridge describe wanting, as driven by particular stimuli which drive a sense of wanting. Yet, this more vague, intangible pull is likely more akin to Lende’s (2005) use of desire as part of the way adolescents in Colombia expressed incentive salience. Desire implies much more a sense of longing, rather than the immediacy that wanting dictates. From such senses of wanting and desire usually comes drug seeking.

Drug seeking is often something that difficult to measure in the lab. Some researchers might use animal populations to conduct this sort of work (Valyear et al. 2017). Others have used studies on cigarettes and measured puffs of cigarettes or sips of alcohol to measure drug seeking (Motschman and Tiffany 2021). For participants, drug seeking was often about the dread of having or not having. The drug seeking is about anticipating the chase of the drug, something that is all too real in unregulated markets.

A selection from my fieldnotes explains this chase well.

Cherry, a participant, and I stand near the van and chat after she has finished her daily assessment. She smokes a cigarette and tells me about her life lately. She tells me how she’s switched dealers three times in the last three months. She had been getting her supply from one

guy for a long time, but recently he became un-reliable– not picking up when she called. She would end up going into withdrawals while waiting for him to get back to her. She found a new dealer, but the same thing happened again. She's finally found another new dealer who is more consistent, but she had to switch to fentanyl from heroin – because this newest supplier only has fentanyl. She tells me she's not necessarily pleased with this switch, as she flicks the ash off her cigarette, but at this point, anything is better than risking going into withdrawal.

For Cherry, drug seeking is not only about finding the drug, but also negotiating the unregulated markets and even entailed switching from heroin to fentanyl to maintain a steady supply. Another participant, Rockie, a seasoned expert who had been injecting meth for close to ten years, explained why this dynamic of drug seeking is so important.

"What does it feel like when you don't have it on hand?"

"It depends. If I've just had something, then I'm fine. I've got plenty of time. But if I've like haven't had any all day, and I don't have anything on hand, it's kind of a 'awh shit this is gonna suck.' I need to figure something out. I need to get going. I need to do this. And I start get a little anxious. But when you compare it to something like a cigarette, nowhere near as bad."

Drug seeking is predicated on these supply-withdrawal dynamics. Having enough in times of need initiates seeking. Rockie also compares dimensions of drug seeking between heroin and cigarettes. Interestingly, they note that such seeking is worse with cigarettes. Though cigarette use is far less rewarding than heroin (in terms of hedonic reward), drug seeking is intensified. This lends credence to Robinson and Berridge's (1998) incentive sensitization theory of addiction which emphasizes drug wanting and seeking as the basis of addiction rather than pleasure-based models. Such work is supported by research on the dynamics between addiction, value, and pleasure. Research suggests that while subjective pleasure decreases over time

substance use becomes increasingly more difficult to stop (Kennett et al. 2013). Further, the act of seeking is not value free. Participants note that such seeking causes anxiety and is frankly, "annoying", as Colin, another participant noted.

Colin was a 26-year-old man who had recently stopped injecting opiates after spending a month in rehab, but soon after started injecting cocaine. When he used opiates, Colin noted that the drug seeking was, different. For Colin, using opiates came with "debilitating" physical dependency. The prospect of getting opiates – seeking them out, was for him, half of the high, he explained.

"Okay so when you know for sure that you're going to have the opiates in hand like you go from like hating everything to like 'oh my god like amazing.' Yeah, like when you know you have the money, you know your guy's gonna answer, you know you're gonna be able to go get it. When you know you're really about to go get it you're like elevated even if you feel sick before and then when you get it you're still feeling just as elevated, when you're mixing you feel just as elevated. There is no like increase. It's as soon as you know you're going to get the drugs for opiates that you feel better. Cocaine not so much. I could go and get the cocaine right now, and it doesn't make a difference"

For opiates, the seeking becomes part of the high. Yet for cocaine, it does not become part of the high, but the seeking takes on a different quality. In talking about seeking out cocaine, Colin notes more nuance to the feeling. Not having is "annoying," but it also builds up anticipation and excitement.

"Well, it's not the dread of not having because I already didn't have it yet. It's like, [this] shit is like annoying. Like when I don't have it. But it was more like, I can't stop thinking about

how it's going to go tomorrow to acquire it. It's so strange. Does that make sense? But now here in daytime it's like, eh, I have to wait...Whatever."

Colin talks about how the day before he gets his supply, he builds up anticipation for getting the drug. Not having the drug is "annoying," but the anticipation of getting the drug (the drug seeking) is something to obsess over. Rob, another participant who injected opiates expressed this obsession well.

"You're just thinking about, I guess you're thinking about being sick, you're thinking about those leg cramps and the, they say crawling out of your skin feeling. So, you try not to get to that point. So, you're trying to figure out every which way you can get some money or borrow some money or, you know, talk to your dealer into giving you some dope, you know, so you'll think of anything you can to get some dope, really. And that's pawning everything you own or selling anything that you can sell in your house to get it."

Rob had been using for years and had gone on and off use at different periods of his life. He had in fact cashed in his 401k, sold his car, and had moved in with roommates which enabled him to continue his use. This is the classic story that is often told about people who use drugs in the popular media – that they would be willing to lose everything if just for a hit. And to an extent, someone like Rob might validate this story. Yet, drug seeking is more complicated than the simple "sell everything for a moments pleasure" narrative. Steve, another 40-year-old participant who injected opiates, articulates this rather well.

"It's like a fuckin' on and on battle every day and then you got to chase the shit because this person might not have anymore they might have sold their last bag to this person now you got nothin' now you gotta go find it. Now hopefully this person got shit that's even going to get

you high or not even high anymore. You could write that down. You do it for a long period of time you're not even doing it to get high. You're doing it to just get better. Just get not sick."

Drug seeking is apparent, but complicated, as Steve notes. Participants often are not after seeking a moment's pleasure but seeking something that will help them not to feel sick – to be able to function in everyday life. Further, seeking is often framed around the anticipation of getting the drug and being prepared for your next dose.

Cues and the cue reactivity paradigm make Triggers visible in a certain way, through machines and pictures or models. Here I demonstrate how participants talk about enacting (or not enacting) different types of reactivity. Physiological reactivity and craving were not as pronounced as a sense of wanting or even drug seeking which seemed to dictate the schedules of some participant's daily lives. Further, these ethnographic examples provide nuance and dimension to lab-based enactments of Triggers. For instance, drug seeking is not simply about seeking out a drug but anticipation of use and navigating access to drugs. Triggers in the lab also present compelling connections to (or coordination with) treatment programs, which seek to regulate triggers in very particular ways.

Treatment Paradigms

Research on Triggers has led to the development of technologies to address Cues-as-Triggers. Particularly, rehabilitation institutions focus on T/triggers as the key to preventing relapse. As such, Triggers are emphasized within rehabilitation programs, and much is made of practicing Triggers within the rehabilitation space. In this section I review two different types of treatment programs and discuss how they practice Triggers. First, I discuss medication assisted therapies which render Triggers visible and invisible through chemical depression. Second, I

discuss rehabilitation programs- where individuals come to know and practice Triggers through therapeutic interventions.

Medication Assisted Therapy

Medication Assisted Therapy (MAT) employs the use of pharmaceuticals to inhibit drug withdrawal and craving. This type of therapeutic approach is widely understood to mimic treatment of other organic diseases which target biological pathways in the human body. Many participants of this project had encountered MAT at some point in their lives. It is often offered during hospital admissions, particularly for overdose, to enable individuals to begin to move from illegal markets to legal markets. It is important to note that MAT therapies are currently only available for opiate use and alcohol use, not stimulant use. Discussions of MAT took place with participants who use opiates. The goals of such therapies are to suppress experiences of wanting and withdrawal by mimicking the chemical make-up of opiates without the pleasurable feelings of the high individuals get from these drugs.

For some participants, these drugs mimicked the sensations of street opiates. Yet, there are particular sensations that are more relevant than others. Stacy was the second person I interviewed and she had been using drugs since she was a teen. At 32 she was injecting heroin regularly. During our interview I asked how she knew it was time to use again, between injections. She noted the taste that heroin always leaves in her mouth. As the taste dissipated, she knew it was time to use again. She would use that taste on her palate to decide when to inject again.

Stacy had also tried to stop on several occasions. For her, Methadone (an opiate replacement drug) mimicked this sensation, but Suboxone (a different opiate replacement drug) did not.

"Yeah, so it's interesting what you say too about like that palette thing. So, like when you were taking the methadone you still got that kind of sensory like…?"

"Yeah, I was like blown away. That's what like, it literally, like I only did it for --I only had two doses of it. So, it wasn't even like it really took my withdrawals away. It did for a couple of hours. But within those couple of hours, like I didn't think about it at all. Like it was so weird, because I had like I had the feeling like that I still had it, you know, like I didn't really get rid of it. Kind of, it was, I don't know, it was very bizarre to me like I didn't expect… I didn't expect it to be like that. I thought it was gonna be like you know Suboxone or something."

"Yeah."

"I fuckin hate suboxone."

"Oh, you don't like it?"

"Hell no. That shit taste so fucking gross. Oh, I can't even..."

"I didn't know it tasted bad."

"Dude it's so horrible. It's so horrible [laughs].

For her, Methadone did not take the withdrawals away. Withdrawals are a potent trigger, especially in the first few weeks that people are trying to stop (Kasvikis et al. 1991). Even though Methadone did not take these withdrawals away, the drug successfully mimicked the taste of heroin in her mouth. This sensory element, it seems, is an important trigger for Stacy during active use. That taste indicates that it is time to use again. Yet when trying to do MAT the sensory dimension is transformed. It is the mimicking of the taste that indicates that the MAT

therapy shows success. It means that the drug “works” while at the same time aiming to suppress reactivity to other triggers.

However, these interventions were not successful for all participants. Max, a participant who was homeless and injected fentanyl found that, for him, these therapies work for a period, but eventually his sense of “wanting” returned.

“I been trying to quit. I just can't because I'm sick, I get sick. If I get sick, I ain't got no choice.”

“Have you tried any like Suboxone? Or?”

“Yeah, I tried methadone and suboxone.”

“And you didn't like it?”

“No.”

“Why?”

“Because at first, it really works. You feel great. But then after you start taking its certain period of time, no more feeling, no nothing. I just wanna go shoot up again. It don't work after a while. At first it works great, but after your body gets used to it, your tolerance goes up and you just can feel nothing. And you're like, What the hell? It's a waste.”

Though MAT attempts to target and eliminate wanting, for Max and many others like him, the triggers, and experience of wanting are not eliminated. Despite the intervention, which seeks to chemically eliminate triggers, they persist. Others had triggers that could not be managed through MAT.

For instance, participants who experience chronic pain noted that these therapies work well for treating withdrawal but not for treating the pain. In other words, these triggers persist

beyond the opioid receptors that are engaged in MAT. From Gerrit, my first interviewee with chronic pain–

"Have you ever tried…"

"I've tried pain management."

"Suboxone?"

"Suboxone doesn't help with, with pain, per se, but it does help with withdrawals."

Other scholars have discussed the biopolitical implications of MAT and moral discourses of pleasure (Bourgeois 2000, Duff 2008). Here I seek to highlight how MAT enacts Triggers as a biological substrate to be rendered visible through the taking of medications that may or may not work for a particular consumer. Medications attempt to effectively address wanting (as the subjective experience of triggers) and withdrawal (as the primary emphasis of triggers). In MAT Triggers are biologically mediated. MAT approaches still practice Triggers very much as cues-through which targeting models of reactivity can target Triggers. In rehabilitation programs, Triggers are created and enacted through therapeutic relationships.

Rehabilitation

Rehabilitation programs are often the first place where individuals encounter Triggers. Language use in rehabilitation programs has been widely used as a gateway to understand how these programs shape identity (Cain 1991), recovery narratives (McIntosh and McKeganey 2000; Carr 2010; Carr 2013), and client relationships to their own bodies (Scholsser 2018). I suggest that this is the space where cues-become-Triggers. Participants often talked about rehab programs as the first place they learned about Triggers.

Returning to my interview with Winston, he noted that he learned about triggers first in a rehabilitation program.

“So, so one thing I'm interested in, you just said it's like, you know, you described really robustly like that triggers are part of like this kind of subconscious or unconscious kind of like...”

“I learned that shit from somewhere though.”

“That's what I'm saying where did you...”

“Oh I know! It was an old ass HBO special. We was watchin’ it in rehab and one of the doctors in her research, she had done figured that shit out.”

This is something that many participants echoed. In fact, when I asked “when did you first learn about triggers?” the answer was almost always rehabilitation or treatment. Rehabilitation programs are where people *learn* about Triggers—where the conversation first starts. Here, however, it is important to consider time. Triggers are not linear- objects are not ordered, as Mol might say (2002). The narrative of rehabilitation programs and therapeutic approaches is such that the object (Triggers) is developed and processed within active use, and then is discussed, and learned about within rehab programs, and transitioned into a signal for sobriety or relapse (if one recognizes it right). Instead, I propose that Triggers have a sort of liminality. They are neither irrelevant before rehab nor fully realized in rehab. They are made to appear and disappear in relation to the practices that enact them. In this case, the therapeutic process enacts Triggers such that they are made to, seemingly, suddenly appear as always-have-been. Let me show you what I mean.

There were several substance use counselors I interviewed during preliminary research and again while I was at Sunshine. The following excerpt is from an interview with one substance use counselor.

“Okay, so what I've seen when it comes to people that are actually, actively using, they don't understand the concept of triggers outside of the context of recovery. Like they don't recognize that they actually have something, whether it be an internal trigger like physiological, or external that makes them want to use. So, yes, I think the word trigger is used primarily in the context of recovery. But there, there has to be other ways of asking them. Because currently, I'm working with a client now, who is in active addiction, and we're trying to get her to stop using and I was in session with her and I was like, ‘What are your triggers for use?’ She's like, ‘I don't have any triggers.’”

For the counselor, triggers are omnipresent—they’ve always been there, and they just need to be elicited. Maybe it’s a problem of translation—talking about *wanting* during active use is more accessible than triggers. Alternatively, it is these elicitation practices that create and sustain Triggers. For the person in active use, triggers aren’t relevant—unless they are in rehab. Participants echoed this.

For instance, in my conversation with Stacy we talked about triggers, and how often they come up in everyday conversation.

“And do people like talk about triggers, like other people that use talk about triggers a lot like, in your everyday life?”

“Only, only people that have been to rehab talk about triggers. You know what I mean? It's like, it's not something that anybody was talking about that’s never been to rehab.”

“Yeah. And then, is it brought up like, often, in like, daily conversation?”

“It's more brought up more often in, like being clean, you know what I mean? Like, when you're clean you talk about triggers all the time, but when you're using, you don't really talk about it, because you're not trying to like, not use so you know what I mean? You don't really

talk about it. It's like if you just relapse you might talk about it, but like, if you're, you know, like, none of the people that I know, they all have been, you know, using for a long time they never are like, 'Oh, like that triggered,' like you say, yeah. You know, I mean, I talked about it all the time when I was clean because, you know, you would want to identify what your triggers were, you know?"

In rehab, this type of talk is how Triggers are practiced–this elicitation process is the practice of Triggers within the context of recovery. The counselor confirmed this and used these same techniques to help her clients in the treatment process. Back to my conversation with the counselor–

"When somebody is first starting out on treatment, they're not aware of what their triggers are. So, what we go, what we do from there, at least what I do, is have them keep a journal nearby, or even on their Notes app, whenever they feel like a craving or trigger. I have them write down exactly what's happening. Because a lot of people at the beginning of recovery don't know what they are. As recovery progresses, and people get, you know, used to actually being more in tune with their body, their physiology, their mind, then they're able to quickly label like what a trigger can be."

Sometimes Triggers are worked out in group therapy. Belinda was a participant who had been to recovery three times and had tried many other forms of treatment including mutual aid and spiritual recovery groups. When she was young, she went to treatment and had stop using for over a year.

"So, you were sober for 18 months. Did you talk about triggers in rehab? Like when you went to that rehab program?"

"We used to point out each other's [triggers]. It was like a therapy. And everybody would

tell you what you're doing. ‘That's your old street behavior.’ And you can't say nothing to them. You just have to listen. And it pisses you off. Because like, some people are nasty. You know, they don't like you. They're gonna let you know it when you're sitting in the chair.”

Triggers are practiced into appearance. Not only are participants taught to recognize sensations and feelings as “triggers” but then they are asked to write them out, call them out, and continue to recognize them—turning feelings, or even just unexamined habits into Triggers. Sometimes—participants found these practices well… triggering. From Belinda again,

“So, we talked about moments that make you really feel like you want to use it's mostly just when you wake up, before you go to bed, and if you've had like a bad day or something?

“Used to... it would be everything when I first started. I could probably go to an NA (Narcotics Anonymous) meeting and that shit would make me want to use.”

“Why do you think that is?”

“I'd be sitting there sober as hell and somebody else talkin’ about they just shot up or they're high right before they came in there. Yeah, you're high. I'm not. But wait till I get home. I'm sorry. I'm not trying to be funny or rude or anything. It’s just, that's the way it was.”

Treatment programs themselves could be triggers. Interestingly, for participants who have never been to treatment, triggers were still tied to sobriety. Polly had been injecting opiates for five years. She was one of few participants who had never been to treatment or had not attempted to be sober since she started injecting.

“So have you ever heard of the concept of triggers?”

“Yeah.”

“So can you tell me like… I want your definition. If you were to make the Webster's Dictionary definition of trigger, like what would… How would you write it?”

"Just like something that reminds you of getting high like a certain place that you go or it could be people or a movie or anything just something that makes you want to get high."

"Do you have any triggers?"

"I don't know like because I don't like crave it just and I've never been sober. So, like I don't know. I don't really know if I guess I do or not. I guess if I see somebody else getting high then I want to get high."

For Polly, having never been sober, she was unsure if she could even have triggers. The treatment practice, it seems leeches into everyday enactments of triggers.

Treatment programs enact Triggers in particular ways. For MAT, Triggers are enacted as a biological process that can be interrupted through the administration of drugs that are pharmacologically similar, but not pleasurable. In rehabilitation programs, Triggers surface as something that has always been there, that impacts your everyday, and that will continue to follow you. They are past-present-and future, at once. Further, they're enacted in the therapeutic process- writing, discussing them. Interestingly, people who inject insist that triggers only exist within this domain. The next section of this chapter seeks to highlight enactment of triggers in everyday life.

Practicing Triggers in the Everyday

While some participants, like Gerrit, whom I wrote about at the beginning of this chapter say that they do not have triggers, many participants did note they have particular triggers. One trigger that participants discussed frequently in interviews was needles. I focus here on needles as one often described trigger to show how this is practiced in everyday life. Many times, during

this project participants told me something along the lines of “we are addicted to the needle.” As injection drug users, the needle represents a potent trigger. Rob explained this well.

“Okay. So have you ever heard of the concept of triggers?”

“Yeah. Yeah.”

“How would you? How would you define triggers?”

“Just either being around it or being around someone that you've shot up with or, you know, seeing someone that looks like they're high or on something or seeing a needle. People that shoot up, you know, we really like our needles, it's a weird thing that, you know, if you're not shooting up, you really kind of think or crave that being able to do a shot.”

I recognize here we are making an intellectual switch from talking about Triggers as a concept to talking about specific triggers—but where needles are concerned, these two overlap. Specifically, with what are called “water shots.” I’ll let you learn about them the way I did.

I return to my interview with Colin. During our interview I asked him about his daily routine of use and when he wanted to use. Colin again brought up the discrepancies between injecting coke and injecting opiates. Colin specifically talks about how he more often felt triggered when he was using opiates.

“So, for coke, no. No, there’s not. But for opiates, yes. Like my aunt would piss me off and I want to go use it. It is more of an anxiety relief with coke. It's just like longing, like it's just yelling at you from the inside and you feel so fucking good when you're high. Like opiates feel great, don't get me wrong. Like I mean, that’s why you see so many people do them. Like they feel good but it's not in the same way. Like I've never felt it with any drug I've ever tried, a comparable high to the rush for cocaine. Of shooting it. So, like ritual wise, it used to be definitely for opiates, like the like when you would get the product like stirring it, etc. Pulling it

up like it was a dopamine rush. Coke. Not at all. Until you actually get the feeling, like until you actually hit the vein, like until you're in a vein and you've injected there is no relief. Like I used to try to shoot water for opiates. Like if I couldn't find opiates, like a lot of people do that. They like just shoot water because like, because it's part of the ritual. You just get like you're so used to…"

My face must have indicated confusion, because he continued,

"You have never heard of that, huh?"

"No, I'm curious though..."

"Okay, so I mean, it's at least decently common. Like, if you can't find any heroin or something, you'll just make like a water shot. And then like just inject, because you're so used to the ritual of like, shooting and pulling it and just like the, kind of the needle, like people say, 'Are you addicted to the drug or are you addicted to the needle?' Like people have said that always. Yeah, and some people say they agree like the needle like it does something. It does. It doesn't feel great because once you push it in, you're like, oh, fuck, it didn't do anything. It's sad. But then at the same time, there's more than zero."

Colin explains that water shots are literally injecting water. Here, the needle and the injection of water are a way to enact a trigger. For some people who inject drugs, doing water shots is literally a way to practice a trigger– to feel the needle, and in some cases feel some relief. Maria, whom I spoke about in the introduction of this dissertation, was a 65-year-old woman that injected opiates. She described her experiences with water shots.

"I wanted, I wanted to use for sure. I wanted to use, and I remember we were sick. We didn't have anything. But I needed to. This sounds so stupid. I needed to get high. And because the needle itself is an addiction. And the point of just I filled water up in the needle and stuck

myself with it just to see if that would help me get through it. And it kind of did. It really did. And it was then that was when I realized that the needle was an addiction. I didn't realize it at first."

Water shots are a way to enact a trigger and Triggers, at once. Put another way, participants often recognized needles as a very triggering object. Engaging with them in this way showed how they enacted triggers. Further, in this practice they are enacting Triggers, as a concept. Needles, and water shots represent Triggers as a powerful part of the injection drug use process. So much so that this enactment brings a sense of relief– even without the drug. In injection drug use, Triggers become visible and potent.

Another way to envision this is through what's called a "flash." I learned about the flash in an interview with Scott. Scott was a 28-year-old man, who was very sweet and sported bright blue hair. We sat together, one night at the Rooster Avenue exchange site and talked about how he started injecting meth. He talked about how he did not start using until he was 18, and even then, he used drugs pretty casually. He dabbled with weed, alcohol, cocaine, and even smoking meth. He did not find that he had much of an issue controlling his use, until he started using needles.

"I used occasionally and it was fine. And then I shot it. And the I remember that day, like it was yesterday so vividly. I even text my best friend like 'I like this stuff way too much.' I can remember the day that I went off the deep end."

He continued to tell me about that day. He had gotten a message on a dating app– a guy was looking to hook up and offered him meth. The man injected the meth for him. In his own words "it was life changing."

When we did our interview, Scott was struggling with what he called his “recovery journey.” Scott was trying to moderate his use and finding some days harder than others. I wondered if it was hard for him– particularly on this journey to be discussing this.

“Is this [the interview] triggering for you?”

“No...I mean sure, but...[laughs]”

“[laughs] what do you mean? Like, you don't find talking about it in that sense to be too triggering?”

“Not that I really want to get high. I, I know that I can go to a trap house right now and exchange some of the stuff that I got and get, get a bag of dope and get high…And I probably won't. I say probably because who knows what text messages I'll get when I leave here– But truthfully, I'll probably just go home make some ramen and then go to sleep. And I've got you know, equipment, clean equipment, and I might visit one of my friends at a trap house or whatever. Give them the Narcan that I have and try to save someone's life…”

He trailed off and then started meditating on triggers, more broadly.

“Triggers are in everyone. And they're different for everyone. Different levels of deadly. Like for me I have I know for a fact I have deadly triggers on me 100%. I've never done heroin. I know for a fact that if I ever do use it, and I hear it's a lot more addictive than meth, I'd probably be dead. Probably be dead. But you know, I can take prescribed like narcotics like Percocet, and can surrender them to the police like ‘I am done with these now you guys can have them back.’ I even snorted it once. And just to see if it was like a different effect. Because that was like the, I'll say to, for lack of a better phrase the ‘junkie’ in me. I even looked up ‘Can I shoot it’ and they're like, ‘don't do that. That's really bad. Yeah, you know, don’t shoot Percocet.’ I'm like, Okay, I won't do that. The point is it wasn't even about the meth. It was about I just like seeing the blood.

The blood draw we call a flash. It's a blood return. Like another word is called a flash because you know, you see a flash of red. And you know what? That's triggering me right now. Like that feeling. So, I'm gonna stop talking about it. Yeah, it's a huge trigger. But I'm just realizing, yeah, it is you know, you don't really think about it. So, you start saying it, but like, I've got to, I got chills. I've got like, yeah."

"Yeah. Well, we can stop there. And we can talk about something else [recording ends]"

The flash- talking about the flash- fully triggered Scott. He started to detail physically what he was feeling, and how much it was resonating with him. He got chills and later told me that he was starting to sweat. Here, triggers are enacted in two ways. First, through talking about the trigger– meditating on the flash, describing it was a potent trigger. Additionally, the flash itself surfaces as a really visceral trigger. Much like water shots, the flash enacts Triggers as potent stimuli, drawing you closer toward use. The practice of injecting, the signal of the blood in the syringe—a trigger appears, is practiced through injection—or even just talking about injection.

Other participants also talked about the flash. And for one participant the flash represented anxiety relief. The flash means the anxiety was about to go away.

"and what does it feel like when you're when you're triggered? Like what does it what does that feel like to you?"

"Well, you get anxious until you do it. So, the anxiety is there but as soon as you see that blood rushing to that needle it's the best feeling in the world, just everything."

Needles exist at a complicated crossroads as a potent type of trigger and a way to enact Triggers. The act of injecting makes triggers (like the flash) exceedingly visible. Triggers are

enacted through the process of injection. Triggers– like exposure to needles– are also highly regulated.

Regulation

Regulation and the practice of Triggers intersect in a fascinating way. For some, Triggers simply don't matter if they are able to successfully regulate their use. Benny was one of those people. Benny started using opiates after a minor accident for which he was prescribed pain medication.

"I want to say it's been about, well yeah, about ten years now. Ten years ago, I started off with a with an injury, pain medication. Percocet, ten milligrams. And then, you know, once I witnessed the effect of that, you know, I used it while I was in pain, but then afterwards, I started abusing of it. And it slowly escalated from that to the 30 milligrams of oxycodone and then slowly but surely, it switched to a heavier or pure form of, I guess, like derivatives of heroin. You know, from there, I went to heroin. It was cheaper, and you just get a larger amount. And it just became something that I did."

Benny now mostly used fentanyl, and did not have any long lasting, chronic pain. He used every day and timed his doses with symptoms of withdrawal.

"You start gettin' withdrawal, you start sweating, nose runny, nausea. Things like that. Yeah, your body will tells you [when to use again]."

Other than withdrawals, Benny did not seem to have any significant triggers– at least now. Benny differentiated between the past and his current patterns of use.

"So how would you define triggers? Like, if you had to find out your very own definition? What would that be?"

“A trigger for me now? Well, before it'd be like watching. Like, say you're watching TV and you see someone shooting up on TV or something like that. Or even if you know someone's talking about it, glorifying it. Or if you see someone else that you used to that used to use with, or maybe a neighborhood or a house that you used to use at, or someone or something or even, even like a nightclub, a girl or something that you used to use with, you know, those were all triggers, for me. Maybe just an argument. But also, that's what I'm saying. I mean, you know, when you're an addict you try to use anything to justify because, yeah, bad things to make you want to use, but even good things make you want to celebrate and use. Just like, it's kind of just, just to make excuse out of anything. So, as I said, I don't really think it's so much triggers, because that doesn't affect me as much as it used to. Now it's just more of a maintenance because I can see someone doing it and I can, or I could pass by someone and I wont do it right then and there. You know, I mean, because I know I have my own thing going on, like a schedule or wherever that I keep just to be maintained. So as far as triggers are concerned, I'm not triggered too easily anymore.”

For Benny, triggers changed over time. In the past TV, or various emotional states were triggers for him. Now, having security, a pattern of use, regulates his triggers. And in doing so, they disappear. Other participants also expressed how this ability to regulate-in relation to triggers changed over time. Samantha echoed much of what Benny articulated in his interview.

“So, you said you're going to the bathroom when using and things like that. So, if you're walking by the bathroom during the day, does that ever make you want to use?”

“Not really? Not really, there's no triggers like that. You know, I would say the first time around when I was younger. For some reason, I would catch myself noticing. Like, if you see a discarded wrapper on the street, if you if you are someone who used in the past, you know what

an empty packet looks like. I used to notice those things all the time, you know, for some reason."

"Yeah. And now you don't notice?"

"Well, it's also different. When I first tried it in New York, you know, it was heroin only there's no such thing. There's no fentanyl yet. It came packaged in almost seemed like little parchment paper packets like little like folded over squares that came with a stamp. And you know, if you wanted to buy like a certain amount, it was called a bundle, which contained a packet ten bags and a rubber band. Coming out here, fentanyl or heroin I noticed it's a little tiny plastic Ziploc baggie you see through baggies. And here the by the gram volume is very, very different. The quality is also very different than heroin from when I was 13. It was a lot purer in New York. What's out here is like, you'd be surprised there's so much stuff. And it gets put in there. So, it is a dangerous thing I've seen unfortunately, a lot of people overdose, you know, so. But no triggers. No specific triggers."

For Samantha, like Benny, and many others I interviewed, triggers just seemed to slip into the fabric of everyday life. Sure, they might engage with things that they consider triggering, but Triggers, disappeared in their highly regulated everyday use. They were even able to reflect on points in their use where triggers were far more powerful– yet, as they sat at the exchange, they told me that they had no triggers. Moreover, many participants told me the exchange itself was not triggering. In everyday life, Triggers may not exist, or they may have existed in the past, or they may be practiced and enacted through the needle and the flash. Triggers in everyday life are just not one thing.

Conclusion

The goal of this chapter was to establish Triggers as an object that is enacted differently through practices in the lab, rehabilitation programs, and in everyday life. The goal here was not to elaborate on every single way that Triggers can be practiced, assuredly, there are many, but to give examples of specific ways Triggers are enacted as an object. As Mol (2002) notes, "it is possible to listen to people's stories as if they tell about events. Through such listening and illness takes shape that is both material and active" (20). It is this listening, to participants, to scientific communications, to experts, which help understand how different practices inform Triggers. Further, I show, through ethnography and quotes from interviews how interactions with triggers enact Triggers. I suggest that it is enactments of triggers, that, in part enact Triggers.

In this chapter I use examples of cue reactivity research and writing to establish two main goals. First, that cue reactivity is the right comparable object to Triggers in everyday life. I discuss how research in the lab is *coordinated* with people's everyday experiences. I also seek to express, second, that these different enactments of Triggers show how Triggers, as an object are many. I do not want to simply distinguish Triggers from cue reactivity as separate objects, but instead show how Triggers, as an object, are translated between spaces of enactment. Using a multiple ontologies approach opens objects up to an analysis where objects can at once be socially and biologically meaningful.

I also use this chapter to discuss the ontologies of Triggers outside of the laboratory. In treatment Triggers are practiced as a biological reaction in need of suppression—or a learned, now innate object needed to be discussed and recognized, repeatedly. Such treatments, which participants interact with frequently, shape enactment of Triggers outside of clinical spaces. Practicing Triggers in everyday life is often referential to Triggers in treatment settings.

In some cases, Triggers disappear entirely, without the constant self and group talk to guide Trigger rhetoric and practice. In everyday life, Triggers are physical objects with their own practices, viewed perhaps through the little notched window between the needle and the plunger of the syringe. Triggers are *literally* practiced through water shots and the act of injecting, potently visual through the flash.

Finally, I suggest that for some, in everyday encounters, Triggers act like regulators. Such an idea is not revolutionary and evokes an incentive salience approach toward Triggers where environmental stimuli continually draw attention and cement patterns of use (Robinson and Berridge 1993). Still, as I aim to show, Triggers are not one thing. When understood as an object, enacted in practice, Triggers become multiple. Multiplicity, then opens Triggers up to a different kind of analysis. The analysis that follows is one in which the instability of the object allows us to look and see what features of context and what practices in such contexts shape the enactment of the object. In the next chapter, I discuss the harm reduction context, and how the different "sites" that comprise this field have the potential to shape Triggers.

CHAPTER FIVE:

ESTABLISHING THE LOCAL

"The praxiographic 'is' is not universal, it is local."

-Annemarie Mol, *the body multiple: ontology in medical practice* (2002)

Introduction

I would like to start by offering a description of Sunshine. Imagine, if you will, that you are seeking out harm reduction services for the first time. You have likely come with a friend--someone who has been here before, someone you trust. It seems unlikely that such services could exist in Florida, given the legislation around substance use and overall resistance to social services in the state. Nevertheless, you give it a shot—hoping it's not some sort of sting operation.

You show up to a mostly empty parking lot that sits on the east side of town. When you arrive you see a few people milling around what looks like a ten-passenger van- parked across three parking spots. It has been wrapped with Sunshine's logo, and you notice the inside of the van has been outfitted with an examination table, a portable sink, and shelves. The van is also stuffed with supplies. Boxes of syringes, alcohol wipes, snacks and drinks are practically pouring out of the back of the van. In front of the van sits a long white folding table, stacked with more supplies. You see someone in an orange shirt with the same logo that is on the van printed on the

back. They're hovering around the supply table—you assume it is an employee or volunteer—they are packing supplies into an unmarked, drawstring bag.

In front of them sits another long white folding table, this table has three people sitting at it, each with laptops in front of them, and chairs across from them. They are clearly there to receive people. Two of these volunteers are talking to people who also are here seeking their services. You think you vaguely recognize one of the people at the end of the table. The center seat at the table is left open, and the volunteer sitting there smiles at you and waves you over.

You hesitantly sit down as they welcome you and ask you how you are doing. They comment that they like your hat, it has the logo of your favorite sports team on it—they love them too. You talk about the season for a while before you mention that you have never been here before. The volunteer smiles, gives you their name, and talks you through the enrollment process. They tell you and they are going to ask you some questions and as you motion to pull out your license, they stop you. They tell you that they do not want to see your license, in fact, everything that you will do here is anonymous, they do not even want to know your name, unless you have a pseudonym you would like to be called by.

The volunteer continues with your enrollment. They ask you the basic stuff, like what your racial, ethnic, and gender identities are. Then they move on to asking you about your use. You tell them what you have used in the past month, a little heroin—that you think was probably fentanyl—and some meth. You have smoked a little pot too. While you are talking, they are smiling and nodding, leaning in and listening intently, noting everything down on the form on their computer.

They ask about how often you inject and if you use a new syringe every time. You inject a few times a day, in truth you are trying to quit, but it has become difficult to do so recently.

You have just been stressed, and you do not have the time or support to go through withdrawals right now. You try to use a new syringe every time, but it is hard. Syringes are hard to find, and you do not really have the funds to buy them online. You have tried the pharmacy, but they will not sell them to you, and to be quite honest, you feel embarrassed every time that you are rejected by a pharmacist in a line full of people waiting for their heart pills and antibiotics.

While you are talking, they mention a few things that you could do to help, if you are ever in a pinch. They suggest other ways to safely consume if you do not have a clean syringe. They also tell you about how to clean your injection site to prevent abscesses. That reminds you, you have a small abscess on your arm, and you are not sure what to do about it. You show them the sore and they take a look. They refer you to an on-site clinician who walks over and examines your arm carefully. You talk with the physician for a while and they dress your wound. Before you go, they give you a prescription and recommend home care instructions, like applying a hot compress and keeping the infected area clean.

The volunteer moves on to asking you about what supplies you would like. They show you an example of each product they have. They have syringes, of course, and in multiple sizes too. You tell them you usually use a thin, long needle. They recommend a 31 gauge, ½ inch needle. It's Easy Touch brand– you like Easy Touch– they just seem to work much better than some of the other brands on the market. They also show you a bright blue tourniquet, a small tin cooker, and some cottons. They have tiny bottles of sterile water and saline. This is helpful, you usually try to use filtered water, but you know sterile water is probably better. They also have hundreds of boxes of Narcan– the nasal spray kind.

They pack all the supplies into a bag for you, while you return the used syringes you brought with you to the big red sharps container that is sitting to the side of the enrollment table.

When you come back, they give you a snack, some juice and a muffin. There are also condoms sitting in a jar on the table and you grab a few of those. Before you are about to leave, they give you a booklet. It has information on safe injection practices, and numbers for all of the recovery programs in the area. It also has information on food banks, shelters, and crisis services. They remind you that they will be there every Thursday for five hours and wish you a good day before you leave.

Since you started injecting, you have never felt cared for by any sort of medical or social programs. When you go to the hospital, you hear the nurses calling you a "junkie" behind your back, or not taking any of your claims seriously. You are leaving kind of surprised. You got what you need, and you were treated well. You have supplies that will help you stay safe, information and resources for the future, and a smile on your face.

This is what a typical first visit to Sunshine looks like for someone who injects drugs. This section is meant to provide a mental and emotional picture of what it is like to come to the harm reduction space for the first time. The remainder of this chapter focus on the "sitings" that comprise the physical, geographical field site described here.

Siting the Local

The previous chapter established Triggers as an object. This chapter establishes the "local". The point of this chapter is not to simply describe my field site as a specific, geographical location (though, I did that too). The point of this chapter is instead to "site" the local, to elucidate how the local is being "done". This chapter draw heavily on a 2017 piece by Emily Yates-Doerr in which the author asks, for the ethnographer, "what is a site?" (Yates-Doerr 2017, 381). Whereas anthropologist generally localize their site/s to the geographic locations in

which their research projects take place, Yates-Doerr suggests that the local is "ontologically partial" (379). What is "local" depends on the questions the ethnographer asks and how they author answers. Instead of assuming the local as geospatial place or time-space Yates-Doerr instead proposes "sitings," the places and times in which fieldwork is portrayed into being. "Ethnographic siting unsettles the division between representation and field site, underscoring the iteration built into ethnographic practice and challenging an assumed ontological coherence of things" (381-382). Most importantly, "siting" unsettles the "Euro-American concept of perspective" insisting that the world does not simply exist to be known but that how we know and portray worlds shape what ways and worlds matter (382).

Similarly, Moore (2004) enacts "scenes" in his work on people who use drugs in Australia. Contesting the frequently used (and now somewhat out of date) concept of "subcultures," Moore ethnographically captures how space, time, and variation contribute to the scenes in which substance use takes place. Further, Moore challenges ethnographers to move "beyond subculture" to consider how the concepts we bring into the field, shape what we see in the field. "Concepts shape how ethnographers conduct their fieldwork, helping to structure what they 'see' in the ethnographic field" (204). I suggest unsettling our concept of a field site through the practice of siting will help us to better understand the ways in which substance use Triggers and harm reduction interact.

Siting is reminiscent of Niewöhner and Lock's (2018) concept of "situated biologies." Situated biologies seek to locate bodies, or biologies, in a specific place and time. For Niewöhner and Lock, local biologies are just one example of a biology that is situated locally. Sitings can extend this discussion in two critical ways. First, siting gives the capacity to locate work in specific "places" that are not always geographically local, but that in some way have the capacity

to shape these sites. For instance, later in this chapter I discuss harm reduction, which at one capacity informs the local site–at Sunshine we practiced harm reduction. However, the harm reduction siting is also much larger than the local site and is part of a global network of health activism and politics. In this way, siting offers a broader lens then physical context, but is about what is drawn to relevance by the ethnographer. De-centering the "site" as not only physical ontologically challenges understanding of what a site *is.*

A second way to think about siting is through its capacity to unsettle "Euro-American" notions of the body and to locate theory as grounded in local practice. Siting can situate theory more locally, to provide the ability to speak to complicated local problems that theories often do not have the capacity to fully grasp. Take, for example, embodiment theory in anthropology which posits that the body is the "subject" of culture, a theoretical pathway for culture into the body (Csordas 2002). Such an approach, where the body is the subject of culture, and often social and political phenomena (Scheper-Hughes and Lock 1987), tends to lose sight of the physical body. Instead, the individual body is representative of the social and cultural pressures that exist near it. Siting provides a way to link theory and practice more concretely, and how such local practices, for instance, become embodied by reimaging notions of the body and how one can become embodied. Siting challenges us to think of how practices are situated locally, and within broader social, cultural, or institutional forces. This chapter attempts to show the utility of applying a siting approach to understanding the "local."

In this section I discuss several "sitings" that compose my field site. I discuss the three "sitings" that comprise this work. First, I discuss the War on Drugs and how the national becomes local through practices surrounding the illegality and morality of substance use. Second, I discuss the opioid crisis and biomedicalization of opiate use and treatment. I discuss

how the opiate crisis has impacted Sunshine and its participants. Third I discuss the last "siting," which details harm reduction in Florida and the places I spent most of my time during this project. I end the chapter by discussing how the local is done shapes how Triggers are practiced in the harm reduction context.

Siting 1: The War on Drugs

The War on Drugs is a political war which effectively criminalizes individuals who use drugs. Famously declared by Nixon and championed by Nancy Reagan's "Just Say No" campaign, the War on Drugs in the United States has turned substance use into a punishable offense. Drug laws, however, were not invented in the 1980's. Drug laws have existed in the United States since the late 1800's targeting and criminalizing racial and ethnic minority populations. Today 1,155,610 people are in prison for drug law violations. Of those individuals, a quarter of people arrested for drug related crimes are black, despite making up only 13% of the US population and selling/using drugs at relatively similar rates to their white counterparts (Drug Policy Alliance, 2022). Scholars of the War on Drugs have noted the impact of its policies on our nation. Jensen et al. (2019) note that from 1986-2004, the "early years" of the drug war, there were many impacts of the War on Drugs on what they call the "civil domain".

> "[The authors] witnessed a tremendous increase in prison construction and capacity that drained resources from other areas of potential government spending (e.g., education and health). This development was accompanied by diminished life chances for members of economically disadvantaged groups and classes. There were tremendous increases in incarceration rates for ethnic and racial minorities and concomitant high rates of joblessness and weak social bonds that led to diminished life chances in general."

Sunshine's participant population very much felt the effects of criminalization in their daily lives. I offer you an early moment from my time at Sunshine.

From my field notes.

I am sitting at the enrollment table in the parking lot. My back is to our mobile unit that carries our supplies. It's about 1 pm and participants are slowly rolling in. Tom (a regular) is eating a muffin and checking in for his daily assessment with a volunteer. I'm working with a new participant, going through the enrollment survey. Volunteers and staff mill around behind me, packing bags of syringes, alcohol wipes, and other supplies, sorting inventory, handing out snacks. I ask the participant about their history of substance use; before they can answer a local police officer pulls up behind them in a marked SUV.

The officer rolls down the window. "What is going on here?" He asks.
The participant in front of me physically turns inward, her shoulder hunch over, her face tilts down toward her lap, her eyes squeeze shut. She almost seems like she is trying to make herself so small that she might disappear. My heart races. I'm worried about our participants- preventing any conflict. Our site coordinator approaches the SUV to talk with the officer. He briefly explains our operation—and our agreement with the county to operate. The officer slowly, hesitantly leaves. My attention turns back to the new participant who is visibly shaken and sweating.

"Do they come around here often?" she asks.

Though Sunshine operates legally, with the cooperation of the county and local police, moments like this happened frequently. Officers would park in the same parking lot or drive through while we were serving in the area. While they never made any arrests at the site, their presence would leave participants shaken up, scared to seek our service for fear of repercussion or arrest. The War on Drugs, while a national (arguably, international) "war," is one "site" in which this project took place. However, the impacts of the War on Drugs are broader, and just as insidious, as criminalization.

It is common to talk about addiction as a chronic relapsing brain disease, in which the central problem of addiction lies in flawed biology, rather than corrupted morality (Leshner 1997). While there are debates around the usefulness of this framework (see for instance Heather et al. 2022), the brain disease model largely opposes what is known as the moral discourse of addiction in the US. A good example of the moral discourse can be found in media dating back to the 1930's. *Reefer Madness,* a fictional film from 1936, details the purported "dangers" of marijuana, or as they call it "the burning weed with its roots in hell." The film depicts "dopesters" who lure innocent kids, including the main character Bill, into the grips of "madness." It is difficult not to notice the gendered and moralizing language present in the film. For instance, Bill is seduced by an attractive woman who suggests that instead of smoking an (ironically) "innocent" tobacco cigarette he should smoke marijuana. The film remarks on the "terrible price" he pays for a "moment pleasure" including (but not limited to): debauchery, violence, murder, suicide, and hopeless insanity (Gasnier, 1936). The film depicts substance use as immoral and corrupting.

More contemporarily, an Australian anti-marijuana campaign depicts people who smoke marijuana using the "stoner sloth," a sloth with little perceived motivation to do schoolwork, hang out with friends, or really anything. This depiction of people who use marijuana as slow and lazy very much works to Other individuals who use drugs. Singer and Page (2014) elaborate on this idea in their book *The Social Value of Drug Addicts: Uses of the Useless.* On Othering, they note, "Othering is comprised of a suite of behavioral practices by in-groups, including stereotypic thinking, stigmatizing marking and bounding, social distancing, dehumanization, justification of oppressive dominant practices, and (possibly) commodification of outgroups" (Singer and page 2014, 16). This othering works to distance those in the "socially acceptable"

category from those in the "socially unacceptable" category. Further, Othering is a tool for the in-group to establish moral superiority. The practices of Othering were common at Sunshine.

From my notes,

Two kids ride around the parking lot on a scooter. They look to be about 7-10 years old. They ride past and yell "what are y'all doing here?" We don't have time to respond before they circle around and start yelling again, "crack heads!" They laugh as they ride away. Then they circle back again "crack heads!" Participants seem not to notice or at least don't look at kids.

These children are young, and may not yet even know what the slur "crack heads" means, yet, they reproduce violent notions of the War on Drugs as they zipped through Sunshine. This is of course, not their fault, afterall they are only children. Such experiences highlight how deeply embedded the language and politics of the war on drugs is in the US.

Here is another example from my fieldnotes. I'm talking with a participant I had a lengthy discussion with the week before. We talked about his hopes and dreams, and how he was making some positive changes in his life. He had finally gotten back to a place where he was able to consistently pay his car payment, had a place to live, and was starting his own company. He was in the process of starting Hepatitis C treatment. This conversation is after a weekend he spent with his family.

I walk up to him as he approaches our table. He's looking down- not greeting us with a smile like he usually does. I welcome him and follow up with him after our talk last week. He tells me that over the weekend he went to a family party at his mom's house. Got in an argument with his sister, who he says attacked him. He swears it wasn't his fault. He now seems to be struggling (as opposed to his positive attitude only a few days ago). He tells me when they were arguing his sister yelled at him, "You have HIV and Hepatitis C!"

He says he yelled back, "I only have Hepatitis C and I'm working on getting treatment!" He looks defeated. You can tell he's saddened to hear her say things like that, and the things that implies about him (that he's somehow "dirty" or less than). At the same time, I can't help but to notice he seems to have a sense of pride as he tells her that he's working on HCV treatment (a big step!). He's trying to do better for himself and his health. He cares.

Participants were often stigmatized by outsiders, unknowingly creating a sense of othering for Sunshine's participants. However, Othering often also happened on the inside. Participants would often refer to themselves as "junkies" or "useless". One participant, who has now transitioned to a residential treatment facility and at the time of writing has been sober for almost two months, remarked that any Narcan used to reverse an overdose he was experiencing would be a "waste." Participants at Sunshine very much internalized the moral discourses surrounding their use.

Sometimes, participants used these discourses against each other. In our interview, Gerrit elaborated his dislike for "junkies."

"…you don't want to have junkie friends because junkie friends are horrible and they are not real friends. They just wait for a chance to steal from you. Because that's what junkies do. So, I hate junkies."

And again, later in the interview, he distinguishes between the "regular person" and the "drug person."

"I can see in people's actions and the way they talk when the drug takes over their body, I count it as a regular person, and then the drug person. And the drug person is a horrible person, they will do anything for the drug. And the drug is all consuming. Their whole life is about the drug. They go to work for the drug, if they go to work, they go to work for the drug. They wake

up and they try to make money for the drug. Everything is about the drug. And then the regular person is what's hidden behind that person. And most people, you never see the regular person. You just see the drug person. And if you look at them, and you're talking to them, you can tell they're not even listening to the words you're saying they're just thinking about how they can get drugs from you."

Siting provides a way to think through the competing dynamics of this quote. In one sense, this quote provides a look at a very othering attitude and speech. The "drug person" is not a "regular person." In another it highlights how such othering draws on notions of productivity under a capitalist regime (not being productive enough) and being caught in perpetual cycles of drug seeking and wanting (incentive salience). Siting situates the body at the center of cultural values of productivity and pleasure, and embodied experiences of substance use Triggers. The sites are not near in geography, but manifest in a localized (sited) body.

I do not use this quote to point to a hostile Othering environment at Sunshine, in truth, because there was not. At Sunshine, despite what people might have said about "junkies," it was quite a peaceful and cooperative environment. I use this point only to illustrate the prevalence of the moralizing discourses of substance use even amongst people who use.

The first siting details some ways that the War on Drugs and moral models of substance use in the US has become part of the local landscape. It is omnipresent, in far more daily interactions than were recounted here. Many everyday conversations with participants included asides about court dates, or remembering time spent in jail. Moralizing discourses of substance use and addiction taught generations how to think about people who use drugs, as bad, or dirty, or simply "crackheads" rather than people who deserve dignity and respect. Further, this impacted their daily actions.

Pharmacists in Florida can decide who they sell needles to. Participants faced widespread discrimination from pharmacists who refused to sell them needles, suspicious of what might be done with them. One volunteer, a pharmacist himself, recalled the hesitancy of his colleagues to provide needles to injection drug users. Many, he noted, were morally opposed to injection drug use, and thought they might be able to stop it if they didn't provide needles. Undoubtedly, this has contributed to participants re-using or sharing syringes. The resulting embodied structural violence (infectious diseases, abscesses) is one of many manifestations of the stigma injection drug users face as a result of the War on Drugs and United States discourses on morality and substance use. The next siting details a different approach to drug use, which prioritizes health and the Opioid Crisis.

Siting 2: The Opioid Crisis

The next "siting" for this project is within what has been termed the "Opioid Crisis" in the United States. The Opioid Crisis in the United States started in the 1990's and early 2000 and has largely been blamed on pharmaceutical companies which advertised opiates, like OxyContin, as "minimally addictive." Evangelizing by pharmaceutical representatives to physicians is attributed to the over prescription of opiates for patients experiencing chronic and acute pain (Hansen and Skinner 2012). This contributed to an increasing number of individuals who experience opiate addiction and subsequent rates of overdose in the United States.

Moreover, the Opioid Crisis coincided with an increase in heroin use in the white middle class, as heroin became cheaper, purer, and easier to access (Hansen and Skinner 2012). Today, there is much legislation surrounding the Opioid Crisis, including legislation around when and how opiates can be prescribed, which have fluctuated throughout the pandemic (Eaves et al.

2020). Additionally, buprenorphine and methadone have become household names in MAT, which many people, as we discussed in Chapter 4, rely on to treat their addiction to opioids.

The Opioid Crisis in the United States draws a stark difference from the "Crack Epidemic" of the 1980's. E. Summerson Carr (2019) writes of the "crisis,"

> "Whereas the portraiture of opioids commonly features an innocent white heartland disrupted by crisis that seems to come from nowhere, the representational economy of crack implicated a population that was already publicly imagined to be plague/plagued by any number of pathologies and social problems." (164)

Carr calls into question the use of the word "crisis" as it "projects urgency" (163). While she acknowledges the importance of urgency, after all, many lives are at stake, she questions the immediacy this term brings. A crisis begs action. An Opioid Problem, while sounding less severe, suggests perhaps a different way to look at opioid use in the United States, which "allow[s] for deliberation, debate, exploration, experimentation" (164). Carr argues that the use of language here effectively situates how we approach our work. That the sense of urgency crisis portrays might cast off critical engagement with the phenomenon. She writes that where an epidemic "is a way of figuring a problem relative to population rather than historical situation," a crisis projects a starting point, a problem already established, to which something must soon be done (Carr 2019). Whereas the Crack Epidemic was about solving the problem of a people, the racialized (read: White) Opioid Crisis is about solving an urgent problem happening to a people.

This provides the framework for our next siting. An extension of biomedical models for addiction, the Opioid Crisis poses both a medical problem and medical solutions for people that use opiates. Whereas the Crack Epidemic offered critique and criminalization to populations of color, the opioid epidemic is focused on both biomedical problems (i.e., the over prescription of opiates leading to an "addicted white middle class") and biomedical solutions (i.e., MAT and health policy initiatives).

As discussed in Chapter Three, the Southeast region of the US has been disproportionately impacted by the opioid epidemic. Year after year, rates of overdose in Florida have risen, especially in the COVID-19 pandemic (Project Opioid 2020). In Florida, this has impacted the treatment and policy guidelines, such as the establishment of harm reduction sites through the IDEA legislation. It's the Opioid Crisis and policy and treatment initiatives that led to the creation of Sunshine through the IDEA legislation. Further, Sunshine's mostly white population is very much a living depiction of the "portraiture of opioids."

Many of the participants at Sunshine came into their drug use through the opioid crisis in the US and prescriptions that started in a doctor's office.

Briefly from my fieldnotes,

Participant doing daily assessment. Sitting at testing table with Site Coordinator. I'm squatting on the ground next to the table, looking up at the participant and Site Coordinator while they do the daily assessment. I listen.

The participant starts to express interest in volunteering with us. Site Coordinator emphasized that we want peer volunteers at the site and that she should sign up. They continue her daily assessment and are making casual conversation when Site Coordinator asks about how she started using. Said she had back surgery and was left with extreme pain, which put her on pain pills. Said she didn't inject but her brother did. She wanted to prove to him that it's not that hard. That he could stop. So, she injected, to prove a point. She never went back after that. She too is a victim of the opioid crisis.

Over half (57%) of interview participants mentioned acute or chronic pain as part of why they started using or currently use. Further, often their prolonged encounters with opioids started with prescription opiates. Sometimes, participants didn't even have to experience chronic pain,

simply episodes of pain brought them into the opioid crisis. Sarah, a participant, who injected opioids and was a mother to “two beautiful children” mentioned that she started using after giving birth to her first child.

“Do you have chronic pain at all? From the C section?”

“No, I simply just use it for coping. It was never really for pain. And it really sucks. Because when I go to the hospital and I'm in pain, they're like, we're gonna give you 10 milligrams of morphine. That's just gonna make me cry. Because I feel it. I feel the pain because I do so much street drugs. Fentanyl.... There's nothing stronger than that. And that's all that's out here. And I tell people that haven't touched ‘Oh my god, do pills. Because you're gonna be on the floor. Like passed out, overdosing’ [from fentanyl]. I watched it happen to like 10 people, man. They get out of jail or rehab. They've just been clean for a little bit. And they want to buy their shit on the street. I'm like, it's either nothing and it's garbage, or it's gonna kill you. And you better hope somebody is there... And they think I'm talking shit. But it is so hard. I was so mad at my friend because he was the first one that OD’d in front of me. I did not know how hard it was to give somebody CPR. That is overdosing, like their jaws are locked. They're not opening their mouth. It is horrible.”

Though Sarah did not have continued pain, it was still in her encounter with the medical system where she started her opioid use. Further, her use complicates her current relationship to medical care. Seeking services, particularly if she is in pain, is difficult now that she uses too much for her pain to be effectively relieved in the hospital. Participants like Sarah could link their use directly to their experiences in clinics, operating theaters, and with health insurance policies.

Another participant, Darla, details the struggles with maintaining pain management within these systems of care.

"I've had my back issues pretty much all my life, scoliosis, hyper lordosis, disc degenerative disease, a lot, a lot of back pain all the time. And it just like back in '07-'08, I went and… the main reason I got hooked on opiates was because I went to a pain management doctor I got through Medicaid. I was going to him for like two years, three years. And then all of the sudden the insurance stopped covering it. And I didn't have no other insurance. And he was just like, you're cut. So, I just went to the street and started getting them on the street... And it's like, yeah, eventually. Sure. I would like one day to not have to do it. But you know, it's like, like I said, that's gonna have to take, you know, some kind of medical work. You know, it's like, until then, you know, I don't want to just walk around in pain all the time. Just suffer just because it's like, you know, but yet you're giving out pill-heroin? You given all this heroin out to the public. You know? How are you going to tell me I'm wrong? You know? I don't know. That's the way I feel about it."

Interestingly, as Darla points out, once the system shut down, they were left with nowhere else to turn but to street drug use. Getting any form or regular pain or maintenance treatment proved difficult for many participants. Some participants were trying to navigate both treatment and injection drug use at the same time. One participant exemplifies this struggle. From my fieldnotes,

Derek started using pills in 2010 when he could get meds from pill mills. Friend introduced him to drug. Had severe sciatica and went to pain management for 30mg Percocet. Once pill mills shut down, he tells me he went to the emergency room because he thought he was

sick. It turned out he was going through withdrawal. He tells me that he didn't even know/realize that is what was happening. He recounts his addiction accelerated after that.

After a later meeting, I wrote fieldnotes about my experiences with this Derek over time.

Derek sat down to do daily assessment. I had helped him do his initial enrollment and have checked in with him at every visit. When he first started coming, he had just moved from California where he was on MAT for five years (methadone). Was very successfully in that program, and then moved to Florida. In Florida, started injecting for the first time while also trying to get connected with MAT services in town. The first few visits said he was only injecting because the methadone he was getting was not yet at a strong enough dosage (at MAT they start low and bump you up every three days--- if you miss a dose, your dose is bumped back down). Upon first enrollment, was living at home with his partner and seemingly working toward full time MAT.

Slowly over next few visits things started to unravel. He had to go to hospital for an infection. Then husband—finding out about use—split. Derek started living out of his car, experiencing homelessness. Then, started taking meth. Ended up in the hospital again related to psychosis after using meth. Last time we talked he was still on meth and experiencing some psychosis. Wanted to stay and talk with staff for a long time. He said he didn't have anyone to talk with regularly, now that he's living alone in his car full time in a town where he knows few people. He mentioned that he needed to get an issue with health insurance resolved but stated that he was losing motivation to do anything about it. I tried to help with the health insurance ("let's call together right now") but that was unsuccessful.

Derek was a very important participant to me. He was funny, and kind, and outgoing and always made the staff laugh when he was around. Watching him struggle with the system was,

frankly, frustrating. Navigating treatment seemed quite difficult– and the more difficult it got the harder it was for him to maintain the progress he had made over the last five years before moving to Florida. He was not the only participant who expressed difficulties of navigating MAT.

I sit with Carl at the enrollment table chatting as he drinks lemonade and eats a donut. We talk about his job. He works in agricultural industry, in the fields all day. He tells me he must wake up at 4 am every morning to take the bus to the clinic to get his Methadone. He then goes to work in the hot sun for 8-12 hours. He's still injecting because by the time he gets home from work, the methadone has worn off– he has sweat it out, he says. He's asked the clinic for longer lasting treatments, but so far nothing has worked. He tries not to inject, but sometimes the late-night withdrawals are too unbearable. After he leaves, I talk with the site coordinators and they warn of the dangerousness of this practice. It's very easy to overdose when taking methadone and fentanyl. Next time he comes I'll make sure he takes extra Narcan.

My experiences with Derek and Carl left me shaken, for both of them had tried so hard to do the "right thing" and seek treatment. Yet, they ran into so many roadblocks to doing so. In the end, Sunshine became their only haven.

Sunshine, and all other SEPs in the state, are situated within the Opioid Crisis. Many of Sunshine's participants can tie their use directly back to their experiences in clinics, or after surgery. SEP are now on the frontlines of the Opioid Crisis, providing overdose prevention training and overdose reversing drugs. At the same time SEPs mediate, for some, the liminal space between MAT and regular injection drug use. Bodies are knotted between sites, representing the potency of pharmaceuticals (and their marketing practices) and the absence of adequate infrastructure in the aftermath of these practices. These SEPs are doing the "urgent"

work that the crisis necessitates. The local, this particular siting, is not bound geographically, but lies within an entangled web of practices surrounding the opioid epidemic in the Southeast US.

Siting 3: Harm Reduction

Its Fall 2022, and I'm sitting in a ballroom at a hotel on the coast of Florida. Just outside the room, tourist sunbathe at the pool in sweltering 90-degree heat at 9:30 am- unaware that inside the ballroom next to them is the historic first meeting of the Florida Harm Reduction Coalition. Inside the ballroom, 150 people sit listening attentively to the opening speaker. Tee-shirts representing different programs, badges showing corporate or university affiliations. I sit among my Sunshine colleagues, diligently scribbling notes as the opening speaker makes her remarks.

"Why harm reduction?" she asks. There is a pause.

"Why not?" she whispers into the microphone. Again, louder, "why not?"

The speaker is named Jane and she is a "nurse and momma to a beautiful 22-year-old injection drug user." Jane tells us of the moments that led her to harm reduction. After watching people who use drugs come into the ER "sick, poisoned, and dying", and her daughter become a user, she became desperate for a way to help. She recalled a fight with her daughter.

"She yelled at me 'what do you want from me?' and I yelled back, 'if you could just not die that'd be great!'"

She gets at the heart of what she does as a harm reductionist: "just don't die."

…

Harm reduction programs started in Europe in the latter half of the 20th century. Coinciding with the AIDS epidemic, harm reduction programs seek to help individuals who use

drugs or engage in other risky behaviors with the intention of providing safe alternatives and resources, rather than encouraging abstinence. For instance, harm reduction approaches to sex practices emphasize safe sex such as using protection, rather than expecting people to abstain from sex altogether. While the War on Drugs has criminalized people who use drugs and told kids to "just say no," the medicalization of addiction in the "era of the brain" emphasizes addiction as a Chronic Relapsing Brain Disease, of which people have no power over and should aim for complete remission from the disease (abstinence). Harm reduction programs differ in that they emphasize a third alternative to these approaches to substance use and addiction. They specifically focus on pragmatism, and engaging people where they are at.

Rather than expecting people to stop, they ask what can be done to make their lives better and their practices safer. While harm reduction recognizes that, for some, abstinence may be an ideal outcome, they don't expect people to stop. Rather they see risk behaviors on a spectrum from very risky, to safe/abstinence. These programs try to move individuals along this spectrum. Further, harm reduction, historically and contemporarily, is driven by the people it impacts the most. In 1984 a group of drug users in the Netherlands, *Junkiebond* (drug users union), helped to organize and start the first Syringe Exchange Program (SEP). Harm reduction programs rely heavily on their users needs and inputs, often employing "peers" on staff to offer services, input, and direction for harm reduction organizations.

Harm reduction programs also use low threshold approaches to servicing their population. One phrase often heard in harm reduction circles is to "meet people where they are at." In other words, the mission of harm reduction programs is to make being safe as easy as possible for its affected populations. For instance, mobile syringe exchange programs meet people in the communities they actually live, rather than making them go out of their way to

access services. Often these services are also free or low cost, making them accessible. Finally, harm reduction is based on compassionate pragmatism, rather than moral idealism. These programs ask, "to what extent are the consequences of these individual behaviors harmful or helpful to the individuals and to other who may be affected?" and "what can be done to reduce these harmful consequences?" (Marlatt 1998, 57). Rather than imposing moral judgments, harm reduction upholds a "shit happens" attitude, acknowledging that individuals are on their own life course, and deserve love and compassion, no matter what (Marlatt 1998).

Here, I return to Jane.

"The principles of harm reduction all start with action words. Harm reduction *accepts* that licit and illicit drug use is part of our world... Harm reduction *understands* drug use is complex… harm reduction *establishes* quality of life…" she trails off.

"Harm reduction is a set of *actions*." She emphasizes. "Acting. Practice…*love* is also an action word…"

Sunshine employs harm reduction strategies to promote "drug use with dignity," as the director often retorted. Harm reduction is not just a theory but a *practice,* as Jane tells us. A practice of understanding, acceptance, and love. To understand the local, we need to understand how harm reduction informs the locality.

Siting harm reduction also helps us to understand how the local can become biologically meaningful. Syvertsen (2022) in her book *Dangerous Love* understands love to be a protective factor against certain risks that accompany being a sex worker and injection drug user. For instance, despite being at risk for transmission of sexually transmitted infections and HIV, non-commercial sex partners offer vital emotional and physical care (housing, food, emotional support, etc.) to their sex-working counterparts. Syvertsen describes the notion of "dangerous

safe havens," or places in which there is a real potential for harm, but that also provide a sense of love which functions as a means of resistance to such harms. Love, she posits, is a "creative response to risk" (6). Further, she notes "harm reduction articulates with a framing of love as social analysis and political practice that can reorient our priorities to concrete action" (20). Harm reduction, choosing love, at once reframes how we understand our population as a population deserving of care, and is a political choice with embodied implications– to quote Jane again, "just don't die."

As I describe through the rest of this section, harm reduction is enacted in small and big moments all of which are meant to demonstrate radical love and acceptance and often prevent great bodily risk and injury. Here I offer some moments of harm reduction from my fieldnotes without great interruption. I hope that as you read them, you let the moments come to life for you, to imagine harm reduction for yourself.

May 13th

I Look over at the enrollment table and see two women hugging and crying together as they talk to Site Coordinator and a volunteer. Site Coordinator and volunteer lean in, nodding and listen intently. Later the Site Coordinator tells me that these women while doing their daily assessment started to talk about the three OD's (overdoses) experienced within their community. 15 OD's in the last year, 3 in the last week. They have lost that many people. This is a space to process grief for many. For a lot of our participants, they have no other outlet. They express that they're not just upset about the three deaths this week, but it's a mirror for their own lives. They tell stories about their friends' lives.

May 2nd

Site Coordinator sits with participant, one on one, doing daily assessment. Nothing remarkable, other than housing situation—dealing with government housing. Initially was in government housing program but lost her home when she went to a domestic violence shelter to get away from abusive partner. Participant is eligible for housing voucher but can't get housing at low-income housing apartment. They keep telling her to wait for a letter in the mail to get apartment- but once they send letter, she only has 48 hours to make an appointment and claim the housing. However, it takes more than 48 hours to receive letter. i.e. she received a letter on Saturday (post marked) for an appointment scheduled for Friday. Participant tries to follow up with apartment, but they turn her away and tell her it's too late—put back on 6 month waiting list.

Site coordinator makes multiple attempts to call and follow up with housing authority and apartment complex to no avail. I observed as he sat for about 30 mins with her, shuffling through paperwork, trying to sort out housing. But he also bonds with her. They just chat, like to old pals. Talk together about having lived in New York City. They laugh about the oddities of the city and reminisce about the food they miss.

May 23rd

Participant presented for regular daily assessment. Participant asked for 10 boxes of Narcan. Staff inquired why so many (participant usually doesn't get that many). Participant told staff member that he got a new roommate and they're going to celebrate. Indicated that they were planning to OD– potentially multiple times.

May 9th

Person from local recovery center came to pick up Narcan but had no idea how to use it. I gave a short Narcan training demonstration. I search the van for our overdose training kit and pull out the small white, nasal spray cannulas we have. I stand with her in the parking lot as I show a visual demonstration on how to use Narcan– first use the applicator to spray up one nostril, then do chest compressions and rescue breathing. Two minutes later do the same with the other nostril. I motion this with my hands and the demonstration Narcan. She was surprised at how to use it and expressed that the entire staff (of addiction professionals) probably need to be trained as well.

Additional fieldnotes from that same day

When there was some downtime, a conversation about how exchanges in other states give out bubbles and stems (safe smoking materials) started amongst the volunteers/staff members. This practice is not legal in Florida. One volunteer expressed hesitancy about these programs providing these materials. Saying she understands the logic of giving out needles (to stop the spread of HIV/HCV) but said safe smoking kits don't really stop spread of infectious diseases. We discuss these reservations as a group. Volunteers and staff members talk about the importance of safe smoking kits for reversing other kinds of health issues. "If you're not smoking out of glass, what are you smoking out of?" (i.e., things like plastic can greatly damage people's lungs, etc.). Proving safe smoking kits is trying to reduce the disease burden of a different diseases. I'm not sure she's convinced, at the end of our conversation, but she does seem more open to having these discussions and considering it. My takeaway is that social changes happen here, even amongst the staff.

June 1st

I'm noticing the behavior of volunteers/staff toward participants. Everyone greets participants with a hardy "welcome" or "I'm happy to see you." Or "glad you're here." Very much a welcoming environment. Hugs, high fives, and fist bumps are not infrequent. We care, we ask about your life, your loved ones, we follow up. Just now, a woman walked up, nervously, "I haven't been here in like a year." A volunteer enthusiastically greets her, "well welcome back!" a big grins spreads across her face. The participant smiles, relaxes, and sits down.

Harm reduction happens in many ways. The moments I offer here are meant to show the ways that harm reduction is enacted. Sometimes, it is sitting with participants in grief– and bearing witness to tragedy. Other times it is becoming a social worker and activist all in one to help participants navigate the public housing system. Harm reduction can also be far more straight forward, by providing Narcan and training people on how to use overdose reversing drugs. Yet, harm reduction is also about action and advocacy. Change, it seems comes through having hard conversations about controversial topics and educating the community on the importance of the different harm reduction strategies available. Harm reduction is *enacted* through these series of practices. Simply providing safe injection supplies is just one part of the larger practice of harm reduction. The examples provided here show how harm reduction is *practiced* with the intention to build community, to be there for PWID, and to help. This third "siting" situates harm reduction at the center of "the local."

Conclusion

The goal of this chapter was to establish the local. The War on Drugs provides a backdrop for the political and social environment of substance use in the United States. I provide

examples of how the War on Drugs was enacted at Sunshine. First, through the presence of unnecessary law enforcement, which often scared participants—even to the point of not returning to the exchange. Related to the War on Drugs are broader discourses of morality and substance use in the United States. Often, these moral landscapes were enacted at the site, with participants and passerby's using language like "junkies" and "crackheads." Language and practice, as Carr notes, are intertwined. "To be a good practitioner is to be a sophisticated rhetorician, to know the history and anticipate the effects of the terminology one uses" (Carr 2019, 165). The effects of this structural violence were surely embodied, through the actions of participants who come to view themselves as useless, or pharmacists who morally oppose providing clean syringes for injection drug users.

The Opioid Crisis is also relevant to policy and morality. The state of Florida is still experiencing the impacts of the opioid crisis, with record number of overdoses annually. A crisis painted as particularly impacting a shocked, white middle class very much resembles Sunshine's population. Many of Sunshine's participants arrived at Sunshine through their encounters with the Opioid Crisis- and their prescription opiates. And still, as participants navigate their relationship with opiates and injection drug use, Sunshine provides a space to receive care in the interim. This nationwide crisis is particularly acute in Florida's syringe exchange programs.

A compassionate response to injection drug use, harm reduction programs seek to combat many of the embodied impacts of these the War on Drug and Opioid Crisis. Harm reduction is not just a theory, a way to think about substance use, but a set of actions. Harm reduction is, as Jane notes, a practice of love and community, which is very counterintuitive the War on Drugs and moral models of substance use. Further, harm reduction presents a set of practical strategies that attempt to alleviate the impacts of the Opioid Crisis in the United States. Harm reduction,

however, is not just about providing lifesaving supplies. Sometimes it's listening to participants, educating the public about overdose prevention or the necessities of safe smoking supplies. Practicing harm reduction can sometimes be helping someone navigate bureaucracy. Harm reduction is a site of care.

To talk only of the simple, geographical space in which this project took place would be to ignore all the other "sitings" that are also local to this work. Treating the local as "ontologically partial," the goal of this chapter was to give greater context to the contexts that the remainder of this text discusses. Further, sitings help us to frame the ways we talk about and write about bodies in anthropology. Siting grounds concepts such as practice and embodiment locally. This sort of situating offers us better ways to think through *how* structural forces become a part of local bodies. The following chapter focuses on Triggers in harm reduction and suggests how Sunshine's programs can become meaningful to bodies.

CHAPTER SIX:

TRIGGERS IN HARM REDUCTION

"It is hard to think of any significant aspect of our lives that is not influenced by what we have learned in the past."

-David R. Shanks, *The Psychology of Associative Learning* (1995)

Introduction

Triggers don't exist in harm reduction. Or at least that is what my fieldnotes say. The previous two chapters have worked to unsettle notions of solitary objects and contexts. The goal of this chapter is to understand how Triggers become multiple by following them from everyday drug use to the harm reduction context. This chapter covers a wide breadth of time, sites, and theoretical development, and ultimately challenges us to think through how such different enactments of Triggers matter. I show how I came to think about the ways Triggers "disappear" in harm reduction and how this disappearance is meaningful to Sunshine's population.

It is worth discussing here a bit more about the population sampled here. Over 80% of the people discussed in this chapter inject some form of opiate (heroin, fentanyl, or prescription opiates). They are likely seeking out Sunshine's services because they do not otherwise have access to syringes, health care, or other critical resources. Further, they are often experiencing infectious diseases (44% have HCV and 2% have HIV), or other bodily injury related to injection drug use such as abscesses and other infections. Almost half of participants are homeless or

unstably housed (approximately 43%). Participants coming to the exchange often are not only seeking out sterile syringes, but also potentially lifesaving care.

In addition to the need for care and resources, participants are often coming to the exchange with significant trauma and need for social support. I do not include many stories of trauma here, out of respect for the privacy of participants. Some things, I think, are better left in the field. I frequently sat with participants for hours and I listened to stories of loved ones they had lost or horrific accidents they had experienced. They also had big dreams. Dreams of stopping substance use or finding stable employment and housing; dreams of being able to get custody of their kids or reunite with family members. Participants at the exchange were (and are) much more than their injection drug use.

In this chapter I discuss different ways in which context matters. It is equally important to note the contexts that cannot be covered here; the contexts that each individual learned substance use, or contexts in which they carry out their daily use. Such sites are equally as important as the harm reduction context that is discussed throughout this chapter. However, this project could not go everywhere, as such, T/triggers it seems are our best way to understand how these everyday contexts interact in harm reduction. The following section details some of how individuals learn to associate triggers and context.

Associative Learning

Theories of learning elaborate how contextual factors become cues. "…*associative* learning is at the heart of any organism's psychological capabilities, because it endows the organism with the ability to adapt its behavior as a result of acquiring information about associations or contingencies that exist between events in its environment" (Shanks 1995, 2).

Associative learning is an event in which "…the environment (or the experimenter) arranges a contingent relationship between events, allowing the person to predict one from the presence of others" (Shanks 1995, 2). Thus, associative learning, the type of learning proposed by Pavlov by way of his hungry dogs, elaborates *how* contextual factors becomes cues.

It is important to note here that context is of course relative. Depending on the perspective of the individual and the researcher, context could be in the brain/mind, a cage, a laboratory, a city, or the world. An ontological way to think about context can relate more closely to the sitings framework discussed in Chapter Five. I suggest that context, much like the field site, is not always bound to physical space. Context can be sited by theoretical constructs, socio-political dynamics, and cultural/institutional factors. Here, I understand context as the relative sites that humans occupy when in pursuit of substance use, and in particular, harm reduction.

Principles of associative learning illuminate how context connects to cues. As cues are created and encountered in context, they become associated with substance use and its various mental and physiological consequences. Cue exposure research highlights two different dimensions of associative learning. The first is classical conditioning. As Tiffany (1995) explains,

> During a history of drug use, certain stimuli, such as environmental contexts or drug paraphernalia, reliably accompany drug administration. It is typically assumed that these stimuli, by virtue of their pairing with the drug unconditioned stimulus (US), become conditioned stimuli (CSs) capable of eliciting conditioned responses (CRs). From this perspective, addicts' reactions to presentations of drug-paired stimuli in a cue reactivity study are considered CRs. (47)

Thus, for many who research cue reactivity, interest lies in this proposed learned response to stimuli as a way of understanding why addiction is so compelling. Cues present a reality in which simply avoiding drugs or overcoming withdrawals are not enough to detach someone from

patterns of use. Instead, associations between cues and possible future instances of use must be managed.

Managing cues is difficult as they often present as a complex series of stimuli and action leading toward use. Operant conditioning, which is an associative learning paradigm based on positive and negative reinforcers, accounts for a complex understanding of the role of cues in substance use. To illustrate this, I return to the example given by Troisi (2013) used in Chapter Four. Troisi provides an example of someone seeing an "open" sign for a bar, and then they are led toward use with additional operant cues, walking into the bar, sitting down, drinking (a reinforcer), all contribute to a string of complex actions leading toward use.

Interviews with participants highlighted similar patterns or reinforcement, where signals and actions combined together lead to enacting opportunities for use. I return here to snippits from my interview with Gerrit, my first interviewee. For Gerrit, his particular "not-ritual" highlights this same complex pattern that Troisi (2013) describes.

"So, is there like a certain thing that you do right before you use? Like is there a certain ritual you have maybe like leading up to use?"

"I'm not a ritual type of person. I know a lot of other people are into the ritual of it. I just want to get it into me as fast as I can. Actually, most the time I pay [sex workers] to come do it for me. Because I know I live next to [sex workers] and they have a lot of experience shooting people up. So, I'll pay them a hit to come shoot me up. And if I can't do that, then I will put in my vein or put in my muscle and go on without it."

"And so, is there anything happening right before you use? Like paint a picture for me of the context."

“Well, I have a table that's covered in drugs and needles and everything. All that I need. And I go to that table and search for the drug that I need for that morning. And I get them all ready. Or I get one. I'll crush up a Xanax snort that. Even though I know it's not 100% bioavailable, I snort it. Then I start getting my heroin ready. So, then I'll put in a spoon, put water in it, stir it up. Burn it if it needs burning. Do not burn if it does not need burning. And then pull it up and call over. If they don't answer, then shoot it into my muscle.”

For Gerrit, a series of actions lead him closer to use. Approaching the table (the open sign), crushing up the Xanax (reinforcer), preparing the shot, calling for assistance with the shot, taking the shot (reinforced again). This example highlights a more complex understanding of substance use cues that lead to drug behavior. The initial cue, the table of drugs, was also followed by a series of operant responses which led closer to and reinforce use.

One might also look at negative reinforcement of substance use. “Negative reinforcement of substance use means that an aversive outcome is reduced by the use of the substance, making it more likely that substance use behavior will occur again in the future” (Blume 2001). For instance, withdrawal or having to deal with difficult emotions might be considered negative reinforcers for use. Such negative reinforcers can be quite powerful and keep people in cycles of use. For instance, many opiate users are bound by the negative reinforcement of chronic pain.

Moreover, reinforcers also often work in concert with other processes that perpetuate use. Gerrit makes this clear with his discussion of how he feels right before he injects.

“Like what does it feel like right before you're going to use it? Like when you expect to use it –right before. What does that feel like?”

“It actually makes you almost not sick, right when you're about to use, like the sickness almost goes away completely. Because you know, you're going to use like, so the sickness is

halfway in your mind, which I found very interesting. Because if you go to jail, you're like, you become less sick than you are if you're on the outside. Because if you're on the outside, you have access to it. Which makes you sicker because you know, you have access to it. If you're in jail, you don't have access to it, you know, you don't have access to it, which makes you less sick."

What Gerrit experiencing is likely several overlapping processes. First, anticipation of use interacts with homeostatic mechanisms in the body– the body, having associated certain signs and signals with use, is preparing for injection. This framework proposes that encounters with cues encourage a state of situation specific tolerance in which drug related cues trigger physiological processes in the body which stimulate changes in anticipation of use. This proposes that cue encounters are useful in maintaining homeostasis of long-term substance users (Smith 1990, Siegel 2005).

Second, Gerrit describes varying states of withdrawal. Feeling sick before you use and between long periods of use, known as "withdrawal," is a potent negative reinforcer for people who inject drugs. Negative reinforcement has been called the "dark side" of addiction, with researchers proposing that there are neuroplastic changes in the brain leading to recruitment of "anti-reward" systems (Koob and Le Moal 2005). Negative reinforcement was a common subject for participants in this project. For instance, a common refrain from participants related to their use was generally some variation of "I do it just to get un-sick." Positive and negative reinforcement are both understood to be important in the maintenance of long-term substance use (Wise and Koob 2013). One way to think through this is in your daily coffee routine.

When you first started drinking coffee you may have enjoyed the taste, and the tastes that frequently accompanied it. The whipped whole milk on top of your nutty cappuccino, or the sugary, vanilla cream on top of a regular cup of coffee. You may have taken pleasure in the small

ritual that surrounded your use. Scooping four imprecise tablespoons of coffee into the filter and preparing the machine to make your coffee. Or the five minutes of silence as you boiled water for your French press, while the day is still quiet. Maybe it's more social for you, and you enjoy grabbing Starbucks with a friend.

Whatever your ritual is, if you're like me, you'll have noticed that over time there became less joy in the making and consuming of coffee, and it became more of a burden. A thing I *had* to do. And the side effects were not all that pleasant. It is now less that I *like* caffeine, but I *want* the caffeine. And if I don't have it at approximately the same time every day, I will get headaches and nauseous. But, if I have too much, I will get anxious. When I walk past a coffee shop, I am instantly attracted towards it, thinking how nice it would be to get a cup of coffee, no matter how overpriced or how terrible it might make me feel. My consumption now is not so much about the joy in the act of consumption, but the attention and time dedicated to getting the coffee and the *need* to consume.

Once again, it is clear that tolerance, withdrawal, positive, and negative reinforcement all play a role in the maintenance of my caffeine habit. The peace in preparing a cup of coffee or tea, and the joy in the flavors produces a subjective pleasure to the act. Yet, the withdrawals (headaches and nausea), and the dependence on caffeine to keep me awake evoke the "dark side" of addiction. Yet there is another important element here as well. Wanting, as discussed in Chapter Four, bridges the conceptual gap between these experiences. Incentive salience theory provides an explanation on how such experiences of "wanting" come to be.

Part I: Incentive Salience & Maintenance

It has been clear for a very long time that catecholamines, a class of neurotransmitters, play a distinct role in the neural basis of substance use. Dopamine, the neurotransmitter of interest, was at first proposed to be responsible for reward, and specifically the pleasurable experiences related to substance use (Yokel and Wise 1975). However, more recent studies have explored dopamine as a contextual neurotransmitter. Rather, dopamine interaction (explained by incentive salience theory) signals to us what is useful or important in any given context. In drug use, incentive salience theory proposes that the role of dopamine is to *sensitize* toward stimuli for substance use.

Incentive salience is a biopsychological theory of addiction that attempts to unite subjective experience with the psychological and physiological dimensions of addiction. "Incentive-Sensitization posits that addictive behavior is due largely to progressive and persistent neuroadaptations caused by repeated drug use" (Robinson and Berridge 1993, 249). This "neuroadaptationist" framework proposes that as drug use is increased, the brain, particularly the mesotelencephalic dopamine system, is increasingly sensitized to the drug through stimulation of dopamine neurons and interacting forebrain neurons that receive increased signals from dopamine and glutamate (Berridge 2022).

Robinson and Berridge (1993) propose that the attribution of incentive salience is what makes stimuli "wanted". As the brain changes in response to the repeated presentation of substances, it adapts and sets expectations for future substance use. In fact, it becomes hypersensitive to stimuli related to use and highly attuned to seeking them out. This theory proposes that substance use interacts specifically with perceptual systems that deal with attention and "wanting", which is why, after a while, drugs are less liked than they are wanted.

> Drug-associated stimuli become more and more able to control behavior, because the neural system that mediates 'wanting' becomes progressively sensitized. 'Wanting' evolves into obsessive craving and this is manifest behaviorally as compulsive drug seeking and drug taking. Therefore, by this view, drug craving and addictive behavior are due specifically to sensitization of incentive salience (Robinson and Berridge 1993, 249).

Recently a friend trying to kick his caffeine habit exemplified this as he was lamenting about his relationship to coffee, "I don't even feel like I get a buzz anymore, I just need caffeine to function." The incentive salience theory explains better what it is like to live with addiction—that perpetuated use is not centrally about pleasure or reward, but about wanting that drives attention and drug seeking.

Incentive Salience – Wanting – Triggers

Previous research in neuroanthropology has examined wanting and incentive salience through a biocultural lens. Lende (2005; 2012) conducted ethnographic research with adolescents in Colombia- comparing adolescents who attended a local school to adolescents who attended a local substance use treatment program. In addition to interviews and observation, Lende issued surveys to these students which assessed, among other factors, salience and substance use patterns. In other words, this study looked at the factors that led to substance use, the degree to which adolescents in this area used drugs, which drugs they used, and how salient those drug use experiences were. Lende found that, as Robinson and Berridge (1993) proposed, wanting, and *querer mas y mas* (to want more and more), fit ethnographically with how adolescents described their drug experiences. Moreover, the salience scale, meant to measure salience for substances, correlated well with addicted status, and other important risk factors for use.

This chapter seeks to pick up where these studies left off, particularly with the idea that, "future research should investigate how individuals learn to pay attention to certain cues and

decide to seek out drugs or not" (Lende 2005, 121). This chapter seeks to show the limits of wanting, the contexts in which wanting comes and goes, and the differing intensities at which this wanting presents itself. Additionally, I discuss how context and "cues" (triggers) shape experiences of salience. To do this, I employed an updated version of Lende's original salience scale (discussed in chapter 3) to measure participants experiences of subjective wanting. I also use data from interviews and observations that highlight how individuals express wanting in different contexts.

Incentive salience provides the neurobiological basis for addiction. Triggers, in one sense then can be understood as the stimuli which interact with the midbrain attention and perceptual systems that drive the incentive salience process. "A sensitized dopamine system is not hyper-active all the time, but rather momentarily hyper-re-active to particular cues or imagery of drug taking" (Berridge 2022, 78). It is these interactions with triggers that stimulate a sense of wanting.

Measuring Wanting

As indicated above, the subjective experience of incentive salience is more often expressed as "wanting." As Gerrit noted in his interview, wanting is "…like someone constantly flicking in the back of the head every second of every day. And if you go longer without a hit, that these flicks get harder and harder and harder. And that's what it feels like every day." Ethnographic interviews indicated that wanting and attention drove daily use for many participants. For instance, as discussed in Chapter Four, Winston vividly described how he wanted to use, and how such wanting made them feel (i.e., an "intangible pull").

To understand the extent to which this wanting mattered, I employed the Lende and Casper 2022 Salience Scale (discussed in Chapter Three). The scale asked questions like, “at times I have started to use and use without thinking about anything else” and “sometimes all I can think about it using.” The eight-item scale, like the original, sought to measure salience of drugs and drug use experiences (n=103, range 9 to 40, mean 28.2, SD 7.99). During analysis the scale was re-coded so that the lowest endorsement of salience was 8 and the highest endorsement was 40. A reliability analysis resulted in a Cronbach’s alpha of .847 for this scale. Additionally, a Cronbach’s Alpha value was calculated for each item if it was removed from the scale. All items, if deleted from the scale, decreased the overall Cronbach’s Alpha (See Table 6.1), indicating that each scale item contributes to the overall reliability of the scale. The distribution of scores was relatively normal, however there was a slight negative skew, and the distribution could potentially be considered multi modal (figure 6.1).

Table 6.1. Cronbach’s Alpha of Scale Item if Deleted.

Scale Item	Cronbach's Alpha if Item Deleted
Scale Item 1	0.825
Scale Item 2	0.835
Scale Item 3	0.837
Scale Item 4	0.83
Scale Item 5	0.842
Scale Item 6	0.832
Scale Item 7	0.821
Scale Item 8	0.811

The potential multi-modality of the distribution indicated that there may be some distinctions between salience scores and the groups of individuals who score low, in the middle, and high on the salience scale. I was interested if there were any correlations between salience

score and any other variable I collected, like time at the exchange or number of visits, or even by gender identity or drug of choice. However, there were no significant correlations found between salience score and other variables.

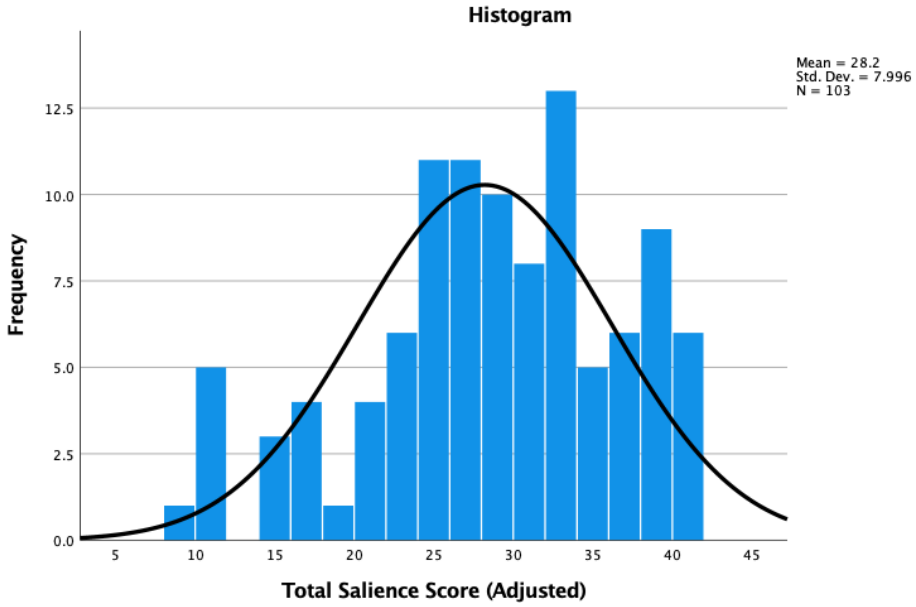

Figure 6.1 frequency distribution of adjusted salience scores.

To further interpret participant scores, I calculated quartiles for the sample, and created a boxplot to look at distribution along the median (figure 6.2). Individuals who scored within the first quartile (score of 24 or lower) were considered "low salience," individuals in quartiles two and three were considered "medium-low" (score of 25-28) and "medium-high" (score of 29-34), respectively, and individuals in the fourth quartile were considered "high salience" (scores above 35). Table 6.2 provides demographic information for each quartile. As Table 6.2 shows, most individuals in each quartile identified as white, non-Hispanic and straight/heterosexual. Gender was represented relatively evenly in each quartile. Additionally, there did not seem to be a

discernable pattern among substance use by quartile, most individuals in each quartile used opiates of some form.

Figure 6.2. Boxplot of salience scores where Q1= 24, Q2= 28, and Q3= 34.

But more can be done with this scale than just calculating scores. These scores can be useful for interpreting ethnographic data. Moreover, ethnographic data provides context for and a texture to these scores, to better understand what it means to experience high or low salience on a daily basis.

I was able to match 16 of the 41 individuals I interviewed to their salience scores. I used Nvivo (Version 1.7) to code individuals into their salience groups. I then coded their experiences of wanting by group. Interestingly, there were commonalities, by quartile, in the way individuals discussed experiences of wanting and their related substance use patterns. In the next sections I present case studied of participants who exemplify each of these salience groups.

Table 6.2. Demographic information for individuals in each quartile.

Q1 (Low Salience)	**N=27**		**Q2 (Medium-low Salience)**	**N=26**	
Racial Identity	**n=27**	**% (of quartile)**	**Racial Identity**	**n=26**	**% (of quartile)**
White	22	81	White	22	84
Black/African American	3	11	Native American	2	8
Native American	2	7	Multiracial	1	4
			Prefer not to say	1	4
Ethnicity	**n=23**	**%**	**Ethnicity**	**n=20**	**%**
Non-Hispanic	16	70	Non-Hispanic	14	70
Hispanic	7	30	Hispanic	6	30
Gender	**n=27**	**%**	**Gender**	**n=26**	**%**
Male	16	59	Male	13	50
Female	11	41	Female	13	50
Sex at birth	**n=124**	**%**	**Sex at birth**	**n=24**	**%**
Male	16	59	Male	12	50
Female	11	41	Female	12	50
Sexual Orientation	**n=27**	**%**	**Sexual Orientation**	**n=24**	**%**
Straight/Heterosexual	23	85	Straight/Heterosexual	20	83
Gay/Lesbian	1	4	Bisexual	3	13
Bisexual	2	7	Declined/Refused	1	4
Don't know	1	4			
Current drug of choice?	**n=27**	**%**	**Current drug of choice?**	**n=26**	**%**
Heroin	10	37	Heroin	6	23
Fentanyl	9	33	Fentanyl	7	27
Prescription opioids	2	7	Prescription opioids	5	19
Methamphetamine	5	18	Methamphetamine	6	23
Cocaine/crack	1	4	Upper and downer ("Speedball")	2	8
Q3 (Medium-High Salience)	**N=25**		**Q4 (High Salience)**	**N=25**	
Racial Identity	**n=25**	**% (of quartile)**	**Racial Identity**	**n=25**	**% (of quartile)**
White	25	100	White	23	92
			Asian American	1	4
			Multiracial	1	4
Ethnicity	**n=23**	**%**	**Ethnicity**	**n=22**	**%**
Non-Hispanic	18	78	Non-Hispanic	17	77
Hispanic	5	22	Hispanic	5	23
Gender	**n=25**	**%**	**Gender**	**n=25**	**%**
Male	12	48	Male	11	44
Female	13	52	Female	14	66
Sex at birth	**n=23**	**%**	**Sex at birth**	**n=24**	**%**
Male	12	52	Male	11	46
Female	11	48	Female	13	54
Sexual Orientation	**n=23**	**%**	**Sexual Orientation**	**n=24**	**%**
Straight/Heterosexual	21	91	Straight/Heterosexual	21	87
Bisexual	2	9	Bisexual	3	13
Current drug of choice?	**n=25**	**%**	**Current drug of choice?**	**n=25**	**%**
Heroin	10	40	Heroin	10	40
Fentanyl	10	40	Fentanyl	10	40
Prescription opioids	3	12	Prescription opioids	1	4
Methamphetamine	1	4	Methamphetamine	1	4
Upper and downer ("Speedball")	1	4	Upper and downer ("Speedball")	3	12

*All percentages rounded to the nearest whole number.

Low Salience Group

Of the 16 individuals I could match from score to interview, two individuals fell into the low salience group with scores of 14 and 18. These individuals reported using expressly for pain or other psychological symptom management. Barb had a salience score of 14 and exemplifies a low salience user well.

Barb is a 52-year-old woman who started injecting opiates to cope with physical pain after cancer treatment.

“I inject my medication. I don't do hardcore drugs, but this is bad enough, trust me. I got here by means of cancer. During my treatment, they put me on Dilaudid and Morphine. And then my body would build up a resistance and they'd switch me to Oxycodone. And then they'd send me back, you know, like, flip flop you so that your body didn't build up too much tolerance. Eventually, nothing was really working. They just kept me on the hydromorphone. But the government, when they started cracking down a few years ago [on opioid prescriptions], I don't think they realized how bad they hurt the people that really needed the medication, because I was managing without having to inject or do anything crazy with the prescribed medications. The combinations and the dosages that they were giving me were working just fine. I didn't abuse it, I followed my scripts to the tee. And all of a sudden, Monday, I go to the doctor, and they're like, we have to take you off this, this, this, this and this, and switch it to this. And it was considerably lower. Which basically put me in a point where I was bedridden. Like, I couldn't move most of the time. I mean, they used to have me on fentanyl patches with extended release morphine, with hydromorphone, and that managed my pain.”

“Are you still in pain?” I asked.

“Oh, yeah, I'm in pain every day. Yeah. But when they took all that way, I became bedridden. Well, there was a friend of mine that she was sick. And she told me that her doctor told her to do it. In retrospect, I can't believe a doctor would ever tell you to do this. But she convinced me that I needed to let her inject it. I told her no, because I know when I go to the hospital, and I'm in real bad shape, and they give it to me IV, I like it. I don't get high from it. I like it because I literally get out of pain for once in my life. And so eventually, she got me to do it. And then when she did it, that was it for me. I have to take care of my whole family and I have to be able to move. And so I mean, that was my, you know, last resort.”

Barb exemplifies the struggle of many chronic pain participants who were suddenly switched from medications and hard to make drastic changes in their life to cope. Interestingly, Barb reported little to no experiences of wanting. Her only experiences of wanting correlated with her experience of chronic pain.

“I mean, as my pain increases, I want yeah, you know, you but it's relative.”

Interestingly, Barb described that she is often able to go without substances for a while if necessary.

“Are there ever times that you might miss a dose or not take a dose or skip a dose or anything like that?”

“Sure. I mean, if I'm out with the family, or whatever, and I mean, sometimes I'll run out the house in between everything and forget to bring my kit or, you know, I'll be somewhere where I can't do it. And I just have to deal with it until I get...”

“Get to a place where you can?”

“Right.”

This is something I noticed very early in my fieldwork, before issuing the salience survey, that participants who experienced chronic pain and used to specifically treat these symptoms often could not verbalize experiences of wanting, or really relate to discussions around triggers other than pain. For instance, in a reflective moment from one of my first months on site I wrote this in my field notes.

> *So far, I have heard a lot of stories of individuals with chronic pain who use opioids to cope. Triggers seem at once influenced by prescribers, and the concepts of pain medication (i.e. current use patterns match prescribed patters – 1 pill/shot every 8 hours). Pain is the trigger, but it is complicated by the neurological pathways that perceive pain, current and former standards of treatment, strength of drugs (fentanyl vs Oxycodone vs heroin) and their potential for pain relief, and participation in everyday life. For many participants, these drugs seem to help them live a regular life, which they might not be able to live in without medications to mask the pain. Otherwise, participants don't seem to recognize very many triggers. They "just do it". Use seems regularized and normalized. They don't recognize specific instances that drive them toward use.*

Barb illustrated this detachment from Triggers in her interview.

"Is there anything that's ever in the environment or that happens that makes you feel like you want to use?"

"Not really, no."

Low salience individuals, it seems, had a harder time expressing subjective experiences of wanting. Overall, people with lower salience, like Barb, may use as a way to cope with chronic pain and see their use as a means to an end. Lende and colleagues (2007) call attention to such instances of functional use in an ethnographic research paper with people who use meth. They

note that functional users often attributed their use to enhanced function, increased productivity, and ability to function normally. Functional use, for many, including participants at Sunshine, seems similar to the themes highlighted by Lende and colleagues. Participants' often saw their use much more as a way to get by, rather than a use perpetuated by feelings of wanting.

Maintenance Minus Group

The middle range respondents, whom I've come to call the maintenance plus or minus group, expressed mostly using to maintain and not experience withdrawal- as opposed to low salience users who did not express any use revolving around withdrawal. Three individuals had medium-low salience scores (score of 25-28).

Brad, who had a medium-low salience score, started injecting at 29 after trying many drugs in his youth.

"At the age of 29, I use my first opiates, which were pills, obviously, Vicodin. So, I was taking Vicodin and oxycodone, oxy 80's, actually. One day, I was hanging out with a different group of people and we were using cocaine, like straight cocaine and they were doing it IV. And they were like try it. Why don't you try it? And I tried it, and I liked it, so I used that for like, a couple of weeks. And then me and the girl that I was seeing at the time broke up, and then I tried heroin for the first time on my own. And uhm I haven't stopped since."

Though Brad had not stopped since, he was often contemplating it. We talked frequently when he was at the exchange about how he wanted to stop, regain custody of his son. He was "on the edge" of quitting he told me, many times. In our interview, he described his daily use as very routinized.

“I live in the woods. I'm homeless. So, I have so many things on my mind. Like most people that are homeless and using drugs. I'm speaking in general. Because see I'm talking about it's like, they're always worried about getting high. And that's not me. I... me, I'm like, looking for food, clothing, shelter. You know, making sure my wife's okay. You know, hygiene products, all that. That's what's going through my head. I'm not worried about just getting high. Like my night ends when it, when it ends towards the end of the night is like 10 o'clock at night, where I'm gonna go lay down and sit down with my wife and just hang out with her, I might do a shot, to... I do a shot to go to bed anyway, so I'm not sick through the night. So, I'll sit there hang out with her. I might smoke some crack, a little bit of that. Then I go to bed, just like anybody else. Just like my... in my routine I'm using drugs. I'm really living a normal life just with the drugs as a part of it.”

Interestingly, medium-low users did not describe going without, like low users, but may experience wanting (and use more) depending on the strength of the batch or they might use more, simply on accident- because it’s not always clear how much product is in your supply. For Brad, he actively tried not to use more than normal, but sometimes, it seems, it happened.

“I don't...Like my use I don't get high. Like I don't really, mine is not like a get high where I'm like [imitates passed out high person] if I get like that, it's because I did a little bit too much. You know what I mean, because we’re messing with fentanyl. I don't...I'm not the type to be nodding out like that. I get like that only when I do an excessive amount.”

Overall, Brad represents maintenance minus users who in their interviews describe wanting as tied into their daily routine– though not going without. Maintenance plus users, on the other hand, describe going beyond that routine, if the situation presented itself.

Maintenance Plus Group

Seven individuals had medium-high scores (score of 29-34). Medium-High, or maintenance plus, users are similarly maintenance users, they use to maintain– to not get withdrawals. Ted, a 52-year-old man who injected heroin was in the maintenance plus group. Ted was tall, burly, and had a strong southern accent. He had started using opioids after an accident and escalated his use after his son died. At the time of our interview, Ted had been injecting for over ten years. Ted talked about his use as highly regulated, he injected three times a day- morning, afternoon, and night.

"I wake up I wake up usually within the first couple hours I'll do a shot of usually about usually do about a half shot, you know, that's like a normal sized bag for one person of Heroin. I usually try to do like three a day. I usually in the morning, one sometime after lunch and then one in the evening."

For Ted, he remarked that his use mostly revolved around maintaining.

"I really am big into just maintaining. I just don't want to be sick. So, I really don't give a shit about, pardon my French, about the rest of it. I just don't want to be sick. I don't have to be sitting here like this [imitates being passed out]. And hardly anyone's ever even seen me like that. And most people go, 'I would have never known' [that he injects drugs]. Like, that's how I want it to be. That you'd never know."

Ted tried to keep his use very controlled and measured. However, Ted also noted that, if the situation is right, he might inject more.

"I'm usually around other people that are injecting more, and I catch myself just doing it with them as a partying situation instead of a necessity situation."

Ted might justify going over his strict schedule if the setting is right. Particularly, it seemed being in a "party situation" or, later in the interview he mentioned being around women as two situations that might cause him to use more. So, though he detailed highly regimented use, he also would allow himself to "indulge," to feel the high, every so often.

Ted and Brad exemplify the maintenance plus/minus dynamic. The maintenance plus/minus users seemed to mostly express using to stave off withdrawal. Participants with the lower scores seemed to describe sticking more strictly to this, that they may use less or only accidentally use more, while individuals with higher scores may express wanting in certain social situations or using more in specific "need to use" situations.

High Salience Group

Four individuals fell into the high salience group (scores above 35). High salience users also use to maintain, but they also more often described experiencing robust wanting and going out of their way to use, even if they're not in withdrawal. Connor exemplifies a high salience user well. Connor was a 42-year-old man who had been injecting for over six years when we met. Connor was one of the first participants I ever met, and one of our most consistent participants. He would show up to the site, every Wednesday morning, and be ready to exchange on behalf of himself, his girlfriend, and friends. He was also a dedicated employee and son. He took care of his elderly mother and worked full time as a carpenter. He describes his daily use this way,

"Every single day. I wake up, I do a shot right off the bat. Like, I don't even brush my teeth. I don't wash my face. I don't even drink a coffee first. Literally, I wake up. And I look over at my girl and I say 'Hey, make it up'…like I do a shot right off the bat. I get ready. I leave the

house by 6:45 AM. I go pick up my friend for work and I wait on him to do a shot. Usually, it makes me want to do it, so like now, I'm like well, I just did one but screw it. I'm not gonna watch him, I might as well just do one too. So, I do another one. For nothing. For the boredom."

Connor goes on to discuss how he negotiates his use throughout the day, managing working full time and his injection drug use, constantly staving off withdrawal but also injecting more, whenever he gets the chance.

"Depending on who's at work, if one of my bosses is going to be there, we're gonna have to do a shot before we go there. We're going to stop somewhere do a shot before we get there. Because no telling how long they're (boss) gonna be there. We can't just dip off and do a shot. They know all that bathroom shit. There's no more going to the bathroom. "I gotta go the bathroom." They know what the that means. So, it's like, okay, we're pretty much good already. We don't really need to do another shot. It's just in our mind that we have to do a shot. We don't need to do a shot. Like we just did, we're good, like, we're not sick. We're not going to be sick. Heroin last a long time. You could be one shot and be good all day probably. But we just do just cause of fuckin' we want to. It's like, I don't know why."

Connor exemplifies a pattern that other high salience users displayed. They used, beyond what they "needed" to not to feel sick. Moreover, their use, even to them feels random, as Connor says, "I don't know why." These two ideas contrast with lower salience groups who would in interviews tie their use more closely to maintaining and using on a regimented schedule.

High salience users also generally were able to describe wanting and triggers more robustly. Connor described his own experience with triggers,

“Now, like on a regular everyday day, like what would make me say, ‘fuck this man I want to go do a shot?’ If I was pissed. Like, me and my boss just got in an argument over some real bullshit that wasn't even really my fault. You know, that kind of shit. Yeah, of course. Or me and my girl just got in a big ass argument. That works every time. I want to do one like right away.”

Connor, like other high salience users, could describe in more depth scenarios that would be triggering, and provide more robust descriptions of triggers, where other, particularly low salience users could not provide instances in which they had experienced a trigger. Maria, who I introduced at the beginning of this dissertation provided an even more robust description of triggers.

“Oh, okay well some triggers are way more emotional triggers, like maybe someone OD'd. And, you know, I pulled up like to this one house, one of my great friends OD’d there and we pulled up there and my, my, my emotions were just so out of control. And I didn't want to use because that's where he had OD'd at. And, and I just felt like I was just dishonoring him if I did use right there. But then I did want to use because I just wanted to forget about it and not think about it. And I had to be there right then for at that moment for what was going on. And I just... it was... when I had to talk to my husband and I felt like I needed to climb up the walls. You know, like Spider Man, I needed to get away and I just and he had to talk me out of it. And I just kept on and on talking to him. And I remember saying the same things over and over again to him. And in him just you know, it's okay, baby. It's okay, I'm right here. And, you know, basically he had to hold me, you know, almost like a child did to get me through it. And then there's also been other triggers where, where just made me angry, because you know, whatever

the situation was at that place. It made me angry. And I wanted I wanted to use for sure. I wanted to use."

Maria provides robust descriptions of triggers tied to both everyday situations, such as getting angry, or traumatic situations, like visiting the place where one of her best friends died. Overall, those experiencing higher salience discussed using more often (and often without a reason) and more robust experiences of wanting. This could be for several reasons. For instance, they may have just been more willing to talk about their experiences and share more, thus they give more in-depth descriptions of wanting. They may have had more rehabilitation experiences, or opportunities to talk about their use, thus a more robust vocabulary and more actualized sense of their use. Expressions of wanting may have been a sort of "addiction script" people developed in treatment and were deploying in interviews with me (Carr 2010).

In the same vein, low salience users may have been employing similar scripts but employing moralizing discourses to talk about their use. To need to use for a functional reason is perhaps more morally and socially justifiable than to just use to feel good. Thus, participants talked only of the functional value of their use to avoid the "junkie" identity. Discourses on moral drug use and pleasure might support such ideas (Coveney and Bunton 2003, Keane 2008).

Another explanation could be that they simply experience salience differently, or in a more robust way. Researchers have used behavioral experiments and scale measurement to study attention in humans. Specifically, this research has focused on attending to substance use stimuli and later correlating drug use behaviors (DeTommaso et al. 2017; Anderson et al. 2020; Albertella et al. 2021). Studies of attention have proposed a distinction between "sign-trackers" and "goal- trackers" where sign-trackers focus more attention on the signal (cue) while goal

trackers are interested primarily in the reward (drug) (Robinson et al. 2014). Researchers have focused on sign-tracking, or fixation on the cue, to verify the incentive salience paradigm.

This is explained well in publications which detail the story of two raccoons who were trained to deposit a chip into a slot to receive a food reward. After learning the association between the chip and reward, the racoons began to fixate on the chips (gnawing and playing with the chips), rather than putting the chips in the slot to receive the food reward (Tomie et al. 2016). As demonstrated by this example, when research subjects spend more time attending to the sign rather than the goal, they are behaviorally exhibiting the attentional properties of incentive salience, rather than the "liking" of the reward (pleasure theory of addiction). Further, research indicates that sign-tracking is not vulnerable to outcome devaluation (Morrison et al. 2015). This indicates that sign-trackers may be activating the specific regions in the brain related to incentive salience, while goal-trackers are not, suggesting variability in susceptibility to addictive behaviors. Different scores on the salience scale and more robust descriptions of wanting may be due to some underlying differences– like differences between goal trackers and sign trackers. Further research is needed to prove such a relationship.

Summary of Salience

Whatever the causes of difference, salience scores could (and probably should) be viewed on a spectrum, where those on the cusps might not neatly fit into each group. Dividing scores by quartile and looking at the specific patterns within each group, offers insight into how people experience wanting in everyday life. For low salience users, like Barb, wanting is seemingly more closely related to solving a functional problem in their life such as pain. Low salience users also could not really describe wanting as very robust– wanting, it seems could be masked by

symptoms. For the individuals in the middle, use patterns and wanting seemed to fall around withdrawals and maintenance with small variation, more or less, depending on the context. Finally, for high salience users, describing wanting seemed to come easier, with individuals able to talk about robust memories of wanting or triggers. Similarly, these users seemed to use more often, not just to maintain, but to go beyond, whenever possible.

Despite differences in salience, maintaining was incredibly important for participants across score groups. In each group, they talked about using to maintain either functional use (i.e., using to go to work, pay attention, take care of the family), or due to negative reinforcement. Many participants, particularly those who scored in the midrange, discussed how they used to avoid withdrawal. “I just don’t want to be sick.” For high salience users, maintaining and tolerance contribute to higher levels of use. For people who use drugs, tolerance increases over repeated drug administration such that over time, more drugs are needed to achieve a high (Siegel 2005). Maintaining also means maintaining at higher levels. Thus, we see participants like Connor who used first thing in the morning, and then again throughout the day, sometimes so he can feel the high, and other times to stave off withdrawals (negative reinforcement).

Salience then, for this population is negotiated somewhere between positive and negative reinforcement, tolerance, and functional use. Wanting, it seems, is not one distinct feeling but rather a culmination of factors. For instance, wanting might mean simply just wanting to function. For low salience users there is a seeming lack of the “intangible pull,” rhetoric or longing for use. And for others, wanting is very much predicated on tolerance and just wanting to feel normal, to maintain.

In some cases, there are more classical examples of triggers which inspire wanting. For instance, Connor describes watching a friend inject, which causes him to want to use again,

despite having injected right before seeing his friend. Similarly, Ted described "party situations," which make him want to use. Or situations of extreme anxiety and high trigger moments that cause an overwhelming sense of wanting.

Another way to think about salience here is through context. An ontological approach to dopamine could push us to "site" context as not only physical geography, but the other contexts in which people exist, the other contexts that matter to us. For instance, existing in the context of chronic pain or functional use changes the relationship between what in context is important to attend to (i.e., "I am in pain" vs "I would like to feel pleasure"). We can then tie this to broader contexts of the Opioid Crisis, a context in which such relationships between pain and pleasure were manufactured, in part, by pharmaceutical companies, corporate profit, and national politics.

For maintenance users, context, in a very normative way often dictates use (i.e., I am in the time and place that I usually use, my body is starting to feel the urge to use, so it is time to use). Another way to "site" such contexts is to assess what it means to be "normal" socially, mentally, and physically. To be sick, say from withdrawal, is a physically miserable experience. But moreover, to be sick, to be disabled – even if just temporarily, can be socially and culturally detrimental, given the treatment of people who experience disability in the United States (See for instance: Reif et al. 2023). Siting context here is then threefold: the contexts in which you use which interact with concepts such as reinforcement, withdrawal, and tolerance, the context of feeling "normal" which allow you to function in daily life, and the context of being "normal" which is tied to cultural concepts of ableism and productivity.

To expand upon this, using beyond maintenance evokes discourses of pleasure. In their paper *The Pleasure in Context,* Duff (2008) notes that pleasure is almost always relegated to physical/physiological dimensions of substance use. Duff argues, instead, that pleasure is also

enacted by the spaces in which we use, the times we use, and the people we use with. As such context and pleasure often become embodied in drug using experiences. Context as ontologically sited expands how we think about wanting in context. For instance, why certain people or places matter become not just physically meaningful to a body built to read for signs that point toward use, but also socially and culturally meaningful. Dopamine, as a contextual neurotransmitter is not only navigating physical space but space that holds deeply significant cultural, social, and institutional meaning.

The goal of this section of the chapter was to establish wanting, and incentive salience, and further to explore the relationships between maintenance, reinforcement, and tolerance. Siting salience helps elucidate the ways in which context is meaningful, outside of just physical features. The next section of this chapter discusses triggers. I employ the use of free list data to elaborate on the most common triggers experience by participants. At the end of this chapter, I return to the siting framework to discuss how harm reduction and triggers interact.

Part II: Types of Triggers

The previous section discussed the first half of the salience survey. Specifically, I use the salience scale to better understand subjective measures of incentive salience and discuss how participants express wanting more broadly. To ground these experiences of wanting in the harm reduction context, I begin by examining Triggers. In part two of this chapter, I specifically focus on what free listing, as a method can tell us about how participants understand Triggers, and how salient triggers present in and outside of harm reduction.

Free Lists

Free lists provide one way to get individuals to discuss cognitive categories (Dengah et al. 2021). Although this project is not so much about cognition as practice, free lists give a good idea of what objects and practices participants consider triggering. Free lists were issued to participants after they completed the brief salience scale (described in Chapter 3). Participants were asked to "please list your triggers." Participants did this aloud while I transcribed their answers verbatim. They were instructed to orate the list, and when they ran out of things to say I would probe them (as is standard) with the question, "is there anything else that you consider triggering?" or "do you have anything else to add to this list?" On average, participants listed 3.2 triggers.

Scholars suggest that participants should be able to list at least a dozen or so items for any given free listing activity (Weller 2015). Considering that all participants I talked to see to know about the concept of triggers, it is quite surprising that they were not able to list more. This is even more surprising since in treatment programs, one common technique is to have people list out their triggers– something I learned about in preliminary interviews with people in recovery.

There are a few reasons that lists for participants may have been short. For instance, some research indicates that the spaces in which you conduct free listing activities matter. Miranda et al. (2007) found that participants were able to name more plant types when in the presences of plants. Others suggest that perhaps level of expertise influences recall (Hutchinson 1983). Others still suggest that "broad topical areas" are less effective for free listing activities as participants tend to omit items or cluster large categories together (Quinlan 2016). I suspect that a combination of these factors may have impacted the length of participant lists.

First, "triggers," may be too broad a category to generate longer, more detailed lists. Afterall, in interviews, participants often told me that triggers can be "anything" or "everything." In fact, "everything" was the 15th most salient trigger participants listed, which appears higher than things that people often than other things told me were triggering like trauma, anxiety, and depression. One way to have avoided this problem would have been to break triggers down into categories of triggers. So, for instance, asking people what objects they find triggering, what emotions/mental states they find triggering, and so on. This however also would have created a framework for participants to think through triggers, that triggers are objects or emotions. I was more interested in understanding their own concepts of triggers, rather than creating preassigned categories for triggers.

A second reason that participants may not have listed many triggers is because the exchange is not a space associated with triggers. Even though the exchange is full of drug use paraphernalia, people who use, and other things people typically consider triggering, the exchange does not seem to elicit an extended list of triggers. Where Miranda et al. (2007) find that contexts with more plants create longer lists of plants, it seems that contexts with triggers do not function the same way.

One way to understand this is that when people are in active use, they are no longer the "triggers expert." As I discussed in Chapter Four, participants seemed to only associate triggers with recovery. Discussion of triggers was often accompanied by a story of an experience or encounter in treatment or sobriety. For instance, 97% of interview participants had some prior experience with substance use treatment. Further, participants noted that people who use, in the day to day, do not really talk about triggers, unless they are trying to stop. Once in treatment,

participants practiced Triggers through talk therapy, through navigating trigger encounters, and more. Perhaps expertise is tied to the recovery context.

Downey and colleagues (2015) discuss expertise in their work on apprenticeship learning and ethnography. Specifically, they note that expertise and skill cultivation is "inherently diverse and centrifugal," where individuals build skills within the constraints and constructs of culture and training (185). "Models for which to strive" are demonstrated by expert practitioners to create expectations for what skill building and expertise should look like (185). Downey and colleagues attend to practice to understand how expertise is created and enacted.

As discussed in Chapter Four, much of the way participants talked about substance use treatment echoed such expertise building. They sat through group therapy sessions and talked through triggers and what they would do if they encountered them, or they were asked to write out lists of triggers. Such practices are meant to build expertise within the population. And to an extent it did. Though participants often did not recognize triggers as pertinent to their everyday lives they could talk about them, tell me about them, and enact them in the everyday.

In harm reduction, that expertise disappeared. Given that most participants had interacted with a treatment program of some kind in their life, they had the opportunity to build such expertise. Yet, as demonstrated by the low level of responses to the free listing activity, they did not enact this same expertise in harm reduction. In fact, even though I asked participants to enact virtually the same listing activity they often do in treatment programs (literally to practice this built skill), the responses were still shockingly low. This suggests that even though they are the "expert" on experiencing triggers, they are not enacting such expertise in the harm reduction context.

In this dissertation I work to frame Triggers as an object. The free listing activity suggest that in the context of harm reduction Triggers, as an object are transformed. Despite the lack of robust responses, I find that analyzing and discussing this free list data still has value. First, many of the triggers people listed were present at the exchange, as previously mentioned, like people who use, withdrawal, paraphernalia, and death. Interrogating what individuals find triggering and how such triggers are practiced in harm reduction can better illustrate Triggers in harm reduction.

Free List Analysis

Free lists were analyzed using Visual Anthropac 1.0 software following the protocol laid out by Dengah et al. (2021). Initially, the free list activity elicited 318 different triggers across ninety-seven participants. However, many of the triggers listed were variations on a word such as anger and angry, or party and partying. Such variations were collapsed into a single instance (i.e., anger or partying) narrowing down the list to 234 unique triggers. It is important to note that not all alike words were simply collapsed into one term. For instance, participants often listed sadness, emotions, and depression as triggers. I distinguish these as sadness is a particular emotion, whereas emotions represented a range of feelings more broadly, and depression could be a diagnosis that participants carried. Though the words are interrelated, they all represent different ways participants process and experience particular feelings and thus could all be considered different triggers.

Once all synonyms were combined, these words were then sorted more broadly into categories. Categories captured a suite of commonly related terms. In creating categories I tried to stick true to what participants represented to me about the essence of these triggers. For

instance, the category of "family" represented answers like "mom", "dad", or "family" in general, but I did not include triggers such as "relationships" which could be anything from a friendship to a romantic partner. This process resulted in a list of sixty-three triggers. For each of these categories three variables were calculated. Frequency is how often a term appears across participants. Average rank is the order in which a term appears. Finally, salience score is calculated by taking the position of the term in the list and dividing it by the number of items in the list. The overall score is the average across participants. Salience score is represented as a percentage (Dengah et al. 2021).

Overall, many of the triggers related to emotions and emotional states such as sadness, anger, being upset, happiness, and stress. Additionally, many of the most salient triggers related to people who use. Places of past use seemed to matter, though sometimes participants simply just said "people, places, and things," a common refrain from recovery. Interestingly, paraphernalia was not very high on the list. This is especially surprising because we were at a syringe exchange. Appendix Four has the full list of triggers and scores.

For the remainder of the chapter, I discuss the three most salient triggers: People who use drugs (Frequency: 31.1, Av. Rank: 2.41, Salience 21%), Stress (Frequency: 21.4, Av. Rank: 2.77, Salience 14%), and Pain (Frequency: 13.6, Av. Rank: 1.79, Salience 11%). I am choosing here to focus only on the top three triggers to illustrate how triggers are enacted thus provide insight into the ontologies of Triggers. I present ethnographic examples from inside and outside harm reduction to show contrast between enactments of Triggers. While many other triggers could potentially be relevant, I choose to focus more narrowly and provide ethnographic instances of practice that inform how specific, salient Triggers are enacted.

Trigger #1: People Who Use Drugs

Social networks, particularly in substance use, are powerful. As a trigger, social networks function to connect people with drugs. Drug use is incredibly social, it is learned- likely through these social networks. Drug use is also done quite socially. I talked to very few people who injected alone. This was discussed in interviews and observed during participant observation. Interviews and observation with Connor illustrated this quite well.

I checked in with Connor. He said he was doing well. Having a hard time with his girlfriend. Wants to stop, but she is not ready to stop. Puts up "roadblocks" every time he's trying to stop (i.e., gets too sick to stop). She seems to trigger him to use- she sets up his shots and they use together. But he says he is not ready to part ways with her. She was there for him in really though times (i.e., when he was homeless). He also loves her very much and takes care of her. Hard to stop.

Earlier in my interviews with Connor, we talked about how he started using. Here is a selection from that interview.

"I mean, when I was like 16, I used. I was like smoking weed. And me and my best friend, like, we, we didn't want to be like our other boys and that was doing coke and all that shit. We're just like, nah we're good with weed. You know what I mean? Like, that's shit is plenty fine. Well, I mean, like, enough times, of seeing that shit, every weekend, every weekend, every weekend, and these are our homeboy, homeboys you know what I mean? So, like, I guess, enough time of seeing it we're just like, I mean, like, 'let's just try it once.' And then that shit happens, and then it's always a, like a weekend thing. And then when you really get addicted to it, then it becomes like, almost an everyday thing. But then, like, you know, I was like, well, I can take it, I could take it or leave it, because I don't get sick.

“Then, you know, my buddy, which my buddy, he's dead now. He was like our like leader of our little pack. He was the oldest one, like, just the craziest one. Like, everybody wanted to be like him, basically. So, like, he was on pills, real bad Roxy's and shit like that, and I wasn't even on that shit. I didn't want to be on it. But I had hurt myself at work, but it wasn't like so bad, where I really should have really needed to take them. But I was just like damn I'm hurtin'. So, my boy gave me one. And I remember like throwing up and everything. Like, it was too much for me. And I was just like, ‘man, what do people see in that shit?’ I'm like throwin’ up. But then after I threw up it like kicked my ass, boom, whoa, that little ass pill just beat me up. So, then I started asking him to get a couple here and there. Then I started working with a guy. And he was he was on them, and he would give me like five or six of them every night. Just to take home with me.

“And then about two weeks of taking 'em I started feeling ill if I didn't have them, like man, what the hell is going on with me? Something's not right. I'm feeling shitty. And the guy was like, ‘oh man,’ he's like, ‘the withdrawals from these are just terrible.’ I mean, like, you know, he's like, ‘I didn't know that it would hit you that quick.’ He's like, ‘I should have told you, you know, I feel bad.’ So, this man, you know, he gave me like I said, five, six pills every single night and take home. Just because he got me on them, he felt bad for now making me be sick.”

Later in the interview, he recounted a time that he was sober for two years—and then started using again.

“Triggers, is really you know, this is, this is the number one thing we all learn is if you're fuckin’ clean, you're not hanging out with people that are doing drugs. If you're hanging out with people doing drugs, you're not really trying to stay clean. Because every time you're gonna do

drugs. I don't care how much willpower they got. Nobody can fuckin hang around a dude doing drugs right in front of them. The drug that you used to do. You can't sit there and watch that shit. I tried that. Like, I thought I had this shit, I was like two years clean. And my boy was like, 'I don't really want to do this shit in front of you because I don't want to trigger you.' And I was like, 'Man, I got this shit, bro. This is bullshit, bro. Like, you shouldn't be doing this shit'. That's how I was. He was like, 'Man, I know you're just trying to tell me some good shit but,' he's like 'You don't listen when you're on shit.' I'm like 'I know I'm not telling you. I'm not preaching. I'm like, I'm just telling ya.' So, first time he did the shit on the way home and I kind of just looked over and I was like, 'ugh, I don't miss that shit.' Because like, the whole fixing it up. Fuckin' finding a vein that even works because we fuck our veins up bad. But, um, you know, that's like, he fucking did it.

"First day I was like, 'I'm alright.' I guess he thought because I was like, alright with shit that he could do it anytime he wanted to. So, I just shut up. I was like fuck it. Like, if he feels like he had to do it, I guess he had to do. He must be sick. So, then it was like, fucking third or fourth time of him doing it. I started askin' 'Hey man you got any of them D's (dilaudid) on you?' He's like, 'why?' He's like 'fucking nah I ain't getting you...' it was my boy, so he was like, 'nah I ain't giving you a fucking D (dilaudid). You stupid.' I was like no, I was just seeing if you had any. He was like 'well why would you ask that?' I'm like 'I don't know, just wondering.' Then, by the end of the day I already knew inside that I was gonna…I already knew, I was gonna get high."

Social networks and social interactions often introduced people to using, and, in times of sobriety, could bring people back toward use. Here, Connor notes that he learned in rehab that being around someone could be a big trigger that could lead him back to use. Connor's story is

not unlike many others who experienced similar patterns. They were brought into use by someone they knew and learned how to use through these relationship. In treatment programs, they spent a lot of time meditating on maintaining sobriety by avoiding these relationships.

But, in harm reduction, these social relationships with people who also inject can also serve positive functions. In my fieldnotes, I wrote about something that happened quite frequently– participants would often exchange for each other.

Tonight, at Rooster Ave site I did the last exchange with a participant who often comes to the Turtle Road location. He comes very frequently, so I know him quite well– he likes 31 short needles, and always asks for extra alcohol wipes. Tonight, he brought a new person with him to sign up for our services. They are friends and she mentioned that she is always working during the exchange, so she is unable to come. Now, he will be able to bring her card and exchange on her behalf so she will finally have access to clean syringes. Otherwise, she's been reusing, and she shows me the scars on her arms. I also have our first aid team look at an abscess on her arm which needed attention.

While social relationships can lead people into use, social relationships can function to bring people into the harm reduction space and provide critical access and care. Social relationships in active use function as what Syvertsen (2022) call "dangerous safe havens" or places in which the relationships that bind individuals might be inherently risky, but also provide critical access to care and support. One way participants demonstrated these "dangerous safe havens" is through overdose prevention.

There is a big push in the harm reduction community to never use alone. My oldest participant was 71 years old. We called her Miss Myra. Miss Myra had been using for "as long as I can remember." Her whole life story, as she relayed to me in through drags on her cigarette,

was a series of traumatic incidences, one after another. Throughout her childhood and adult life, Miss Myra was the victim of brutal abuse. Though I will not go into detail on these incidences, Miss Myra did credit this lifetime of abuse as what kept her in use.

"So, it's been a battle. It's been everything. Every kind of drug there is I've done. I've run hard from my reality. And, you know, it sucks to be me…I've got this monkey on my back because I've never really started to shoot and stuff except for the last 20 years with the Roxies coming in and everything."

Miss Myra was homeless and injected drugs every day. Though she did not complete the salience survey, I suspect that she would have been in the high salience group, given the way she described her use as "whatever, whenever." Though, she did try to be careful about her use. In our interview she talked about a recent, traumatic episode in which she helped reverse an overdose.

"Oh, yeah. But like with fentanyl, you know, I've died. And I've done that a couple of times, too. That was fun." She said sarcastically.

"This last year was serious. And I woke up and just thrashing and kicking and rah," She imitates the yells she made.

"Making terrible noises. I'm like, oh, my god, it was hideous. And I swore, swore it off and said I'd never do it again. And of course, that didn't last…I came across somebody the other day. She was right down below me by the overpass. I had left. I was leaving the property going this way [motions opposite direction]. And something just inside of me said to go see her. It's not something I do very often, going visit her. I don't like it down there because it's so close to the overpass. And I'm like yelling her name. I go, 'what did you do?' I go, 'Are you pretending to be sleepin'?' And thought maybe she didn't want to see me or something? And I looked down at her

and her lips are blue. I go 'Oh, hell no. You are 29 years old. You are not leaving me.' Yeah. And I went screaming and running because I didn't have any Narcan and I got my other friend and my partner and I'm like 'Her lips are blue, help me!' And he jumped the fence got over there and got to her just in time."

For Miss Myra, her own use is tied to her relationships – and the truama that stemmed from them. But Miss Myra also participates in life saving social networks and saving lives. Social networks, other people who use, in the context of harm reduction can often be critical, lifesaving relationships. Eighty-nine percent of Sunshine's participants reported learning about the program through referrals from friends or family members. Further, in 2021, participants of the exchange reported reversing over 1,100 overdoses in the community. People who use drugs can matter for getting people into use but can also be critical for carrying out harm reduction measures.

Trigger #2: Stress

Life stresses are another trigger for people who use drugs. One of the ramifications of the war on drugs is the inability to access the tools needed to inject safely. As discussed in Chapter Three, harm reduction programs were not legal in the state until 2017. Further, in Florida, pharmacists can decide who they will and will not sell syringes. For participants, the "scramble" of finding safe injection supplies is a huge stressor. From my fieldnotes-

Talked with participant about benefits of the exchange. She said testing and supplies are important, but also mentioned that it creates a more "controlled" environment. "You don't have to do the scrambling and searching for supplies."

Participants in interviews noted similar ideas. For one participant, Stacy, moving to Florida meant losing access to safe use supplies, which caused a lot of anxiety and struggle for her.

I'm standing in the parking lot talking to a participant, Stacy, before she does her daily assessment. She's waiting on a friend she brought to the exchange to finish her enrollment. We get to talking. She tells me she used to live in the west, and that she's been injecting since she was 16. Said she always had good access to safe injection equipment until she moved to Florida. Didn't have good access and found it to be really expensive to get supplies in stores- if accessible at all. Said it's great to be able to come to just one place for all of the supplies. It relieves a lot of stress for her. She also said it's good because we give out condoms, alcohol pads, etc. Tells other people about us and that we are chill, don't take identifying info. Also said other services are great—through her involvement she has gotten HCV treatment and wants to start PREP (HIV prevention). Also said that kindness helps. That people can get the things they need without judgement. "I wouldn't have done half the things I have done now if it wasn't for you guys, like the HCV treatment. It definitely helps."

There are many mental and physiological stresses that come from being an injection drug user. For instance, dealing with exposure to infectious disease and getting treatment for infectious disease is very difficult. Navigating the health care system in America is especially challenging to those is socially and legally precarious positions (Castañeda 2017). But it was also the more "mundane" stresses of injection drug use that Sunshine made a difference. For Thomas, Sunshine was the first exchange he had ever participated in.

"I started coming here and I think this is a beautiful perfect place because I never had... I never heard of a needle exchange I always heard about people in different states having them,

but I never had one. Like you turn in the rig, get a rig. That saves a lot of people not getting sick. Me and my girl now we literally use that needle one time and throw it in the red box [sharps container]. If we run out, we come here or we will hustle some type of way to get $12 to get a whole box from Walmart. That's what we usually do."

Being a participant at Sunshine eliminates stress through the access to safe injection supplies and other resources which can help to reduce the harm done do and disease burden of people who inject drugs. But the question remains, aren't those same supplies also triggers? As noted, syringes themselves can be a very potent trigger. One interviewee cleared this up-

"So…is being here triggering for you? Like getting supplies or like being at the exchange?"

"No, because it doesn't make me want to use. Yeah, I mean, it makes things easier, less complicated, less…less dangerous. Because you don't know what goes in to getting a needle. A lot of these places don't sell syringes to just everyone. A lot of people resort to sharing. Like I've had people ask me for my old ones. Like, not that I have ever. Still, it's like if you ask me, it's like... it's just not safe. You know? So, it's good to have. Or even that a lot of people too that can't even afford it. The fact that this place is here, is a good thing. And I wouldn't consider it a trigger because it doesn't make me want to use it makes me want to practice makes me want to practice safe practices. You know what I mean? Makes you want to… it brings up my awareness."

For many participants, the exchange changed the way they looked at needles. Sure, they were going to use them for injection drug use, but the needles also represented the broader community and care that was a part of the fabric of Sunshine. Another participant put it succinctly. From my fieldnotes again.

I asked her if the exchange is triggering, she said no, not triggering. When people are desperate, they "start to do dumb things like re-use or use other people's needles." Even gave the example of the necessity of safe smoking. Someone cuts their lip, and someone else uses it… Said being here to help and provide safe use is most important.

The exchange also helps eliminate other anxieties, outside of just the stress of having clean and safe materials, the exchange offers participants protection under the law. From my notes,

Made participant a new card. Having Sunshine ID card is super important because syringes are considered paraphernalia. If stopped by the cops, participants can show they are a member of Sunshine Syringe Exchange. This can eliminate potential charges. This has been relevant as several people have called Sunshine to get proof of participation to try to get paraphernalia charges removed as members of the exchange.

There are many other stresses participants experience that the exchange attempts to ameliorate. For example, Sunshine works with local non-profit organizations to try to find people housing, as many participants are experiencing homelessness. Additionally, at every exchange, there is food and drinks for participants, who may get their only meal of the day from Sunshine. Sunshine emphasizes low-barrier services, which are more successful in trying to initiate change for participants. When we situate the locality on practices of harm reduction and the impacts of the war on drugs, we see that many of the everyday stressors PWID experience, are changed in interaction with harm reduction.

Trigger #3: Pain

One of the first themes I noticed while doing interviews was that pain patients discussed their use in far more clinical terms. They would talk about their use as doses, doled out at regular intervals like someone would take a prescription. For people experiencing chronic pain, use is about just staying out of pain, or maintaining- they discussed their use as incredibly regulated. Here are some thoughts from my fieldnotes early on in my work.

People in chronic pain use to live. They have literally no other solution to pain- they've either been kicked out of pain management or can't access it through lack of healthcare or other structural barriers. Seemingly regulated use (they're reporting an average of 2-3x per day). There's also this rhetoric that I've come across in their interviews, "I'm not like other users." There seems to be a sort of moral superiority of being a victim of the opioid crisis. In many ways, everyone is a victim of the opioid crisis, but if you're able to claim chronic pain, you're able to call yourself a part of this special group that the country/culture has more sympathy for. As opposed to using for pleasure, which is the rhetoric of the war on drugs.

For people in chronic pain, operating without treatment is impossible. Though they may no longer have access to the legal drug supply, they still work to treat their pain. Further, they are very aware of the challenges that come with treating pain within the health care system. Brenda, a participant with lifelong pain avoided pain management as she was scared of what it might lead to.

"I was born with chronic clubfoot. Like I have constant pain in my feet and legs. But I mean, I've learned to deal with it. This gonna sound weird. Like, I didn't want to be on, go to the doctor for pain medicine, cause I didn't want to use the pain medicine as a crutch. Yet I do heroin and everything else. Like, makes no sense to me. Whoa, it's weird."

Pain management for many participants is left in their own hands. Further, pain is a potent trigger. For many participants, they see no way out of use. For instance, one might consider using MAT therapies to stop using, for chronic pain sufferers that's only half the battle. Participants, like those detailed in Chapter Four, reported that MAT therapies couldn't manage their chronic pain symptoms.

"Suboxone doesn't help with pain, per se, but it does help with withdrawals."

Pain patients also regulate their use through pain. The trigger becomes a regulator. A negative reinforcement perspective helps to understand how pain is tied to regulation of use. As pain arises, people seek out pain relievers to dull that pain. Thus, repeated presentation of pain and routinized doses, it seems for some, contribute to their regulated use.

For example, in interviews I would ask participants how often they use. Chronic pain participants would generally answer something like 3-4 times per day. I wanted to understand if there are other things that might make them want to use, so I would follow up. "Are there ever times that you'll use more than every four hours?"

Many participants who experience chronic pain echoed Diane's sentiment below. Diane had chronic pain after a car accident, and her pain regulated her use.

"If my pain is, you know, really bad. Or if it's not good stuff."

Increased pain, or perhaps higher tolerance related to consistently using pain management drugs was attributed to any excess use. Another participant detailed how pain and withdrawals helped him sense when it was time to use again. Thomas, a black male who had been injecting opioids since a run in with law enforcement 6 years prior put it this way–

"Okay. So, how do you know when it's time to use again?"

"Well, my body started hurting, like because I got shot in the back and I had got ran over by police. So once those start hurting, I start feeling a little bit but once I started getting restless legs and stuff like that."

For Thomas, chronic pain from injury and feelings of withdrawal (e.g., restless legs) function as negative reinforcement and thus a signal to use. For some, the exchange is a place that they know they will be out of pain.

I asked Barb about the exchange- she said it is good because it helps her have safe materials to use. She also said it's not triggering because it's a place to come and know she isn't going to be in pain for the next week. Her priority is pain (chronic pain sufferer).

For chronic pain sufferers Triggers are transformed. They are a practice of wellness, a way to get well. A way to self-medicate and treat a problem for which there are too many barriers to solve. While pain is a potent trigger, it's also a potent regulator. And for some- Sunshine acts as access to healing, to the ability to feel relief in a safer, controlled setting.

Summary of Triggers

This section illustrates two important points. First, the free listing as an activity highlighted the distinction between how individuals may conceptualize Triggers in harm reduction versus other spaces like recovery. Participants could not name very many triggers when asked to create a list. The list average of 3.2 is well under expectations for free lists which should be closer to a dozen or more. This could be a fault of execution– that asking people to list their triggers is too broad a question to provide the level of detail I had hoped to see. The physical space, though ripe with triggers, is, from participant accounts considered not triggering. Further, expertise with triggers is more often associated with being in recovery or practicing

recovery. These factors could be contributing to the lack of available terms participants had to list.

Despite the short list, I interrogate what these triggers look like in and around harm reduction. The takeaway for this section is to better understand how participants interact with salient triggers in and outside of harm reduction. People who use can, in the everyday, draw people closer toward use. In harm reduction, people who use can perform lifesaving roles. Stress plagues the daily lives of people who inject drugs as they navigate their status as an injection drug user, and access what they need to inject safely. Sunshine provides solutions to many of these problems with supplies, referrals, and support. Finally, pain is a common occurrence in the daily lives of many of the participants at sunshine. For those who manage their pain through injection opiate use, the exchange is a fundamental space of health care for them.

Another way to think about this section is that it begins to reflect on the ontologies of triggers in harm reduction. Participants noted the transformation of triggers in harm reduction. No longer are syringes and safe injection supplies just that, but what they symbolize in harm reduction and how they are enacted – toward health and harm reduction, ontologically distinguishes triggers at Sunshine from the same objects as Triggers in everyday life. This change in things that are triggering, like needles, can also reflect broader changes in the concept of Triggers. In Chapter Four I discuss how Triggers are enacted in different spaces. In Chapter Five I discuss how spaces can be sited to reveal critical dimensions of local interaction. For the remainder of this chapter, I situate and discuss Triggers as an object in harm reduction.

Part III: Triggers & Harm Reduction

In Chapter Five of this dissertation, I employ a sitings approach to situate the local. The local, is not merely geographical but ontologically partial– portrayed into being by the ethnographer (Yates-Doerr 2017). Further, I site harm reduction as a space that is both socially and physically meaningful. I return to that approach here to understand Triggers in harm reduction. First, I discuss encountering Triggers in harm reduction. I focus on my own interactions with Triggers in my work as a harm reductionist. The second section discusses how participants interacted with triggers in harm reduction and how they conceptualize Triggers in this context. Finally, I propose a way to understand how Triggers are enacted in harm reduction.

Reacting to Triggers at Sunshine

One of my first days working at Sunshine I was looking through some of the literature that was placed across the table for participants. This literature was developed by Sunshine, to provide information to participants about a range of topics – tips for safe injection, HIV Frequently Asked Questions's, navigating health insurance, and the like. I began to flip through the 20+ page resource guide that happened to be in front of me. I opened to page one and noticed that it had information about "*Drugs and the Brain*." I read on to find that this page is part informational guide, part activity. The reader first learns that "addiction is a brain disease" and that "drugs change the structure of the brain and how it works." I continued down the page to see a section entitled "Triggers."

> "A **trigger** is anything that makes you feel the urge to go back to using drugs because it reminds you of taking drugs and getting high. **Learn your triggers and stay away from them**" (emphasis original).

Under that I see writing prompt that asks me to list my triggers. Under that there are a few blank lines and some suggestions of what sorts of things might be considered triggers, "person, place, thing, smell, feeling, picture, memory, something stressful."

The other pages of the booklet are filled with lists of helpful, local resources, vetted personally by the staff of Sunshine. Over my time working at Sunshine, I had come to learn that this booklet is normally distributed with accompanying advice, "page ten will give you resources for local shelters." Or "page twelve has mom and baby care information." Page one is breezed right through by both staff and participants- never really paused on.

I must have given out hundreds of copies of this booklet while working as a harm reductionist at Sunshine. Each time I handed it out it was to offer the other resources that lay within the book. For expectant mothers, I would make sure they knew exactly what number to call that would connect them with a maternal MAT clinic. For others, sometimes it was having conversations about recovery. I would sit with them and review the local treatment centers. We would talk together through their options see which program would suit their needs best. "Do you want to go to detox? Do you have insurance? When do you want to go in?" Each question guided the options that were available, and how to pursue treatment. Sometimes I would hand the booklet out after a long conversation about a traumatic event and we would talk through how to contact the local crisis center. I never really stopped and used page one to guide any discussions on triggers–though, in hindsight, it may have been a good interview prompt.

Triggers, and specifically asking people to "know and avoid triggers" never seemed like a practical conversation to be having at Sunshine, especially during regular enrollment or daily check-in encounters. Knowing triggers, as they related to their everyday lives and practices just did not seem relevant, especially as I started doing interviews and learned that participants did

not seem to be able to identify triggers in their everyday lives. Further, telling people to avoid objects or situations that may have been triggering was just not practical. As a harm reduction organization, simply telling people to avoid syringes, or drugs, or their social connections, is just not a harm reducing practice.

When I began to ask if the exchange is triggering participants would answer "no," quite readily. So, then why did I stick around Sunshine to interrogate substance use Triggers? Simply put, though the exchange is not triggering, it is a space full of triggers, of practices and objects that go by other names. Syringes, tourniquets, cookers-- the stuff of use. Studying triggers in this context gave greater insight into how to understand Triggers as an object.

Interacting with Triggers at Sunshine

Despite being able to express various levels and experiences of wanting in their everyday lives, when it came to Sunshine and its harm reduction programs, participants expressed that the exchange was not triggering. When asked if being at Sunshine made them want to use, participants universally responded "no," even while interacting with "triggering" paraphernalia.

I'm doing a focal follow with Ted. He's standing at the sharps bin, counting out his syringes. There's a delicate plink in the background each time he drops a syringe into the bin– tiny plastic collisions. As he deposits his syringes into the bin, I ask him about triggers. He says the site isn't triggering. Said it could be, but it isn't—unless he doesn't have drugs, then it can be triggering. Mentions that the exchange might be triggering for other people, but he's not sure. Tells a story about being in jail. When he was in jail, he had to get his blood drawn. There, the needles were very triggering for him and even make him feel high.

As Ted counted out his needles, he talked about how being at the exchange was not triggering for him, even though in other contexts, needles prove a potent trigger. Another participant, Jordan, expressed similar sentiments while showing me a custom cooker she made.

I'm talking with Jordan. She's the first participant I ever interacted with at the exchange. Jordan is young and beautiful with blond hair that she always piles atop her head in a bun. We aren't too far apart in age, and we share a similar sense of humor. I always make it a point to check in with Jordan when she stops by. We've recently run out of cookers at the exchange. So, Jordan runs to her car to grab the custom cooker she made herself. She shows me the spoon she uses to cook her drugs before injecting. She's painted yellow and pink polka dots on the handle. Her initials are painted in delicate black cursive letters at the tip of the handle: JG. She's thinking of painting more and selling them. Jordan is fiddling with her spoon as our conversation drifts back to triggers after she asks me how my project is going. I ask her if she thinks the exchange is triggering. "In terms of triggers," she says, "It's not triggering per se, when I am here" But that is because she is currently using, she explains. "I would feel triggered if I drove by and saw the van and I was trying not to use."

Jordan too interacts with paraphernalia, and yet at the same time says the exchange is not triggering. Interacting with triggering items did not really encourage any sense of wanting or triggers, it seems. Perhaps this is because, according to the free list data, needles or cookers are not necessarily considered highly salient triggers.

People who use, it seems, could be a more triggering example. But participants seemed to associate the site more with the people who worked at Sunshine, rather than other people who inject drugs. During one focal follow, one participant pointed to people as the problem and the solution.

I'm sitting with the site coordinator as he does a daily intake for Karen, an older woman with a history of chronic pain. She spontaneously launches into discussion about triggers. Says that addiction is "all about triggers." Said triggers are about "person, places, and things," recalling rehab rhetoric. She revisits this idea a lot while we talk. She said these are the things that make people continue to use. I asked if the exchange is triggering, she said "no, but it would be if I was sober." She mentions that the needles would be triggering, if she was trying not to use. She reinforces that "the needle is the addiction," and the "instant gratification" that it brings. She also mentions that people who use are part of the trigger too. It makes it hard to stop when around people who use. But, she says the exchange is not triggering and points to all of the services we provide as part of what helps, primarily the syringes and safe injection supplies. But she also mentions her family. She says her family talks to her a ton about stopping, but she really only considers it when we talk with her, give her resources, etc. She says that being around caring people (presumably caring people that aren't related to her) would influence her to actually call the resources (cards for recovery centers). We create a climate of care. We eventually end the conversation with her talking about how she would like to volunteer with us, to serve as a peer.

Karen attributes her use to the people around her that use. This is familiar to the free list discussion of people who use. Yet, the people on the site, it seems also present the furthest thing from a trigger. Karen mentions that it is being around the people on site that makes her want to stop using.

There are two interesting themes that appear here when participants talk about and interact with triggers at Sunshine. First, each participant mentions something like "this place would be triggering if I was sober." We can understand this statement in two ways. First,

participants are likely alluding to the fact that attribution of salience may be higher when they are not using for long periods of time (Robinson et al. 2014). Second, can we perhaps explore the idea that during sobriety Triggers are enacted differently. For instance, during recovery, individuals are often asked to identify triggers, and to further enact Triggers by listing, discussing, and avoiding them. At sunshine, though participants are constantly interacting with triggering objects, Triggers are not enacted– despite having a literal handbook with instructions on how to do so. If they were not using, a place like a syringe exchange would be enacted quite differently.

The second interesting thing that happens is that participants are literally interacting with triggers, and yet, they still do not invoke that Sunshine is triggering. Ted and Jordan are both interacting with drug use paraphernalia, which are considered triggering. Despite the presence of these visual, tactile, and sometimes auditory stimuli, they do not find the exchange is triggering. Karen might help us to understand why. Karen acknowledges that people can be quite triggering. But, when she is at Sunshine, the people she is attending to, it seems, are the staff and volunteers. Thus, when she thinks of triggers, she is thinking of the people outside of the exchange. At the exchange people are access to non-judgmental, lifesaving services and care.

Sasha, a woman who had started injecting drugs at 13 years old after a boyfriend had introduced her to heroin, put this very clearly in her interview.

"So, is being here triggering?"

"Nope!"

"Why not?"

"Um, I guess maybe because I've never actually done the act of shooting up here? For some reason, though even if I was sick (in withdrawal), would I this be a trigger? No. I don't

know why. I just associate as happy place, no negative experiences, a healthy place. You guys are awesome. So, no."

For Sasha, like many others who echoed the same ideas, Sunshine was not necessarily associated with use, and it was associated with being a "happy" and "healthy" place. In short, there is so much more happening at Sunshine that goes beyond the 1:1 exchange. Enacting Triggers at Sunshine encompasses these dynamics– of Sunshine as a space which is built around harm reduction and draws many different associations.

Enacting Triggers at Sunshine

Mol (2002) challenges us to look at object in practice. Specifically, she calls attention not to how objects are known, but how they are enacted, when the appear and when they disappear. It seems, in many ways, that Triggers simply disappear at Sunshine. I argue that by attending to the objects that are supposed to be triggering and siting Sunshine in harm reduction practices, we can better understand how Triggers are enacted at sunshine.

First, the things that are triggering themselves, seem to have different meaning in at Sunshine. Ted, as he's disposing of syringes, compares his experiences in jail and at Sunshine. In one context, syringes are incredibly triggering. At Sunshine, they seem to not draw the same associations. Jordan similarly is holding a cooker and discussing how the exchange is not triggering. The context, it seems, holds different significance for these objects.

One way to think about this is through associative learning. Simply, they are not injecting at the exchange, so they are not associating being at the exchange with getting high (Shanks 1995). When they leave, and enter drug using contexts, perhaps the materials of the exchange might become more triggering (Drummond 2000). Or perhaps going to the exchange is just one

reinforcer in a heterogeneous operant chain leading toward use (Troisi 2013). Further, Triggers might be far more salient when someone is not in active use (Robinson et al. 2014). All these explanations suggest that the contexts of use may be important in shaping Triggers.

Another way to think about this is through the siting framework. Specifically, the harm reduction context provides a very specific siting. Harm reduction, as I discuss in Chapter Five, is not only the physical field site but tied to a larger philosophy of practice and love. This siting, I argue, becomes deeply meaningful to Sunshine's participants.

The free listing activity helps us understand better how such siting matters. The people at the exchange, and other people who use, can lead toward use. At the same time, they can also provide critical lifesaving care. Moreover, the exchange emphasizes love, community, and respect. Participants are treated with dignity and kindness. These practices inform this site, and why the people who are at and around this site might create a different sense of meaningfulness. Further, the site can offer major, practical benefits for membership. Being a person who injects drugs is socially and physically stressful. Having the services that the exchange offers can help remove some of that stress. Finally, for some participants who experience pain, the exchange might be their only source of pain management and health care. Thus, things that could be potentially triggering, could also be transformed in interaction with this site.

Enacting triggers also helps us understand how Triggers are enacted at Sunshine. Triggers, it seems, are not particularly meaningful to participants who are actively using. This could be because Triggers are enacted in recovery. "If I was sober this would be triggering" is indicative of the relationship between recovery and Triggers. Mainly, that Triggers are practiced in many ways, very often in treatment programs.

In harm reduction enacting Triggers is far less practical. As I reflect on my own engagement with the resource booklet, I've come to better understand why Triggers are not enacted the same way at Sunshine. Enacting Triggers as things to "know and avoid" is not very practical advice for someone who injects drugs. Further, harm reduction is explicitly focused on helping reduce risk. While some aim to stop use altogether, the primary goal of harm reduction is to simply reduce harms (Single 1995). Listing, knowing, and avoiding triggers is not how Triggers are enacted on site. In practice, at Sunshine, Triggers are enacted as pathways to care. Triggers are enacted as a clean syringe, a caring confidant, possibility for pain management, a place to reduce stress, and more. Enacting Triggers is contextual. In the conclusion of this chapter, I discuss how this enactment of triggers can be understood in relation to the other themes of this chapter including learning and maintenance.

Conclusion

The goal of this chapter is to show that Triggers are not the same everywhere, all the time. I open this chapter with the provocative notion that Triggers do not exist in harm reduction. I do not mean that they are fully irrelevant, but rather I intended to the ways that Triggers are made to appear and disappear in the practices that surround Sunshine. Outside of Sunshine, participants were able to elaborate on Triggers, at least in experiences of wanting.

The salience survey showed variation within the population on subjective ratings of salience. Pairing the survey and ethnographic data provided a way to understand why participants may have been experiencing different levels of subjective salience. For instance, low salience users described very little subjective wanting and rather seemed to use functionally, for chronic pain or to manage their attention. Mid-range respondents seemed to offer insight in to

practices of maintenance among people who inject drugs. Maintenance users often seemed to be negotiating their lives around just trying to maintain their use. Wanting was generated by negative reinforcement and tolerance (using to avoid withdrawal and meet physiological expectations of use). The group with the highest level of salience was able to describe wanting in a much more robust way. This group helps to illustrate more classical understandings of incentive salience in everyday life, where certain activities, actions, or objects draw attention toward use. Watching someone else inject, partying, or situations of high anxiety can generate an overwhelming sense of wanting.

Subjective experiences of salience, it seems, could be negotiated between reinforcement patterns, tolerance, and functional use. Wanting, then perhaps is a culmination of these factors; a way to express subjective salience. I also suggest that salience is highly contextual. That the sites of use shape how individuals experience salience. I challenge understandings of the meaningfulness of context through the siting framework, suggesting that there are other ways to understand *how* context matters in salience.

Expressions of salience and wanting are often colloquially linked to triggers. Rather, the way individuals talk about and express the salience of context in everyday life is through triggers. The second section of this chapter elaborates on what participants specifically identified as triggers. Participants listed things like emotions, family, drug availability and paraphernalia that were triggering to them. I examined the three most salient triggers to illustrate how such triggers are encountered in and outside of the exchange. Interestingly, participants did not generate extensive lists of triggers. I suggest that perhaps this is due to the fact that in active use, participants are not considered "experts," despite the fact that, if they do go to rehab, they will be

asked to look back at the very experiences they were going through in order to generate lists of triggers. Further, I suggest that the exchange, for participants is not triggering.

Observations with participants and their interactions with triggers illuminates how participants enact Triggers in harm reduction and suggest why they might not find the exchange to be triggering. This is best exemplified by Ted who was actively handling syringes and contrasting how triggering they were in jail and at the exchange. The same object, in a different context holds different meaning. This of course, can be partially attributed to the salience of objects during active use and sobriety. Objects can be much more salient when you are not using (Robinson et al. 2014). Another way to think through this is to understand how the harm reduction siting informs enactment of Triggers.

For instance, the enactment proposed in the resource booklet asks participants to list their triggers, know them, and avoid them. This approach is not cohesive with the harm reduction model, which instead asks individuals to focus on risk reduction. Harm reduction, as a site, offers other ways to interact with triggers. At the exchange, syringes are enacted as a pathway to health via safe injection. People are associated with healing, health, and safety, rather than just using. The exchange operates as a place of stress reduction and care for people experiencing a range of pain and trauma. Siting triggers in the harm reduction context provides a clearer understanding of how Triggers are enacted in different spaces, which can be socially and physically meaningful.

Local neurologies is one way to explore the relationship between context, development, and culture. Local neurologies, and a neuroanthropological approach in general, push us to understand process in context. Siting context provides a way account for geographical, social, and cultural meaning. Further, siting provides a way to localize theory–to recognize how certain

theories situate bodies, practices, and what is theoretically relevant in any local setting. Employing an ontological approach to local neurologies, then, can help us to better understand how objects and bodies are situated locally.

Triggers are enacted and physiologically and cognitively meaningful in everyday life. Participants can describe how tolerance, reinforcement, and maintenance shape their experiences of wanting. In recovery, such abilities, it seems, are even more robust– stimuli become extra meaningful. Yet, in the harm reduction context the ability to describe wanting or triggers seems to disappear. Triggers are enacted differently in different contexts. A deeper engagement with physiological dimensions of reactivity is needed to understand better the relationships between such factors in and outside of harm reduction. The next chapter of this dissertation discusses how local neurologies and multiple ontologies can be complementary theories.

CHAPTER 7:

DISCUSSION

Introduction

The goal of this project was to provide an ethnographic interrogation of substance use Triggers. I use the harm reduction context to locate Triggers within a particular site and examine how Triggers are enacted there. To do this, I employ a triangulation approach, evoking local neurologies and multiple ontologies from anthropology, as well as incentive salience and cue reactivity theories from neuroscience and psychology respectively.

This chapter returns to the questions set forth in Chapter One to discuss the local neurologies of substance use triggers in harm reduction. I also discuss the potential theoretical contributions of this work. Namely, I discuss the implications of this work for employing the local neurologies framework in future research. Finally, I discuss how the approaches employed here can further theory in anthropology more broadly and compliment approaches like ontology.

How do PWID come to know Triggers?

PWID come to know Triggers through their various enactments. Chapter Four of this dissertation aimed to unsettle the concept of triggers. Employing Mol's (2002) ontological approach, this chapter aimed to demonstrate how triggers are an object that is known not via differing perspectives of this object, but through specific practices that enact this object. In short,

Triggers, as a concept, are not the same everywhere, all the time. Further, it is the ways that Triggers are enacted that distinguish them.

I first discuss the cue reactivity paradigm which proposes triggers as some combination of craving, physiological reactions, and drug seeking. In the lab Triggers are enacted in many ways. Some studies, for instance, present Triggers as a series of complex stimuli leading toward use (Troisi 2013). Others present Triggers as a response to a stimulus that that can be accessed via fMRI technology (Regier 2021). Others enact Triggers as a several distinct, but overlapping processes: craving, drug seeking, and physiological reactions (Drummond 2000).

The craving (subjective reactivity) framework that Drummond presents (2000), enacts Triggers as accessible, everyday encounters. Participants who injected drugs often did not express craving. They often remarked something like, "I don't really have cravings." Yet, they did have robust expressions of wanting in everyday life. Ninety three percent of interview participants discussed wanting in relation to their use. Further, they often discussed the way wanting made the feel. Lende (2005; 2012a) proposed that adolescents who used drugs in Columbia experienced a similar sense of wanting and of. Participants in this project evoke a sense of longing in describing wanting as an "intangible pull." Thus, Triggers are not enacted as just craving, but a sense of longing for use.

The other forms of reactivity that Drummond (2000) suggests are also practiced differently by participants in their everyday lives. In fact, they often recall experiencing very little physiological reactivity to drug use stimuli. Drug seeking is even more complex in everyday settings. Drug seeking, as participants describe, is not just based on exposure to triggers but a range of contextual factors including the setting and individuals present. Further, drug seeking, it seems is moderated based on availability of substance. Participants often noted

they would use less if they had more, whereas *anticipation* of running out of drugs would increase their seeking behaviors.

Here I offer different enactments of Triggers. Looking at Triggers through different enactments highlights how Triggers as an object transform. Such transformations show that in the lab, Triggers have an assumed automaticity to them. Either one trigger leads to a series of triggers and reinforcement which perpetuates use, or Triggers are an automatic process that can be visualized via brain scans. In everyday life, negotiating with Triggers is perhaps slightly more nuanced. For instance, drug seeking is moderated by drug availability. There is some rationality to times of seeking. In other words, just because the drug is available, does not mean someone is going to use. In Chapter Six I discuss how wanting and maintenance are part of complex engagements with positive and negative reinforcers, and tolerance. Wanting then, may bridge the gap between enactments of Triggers. In the lab wanting is a sign of the automaticity of Triggers, in everyday wanting is a manifestation of complex calculations aimed at maintaining use.

In rehabilitation and treatment settings Triggers are also enacted in particular ways. In MAT, Triggers are enacted through pills which impact opioid pathways throughout the body. The goal is to suppress the effects of triggers and hopefully, re-route behavior through chemical suppression. Triggers then become dosages, doled out at regular intervals as a legal, prescribed substance rather than illicit use. MAT is meant to suppress triggers– to make T/triggers disappear.

Rehabilitation programs on the other hand aim to elucidate Triggers through defining, listing, and therapizing around Triggers. Participants learn about Triggers through encounters in rehab, recounting their first experiences with triggers and in certain programs engaging in long sessions of talk therapy and listing exercises related to Triggers. A radical idea would be to

suggest that rehab programs create Triggers. In therapeutic settings, triggers are practiced as ever present and haunting. Triggers are warning signs, which rehabilitation practices seek to help people understand and re-learn to be prepare for life outside of rehab.

Yet in everyday life, Triggers change again. Triggers are key to regulating use and help navigate contexts as a person who injects drugs. In everyday life, Triggers are enacted instead as signposts, guiding individuals toward use and maintenance. At some point, triggers seem to disappear into the fabric of everyday life. But it's not as if they disappear totally. Participants could still discuss wanting, quite robustly. And they might even talk about a specific object as triggering, like the flash. They just did not seem to relate their everyday use to triggers. Triggers were something that could be talked about, but for many participants were not apparent in everyday contexts.

The goal of this chapter was to show that Triggers can be enacted as many different objects. Moving from the lab to treatment and to everyday life, there are slight differences in how Triggers, as an object, are enacted. It is important to note, however, that these enactments are still *coordinated*, as Mol (2002) might say. Triggers, though enacted differently, are not always perceived as different. For instance, in lab-based settings, great effort goes into creating and understanding the enactment of an object from place to place. There are standards for analyzing objects and elaborating on how to attend to a particular object (See for example: Ekhtiari et al. 2022). Coordination between treatment programs and everyday life is particularly interesting. Participants are asked to orate lists of Triggers, and to enact these encounters in particular ways. Such coordination is so salient that participants almost exclusively associated Triggers with rehab, despite being able to talk about triggers that they encountered and enacted

in their everyday lives. Context then is incredibly important to understanding how Triggers are enacted.

What is the Local?

Chapter 5 of this dissertation questioned the "local" of local neurologies. As Yates-Doerr (2017) suggests, the local is "ontologically-partial." If the goal of this project is to understand triggers within a certain context, it is critical to have a solid understanding of the context we are studying. It is through siting that "context" broadly, becomes local. Sitings provided two important contributions to understanding the ethnographic field site.

First, the siting framework suggests that the field site is always portrayed into being by the ethnographer. Thus, it untethers the field site from one geographic location to understand how context more broadly can become local. For instance, I show how culture and national policy contribute to the field site at which this project took place. Not only is Sunshine a reflection of the broader harm reduction movements in the state and nation, but it is also a site of tensions between the War on Drugs and Opioid Crisis in the United States.

Second, siting unsettles how we think about and apply theory to any given site. Rather, siting gives a better way to localize theory by providing a framework for understanding how theory is enacted in the field site. Siting theory is done by recognizing how theories play out in any given site. For instance, a question this dissertation ask is, how does cue reactivity work in harm reduction? De-centering Euro-American concepts of stimuli, cues, and the body, makes space to potentially understand differently how cue reactivity, as a concept and practice hold up in harm reduction. Such an approach to siting and push forward how we integrate theory with what we see in the field. For cue reactivity specifically, this sort of siting in important to

understanding variation in application of the principles of cue reactivity. Put another way, why does cue reactivity not always hold up in specific contexts? Why does reactivity not always lead to relapse? And why does relapse sometimes occur without reactivity? These are the sorts of questions that could be answered by applying the siting framework to theoretical approaches in the field.

This chapter provides insight into the "sitings" that make up Sunshine's harm reduction programs. The first siting that this chapter discusses is the siting of the War on Drugs. The War on Drugs has defined political and moral approaches to substance use in the United States. America's longest war, the War on Drugs has served to increasingly punish and penalize people who use drugs. Further, this war is intertwined with moral models of substance use, where people who use drugs are considered "useless," to quote Singer and Page (2014). This siting matters at Sunshine, where participants are constantly negotiating their spaces to avoid police or jail time. Further, participants often encountered discrimination based on their substance use.

The War on Drugs has caused great injustice and inequity in the lives of people who use drugs. Structural violence offers a clear framework for understanding this, "These structures are violent because they result in avoidable deaths, illness, and injury; and they reproduce violence by marginalizing people and communities, constraining their capabilities and agency, assaulting their dignity, and sustaining inequalities" (Rylko-Bauer and Farmer, 2016). In Florida, the impacts of this are clear with rising rates of incarceration, HIV, HCV, and overdose. The War on Drugs as a siting, informs how participants negotiated their everyday lives as drug users.

The second siting I review is the Opioid Crisis, which has similarly structurally violent features. The Opioid Crisis was the genesis of many participants' drug use. Many were still navigating features of the crisis, trying to get care for chronic pain, or suffering under the

consequences of regular use of opiates. Others were seeking to stop using opiates through opiate replacement drugs, which was also similarly difficult to navigate. Harm reduction facilities in many ways operate as an answer to the problems posed by the Opioid Crisis, as they offer safe injection materials, overdose prevention tools, and sometimes even a space between active use and MAT.

The final siting is the harm reduction space. Harm reduction, as the vignette about Jane reminds us, is a *practice.* Harm reduction offers a suite of practices aimed at mitigating the harms caused by the War on Drugs and Opioid Crisis. These practices occur many ways at Sunshine. At its most basic, it provides syringes, safe injection materials, and testing for infectious disease. However, harm reduction at Sunshine goes beyond this.

First and foremost, participants are always empowered to make choices about what they want and need. They tell us what type and size needles they want; it is not dictated to them. Staff and volunteers also engage in what might be called listening as a form of care. As Levy (2020) writes, listening is "a responsive activity that values the knowledge embedded in communities" and "a deliberative practice, one that structures our identities and activities" (5). This deep listening takes participants' experiences, traumas, and tragedies seriously, and provides a space for participants to be heard. Volunteers and employees also used this listening to try to encourage change. For some that meant trying to battle bureaucratic housing systems with participants or talking through experiences with overdose. Other times harm reduction practices were teaching people how to use Narcan, or the importance of safe smoking supplies. Harm reduction comes in many ways, but most of all it's a commitment to a practice. A practice which prioritizes community, health, and safety for all.

Collectively, these sitings situate the local. Sunshine is not only a physical location but an amalgamation of politics, policies, bureaucracies, and health care systems all interacting at once-across space and time. Collectively, Chapters Four and Five provide the object and the context for locating Triggers as a specific object at a specific site. This leads then into Chapter Six which examines Triggers in harm reduction.

What are the Local Neurologies of Substance Use Triggers in Harm Reduction?

Chapter Six discusses incentive salience and wanting for participants as a whole and on site. Harm reduction provides an interesting context for interrogating Triggers as participants often noted that the exchange was not triggering – despite the fact that it is saturated with Triggers. Incentive salience and wanting provide a broad framing for the neural substantiation of Triggers (Robinson and Berridge 1993; 2008). However, the salience survey is limited to understanding subjective salience. Using ethnographic methods, I was able to assess how subjective salience related to descriptions of use and wanting in everyday life. Though the sample size was small, I found that participants salience scores fit well with their descriptions of wanting and patterns of use in everyday life.

One important consideration of the salience score data is maintenance. Participants largely seemed to be using to negotiate experiences such as withdrawal, pleasure, and pain relief. Maintenance provides a framework for understanding how experiences of wanting are intertwined with positive/negative reinforcement and drug tolerance. In many ways, participants in the maintenance group could resemble those in MAT treatment. MAT treatment is an effective bodily regulator that also lowers negative reinforcement dynamics and inhibits pleasure. For

many in the maintenance group, their use could resemble these processes, without the institutional constraints.

I also sought to understand *what* participants considered to be triggers. Free list data indicated that people, stress, and pain were the most salient triggers for participants. When looking at these features within the context of harm reduction, these common triggers were transformed. People represented pathways to healing and help. The exchange itself alleviated a lot of the stresses that accompany life as an injection drug user. Similarly, the exchange offered a sort of mediator for people who experience chronic pain. I suggest that perhaps, there are associative learning dynamics happening at the exchange that change the ways people enact triggers.

Associative learning explains how contextual factors become cues or triggers. I suggest that perhaps Sunshine's participants, many of whom were experiencing harm reduction programs for the first time, may be re-learning triggers. More than that, their practices surrounding triggers change. People are not just a source of drug use but also a source of health, care, and community. Dynamics of stress change as Sunshine provides some relief to the daily stresses of injection drug use. Chronic pain patients are provided some level of support and care in their pain experiences. Eliminating the stresses of use and pain management could also address positive incentives linked to using. Participants do not have to work as hard to get the supplies and treatment that they need, reducing the need for seeking and the stress that accompanies it (which could exacerbate wanting). Triggers, as a concept, fade aways as associations surrounding triggers change. Associative learning offers one way to understand the change that is happening and why wanting might be so low at the exchange.

The free listing method also potentially indicated that participants did not have the "expertise" and contextual stimulation to recall long lists of triggers. Participants listed on average 3.2 triggers, which is quite low compared given that the standard is about a dozen or so terms (Weller 2015). This could indicate that triggers is too large of a conceptual category to be succinctly listed. It might also suggest that associations between active use, the harm reduction context, and triggers are quite low. The remainder of the chapter may explain why participants do not see the exchange as triggering and how they enact Triggers in harm reduction.

This is not to say that the same dynamics exist at all harm reduction programs or that triggers are the same for injection drug users everywhere. One might also critique this fieldwork as I use similar practices as those in the lab and rehab to elucidate the concept of triggers (i.e., listing strategies and surveys). However, the goal of this project was not to critique these practices, rather to recognize how they enacted Triggers. This project aimed to evaluate Triggers at a certain place and time, through a practiced based, ethnographic lens.

Thinking Through the Local Neurologies of Substance Use Triggers

Downey (2021) proposes that local neurologies are inevitable given the fact that humans are equipped with a plastic nervous system that is highly receptive to environmental pressures and constraints. Local neurologies is a conceptual lens which provides a way to understand development in the context of particular environmental and sociocultural dynamics. Thus, local neurologies focuses on particular sites that inspire neuro-cultural variation in order to understand the brain as neither universal nor highly particular (Casper et al. Forthcoming).

This study sought to understand the local neurologies of substance use Triggers in the harm reduction context. Triggers are at once socially, culturally, cognitively, and physiologically

meaningful– they are a complex object that spans the brain and culture. Further, I argue that to understand Triggers we must understand Triggers in practice. I look to the harm reduction site which presents a complicated local dynamic. Harm reduction is at once a site of activism and political significance, but also a site of care for bodies (and brains) that sit at the crossroads of the War on Drug and Opioid Crisis. The "local" is a complex web of constraints, geography, and sociocultural dynamics that impacts how individuals enact Triggers in active use.

The resultant neurologies then, I aim to show, are potentially situated within dynamics of incentive salience, wanting, associative learning, tolerance, withdrawal, and substance use maintenance. Employing a triangulation approach, I evoke research from psychology and neuroscience to help contextualize the everyday practices related to and enactments of Triggers. I propose two potential take-aways for considering the "neurologies" of substance use Triggers. First, that there are variations in wanting that are significant in how individuals navigate their daily lives and interactions with Triggers. For some, wanting is robust and drives their use. For others, wanting appears muted, couched within functional use and reinforcement-based learning paradigms. In harm reduction, wanting seems to dissipate, at least subjectively. Triggers, as an object, I suggest are not the same in all contexts and garner different meanings and responses in different contexts. In harm reduction, Triggers, and the sense of wanting, seemed to dissipate.

A second potential implication of this work is that learning may also matter to how individuals understand Triggers. Triggers, it seems also become obscured in harm reduction as, I propose, they may undergo a process of re-association. Triggers in harm reduction are associated with use but may also be associated with decreased need for seeking and a method of MAT maintenance. Further, Triggers become associated with the positive implications of being

involved in harm reduction such as care, respect, and a challenge to what it typically means to be an injection drug user in the United States.

I recognize here that I can only speak to the subjective dynamics of the neurologies present in harm reduction. This project employed ethnographic methods which rely more heavily on subjective explanations for biological processes and assessments of wanting. The strength of this approach is that it decenters empirical understandings of biology and prioritizes the perspectives of participants and their own understandings of their biologies. In this way, I evoke an ontological approach to studying Triggers.

There are however significant drawbacks to this. Namely, it becomes harder to speak about material changes in the body via such assessments. There are likely better ways to capture how the body, brain, and culture interact in the harm reduction context. Mobile methods, for instance, may present one innovative approach to understanding how biology/neurologies are shaped in different interactions. In the final chapter of this dissertation, I suggest how a researcher might better get at local neurologies by employing a more biocultural methodological approach.

Employing Local Neurologies

Downey has applied local neurologies to echolocation as a case study (Downey 2021). Other pieces have been written about the theoretical significance of local neurologies (Lende and Downey 2020; Casper et al. Forthcoming). This project is one of the first studies to explicitly employ the local neurologies approach. There are some lessons learned in doing so that could contribute to a broader understanding of how to apply this theoretical approach in the future. The

main data chapters of this dissertation each contribute important considerations for using local neurologies.

Chapter Four is an argument for employing an ontological approach to understand how objects are enacted. Ontology recognizes that epistemological approaches speak of objects and how they are known. Ontology challenges this "perspectivalism" as Mol (2002) calls it, and rather looks at how *practice* shapes objects of inquiry. Mol uses this to argue that the body is multiple. That the way the body is enacted changes the body, in any given context. We can extend this to the brain in the local neurologies approach. By focusing on the different ways it is enacted in research and elsewhere we can come to better understand the multiplicity of the brain. Decentering biomedical views of the brain and body can help us to ask different questions about problems that humans encounter. For instance, the relationship between Triggers and relapse is not clear exactly, despite the fact that many different theorists have sought to understand this (Troisi 2013). Examining Triggers as a different object and attending to how they are enacted can provide a different perspective on the relationship between Triggers and substance use. A multiple ontologies approach to frame objects, and in particular the brain, can open new ways to see objects and new lines of inquiry. Doing so helps us attend closer to what contexts and practices shape local neurologies.

Chapter Five interrogates the "local." Lock (1993; 2017) and later Niewöhner and Lock (2018) situated biologies within time and space. Such situating helps us understand how local environments and culture become embodied. Yates-Doerr (2017) proposes that biologies should instead be sited. Siting biologies accounts for not only the relevance of geographical location but the other sites that comprise field work. The siting framework helps to rethink what we consider to be of importance locally, and further how we apply theory locally. In this work, the local is

informed by sociopolitical settings, as well as cultural understandings of drug use. Siting the local requires an interrogation of Euro-American concepts of a field site and instead challenges us to think broader about how the local is portrayed into being. This can be applied to the theories we employ in our research to. Siting theories helps to re-think how we see theory in the field, and what parts of such theories are relevant. For instance, siting cue reactivity theory helps to attend differently to what people are enacting and the framework by which we understand these enactments. In any approach to local neurologies, I argue, the local should be expanded beyond immediate geographical space.

Finally, Chapter Six helps us understand how to approach a study of neurologies. To do this, I employ triangulation–pulling from research in neuroscience and psychology to help understand what the ethnographic moments highlight. At the same time, I hesitate to fully commit to explaining everything via psychology and neuroscience. I site this work in the middle of these approaches. Employing this approach, specifically to Triggers helps to show that the brain is more contextual than it sometimes appears. Participants were able to manage different enactments of Triggers in different contexts. One would expect that a place filled with triggers, like syringes, would enact Triggers. Yet, participants insist that the site is not triggering. The brain can be discriminative and contextual.

Previous research in neuroanthropology has focused on skill acquisition and "bio-developmental spirals" (Lende and Downey 2012; Downey 2021). These approaches seek to understand neurobiological principles become applied in these bio-developmental spirals. This study instead seeks to highlight that the brain is not always spiraled. Rather, the brain is not always applying the sale elaborated local neurologies. Rather, context shapes which neurologies matter when. However, distinguishing these processes in the field is hard. In Chapter Six I

employ triangulation to try to unravel these processes. The salience scale attempts to capture wanting, while interviews and observation supplement scale values in interpreting how wanting applies to harm reduction. And yet, we are still left with multiple, complex, overlapping processes that likely contribute to Triggers in harm reduction. Salience, wanting, maintenance, and associative learning dynamics all mattered. Approaching the field by attending to multiplicity is critical to understanding a messy brain in complicated contexts.

Thus, applying local neurologies, I suggest should attend to objects in practice, and specifically how these objects are enacted. I propose that siting objects is an effective way to understand how context becomes meaningful. Further, a triangulation approach helps to navigate through and examine a messy and complex brain in these particular sites. This is an advancement of the local neurologies approach as it is currently understood. Downey (2021) argues that local neurologies should focus on ontogeny. Development is indeed important in understanding how individuals are changed in context. Yet, such an approach makes assumptions about the ways contexts matter. I instead suggest that ontology and siting can help us better understand the objects that we are interrogating and the practices through which these objects are drawn into relevance. Further, such an interrogation pushes local neurologies to expand the sites which matter in such developmental approaches. In the next section of this chapter, I specifically discuss how local neurologies and multiple ontologies can be compatible theoretical constructs.

Theoretical Contributions: Local Neurologies and Multiple Ontologies

Local neurologies is a theoretical framework that asserts that the nervous system is shaped within local, developmental constraints (Downey 2021). The nervous system is incredibly plastic and such plasticity lends itself to learning in specialized environments. For

instance, Downey notes that people who navigate via echolocation show material changes in the visual cortex of the brain (Downey 2021). However, as Downey notes, echolocation is not applied evenly across contexts, cultures, or people who experience blindness. Echolocation, and the use of clicking can be understood as culturally disadvantageous. In many places, it is more socially acceptable to use a walking cane or animal assistance, whereas clicking can often be understood as interruptive or off-putting. Instead, engaging in echolocation is a skill that is taught and learned in particular settings by particular experts. It is through skill development (locally acquired), Downey argues, that the nervous system is changed– or rather becomes embodied, hence the notion of The Encultured Brain, the title of Lende and Downey's seminal work (2012).

The essence of Downey's local neurological argument is this– that we must attend to the contexts and constraints to understand embodied variation. To understand how the brain (and extended nervous system) participate in creating local neurologies we must understand opportunities for "spiraled" human development and the ways that culture (which often inform context and constraint) becomes embodied. In this way, the local neurologies concept is inherently about unsettling the divide between nature and culture, proposing a framework to understand flexibilities in nature by way of culture.

Similarly, ontology is a theoretical approach focused on alterity and specifically variations in nature. For instance, Kohn (2015) recognizes that for people in the Amazon, forests come alive– as he writes they think. Nature then, no longer functions according to universal principles but is rendered as flexible as culture. The variation is indeed perceived through culture but is made materially real by the way the thinking forest is enacted – through hunting, communing, and living a life attuned to the forest (Kohn 2015). For ontologists and

neuroanthropologists alike, nature is flexible and something that can be examined through ethnography deeply embedded in the spaces in which alternative natures are being trained, practiced, and enacted.

Where ontology and neuroanthropology differ, however is in how they conceptualize such differences. The ontological turn specifically suggests that "nature" is a Westernized, biomedical object that can and should be interrogated to account for variation in human (and non-human) realities. Further, Westernized knowledge is almost always presented as referential – about how people know some objective thing. Instead, a multiple ontologies approach suggest that knowledge is embedded in objects and moreover, how these objects are enacted.

In essence, how people enact any object creates the reality of this object. As Mol (2002) notes, objects are not floating in a void, awaiting representation. At the same time, objects are not wholly and uniquely constructed by any one perspective. Instead, objects are created through practice. This is what makes ontologies multiply. Objects can exist in multiple ways via the multiple practices that enact them. This is, in part, what I aim to show through this dissertation, that objects (in this case Triggers) become meaningful in practice. Triggers are differently meaningful in harm reduction, in part due to the different practices which enact them. In harm reduction a needle is not just the route of drug administration by also a powerful symbol of health and health care, of risk mitigation, acceptance, and community. The needle is enacted through a process of exchange with caring and compassionate staff and volunteers. In substance use treatment the needle stands as a harsh reminder of past realities, of a potent warning sign, and something to avoid. Needles (the object) and Triggers (the concept) are changed.

Downey (2021) insists, that the ontological turn is "excessively idealist" and cannot account for embodied variation. He argues that the ontological turn specifically hinges on

conceptual variation– not embodied variation which Downey assesses via a cultural phenomenological approach. The ramifications of depending on the ontological approach, he warns is that human variation is only understood to be superficial or cognitive. Whereas Downey (2021) argues that "difference in human embodiment generates particular forms of 'worlding'" (2), literally embodiment shapes how people interact with an exist in the world. As discussed at the beginning of this section, for Downey, culture and constraints shape developmental trajectories, these potential worldings. The ontological, he argues, counters such claims in its inability to speak to changing biology and development.

Yet, it is often conceptual problems which pose the most interesting, embodied variation. For instance, to use Downey's own research, enacting concepts of balance differently shapes variation in vestibular systems of Brazilian Capoeira practitioners (Downey 2012). Concepts, it seems, are critical for shaping practice and engagement with the world. In this way, "concepts" and "objects" are one. In other words, a concept is a sort of object in that it is too enacted in practice. Attending to how concepts are enacted can open whole domains of inquiry, particularly for culturally attuned anthropologists. Fieldwork is a critical space for recognizing where and how concepts are enacted differently, and thus where points for embodied variation (those developmental spirals Downey writes of) may be. I propose that instead of viewing ontology and local neurologies as conflicting, these two theories can work together to explain how objects (concepts) that change are practiced differently in different contexts can extend to explain embodied variation.

This idea is supported by current research in neuroanthropology which seeks to understand "concepts in dynamic assemblages" (Downey 2022, Neuroanthropology.Net).

Downey writes of his suspicions that "concepts change" and further how concepts have the potential to influence practice and embodiment,

> "When a concept is effective in skill acquisition, for example, it influences individuals, not just through learning it overtly. A potent concept is also instantiated through physical practices, habits, material culture, social interaction, and emotional commitments. As a concept is integrated into a group's or individual's cultural repertoire, it may have unintended effects; even as it becomes obsolete or falls into disuse, it can have long-standing consequences" (Downey 2022, Neuroanthropology.Net).

Downey notes that concepts are key to skill acquisition. Further, concepts become "instantiated." Attending to concepts in context, and how they changed is enabled through an ontological approach– an approach that is focused on interrogating concept through practice, or perhaps even skill. It is by attending to practice in the ethnographic present that we understand how these concepts have such critical consequences. Such consequences are what I aim to show in this dissertation.

Further, I argue that it is this flexibility in concept and change in practice that can become deeply embodied and meaningful to individuals who inject drugs and practice harm reduction. Ontologies provide a way to interrogate how it is that concepts change in practice. For instance, Triggers in rehab are practiced through listening, confrontation, avoidance, and thus triggers become the things to look out for – to attend to and be reactive to. Triggers in everyday/harm reduction are practiced as part of maintenance, regulation, agency, health – these are things to attend to and hope for. Such enactments can produce deep embodied meaning – which is something I think both Downey and I hope to demonstrate through future research.

However, interrogating such issues in research (operationalizing them) is not straight forward. How do you analyze a concept that changes in different contexts, has varied and robust practices, and seemingly interacts with embodied systems? Triggers present a particularly "sticky" problem. Often Triggers are relegated to rehab. Yet, Triggers as a concept and practice

pre-date modern U.S. substance use treatment programs. In the early 1900's researchers sought to "cure" addiction, but could not contend with triggers, and thus instead changed tactics to address "cues" in rehabilitation and in research on addiction (Campbell 2009). Researchers now seek to understand how Triggers become embodied through a myriad of laboratory-based experiments and assessments as I review in Chapters Two and Four. In essence, people were practicing Triggers before Triggers were "discovered."

Today Triggers, as an actual practice, are referential. Individuals are encouraged to think back to their prior experiences of active use to discern their triggers. Triggers too are taken as a standard object. Despite individual variation in things that can trigger, Triggers are understood to be something that all PWID have. Further, PWID and are pushed to identify triggers, to "know them and avoid them." As such, Triggers are referential to a past self that is in constant contention with a current self. Moreover, this view of Triggers is referential to a universal experience of "addiction," often labeled as a chronic relapsing brain disease. Thus, these practices are referential both in how they understand Triggers and the self, and bodies experiencing addiction.

Ontology offers a way to move beyond referential practices surrounding Triggers and referential knowledge of Triggers. This is critical because objects change. Triggers are not always Triggering, yet these approaches to Triggers in substance use treatment cannot account for all the other ways in which Triggers are enacted during active use and after.

Ontologies emphasize the here and now by examining what practices are enacting the concept in the moment and asking how it is impactful to the way individuals live. In essence, what we do becomes embodied (Roepstorff et al. 2010). Interrogating pattern practices (concepts in action) creates space to connect the conceptual bodies to changing material bodies. Yet, in

doing so one walks an intellectual tightrope between ways of knowing. The ontological approach pushes researchers to recognize that knowledge is situated, and objects do not only exist in how they are known, but how they are enacted.

Research in neuroanthropology is reliant on neuroscientific and psychological literature to describe standard concepts and objects of inquiry. The work of neuroanthropologists then is often referring to or validating laboratory-based concepts by studying them in the field. For instance, Lende (2012a) does this in his study of incentive salience among adolescents who use drugs in Colombia. He provides a cultural model for understanding wanting, attention, and drug seeking (key factors of the incentive salience paradigm as studied in lab-based animal populations). Ultimately, Lende and Downey (2012) acknowledge that biology is flexible. How else could it become enculture? But, instead of asking about bodies in the wild, what neuroanthropology is really doing is asking how bio-medicalized subjects change in particular contexts– asking how those concepts from the lab hold up in everyday life.

Instead, I suggest neuroanthropologist start with the everyday concepts and work backwards, radically accepting what people are telling us about what they are experiencing. In the project presented here, wanting and triggers are obscured in the harm reduction context. This could be because participants are not injecting at Sunshine – thus associative learning is only associated with immediate drug taking action and triggers are only triggers in the literal seconds preceding use. However, I also consider other things that happen in harm reduction that obscure wanting; hope and agency, engagement in other aspects of harm reduction and social meaning, shifts in attention. All of these could be explored in greater depth using in ethnographic and biocultural methods.

I specifically see ethnography as the key to grounding such discussions. In the study presented here, I very much came into the field with my own referential knowledge of Triggers. I had spent extensive portions of my graduate education studying "cue reactivity" and constructs of Triggers in the lab. Yet, my time in the field turned that knowledge upside down. In front of me, I was presented with what I had read were things that should be triggering (needles, cookers, cottons, tourniquets, other users, etc.). Yet, Triggers disappeared. Ethnography was the only way to make sense of this shifting paradigm by becoming part of the practices which make Triggers obsolete.

The ontological perspective centers ethnography and the voices of participants. Many, including ontological anthropologists themselves, see the ontological turn as merely an expansion of what anthropologists are already doing in ethnographic fieldwork (Holbraad and Pedersen 2017). In essence, the ontological approach challenges the ethnographer to come into the reality of the participant– gain that emic view of the world. Holbraad and Pedersen (2017) propose that the ontological way of thinking "seeks deliberately to take these moments [of insight] as far as they will go, making full virtue of their capacity to stop thinking in its tracks, unsettling what we think we know in favor of what we may not even have imagined" (2). In doing so, the ethnographer can push beyond culture, construction, and hegemonic views of bodies to understand how concepts change in practice.

Multiple ontologies can help us better understand these multiple, coexisting concepts and practices. We can at once acknowledge referential knowledge that tells us some things about bodies in controlled contexts while also acknowledging that it could work differently elsewhere. Afterall, Mol (2002) notes, ontologies may be many, but they are not infinite. In the case of Triggers in harm reduction, one could spend more time doing extensive ethnography while also

employing a context dependent salience scale (Something I discuss more in Chapter Eight). Such methodological approaches can complement each other where the ethnography captures the practices which are salient, and a context specific salience scale gives another way to express how salient certain features of context are.

In sum, ontologies are about concepts and conceptual variation. However, concepts also dictate practice. Thus, approaching concepts from a practiced based lens can expand the ability to do neuroanthropological research through ethnographic research on enactment and can create additional opportunities to understand how pattern practices become substantiated in the encultured brain.

Conclusion

This work presents a challenge to how we represent objects in research. Research in psychology and neurosciences (for good reason) often attempt to create models of behavior and process. Human behavior is complicated and messy, eliminating variables and focusing on essentials can lead to great discovery and innovation. For cues and cue reactivity, this often means taking cues out of context and creating models of reactivity to be broadly applied across groups and contexts. An ethnographic approach shows that Triggers are not the same everywhere, all the time. And individuals do not always respond to cues the same everywhere, all the time. On the other hand, research in anthropology often assumes that structures of power or dynamics between structure and agency can explain individual behavior. With Triggers, that would mean assuming that Triggers are socially constructed in recovery, and simply played out in everyday scripts relating to such work. I aim to provide a way to think between this dichotomy. Employing triangulation provides a way to work between perspectives to better

understand how to represent the multiple, relevant dimensions of any given object. Specifically, employing local neurologies and multiple ontologies helps to understand how such objects are represented in different spaces, and what about these representations matter.

The goal of this work is not to critique local neurologies theory but rather, as Yates-Doerr (2017) writes, to "strengthen it by tethering it to an ethnographic sensitivity for treating concepts and objects alike as mobile, empirically situated, not-quite-ever-things" (382). The theoretical contribution this work aims to make is to a stronger local neurologies. As a relatively new theory, local neurologies has been written about few times (Lende and Downey 2020; Downey 2021; Casper et al. Forthcoming). This work aims to add to the theoretical cannon and push local neurologies forward as a critical theoretical construct that will shape the future of the field. In Chapter Eight, the conclusion of this dissertation, I discuss the implications of this work for the field of addiction research, and anthropology as a whole.

CHAPTER 8:

CONCLUSION

Summary

This goal of this project is to provide an ethnographic interrogation of substance use Triggers. In doing so, this project suggests one way to apply a local neurologies framework to human problems. Triggers, which are linked to drug use, are not well understood in or outside of clinical settings. I focus specifically on the harm reduction context to illustrate how Triggers are enacted in practice. Employing ethnographic fieldwork and a salience survey with people who inject drugs, I propose that Triggers are not merely a concept but rather, an object enacted in practice. Further, the way Triggers are enacted shapes what they are. In the laboratory and clinical settings, Triggers are understood to be automatic processes, sometimes happening below awareness. In rehabilitation, Triggers are enacted as potential to relapse, and are brought to constant awareness via listing exercises and talk therapy. In everyday, drug use settings, Triggers seem to disappear.

I explore this disappearance through an ethnography of one harm reduction context. Specifically, I site harm reduction as not only a set of loving and caring practices, but also as a site tied to the repercussions of the War on Drugs and Opioid Crisis in the United States. Such sociocultural and political phenomena shape how individuals engage with the world and constrains their ability to seek care or even stop using all together. The harm reduction context creates a different possibilities for enactments of Triggers.

Despite being able to describe various levels of wanting in their daily life, participants contested that the harm reduction context did not want to make them use and was not triggering. Such revelations are curious, given that the harm reduction context is filled with objects that are triggering (syringes, injection supplies, other people who use, etc.). The free listing activity suggest that people in active use are not "experts" at listing triggers, and thus the cognitive category of Triggers is not very salient to them overall. Further, it seems, the harm reduction context does little to bolster such expertise.

I examine how tolerance, wanting, and associative learning all play a role in the maintenance of drug use in and outside of harm reduction. Maintenance provides a framework for understanding how experiences of wanting are woven into the everyday fabric of use. Wanting is more than simply the urge to use, but also relevant to processes of withdrawal and tolerance, and reinforcement learning. In harm reduction, I suggest these associations could be transformed. Things that are typically considered triggering outside of the harm reduction context are no longer considered triggering. I suggest that perhaps individuals are re-learning these association in a different context which provides a different way to engage with Triggers and wanting.

This project aimed to show how neuroanthropological and ontological theory can be complimentary. Both neuroanthropological and ontological theory are interested in the artificial divide between biology and culture. Both approaches question how these categories are created, what purpose this divide serves, and how it becomes embodied. Local neurologies and multiple ontologies both offer strategies that simultaneously speak to the concepts that matter to humans and the material bodies they inhabit. Further, these theories, together, allow for greater

understanding of the ecological spaces that humans occupy, taking into consideration context in ways that can be best known through ethnography.

Contributions of this Work

This project seeks to employ and further develop a local neurologies framework for understanding questions of biology and culture. Questions of drug use and addiction sit precisely at the crossroads of biology and culture. Anthropologists are explicitly curious about the "biosocial entanglements" of addiction, acknowledging both a critical understanding of the constructs that create addiction and the biological dimensions of the experience (Raikhel 2015). Ontological theory provides one way to look deeper at the concepts and constructs that shape addiction. At the same time local/situated biologies, proposes that biology must be considered within their own material and cultural contexts (Yates-Doerr 2017; Niewöhner and Lock 2018). Using substance use triggers as an exemplar, this project pulls together ontology and local biologies to understand how specific neurological processes play out in everyday lives.

Local neurologies is a new theoretical concept proposed by Lende and Downey (2020) and furthered by Downey (2021) in his work on echolocation among the visually impaired. This theory provides one way to understand how the brain and culture interact by attending to context, and how specific contexts shape and constrain human behavior. Local neurologies attempts to more holistically represent embodied human experiences, a central concern to anthropology as a field. In this project the "local" is not geographically bound, but ontologically distinct. Siting the local deconstructs notions of a bounded field site and opens up the local to capture institutions, structures of power, culture, and other factors that comprise a field site.

Further, Triggers, and the processes that underly complex human-context, engagement are relevant both socially (Raschig 2017) and to many human processes such as eating and reproducing (Lende and Smith 2002). Understanding the role of Triggers in everyday human interactions helps get closer at understanding the relationships between individuals and context. This project proposes one way to understand this complicated biosocial behavioral pattern through ethnographic methods. Triggers then become open to more questions. Future research could continue to interrogate how Triggers are enacted locally, and the biological and social implications of such enactments.

This project also contributes to social science literature on addiction. Previous scholars have argued about the various ontological interpretations of addiction (Hellman 2021; Kelley et al. 2022). Whereas these projects focus on debates on the "realities" of addiction in the social and biological sciences, this dissertation instead suggests scholars should pay particular attention to the enactment of different addictions. When practice becomes the center of focus, addiction, like triggers, can multiply. The questions become less about if addiction is a brain disease, but *when* addiction is a brain disease or *when* addiction is a moral failure, and *when* (and by extension where) those practices matter. Focusing specifically on practice, then helps to illuminate potential "developmental spirals," through which these practices can become embodied (Downey 2021). It is these developmental spirals that can provide insight into how various enactments and practices become embodied.

Lessons Learned: Applying Local Neurologies

In doing this work there were a great many "lessons learned." Perhaps the most important of these lessons is how to apply local neurologies to ethnographic fieldwork. In other words, this

dissertation represents the first enaction of local neurologies theory in the field. Here I outline three key takeaways for future researchers applying the local neurologies framework.

The first takeaway is that one must carefully attend to context and define what the "local" is for any local neurology study. Context, in local neurologies research, can at once be ecological, geographical, sociocultural, or even within or between bodies. In employing the local neurologies framework, one needs to decide which contexts draw relevance to whatever skill or neurology is being examined. I apply Yates-Doerr's notion of "siting" to situate harm reduction as not just a physical site, but a suite of sites that are enacted– and fundamentally a part of harm reduction. In doing so, I recognize that there are many "places" which draw relevance in harm reduction and inform the way individuals enact substance use Triggers. To employ local neurologies, one must go to great ethnographic lengths to recognize what the local is in relation to the neurological variables of interest.

Relatedly, the second takeaway is that one must be specific about the "neurology" to be addressed. It is not possible or practical to address the whole nervous system at once in a study of local neurologies. Local neurologies is interesting precisely because it tells us how humans enact the same principles of flexible biology, differently. In essence, local neurologies is interesting because it can reveal how subtle changes in ecology, practice, or development can change the "worlding" of any one group of peoples. Identifying a specific "neurology" allows for a fine-grained approach to such revelations that would be obscured by studying the "whole" brain or nervous system.

At the same time, the ethnographer must be completely open to recognizing how objects change in the field. In this project I had to throw all I knew about triggers out the window– or I would not have learned anything. Triggers appeared (and disappeared) before my eyes. Instead

of making sense of this through a purely psychological or neuroscientific perspective, I opened my self to the lessons of my participants, and what they were telling me was important. In identifying a neurology, one must be open to those lessons.

Finally, the third takeaway is that local neurologies are best recognized in practice. Much of Downey's work has focused on how individuals come to embody practice (Downey 2005; 2010; 2012; 2021). Similarly, Mol (2002) proposes that objects (like any certain neurology) are enacted in practice. Attending to practice highlights how it is that people can come to embody neurologies. In other words, neurologies become embodied through practice or are resultant of practices. Attending to practice in the field is key. What people do, from a local neurologies perspective, is just as (or even more) important as what people say. The work should be highly ethnographic– attending to practice in excruciating detail. Looking back at my own data collection, I do regret not spending more time attending specifically to practice, capturing more nuance in interactions with and enactments of Triggers. Attending to practice is the bridge between the local and the neurological. As anthropologists or ethnographers, we have a front row seat to watch that happen and become a part of the practices ourselves (See for example Downey et al. 2015).

This project represents the first application of the local neurologies framework. In doing so, I establish *how* to carry out a local neurological project. I offer what I learned in this process for future researchers to build on. Theoretically, local neurologies offers a way to legitimize what participants are saying about how context and practice change them. In doing so, we open the world to new kinds of human variation, which will persist so long as humans do. In the next section I discuss how the lessons learned through this project can be applied to helping the people we study.

Applied Implications

This project, from its inception, has always been deeply applied. At sunshine I was both a researcher and harm reductionist. As an employee of the exchange, I was working every day in the field of harm reduction, exchanging needles, providing overdose prevention trainings, and practicing love for a community of people who use drugs. Certainly, my everyday activities did include taking fieldnotes and doing interviews, but most of all, my daily work was trying to reduce harm in the lives of PWID. Inspired by the works of anthropologists like Paul Farmer, in the field I was working to help participants. Completing daily assessments, packing bags, teaching overdose prevention, providing first aid, HIV/HCV testing, and drawing blood. While there are applied outcomes of the work, I also hope to point out here, that the work itself was doing applied anthropology.

Cue reactivity is understood to be a major precipitator of substance use but has been shown to be unhelpful in treatment settings (Childress et al. 1993; Conklin and Tiffany 2002; Mellentin et al. 2017). Associative learning paradigms suggest that the act of re-learning is potentially stronger than un-learning (Shanks 1995). I suggest that harm reduction programs may be producing opportunities for individuals to "re-learn" salient cues. This suggests that even though triggers disappear from view in harm reduction, harm reduction strategies may have the ability to impact, or mitigate further triggers. In short, harm reduction programs reach participants in many ways that go beyond safe injection materials. Aside from providing lifesaving care, they may provide important paths to health and wellness for people who do drugs. Thus, there is urgent need for the continued support of the work of harm reduction programs in the U.S. and the state of Florida. I suggest that the impact could be greater than just

preventing transmission of infectious diseases but helping individuals to maintain safe use until (or if) they are ready to stop use.

Harm reduction programs could also consider how the dimensions of wanting and salience impact their participants injection drug use patters. For instance, low salience individuals seemingly expressed wanting and patterns of use around mitigating chronic pain or mental health symptoms. How can harm reduction programs help bridge resources for chronic pain treatment and mental health issues? And, if there are resources available to help, how do you successfully transition someone from injection drug use to more mainstream biomedical treatments? What other support might they need? Answering these questions, it seems goes beyond the scope of any one harm reduction program and would require the participation of health care, housing, and insurance companies. Coordinating these programs is likely a herculean effort. Nevertheless, this dissertation provides some areas of specific intervention for PWID.

This work could have implications for the future of harm reduction in Florida. Most specifically, this project supports what participants often say– that harm reduction changes them. Most recently, the United States National Institutes of Health (NIH) created new grant programs aimed at establishing research on harm reduction programs. In their statement they note that people who are in harm reduction are more likely to seek treatment than those not in harm reduction (NIDA, 2022). In short, harm reduction programs can have many meaningful impacts, beyond keeping people safe. However, harm reduction programs in Florida are still quite politically precarious. Aside from the cultural opposition to these programs, there is political opposition. Harm reduction programs in Florida legally cannot seek state or federal funding to support their services, making funding and support for the continuation of these programs hard to sustain. This work can be used to show potential donors and private funders the benefits of harm

reduction – that the work goes far beyond the syringes. Further, an executive summary of the information provided here will be given to Sunshine, which may provide evidence needed for their continued advocacy at the state and national level for more support of harm reduction programs.

Engaging with harm reduction pushed me to new spaces as an ethnographer and person. Recent research on harm reduction techniques in anthropology have advanced critical and analytical takes citing discrimination in buprenorphine prescribing practices (Hatcher et al. 2018), ethnographic surveillance of harm reduction (Campbell and Shaw 2008), language and harm reductive therapeutic approaches (Carr and Smith 2013), and ethics and anti-drug war political activity (Zigon 2015; 2021). Such discourse is important as it engages with the institutions and structures of power which harm reduction is a reaction to and functions within. I situate this project within an "anthropology of the good." In doing so, I engage with the institutions that inform harm reduction such as the War on Drugs and Opioid Crisis. Yet, I also distinguish it from these more critical takes. If harm reduction is about enacting care for a community, I very much see an ethnography of harm reduction as one such enactment of care.

In writing this dissertation I attempt to enact care for community of users, particularly in the politically precarious state that is Florida. Through this work I demonstrate that harm reduction can be transformative for people that use drugs. Amidst moral panics that harm reduction will encourage drug use, I show that harm reduction has the potential to make people want to use less. Through this dissertation I provide ethnographic context for understanding how such changes happen. I engage specifically with substance use Triggers, though the work is much broader– and so are the transformations. Conducting this work, advocating on behalf of

people who inject drugs, is a form of resistance to practices which put down PWID and discredit harm reduction.

Limitations

As with any dissertation, there are many limitations to the project presented here. First, this entire project took place within the COVID-19 pandemic. While it is presented here as a somewhat cohesive picture, many of the dimensions of this project changed over time as the pandemic dictated. For instance, earlier iterations of the project proposed having a comparison sample of individuals in rehabilitation programs. However, accessing these populations was difficult as rehabilitation programs experienced frequent lockdowns and prohibited any extra personnel on the property. Because of this, Sunshine became my primary field site. Fortunately, Sunshine operates outside, mitigating some of the risk of transmission of COVID-19 to volunteers, staff, and participants.

An additional limitation of this project has to do with the salience survey. While the novel application of the salience survey worked well, and showed interesting patterns across participants, it did not directly address the harm reduction context. The phrasing of the questions in the salience survey addressed experiences of salience more generally. For example, "sometimes all I can think about is using," speaks to their experiences across time and space. Given participants insistence that the exchange was not triggering, I was hoping to see some variation in score based on the number of visits or time enrolled at the exchange. I thought that perhaps subjective salience could have been changed in interaction with harm reduction. Correlations, however, did not indicate this. If I were to do this study again, I would create a third survey that assessed their experiences of salience while at the exchange. This survey would

attempt to capture variation in salience between these more general statements and statements geared more toward the specifics of the exchange.

One could do this in two ways. First you could re-write the questions so they address a specific place. For instance, "When I am at the exchange, all I can think about is using." This scale could capture salience related to a particular place. Second, there could be a scale which captures salience, in the moment. So, instead of "sometimes all I can think about is using," you might re-phrase the statement to address current states of wanting "right now, all I can think about is using."

In doing so, you could create a tool that could capture salience in the moment. Such a tool could be important for people who are trying to stop or decrease their use. As a measure of harm reduction, participants could issue these scales to track contexts which may enact heightened levels of salience. Should they want to take the "know and avoid" approach to use, they could use this tool to find what contexts are particularly salient to their use, and that they should avoid.

Ultimately, I only had a small number of participants who completed both the survey assessment and interviews. Interpreting wanting and salience scores could be more meaningful with a larger population. Additionally, the population represented by this study is mostly white, opiate users. While this study represented Sunshine's population well, this should not be generalized with all users everywhere.

Further, the methods employed in this research did not assess biology, other than subjective experiences discussed by participants. While I ultimately believe that the ethnography is the strength of this piece, there could be other, radical ways to assess other elements of enacting triggers. Not assessing biometrics limits the ability of this study to transcend fields and

to discuss embodied changes. One way to get at biology would be to employ mobile methods that measure biometrics. This could get better at any biological changes that individuals experience when they enact Triggers in harm reduction and elsewhere.

The theoretical disposition this dissertation takes presents some challenges for making any generalizable claims. Mol (2002) in her book, *The Body Multiple*, specifically resists any simple explanation of what atherosclerosis "is." The same could be said about this study on triggers. I am not aiming to say what triggers are, all the time, everywhere. Simply, I hope to use triggers to accomplish two main goals. First, to understand triggers in a specific harm reduction context, at a specific time. And second, to illustrate the utility of ontology and local neurologies to studying neuroanthropological topics. To understand triggers more broadly, in more places, I propose that there may need to be more in-depth studies of triggers in context with even larger sample sizes.

Future Directions

In Chapter Six, I propose that Triggers are enacted in the "everyday" between maintenance, tolerance, and withdrawal dynamics. Interrogating further how triggers regulate use could help to clarify how Triggers are enacted outside of recovery. For many, Triggers only exist in relation to recovery. By exploring how people who use drug regulate their daily use, we can have more insight into how triggers are a part of the fabric of life, as participants in this study describe. At the time of writing, I am working on a project that uses mobile assessment methods to explore "cues in the everyday." In doing so, we hope to find further ethnographic data on how individuals interact with and enact Triggers in everyday settings. The value of

studying triggers in such settings is that it can help get at how "pattern practices" become neurologically meaningful, and interrogating how any, one "neurology" becomes substantiated.

On the other hand, there needs to be further research on Triggers in the substance use rehabilitation context. I am interested in interrogating how rehabilitation programs produce training related to triggers, especially the skillset that is offered to recognize the material, psychological, and physiological factors that could initiate future substance use. Previous research in anthropology has focused on the language that participants in rehabilitation programs employ. The "scripts" that are created between the therapist and the therapized, scholars have argued, are a performative part of the recovery process (Cain 1991, McIntosh and McKeganey 2000; Carr 2010; Carr 2013). I would like to explore how individuals are asked to go beyond talk therapy, instituting practices surrounding triggers that shape cultural, cognitive, and perhaps even physiological engagement with stimuli related to past use. Such work could be important as it might also recognize how local neurologies are created and substantiated, but also put such work into conversation with critical scholarship of substance use treatment.

Finally, one theme that emerged in this project, but was not included in this dissertation is about time and triggers. Time presented as an interesting theme throughout this project. For instance, participants spoke of triggers as the past, present, and future at once. Triggers represented a past experience or disposition. At the same time, triggers might not come into cognitive relevance until participants encounter rehabilitation. During rehabilitation participants are trained to recognize any future encounters with triggers. In the everyday, as triggers seemingly disappear, they take on new dimensions of temporality. Never quite being of the past, but also never being fully realized in the present. Such a study could create a bridge to the future

research directions I suggest here, between substance use treatment and the everyday. Future research could explore the liminal time-space that triggers occupy.

Conclusion

Triggers are a novel area of investigation in anthropology. While triggers seem like consequences of prolonged use or an automated neurological process, this project has proposed that Triggers are multiple objects, at once, created in practice. These practices then, may have implications for people who inject drugs. By ethnographically interrogating triggers as an object, enacted locally, this project sought to unite ontological and neuroanthropological theory. For active users, triggers are constant road signs, pointing perpetually toward drug use. At the same time, these road signs disappear in everyday interactions, and especially at Sunshine, where practices may obscure associative learning dynamics.

In a discipline intent on "making the world safe for human difference," this work aimed to interrogate how these "safe" spaces can materially change the way individuals enact concepts. By considering the variation in the ways Triggers are enacted, this research strives to understand how participants negotiate their own worlds through each trigger encounter. Each negotiation molds their reality, neurologically, culturally, socially. For those in harm reduction, triggers are materially transformed from stimuli related to use to stimuli related to hope and empowerment. Over time, as Triggers and all their imbued context come to take on different meanings, trigger encounters shape what reality was, what it is, and what it will become.

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APPENDIX ONE:

SEMI-STRUCTURED INTERVIEW QUESTIONS

Semi-Structured Interview Questions

1. Tell me about yourself and your past drug use?
2. Please describe a typical day of use in your life.
3. Where and when do you typically use? What is usually happening right before you use? How do you feel right before you use?
4. Is there anything that ever make you feel like you really want to use?
5. What moments do you feel like you want to use most? What is happening in those moments? Please be as descriptive as possible.
6. Are you familiar with the concept of "triggers"? How would you define triggers?
7. What types of things are usually considered triggering?
8. Do you know the triggers of other people you use with? How do you recognize when someone is triggered?
9. Is the exchange triggering?

APPENDIX TWO:

INCENTIVE SALIENCE SURVEY

1. PID/#:_____ Date:_____

2. How long have you been injecting drugs?
    a. Less than one year
    b. 1-5 years
    c. 6-10 years
    d. 11-15 years
    e. 16-20 years
    f. 21-25 years
    g. 26-30 years
    h. Over 30 years

3. What drug do you inject most often?
    a. Heroin
    b. Fentanyl
    c. Prescription opioids (such as Blues/Roxy's, dilaudid, etc.)
    d. Meth
    e. Cocaine/Crack
    f. Other? _____

The following statements are about what you could experience when you inject drugs. Please say how well each phrase describes your own experiences with injecting drugs.

1. At times I have started to use and use without thinking about anything else
    1 = Very Well, 2 = Well, 3 = More or Less, 4 = A Little, 5 = It Does Not Describe It

2. When I am using, I can feel completely absorbed in the moment
    1 = Very Well, 2 = Well, 3 = More or Less, 4 = A Little, 5 = It Does Not Describe It

3. When I am using, I sometimes feel like nothing else exists
    1 = Very Well, 2 = Well, 3 = More or Less, 4 = A Little, 5 = It Does Not Describe It

4. At times using feels like I want more and more
   1 = Very Well, 2 = Well, 3 = More or Less, 4 = A Little, 5 = It Does Not Describe It

5. At times what matters most to me is the desire to use
   1 = Very Well, 2 = Well, 3 = More or Less, 4 = A Little, 5 = It Does Not Describe It

6. At times when I feel the urge to use, I want to go use immediately
   1 = Very Well, 2 = Well, 3 = More or Less, 4 = A Little, 5 = It Does Not Describe It

7. When an opportunity to use comes along, it can be hard to focus on other things
   1 = Very Well, 2 = Well, 3 = More or Less, 4 = A Little, 5 = It Does Not Describe It

8. Sometimes all I can think about is using
   1 = Very Well, 2 = Well, 3 = More or Less, 4 = A Little, 5 = It Does Not Describe It

Free List

In the space below please list the **things that make you want to use:**

Free List

In the space below please list **your triggers:**

APPENDIX THREE:

CODEBOOK

Main Code	Nested Code	Number of Codes
Co-morbidities		18
	Chronic Pain	46
Cue Reactivity		2
	Craving	5
	Drug Seeking	9
	Physiological Reactivity	5
Habit		4
Harm Reduction		144
History of Use		52
Incentive Salience		94
	Attention	4
	Wanting	116
	High Salience	9
	Med-High Salience	13
	Med-Low Salience	4
	Low Salience	4
Learning		2
Local Neurologies		2
Overdose		17
Policy		5
Practice		26
Realities		6
Regulation		19
Routine		80
Stigma		26
	Stereotype	11
Time		24
Trauma		28
Treatment		95
Triggers		210
	Family	5
	Pain	1
	People Who Use	15
	Stress	12
	Withdrawal	1
Withdrawal		30

APPENDIX FOUR:

FREE LIST DATA

Item	Frequency	Average Ra	Salience
PEOPLE WHO USE	31.1	2.41	0.209
STRESS	21.4	2.77	0.138
PAIN	13.6	1.79	0.111
FAMILY	17.5	3.22	0.102
WITHDRAWALS	13.6	2.36	0.093
ARGUMENTS OR FIGHTING	9.7	1.7	0.081
BEING UPSET OR SAD	10.7	2.73	0.064
ANGER	7.8	2.13	0.058
HAVING MONEY	10.7	3.91	0.058
NONE	5.8	1	0.058
PLACES WHERE I USED TO USE	6.8	1.43	0.058
BORDOM	6.8	3.43	0.041
PARAPHERNALIA	6.8	2.57	0.041
EMOTIONS (POS AND NEG)	6.8	3.43	0.036
EVERYTHING	3.9	1.25	0.034
ROMANTIC PARTNER	4.9	3.4	0.033
HAVING DRUGS	5.8	3.17	0.032
'PEOPLE, PLACES, AND THINGS'	5.8	2.5	0.032
TALKING ABOUT DRUGS/USE	3.9	2	0.031
MEDIA (MOVIES/TV)	4.9	3.4	0.029
BEING ALONE/LONELY	3.9	2.25	0.028
DEPRESSION	4.9	3	0.028
TRAUMA	3.9	2.5	0.028
ANXIETY	3.9	2.5	0.027
DEATH OF LOVED ONE	3.9	2.25	0.027
BEING DOUBTED OR FEELING LESS THAN	3.9	2.75	0.026
CELEBRATING	5.8	4.33	0.023
SELF IMAGE	4.9	3.6	0.023
BEING HOMELESS	3.9	2.5	0.02
EX ROMANTIC PARTNER	1.9	1	0.019
LOW ENERGY	3.9	3	0.018
NOT HAVING MONEY	2.9	3.67	0.017
BATHROOMS	1.9	2	0.016
HAVING A HARD TIME	1.9	2	0.015
MORNING	1.9	2.5	0.014
SMELLS	1.9	2	0.014
MUSIC	2.9	4	0.012
ALCOHOL	1.9	3.5	0.011
PARTYING	1.9	3	0.011
WORK	1.9	2.5	0.011
CRAVING	1	1	0.01
FATIGUE	1	1	0.01
HOSPITALS	1	1	0.01
I DON'T KNOW	1	1	0.01
LETTING PEOPLE DOWN	1	1	0.01
VEINS	1	1	0.01
WEIGHT GAIN	1	1	0.01
CRIMINAL RECORD	1	3	0.008
SEX	1.9	3	0.007
FISHING	1	2	0.006
HAVING TO DEAL WITH PEOPLE	1	2	0.006
HAVING TROUBLE HITTING	1	3	0.006
HUNGER	1	3	0.006
MENTAL HEALTH ISSUES	1	3	0.006
NOT DOING ENOUGH	1	2	0.006
NOT HAVING THE RIGHT ANSWER	1	4	0.006
OVERTHINKING	1	3	0.006
TROUBLE SLEEPING	1	2	0.006
SPIRITUAL CONNECTION	1	2	0.005
ROUTINE/HABIT	1	5	0.003
WANTING TO STOP	1	5	0.002
NARCOTICS ANONYMOUS	1	10	0.001
REJECTION	1	10	0.001

APPENDIX FIVE:

IRB EXEMPTION LETTER

UNIVERSITY OF SOUTH FLORIDA

NOT HUMAN SUBJECTS RESEARCH DETERMINATION

March 11, 2020

[redacted]

Dear Dr. Rigg:

On 3/10/2020, the IRB reviewed the following protocol:

IRB ID:	STUDY000571
Title:	[redacted] County Syringe Services Program Evaluation

The IRB determined that the proposed activity does not constitute research involving human subjects as defined by DHHS and FDA regulations.

IRB review and approval is not required. This determination applies only to the activities described in the IRB submission. If changes are made and there are questions about whether these activities constitute human subjects research, please submit a new application to the IRB for a determination.

While not requiring IRB approval and oversight, your project activities should be conducted in a manner that is consistent with the ethical principles of your profession. If this project is program evaluation or quality improvement, do not refer to the project as research and do not include the assigned IRB ID or IRB contact information in the consent document or any resulting publications or presentations.

Sincerely,

Various Menzel
IRB Research Compliance Administrator