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The Fifth Vital Sign: An Anthropological Analysis of Productive and Unproductive Pain

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An Anthropological Analysis of Productive and Unproductive Pain

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Abstract

Throughout my time as a Division I rower, I have struggled to understand the ways that I understand my own normalization of pain within a broader cultural environment that portrays pain as a mostly negative aspect of life. This moral quandary inspired me to start researching the role of pain in different socio-cultural contexts. For my thesis, I conducted original research, in the form of participant observation[1] and semi-structured interviews, to build on what I found through an extensive literature review. First, I looked at the ways in which pain is understood within Western biomedicine and, subsequently, "Western" culture. Within this environment, people conceptualize pain as something that is treatable and, because of this, is theoretically unnecessary. Pain has no purpose in this cultural context; however, this perspective, while dominant within biomedical discourse, is not a universal ideology. In fact, pain treatment advocates introduced these ideas to Western biomedicine in the 19th century and faced significant pushback from their peers. However, their beliefs eventually became a seemingly intrinsic part of Western biomedical discourse.

In contrast to the Western biomedical cultural beliefs regarding pain, there are many instances where religious devotees participate in sacred pain rituals. Devotees report that

[1]Participant observation is a data collecting technique used within anthropology and other social sciences where the researcher participates in different daily activities. This allows the researcher to better understand both the explicit or implicit aspects of their interlocutors lives and culture (Musante and DeWalt 2010).

their pain experiences were incredibly meaningful for them. In this context, pain is something to be desired instead of something to be feared or avoided at all costs. This outlook turns the biomedical perspective on its head because it illustrates how pain can be given meaning and purpose which, in turn, lessens the emotional suffering that someone in pain might experience. While these two outlooks are disparate, I found that athletes in the "Western World" mirror both perspectives, to an extent, in order to conceptualize their athletic-related pain in a way that allows them to continue participating in their respective sports. Athletes, then, are forced to navigate their way in a liminal state[2] between these two frameworks. Throughout this thesis, I expand on the ways that athletes conceptualize the acceptance of "good" pain in a larger cultural context that medicalizes and stigmatizes pain and pain-seeking behavior, respectively. This research illustrates that, while the perspectives within Western biomedicine, athletics, and sacred pain rituals may appear to be drastically different, there are many ways that these outlooks mirror one another. Due to these similarities and differences, we should look at a variety of cultural beliefs about pain to better understand pain experiences.

[2] A concept introduced in the twentieth century by Arnold van Gennep to refer to a transitional state within rituals (Van Gennep 1960). This has subsequently been widened by Victor Turner to account for the other processes of change where the individual is in a threshold stage between two states of being.

Introduction

Positionality and Pain

I can easily pinpoint the last time I experienced athletic related pain because it was very recent; however, I could not quantify this pain if I wanted to. In this sense, athletic pain defies my ability or willingness to define it. And so, I must rely on metaphors to describe these experiences. I can discuss the burning in my quads and the metallic aftertaste in my throat. Towards the end of the training session, all I want to do is collapse, but stopping somehow seems just as difficult as continuing. I rely purely on muscle memory as the erg[3] screen counts down the seconds until I am done. These experiences frame my positionality on the topic of pain. Within these contexts, I cannot cower away from my pain; instead, I need to embrace it like an old acquaintance. But, in doing so, there is a level of dissociation that forms between my mental state and my bodily state. In rowing, we are taught to shut out the voice in our head that tells us that we are going at a pace that is unsustainable or that the pain will overtake us.

And maybe one reason why I first gravitated towards rowing nine years ago is because of the way I was taught to conceptualize certain pain. Throughout my childhood, my dad would often tell me and my brother stories that revolved around his own childhood and, more often than not, these stories hinted at the ways in which he learned to endure pain. These themes were clearly present in his tales about the "old boys" he grew up with who

[3] An ergometer, or erg, is an indoor rowing machine.

bore their pain with little to no fanfare (although I often wonder if these stories have been exaggerated over years of telling and retelling them). The "old boys" of his stories tended to be men who grew up during the Depression. Arguably the most intense account tells the tale of the father of one of my dad's college friends. The story is a simple one, but it is quite telling. Frank, the father of my dad's friend, was offloading a horse chute with his son one day when he suffered a compound fracture on his middle two fingers. He cursed under his breath before calling out to his son, "Hey Al, can you get me some duct tape?" When Al returns with the duct tape, Frank reset his fingers, tapes them up, goes back to work, and never went to the doctor for it. While the story is not obviously moralistic, the fact that the sparse details revolve around Frank's stoic response signals that there are times where pain needs to be endured to finish the job at hand.

Although these stories were often gendered, with a greater emphasis on stoic men he knew or heard about, he also told us stories of tough women including one about my paternal grandmother which highlighted that she could remain unflappable despite being in pain – which was, and still is, one of my favorites in his repertoire. The sparse narrative explains how my grandmother had to have surgery to get her gallbladder removed. While performing the operation, the doctors were surprised to see that her gallbladder was four times larger than it should have been. The doctors speculated that she must have been in agony for a sometime. But, when someone would ask her if it had hurt, she would simply reply, "a little bit." Her own perspective on pain was shaped by growing up on a farm during the Great Depression. From a young age, she learned that

pain was something to endure in silence because complaining never solved anything. This is a perspective borne out of having to do what you needed to do to get by.

Through these stories, and others like them, I learned how pain was endured before western biomedical culture "solved the problem of pain" (Jackson 2000, 277; Melzack 1974). With this said, I am by no means endorsing either outlook. However, I would be remiss if I failed to acknowledge my own socialization because it has and will continue to shape my outlook on the subjective experience of pain and how I respond to it. While there is no universally standard way to understand pain, we can learn from the different outlooks within Western biomedicine, athletics, and sacred pain rituals to better understand our own pain experiences in order to develop better pain treatments.

Defining Pain

While almost everyone has experienced pain at some point in their lives,[4] it is often difficult to describe. Although many scholars and researchers have attempted to define pain, the physical and emotional sensations associated with a pain experience results in any articulation of pain to feel incomplete. Even Virginia Wolf, an influential 20th century English author, confesses that the English language "which can express the thoughts of Hamlet and the tragedy of Lear has no words for the shiver or the

[4] While it is incredibly rare, someone born with congenital analgesia, a condition that stems from a gene mutation, is born without the ability to feel physical pain ("Congenital Insensitivity to Pain - NORD (National Organization for Rare Disorders)" n.d.).

headache…. The merest schoolgirl when she falls in love has Shakespeare or Keats to speak her mind for her, but let a sufferer try to describe a pain in his head to a doctor and language at once runs dry" (Scarry 1985, 4). In this sense, physical pain inhabits a non-linguistic state which makes it difficult for people to define or describe.

The essential struggle to articulate pain is one that is present across all languages. Although there are cultural variations in an individual's respond to their pain, all linguistic responses are hampered by the indescribable dimensions of pain. This is because, "Physical pain does not simply resist language but actively destroys it, bringing about an immediate reversion to a state anterior to language, to the sounds and cries a human makes before language is learned" (Scarry 1985, 4). This, in turn, causes people to resort to using pre-linguistic cries to express their emotional and physical turmoil. In doing this, "Pain, in a sense *is* language, one that competes in several ways with every day-world language. [...] For chronic pain sufferers, the messages their pain sends replace and transform everyday-world language, so that messages sent or received in this language are distorted or trivial" (Jackson 2000, 165-166). While people have attempted to decode their pain sensations, they have subsequently failed in defining these nuanced experiences. So, we are still left with speaking about our pain experiences through metaphors. People define their pain by relying on metaphors of other physical sensation descriptors. I can say that I am experiencing a burning, stabbing, searing, dull, or aching pain but I cannot describe my pain without comparing it to a sensation like these.

Throughout history, many individuals have attempted, and subsequently failed, to define pain in a way that encapsulates both the mental and physical experiences associated with pain sensations. These attempts can be traced back to as early as 200 BCE. At that time, it was a widely believed "that pain is the product of bile and phlegm mingled with cold and heat. These simple combinations occur in the brain, and according to Syriac medicine, pain is the product of the brain (a concept that has passed the test of time and that would still hold true today)" (Moayedi and Davis 2013, 10; Budge 2002). This idea has also been utilized by the ancient medicine passed down by the Egyptians, Greeks (most famously Galen and Hippocrates), Babylonians, and Assyrians (Moayedi and Davis 2013).

Since then, people have created theories and definitions of pain that focus on the bodily sources of pain instead of the combination of the physical and psychological aspects of a pain experience. Some of the key theories of pain perception that have been created since the 17th century include the Specificity, Intensity (or Summation), Pattern, and Gate Control Theories of Pain. None of these theories have stood up to scientific scrutiny, in part, because they conceptualize pain as being a physical sensation rather than factoring in the emotional component of the pain experience. These are not comprehensive definitions because pain is simultaneously a physical and mental experience (Jackson 2000, 4; Merskey 1976, Knoll 1975). Although pain is often triggered by a physical sensation, it can only be understood through one's conscious processing of their pain experience. Sociocultural factors frame how we perceive our pain.

Even when someone is undergoing or has undergone vast amounts of physical trauma, they will not experience pain if they cannot process their body's pain signals. When a doctor uses anesthesia, for example, their patients will not experience pain in a specific area, for local and regional anesthesia, or at all, for general anesthesia. One must be able to experience pain to be "in pain" regardless of the physical trauma. For example, when someone properly gets put under general anesthesia for a kidney transplant, their body undergoes an enormous amount of physical damage; however, in the moments they are under anesthesia, they are not experiencing pain. It is generally believed that the anesthetized "patient who looks and sounds as though in pain is registering chemical and electrical activity, not pain (although there are gray areas with respect to some kind of anesthesia)" (Jackson 2000, 4). The fact that operations like this can be described as "generally painless" means that one must be able to experience pain to be "in pain" regardless of the physical damage to their body. In another instance, someone can suffer without being physically harmed, like emotional pain after losing a loved one. Therefore, pain cannot be solely tied to the physical damage that impacts someone's nerves and tissues.

While there still isn't a universal definition of pain, scholars and biomedical doctors typically utilize the definition created by the International Study of Pain (IASP). The IASP defines pain as "an unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage" (Jackson 2000,

3; International Association of the Study of Pain 1979; Moayedi and Davis 2013). Scholars and doctors gravitate towards this definition because it acknowledges the role of the psychological and physical aspects of pain.

Pain is an elusive concept that, while often associated with suffering, is not intrinsically tied to it. While those who adhere to the biomedical model present pain as a largely negative experience, and thus tied to unnecessary suffering of the body or mind, this is not always the case. There are many instances in which an individual willingly undergoes a painful physical trauma because they can view the pain as purposeful, if not beneficial. Because, while pain is both a physical and psychological experience, suffering is psychological. Someone can experience an immense amount of physical damage may not suffer if they are able to frame their pain experiences as being purposeful or productive. On the other hand, one can suffer without being physically harmed, such as the pain one may feel when they suffer the loss of a loved one. Therefore, "one may go so far as to say that pain can be the solution to suffering, a psychological analgesic that removes anxiety, guilt, and even depression" based on how they conceptualize their pain and its meaning within their cultural context (Glucklich 2001, 11).

Fieldwork and Interviews

I started researching the role of pain in athletics in my sophomore year of college when I took *Anthropology 201, Field Research in the Local Community* to learn about different anthropological research methods. During this course, I gathered original data on the pain

experienced by Division I athletes through semi-structured interviews, participant observation, and a survey. I continued to research pain during my junior year as part of an independent study course, *Advanced Reading in Anthropology*, where I conducted an extensive literature review and interviewed more Division I athletes. As a Division I rower, I studied the anthropology of pain as a "native anthropologist[5]" which allowed me to study a community I was a part of while, at the same time, participating and observing everyday routines and habits as if I were new to the social environment.

I completed the Collaborative Institutional Training Initiative (CITI Program) for ethical research with human subjects and received Bucknell University's Institutional Review Board (IRB) approval for this project in the spring of 2021. I renewed my IRB approval the following fall to allow me to conduct follow-up interviews. For these interviews, I talked to two biomedical doctors on their experiences treating pain in rural Pennsylvania. These interviews spanned over two hours in total and resulted in over 30 pages of single-spaced transcribed notes. Together, these sources contribute to a greater understanding of the ways that the Western biomedical perspectives on pain and pain treatment challenges and even contradicts culturally sanctioned pain.

During my research, I learned that there is a plethora of medical research on pain and pain in sports but, comparatively, there is a dearth of anthropological research on sports

[5] A native anthropologist is someone who writes about their own culture (Narayan 1993).

related pain. So, my thesis will contribute to the anthropology of pain by analyzing the similarities and differences in the ways that athletes, religious devotees, and medical doctors understand pain.

Biomedical Perspective

In chapter one, I analyze the biomedical perspective on pain, which is the prevailing medical outlook within Western culture. Due to its prominence, biomedicine is recognized "as *the* medicine, rather than as one version of the larger human concept of medicine as an interpretive and intervention social process" within Western culture (Thorne 1993, 1932). The biomedical model focuses on the physical symptoms or signs of a disease and often overlooks the socio-cultural or religious factors that might play a role in the individual's experience and understanding of their illness. Western biomedicine's prevailing outlook presents pain as "an unproductive threat to cultures and identities" (Shilling and Mellor 2010, 521). This perspective frames pain as destructive and shies away from acknowledging benefits of pain. Within the biomedical framework, people often believe that being pain-free is our ideal state. Therefore, people tend to view any fluctuation from this state to be a cause for concern (Melzack 1974, Morris 1991).

The medicalization of pain has not always been the prevailing outlook within Western medicine. "We have vacillated over the centuries between advocating that pain should be aggressively treated and believing that pain is necessary and important to the curing of the condition or integral part of the treatment given" (Lalken 2021, 2). For most of

human history, western medical practitioners saw pain as an inevitable result of living. Before the 1800s, people did not believe that pain is something that needed to be treated. Instead, people saw it as a sign that the treatment was working. Then, in the 1800s, doctors became more preoccupied in managing their patients' pain. The introduction of surgical anesthesia in the mid-nineteenth century challenged the cultural value-systems regarding pain (Lalkhen 2021). Medical practitioners did not immediately accept and use surgical anesthesia because many people, like doctors or priests, had questions regarding the ethics of performing on nonconscious people and whether anesthesia would delay the healing problems. Priests and some physicians promoted the idea that anesthesia would corrupt a person's soul. Therefore, “The development of medicine and surgery as endeavors that can be accomplished only by relieving pain, and a philosophical shift toward the value of the individual, changed the narrative from one claiming pain as necessary and a part of human life to viewing pain as an experience that needed to be actively managed” (Lalkhen 2021, 3). The cultural shift in perception accelerated in the 1980s and is tied to the release of OxyContin and other opioids for non-cancer pain. This period and its relationship with the prevailing attitudes towards pain in the US will be discussed further in chapter one.

Sacred Pain

Within Western biomedicine, pain is the enemy, an ailment to be eliminated. However, the Western biomedical perspective on pain is culturally specific. Throughout history, humans in different cultural contexts have interpreted pain as a morally meaningful and

useful experience. In chapter two, I delve into the ways in which different religions groups have imagined pain as transformative, beneficial, and sacred. Religious devotees participate in sacred pain rituals because "the pain they produced was meaningful" (Glucklich 2001, 44). There is a significant body of literature that discusses how people participate in painful acts to fit into an ascetic ideal (Vandermeersch 2008). Many groups (such as Christians, Muslims, Sufis, Hindus, and Native Americans) use, or have used, sacred pain within specific rituals. In this thesis, I focus specifically on Christian self-flagellation, the Thaipusam Kavadi ceremony, and the Native American Sun Dance. I have decided to focus on these instances of sacred pain because they are practiced in different geographic and cultural settings, and these ritualized acts of self-hurt[6] serve varying purposes.

Christian self-flagellation is often understood as a tool people use to save their soul by hurting their body. Scholars have traced the practice of self-flagellation back to the eleventh-century church reformer and monastic leader Peter Damian, who appeared to have initiated the practice in the monastery of Fonte Avellana. Although Damian wrote

[6] I am deliberately using the term "self-hurt" instead of "self-harm" because self-harm is a form of non-suicidal self-injury (NSSI) and subsequently associated with emotional distress or a mental health disorder, such as depression or borderline personality disorder. Individuals may resort to NSSI to cope with emotional numbness, suppress overwhelming emotions, or to punish themselves (among other purposes). While NSSI is an act of purposeful pain that often provides someone temporary relief, I have decided not to discuss this form of pain. I felt that I could not do justice to this complex and misunderstood coping mechanism due to the scope of my research. Throughout my thesis, I utilize the term "self-hurt" to make the distinction between someone's motivation to self-harm and a devotee's motivations to self-hurt in a ritualized setting.

prolifically about how the monks were “expected to whip their naked bodies and to do this together, without being ashamed of each other’s nakedness,” self-flagellation did not spread to other monasteries (Vandermeersch 2008, 262). However, it is believed that they influenced the 13th century wave of group flagellation in Perugia which later fizzled out as well.

Self-flagellation became more wide-known and accepted during the flagellation movement in the summer of 1349. At that time, large groups of flagellates meandered through Europe before arriving in Tournai (present-day Belgium). In this setting, self-flagellation was not a form of self-punishment, self-abnegation, or humility. The pain that flagellators inflicted on their own bodies allowed them to feel superior to others since they “experienced in themselves the suffering of Christ, as though Christ’s blood was present in their bodies” (Vandermeersch 2008, 263). While the strength and acceptability of these flagellation movements continued to vacillate throughout the following centuries, this practice was “kept alive in most religious orders and congregations, especially in newly created orders such as the Jesuits” (Vandermeersch 2008, 265).

Another form of sacred pain is the Thaipusam Kavadi ritual. Thaipusam is a day of penance for Hindu and Tamil devotees, and it is held in honor of Lord Murugan’s victory over evil (Jegindø et al. 2013). According to the legends, the goddess, Parvati, gifted a lance to her son, Murugan, so that he could defeat the evil demon Sooropadman who was the “incarnation of evil and anti-dharmic forces in the world. With this act, Murugan

cleansed the world from bad karma" (Jegindø et al. 2013, 174). The devotees who participate in this ritual do so to honor Murugan's victory and to reduce bad karma for themselves, their family, and other members of their community (Jegindø et al. 2013).

The Thaipusam ritual consists of ten days of prayer, fasting, and sexual abstinence in honor of Lord Murugan. However, devotees who participate in the Kavadi ritual on the tenth day may spend several weeks preparing. On the full moon of the Tamil month of Thai, the final day of the celebration, male devotees get their bodies pierced with hundreds of needles, skewers, hooks and/or carry a wooden kavadi, a small wooden arc, that may weigh up to 40 kg. Some devotees "drag enormous chariots by hooks attached to their skin and others walk on shoes made of nails" (Xygalatas et al. 2018, 247). While women and children also participate in the ritual, they do not engage in the most painful activities. Instead, they may carry a small kavadi or a pot of milk and will either "have a single piercing through the tongue or cover their mouths with a scarf" (Xygalatas et al. 2018, 247). After the piercings, the kavadi bearers and other devotees make the 13 km pilgrimage to the Batu Caves in Malaysia (Maciejowski, 2015).

Although many participants have extensive piercings and/or carry a kavadi, they make the pilgrimage with minimal pain and bleeding because they are in a ritual trance. The Thaipusam Kavadi participants experience an altered state of consciousness (ASC) that allows them to dissociate from their physical experiences (Ward 1984). Although the Thaipusam Kavadi ceremony involves self-mortification, Kasim found that local

devotees described Thaipusam as a joyful time. The day acts as a rebirth of oneself that allows the devotees to seek forgiveness for their past sins or misdemeanors and receive a level of purification (Kasim 2011).

The final form of sacred pain I discuss in this paper is the Sun Dance. The Sun Dance is a ceremony of renewal that was practiced by approximately twenty native American tribes during the eighteenth and nineteenth centuries. The Sun Dance is a ceremony of renewal that was practiced by approximately twenty native American tribes during the eighteenth and nineteenth centuries although they were not necessarily the the same between tribes. According to Polhemus (2014), one or more participants "would go forth into the wilderness, prepare himself by fasting and sexual abstinence, insert the appropriate hooks, thorns, or eagle's talons into the flesh of his chest or back and suspend himself until he succeeded in ripping his flesh free to fall back to earth" (97). The act of fighting back against one's flesh was seen as a dance. Many participants would enter a higher or altered state of consciousness. In this Although the United States government outlawed this ritual in the 1880s, the tradition continued and was eventually legalized again. The Sun Dance, especially the Lakota-style Sun Dance, experienced a "major renaissance" in the 1970s (Hallowell 2010, 85). The Lakota Sun Dance consists of four days of ritual dancing during which the dancers refrain from food and water. An "intercessor" guides the ceremony and is responsible for performing other ritual functions, such as piercing the flesh of some or all the dancers.

The purpose of this ritual is to "facilitate communal, tribal, and individual renewal that preserves Lakota traditions and values. Two essential elements for renewal are taught in the Sun Dance are sacrifice and ethical behavior" (Hallowell 2010, 87-88). Through participating in this ritual, devotees learn how to act in relation to their relatives and their community. The joint sacrifice they undertake and the suffering they endure strengthens their social bonds by centering them around a common purpose.

Athletic Pain

In the final chapter, I discuss a contemporary environment in which certain levels of pain are not only acceptable but embraced. Athletes learn to push themselves to their physical and mental limits and, with this level of exertion, pain becomes something to be expected because of their competitive endeavors. Individuals in the athletic communities tend to understand that there are risks involved with every sport. Although pain may not be the direct goal of one's athletic endeavors, competitive athletes are aware that it is often an indirect consequence of their training or competitions. In this section of the paper, I find myself writing from the perspective of a "native anthropologist" since I am a Division I rower myself and have experienced a range of athletic-related pain and injuries.

One of these experiences came during my first year of rowing, back in the spring of 2014. We had just finished a workout in the erg facility (a sparse industrial room in an office complex a mile from our boathouse). One of our coaches, a young woman in her mid-twenties, gathered our team of 30 women's novice rowers together. She told us that,

"Your mind gives up before your body does" in an attempt to chastise us for "flying and dying[7]" on our earlier workout. Echoing the Cartesian distinction of mind vs. body, she explained that our minds, wanting to get us out of danger, will tell us that we can't keep going but our minds are lying to us.

I don't think we really believed her, at least I didn't because I assumed that my mind would be able to accurately predict when my body could not physically continue. Our coach responded, as if anticipating our disbelief, "Okay, let's do some wall-sits." I groaned silently. My legs were already tired because I was not accustomed to the level of our training, but I made my way to the edge of the room. We were spread out on all four walls so that we could see each other. My coach directed us to, "Raise your hand if you think you can wall-sit for a maximum of one minute." Most of the girls raised their hands with a mixture of confidence and apprehension. I hesitated for a second before raising my hand as if in solidarity. But in the back of my mind, a nagging voice questioned whether this was something I was capable of. While emersed in my own thoughts, I almost did not hear our coach continue. "Okay," she responded, "raise your hand if you can do a minute and thirty seconds." A handful of girls extended their arms to mirror us. Once my coach had gotten to 2 minutes, everyone had a hand up.

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[7] Flying and dying is a term used to describe the process of starting out a workout at a pace that is too fast, "flying," and eventually being unable to continue at that pace or even a pace close to it, "dying." It typically results in the rower going slower than they are capable of.

Our coach then explained what we were going to be doing and my stomach fell with fear and anticipation. “I’m going to start the timer for wall-sits. Once you feel like you can’t do it anymore, raise one of your hands up above your head but keep wall-sitting.” After we started, the seconds seemed to trickle by as if they were caught in mud. I kept watching my teammates because I desperately did not want to be the first one to admit my own weakness. This fear was mixed with another feeling of apprehension that stemmed from not knowing how much longer it would be until our coach allowed us to stop the exercise. At about a minute, a handful of hands crept up. Mine followed suit not too long after. You could see the visible pain in everyone’s bodies, legs trembled and faces grimaced, but we stayed put as if we were glued to the walls. By two minutes, everyone’s hands were up but, and my eyes focused on our coach as if to will her to realize that everyone’s hands were up and call us to stop. But, to my surprise and anguish, she didn’t. All thirty of us watched each other through our palpable agitation but no one got up. Whether it was out of competitiveness, comradery, or fear of being perceived as “weak,” we all stayed with quaking legs and our arms above our heads for another minute, although it felt like much longer.

As soon as our coach finally called “stop,” many of us, lacking the strength or willpower to straighten out legs to stand, slid to the floor. “See” she gloated as though she had proven an obvious point, “All of you had your hands up for at least a minute but you were able to keep going. Your mind didn’t think you could do it but your body could.”

Conclusion

While this is by no means a comprehensive analysis of pain, I hope it will contribute to the discussion of purposeful pain within anthropology. Since our personal perspectives of pain are highly subjective and shaped by culture, it is important to understand how these perspectives are formed and what that means for our relationship with pain. My role as a native anthropologist has allowed me to re-think how and why I understand and respond to pain. I hope that this thesis will provide a similar insight by exploring the many reasons that push people to endure and even seek out pain.

In chapter one, my analysis is centered around the biomedical perspective and how our current ideas of pain became widely accepted within western culture. In this chapter, I also discuss the ways in which doctors are socialized to diagnose and treat pain and how the rise, and subsequent fall, of the availability of prescription opioids has changed these practices. In chapter two, I focus on sacred pain and the way that cultural meanings of pain transform the pain experience. And finally, in chapter three, I discuss the role of pain in athletics. Athletes often, both consciously and unconsciously, adopt many of the cultural and psychological perspectives on pain that are informed by both Western biomedicine and the religious construction of sacred pain. Consequently, athletes are forced to exist in a paradoxical state between understanding pain as meaningless and understanding it as meaningful. In the conclusion I explore how this paradox might contribute to pain management and to the scholarship on pain.

Chapter I: Biomedicine

Introduction

While researching and writing this thesis, I was reminded of an old joke that my dad would tell me when I was growing up. While the details have changed over time, the punchline remains the same. The joke goes: There is a boy who is repeatedly hitting his head against the wall. When someone, reasonably concerned, asks him why he is hurting himself, the boy replies, without missing a beat, "Because it feels so good when I stop." While I chuckled in response time and time again, I never understood the humorous nature of this joke and, to be honest, I still don't fully understand how it qualifies as a joke. And maybe that is because I've also grown in a time when the prevailing Western biomedical outlook presents pain as treatable and subsequently unnecessary (Morris 1991).

Within the Western biomedical cultural outlook, it appears like "common sense rebels against the idea that pain can be experienced as something good. If it is pain, we say, it must be a negative experience. Pain can never be anything else" (Glucklich 2001, 88). This "common sense" is informed by Western cultural understandings of pain and, since biomedicine has been integrated into Western culture, by Western biomedicine as well (Zalta et al. 2020). The prevailing assumption is that Western medicine has solved the problem of pain due to medical innovations and new technologies. We have grown to

believe that an "ultimate panacea of complete pain relief for everyone is reasonable" (Jackson 2000, 277; Melzack 1974).

As a part of my research, I interviewed Dr. Nichols, a primary care physician, over the phone one fall afternoon. He was driving out of town for the weekend, so his voice buzzed through my phone as he described that prescription painkillers, such as opioids, are becoming "more of a norm [that] patients are expecting something like–like that for sometimes even the mildest of pain" (Personal interview 10/7/21). The assumption that even mild pain should be treated with the strongest pain prescription pain medication possible reinforces the cultural belief that pain, like disease and illness in general, is something to be eliminated at any cost. For doctors, the "knee-jerk" reaction, as Nichols describes, is to prescribe more painkillers even when it is not medically necessary[8]. In this chapter, I analyze how our current understanding of pain was formed and how this outlook was informed by the rhetoric of pharmaceutical companies and how it shapes biomedical culture.

[8] While the pathologization of pain was highlighted by my interlocutors and academic research, it is important to acknowledge that there is an uneven distribution of access to these pain killers. While biomedicine is focused on eliminating a patient's pain with strong pain killers, there is still a level of unconscious bias that creates an environment where doctors may not believe a patient's reported pain levels, especially if the patient is perceived to be a member of a historically stigmatized group within biomedicine (i.e. people of color, women, and patients with obesity). While this is an issue within biomedicine that should be addressed, it does not invalidate the claim that biomedicine pathologizes pain or the harm caused by the push to prescribe.

Timeline of an Epidemic: How Pain Became Unacceptable

The current Western biomedical lens conceptualizes pain much like it does other diseases such as cancer and hypertension, which led doctors to fight it with every medication and treatment possible. Historically Western medicine was grounded in Christianity before it became secularized. Society associated pain with religious punishment, especially the pain of childbirth. Doctors feared that if they alleviated their patient's pain, they would be undermining the will of God. Since the book of Genesis explains that women suffer during childbirth as a punishment for primal sin, many Christians at the time believed that using anesthesia to eliminate pain during childbirth was the work of the devil.

Many doctors also relied on their patients' pain to measure their progress during treatment because they associated pain with a patient's ability to heal. Doctors didn't want to alleviate pain and cause further harm to befall their patients (Glucklich 2001; Duffy 1968). François Magendie, a prominent French doctor, believed that "pain was essential to life and was connected with the vital essence of the living organism and that anesthetics rendered the 'patient a corpse'" (Glucklich 2001, 186; Fulop-Miller 1939). This led many to believe that the passivity of an anesthetized patient would lead to a poor recovery. By extension, people believed that experiencing pain helped patients to heal with fewer complications (Glucklich 2001).

In the mid-19th century, doctors began to use anesthesia for medical procedures; however, it didn't become a mainstream medical practice until the latter half of the 19th

century. Popular resistance to the use of anesthesia was grounded in the belief that pain is part of God's plan, at least for Christians. As the medical system became more less Christian and more secular, a shift in attitudes made the use of anesthesia more acceptable (Glucklich 2001). Within this new secularized medical system, people lost their "capacity to understand why and how pain would [and is] valuable for mystics, members of religious communities, and perhaps humanity. The role of pain, before it was displaced, was rich and nuanced, and ultimately situated persons within a broader social and religious context" (Glucklich 2001, 201). The secularization of Western biomedicine has complicated the ability of both doctors and patients to understand how pain can be productive and communal.

Another push to medicalize pain took place in the 1980s when powerful pain treatment options, like MS Contin, were able to be marketed for non-terminal or cancer related pain. A cohort of American doctors fueled the movement by calling for their peers to reexamine the way that pain was treated in the medical field. These doctors viewed the controlled-release aspect of MS Contin as an advancement that made it less likely to cause addiction and therefore could be more widely prescribed to people suffering from acute and chronic pain. MS Contin, and later OxyContin, were marketed as miracle cures that made a pain-free life possible.

Pharmaceutical companies like Purdue Pharma disseminated the idea that biomedical pain treatment should utilize strong pain killers because they claimed that pain led to

further medical complications and should considered a kind of illness. The movement to conceptualize pain as an illness in and of itself further fueled Western biomedicine's focus on eliminating pain, regardless of the physical, social, or mental costs to the patient.

One of the key players in this movement was Dr. John J. Bonica whom many credited with the movement to medicalize pain within the United States. He believed that "America was in the throes of a silent plague of undiagnosed suffering, an 'epidemic of pain'" if you will (Keefe 2021, 176). He agreed with Dr. Richard Sackler, the patriarch of the Sackler family and president of Purdue Pharma, that physicians should be bolder and more aggressive about administering morphine to patients. The messaging behind intense pain killers, like MS Contin and OxyContin, made it appear that these drugs were safe to prescribe for multiple forms of pain even though these were originally developed for pain associated with cancer or end-of-life care due to the fear of their addictive qualities.

The promises of a new cohort of painkillers led to many doctors to prescribe vast amounts of opioids to eliminate their patients' pain (Morris 1991; Jackson 1999). Convinced of the claims made by the pharmaceutical industry, doctors shifted from worrying about the potential negative side effects of these drugs to worrying about losing their medical license if they failed to eliminate their patients' pain.

The Fifth Vital Sign

Just as drug companies were touting the benefits of opioids and its medical practitioners were also taking steps to medicalize pain. Dr. James Campbell first presented the idea that pain is "the fifth vital sign" in his 1995 Presidential Address to the American Pain Society (Morone and Weiner 2013, 1728). The other four vital signs that doctors routinely measure are body temperature, pulse rate, respiration rate, and blood pressure. These are considered to be vital signs because they measure the body's most basic functions, and they are utilized to detect or monitor medical conditions at home or at a doctor's office ("Vital Signs" 2021). These vital signs are important because they are used to check if a patient is sick. Dr. Bonica was among a group of "pain specialists" who ardently promoted the idea that pain is the "5th vital sign" that needs to be checked by doctors as an indicator of illness (Crowley-Matoka et. al 2009, 1313).

While the other four vital signs can be objectively measured, pain measurement relies on the patient's self-reporting of their pain levels. Unlike the four other vital signs, there is no objective test to determine what level of pain someone is experiencing. Some common tools used to measure pain include the 0 to 10 pain numeric rating scale (NRS) or the McGill Pain Questionnaire[9] (Lorenz et al. 2009; Melzack 1975). In this scale a one

[9] According to Melzack (1975), "The McGill Pain Questionnaire consists primarily of 3 major classes of word descriptors — sensory, affective, and evaluative — that are used by patients to specify subjective pain experience. [...] The questionnaire was designed to provide quantitative measures of clinical pain that can be treated statistically" (277).

indicates slight discomfort while a ten signifies the most severe pain imaginable. However, these ranking scales are inaccurate and inconclusive. Two individuals with the same injury, a broken femur, may report drastically different numbers. As Dr. Elrich, an emergency room doctor whom I interviewed for this project, explained, people will routinely come in, walking, talking with a half inch cut on their hand, and say their pain is a 10 out of 10. At the same time, there'll be people who are burned on 30% of their body and they're sweating and they're gritting their teeth and saying, "oh, my pain is about a seven" (Personal Interview 10/13/21). So, while self-reported pain rankings can be useful in measuring a patient's response to treatment, its flaws are obvious when it is used to quantitatively measure a person's pain.

A year after Dr. Campbell's speech, the American Pain Society initiated a campaign to improve medical treatment by formulating "pain as the fifth vital sign" (Levy et al. 2018). Dr. Elrich noted that the movement to adopt pain as the fifth vital sign was "really pushed by regulatory bodies, not just individual physicians' societies but by, you know, government regulatory bodies" (Personal interview 10/13/21). In this sense, regulatory bodies expected that doctors would treat pain with the most effective resources available, which often meant that opioids were prescribed. These doctors saw pain as something to be treated and eradicated like any other health problem.

By associating pain with the other four vital signs, doctors came to associate pain with "essential information" within the medical community (Morone and Weiner 2013, 1728).

After the American Pain Society implemented the idea that pain is the "fifth vital sign," the Veterans Health Administration (VHA) and the Joint Commission on Accreditation of Healthcare Organizations (what is now simply referred to as the Joint Commission) quickly adopted a standardized pain measurement scale.

The VHA and the Joint Commission's acceptance paved the way for legislative bodies and medical establishments to prioritize routine pain assessment. An example of this can be seen in how, since 1999, the California legislature requires that "all licensed health care facilities assess pain with routine vital signs" (Lorenz et al. 2009, 291). Since pain became something to be measured and assessed by medical professionals, the expectation that practitioners should respond by alleviating the patient's pain developed (Morone and Weiner 2013, 1728). Now, all inpatient medical settings include the pain scale assessments, specifically within Hospital Consumer Assessments. The idea that pain is the fifth vital sign reinforces the belief that no pain is the ideal level of pain (just like there is a healthy range for the other vital signs).

Measuring pain as the "fifth vital sign" proved to be more problematic than people originally believed it would be in clinical practice. Not surprisingly, a rise in opioid use and abuse has occurred since pain became the fifth vital sign. "According to the National Health and Nutrition Examination Survey, opioid prescriptions nearly doubled from the average between 1988-1994 to the rates seen between 2005-2008" (Morone and Weiner 2013). This is in part because of the assumption that if a doctor detects a patient's pain,

they are professionally obligated to treat it. Doctors often felt as though they needed to end their patients' pain to live up to their Hippocratic Oath to do no harm.

The use of pain as the fifth vital sign within the US biomedical system has had the unintended consequence of encouraging opioid administration in response to patients' self-reported numerical pain scores. As a result, it has been suggested that the 'pain as the 5th vital sign' campaign with its reliance on the NPS [numerical pain scale] directly contributed to the prescribed opioid epidemic" in the US (Levy et al. 2018, 435). Due to this causal relationship, institutions such as the American Academy of Family Physicians, the American College of Surgeons, the Centers for Medicare and Medicaid services, and the Joint Commission have recently ceased to support the assertion that pain should be treated as though it were the fifth vital sign (Levy et al. 2018).

"You Should Always Treat a Patient's Pain"*

The widespread medical belief that pain should be eliminated fueled the rise in prescriptions for strong painkillers like Oxycontin. This narrative portrays companies, like Purdue, as being "driven solely by a sincere – and, real selfless – duty to help patients who were suffering from chronic pain" (Keefe 2021, 249). However, Purdue had a monetary incentive to create the narrative that untreated pain was an epidemic to increase their market share and sales due (Keefe 2021). The push to utilize opioids to treat non-cancer pain created a dramatically larger demographic of individuals who

depended on these medications for pain treatment. However, this came with a lot of negative consequences.

The belief that doctors could, and should, treat their patient's pain compounded the already mainstream idea within Western biomedicine that medical practitioners can cure a wide array of complicated and rare ailments. The patients' perspective that doctors should be able to diagnose and treat their pain contributed to the pressure doctors felt to eliminate their patient's pain. However, Dr. Elrich explains that, when it comes to diagnosing and treating a patient, "the problem is that maybe half of painful conditions don't fit that model. There is no actual damage going on. The person can live their normal lifespan with their normal organ function, it just hurts. And so *pause* then we don't know what to do with it" (Personal interview 10/13/21).

Since research about the addictive qualities of prescription opioids have come to light in the past few decades, doctors have faced intense scrutiny over their treatment methods. While opioids like OxyContin were originally advertised as a safe treatment option, these medications are now associated with high rates of addiction and overdoses. There are approximately 2 million US residents aged 12 or older who are addicted to prescription opioids. By 2018, prescription opioids had caused 600,000 deaths in the US and 180,000 more were predicted to occur by 2020 (Levy et al. 2018, 435). "In 2016, it was estimated that the combined economic effect of the opioid epidemic (healthcare, labor, and criminal justice costs) was $92 billion" (Levy et al. 2018, 435).

While interviewing Dr. Elrich, I was puzzled at first by his assertion:

> "I can treat pain 100% effectively." He explains that pain "is the only condition that I can treat 100% effectively. Like, *pause* If you have pneumonia, our treatments are like, 85% effective. If you have a brain tumor, our treatments are 40% effective. But if you have pain, just pain, my treatment will, at least in the short term, be 100% effective" (Personal interview 10/13/21).

He paused, as if to let this assertion sink in before elaborating on what this assertion truly means for pain treatment. He explained, "I can give you morphine until you are unconscious." When a doctor utilizes this form of pain treatment, the patient is no longer experiencing pain; however, the patient is unable to function in society and may even die from the treatment. In this case, just because pain can be treated 100% effectively does not necessarily mean that it should be treated in this manner.

Given the medicalization of pain, it's no surprise that treating a patient's pain may result in deadly complications and long-term addiction. One complication is compartment syndrome which causes muscular swelling and an almost complete loss of circulation that can be fatal. The main symptom is pain, and if a doctor gives a patient enough pain medicine to cause a loss of consciousness, the patient can't alert the doctors of any changes in their pain levels that may signal that they are developing compartment syndrome. While doctors can measure a patient's muscular pressure by inserting a needle

into the muscle, the needle cannot be left for an extended period. Therefore, doctors rely on self-reported pain levels to detect if their patient is developing this condition.

The overarching biomedical perspective that pain should be treated through pharmaceutical means is challenged by such side effects as compartment syndrome. Examples such as this contribute to the merit of Dr. Elrich's assertion that "you should always treat a patient's pain*" (Personal interview 10/13/21). This statement appears to agree with the prominent biomedical perspective that pain is bad and should be treated; however, the asterisk acknowledges the nuances in pain treatment that are often overlooked. Dr. Elrich explains that the asterisk stands for, "Unless you think the pain medicine will kill them or unless you think the pain medicine will make them worse. Or y'know, unless you think the pain medicine, or like the lack of pain medicine is critical to making a diagnosis for instance" (Personal interview 10/13/21).

The Pressure to Prescribe

Dr. Elrich explains that if a patient wants their pain treated through opioids, which often occurs when the patient is already addicted to them, and the doctor refuses to prescribe this medication, the patient could file a complaint with a patient advocacy group, the medical department's director, or other regulatory departments. On a larger level, patient satisfaction surveys often include a section about pain treatment like, "How often did the hospital or provider do everything in their power to control your pain?" (Levy et al. 2018, 435). This response may be utilized by the regulatory boards, mentioned by Dr. Elrich, as

a metric to determine whether a hospital, a group of doctors, or an individual doctor is providing adequate care to their patients. Regulatory boards use metrics, such as pain, to assess the competency of a hospital and its doctors because, as Dr. Elrich explains, "objective things like mortality rate are typically so low that they don't vary between good providers and bad providers and our influence over whether a patient lives or dies is actually relatively small" (Personal interview 10/13/21). On the other hand, a doctor has a great influence on their patients' pain. Due to these factors, the pressure to treat a patient's pain is formed by professional organizations, patients, and patient advocates.

Pharmaceutical companies, sales representatives, and patient advocacy groups are also among those who pressure doctors to prescribe opioids. As Dr. Elrich explained, the blame for the current state of opioid use and abuse can be placed on the companies that manufacture opioids and disseminated studies that presented these medications were safe and effective. However, "There were the government regulatory bodies that did not regulate their use appropriately. There were the physicians that did not appropriately question the validity of the research or perform research of their own to refute it. There were patients who were demanding it" (Personal interview 10/13/21).

The Opioid Epidemic and Misinformation

By medicalizing pain in this way, we see the stage set for opioids like OxyContin to be prescribed in ever-increasing quantities creating a perfect recipe for a massive culture of addiction. For many years, the addictiveness of opioids like OxyContin were not widely

disseminated or understood, and it was believed that there was a very low risk of becoming addicted to these drugs. Due to misinformation and misconstrued data, doctors did not have correct information about the likelihood that their patients would get addicted. So, while we hold doctors and their patients accountable for creating this cultural norm, pharmaceutical companies (specifically Purdue) are to blame accountable for promoting the idea that the best treatment is to eliminate pain as well.

Opioids like OxyContin and MS Contin were marketed as a quick and effective treatment for pain with a low risk of addiction. Doctors prescribed the drugs liberally, as they were instructed to at their Purdue-funded educational conferences" (Hughes et al. 2019, 2; Van Zee 2009). Although they did not have accurate data, most did not question the claims made by the pharmaceutical companies. Furthermore, many clinicians don't realize that "prescribing opioids may be an incomplete response. Starting in medical school and continuing through postgraduate, pain education training usually involves piecemeal incorporation of pain topics into existing curricula or clinical rotations, without devoted stand-alone class time" because they lack adequate training and education on how to approach and treat patients in pain (Morone and Weiner 2013, 1728). Doctors are now seen as being responsible for eliminating their patients' pain but many lack the proper resources and education to do so.

In the late 2000s and early 2010s, the CDC "warned that nearly a quarter of all patients who took opioid painkillers long term could become addicted" (Keefe 2021, 359). This is

in stark contrast with the scientific research, sponsored by Purdue, that came out two decades earlier and was largely accepted by the medical community. This research reported that addiction did occur, it was the patient's fault for misusing the drug or for having a personal or family history of addiction. This perspective highlights the importance of individual responsibility while overlooking the structural factors that contribute to opioid addiction.

Sales reps were a vital component in making painkillers, like OxyContin, and were widely successful in presenting the narrative promoted by Purdue. The reps recited the meticulously designed slogan that, "OxyContin was the painkiller 'to start with and to stay with'" (Keefe 2021, 208). This slogan helped foster the belief that OxyContin could, and should, be used as the first line of defense for both acute and short-term pain as well as chronic and long-term pain (Leefe 2021, 208). Since OxyContin was understood to be the painkiller "to start with and stay with," doctors felt confident that they could prescribe it for an extended and indefinite period. This sales pitch was "an enticing formula: start early, and never stop" (Keefe 2021, 208). Marketing opioids as a long-term solution to pain directly contributes to the political economy of pain by formulating medicine in a business model that prioritizes profit. This perspective focuses treatment on utilizing medication and subsequently overlooks other therapeutic treatment measures.

Pharmaceutical companies gave sales representatives "specific instructions on how to challenge a potential concern a doctor might have and even did role-playing exercises to

counter hesitation within these training sessions" (Keefe 2021, 208). They were prepared to parry any questions or hesitancy that clinicians expressed regarding the addictive qualities or risk of abuse. When doctors would bring up these worries, sales reps were trained to recite "the language from the package insert, which Curtis Wright, of the FDA, had approved: 'The delivery system is believed to reduce the abuse liability of the drug.' They memorized the line and recited it like a catechism" (Keefe 2021, 208).

While pitching OxyContin, sales reps referred to the medical literature, often funded by Purdue or short-term anecdotal studies that were taken out of context. An example of the latter is an article titled, "Addiction Rare in Patients Treated with Narcotics," published in the *New England Journal of Medicine* in 1980. While sales representatives may have presented it as a long-scale clinical study, it was actually a short letter based on anecdotal findings involving a small group of patients treated at the Boston University Medical Center (Keefe 2021, 209). "Much later, one of the authors of the letter, Hershel Jick, would say that he was 'amazed' by the degree to which Purdue and other companies used this minor academic offering to justify the marketing of strong opioids. The industry has co-opted his work, he suggested, using it 'as an ad'" (Keefe 2021, 209-210). By constantly downplaying the addictiveness of OxyContin and other prescription opioids, sales representatives fueled the idea that pain should be treated because it could be treated with prescription opioids since the risk of negative side effects were so minimal.

Conclusion

The culture of pain within Western medicine is a concept that has vacillated significantly throughout recorded history. Even within the past few generations, there has been a cultural shift in how we see pain which coincides with the rise of opioid use and abuse. The more recent shift in our cultural understanding of pain, which began in the latter part of the 20th century, has contributed to the secularization of our understandings of pain. Within this cultural framework, the purpose of medicine is to locate the biological or psychological source of one's pain and eliminate it rather that peace in it within a broad socio-religious framework.

In this new context, pain has become the fifth vital sign. In this framework, pain signals that the body is ill and can be cured through biomedical interventions. If a patient is in pain, then that is a sign that the body is ill and can be cured through the elimination of pain. As a result, doctors have learned to walk the fine line between over-treating and under-treating a patient's pain since either extreme could lead to disciplinary action or accusations of malpractice or incompetence. The difference between a competent and a negligent doctor when it comes to treating pain can be difficult to discern. Even the most highly trained and experienced doctor finds it difficult to know if they are treating a patient's pain or fueling a current or future addiction because the narrative around proper pain care has changed so dramatically. As Dr. Elrich noted:

> "a few years ago [the regulatory bodies] were like, all of a sudden, 'Oh no, you guys are over treating pain. You've been treating pain too aggressively. You've

> been using too many opiates. And now everyone is addicted and it's your fault.' Um, and–and we were like, 'Just five years ago you were telling us that we weren't doing enough and now you're telling us we're doing too much. We haven't really changed in the meantime" (Personal interview 10/13/21).

When I asked my interlocutors about how they treated pain, they both responded with somewhat defensive answers. When I asked about his experience prescribing painkillers like OxyContin, Dr. Nichols defended himself and his colleagues by explaining that, "We certainly don't torture [by refusing to prescribe opioids], but [narcotics are] certainly not something that is a knee jerk [for] patients to get a narcotic right off the bat" (Personal interview 10/7/21). Neither doctor admitted to prescribing "a ton of" opioids or using opioids as the first line of defense but, due to the history of opioids being presented as an ideal first treatment, they admitted to feeling trepidation that their treatment methods would appear to some as "torture" and felt as though they had to clearly justify their actions. Dr. Nichols and Dr. Elrich who signaled that the field of pain management is undergoing another shift. This new biomedical culture is looking into the nuances of their patients' pain experience and is holding doctors and pharmaceutical companies accountable for purposefully contributing to the opioid epidemic (Keefe 2021; Scarcella 2021).

Chapter II: Sacred Pain

Introduction

While Western biomedicine has created an understanding that pain is unacceptable, there are other cultural contexts in which pain is thought to be beneficial. “Unlike the contemporary biomedical view of pain as unnecessary, a challenge, or the enemy–something to be eliminated–religious traditions aim to bring meaning not only to pain but also to suffering. Some even induce pain and utilize suffering as part of ritual practice or to enable transformation” (Norris 2009, 24). Purposeful pain can be either self-inflicted or inflicted on others as part of a ritual or an individual’s religious training.

Sacred pain is a part of certain Christian, Muslim, Sufi, Hindu, and Native rituals. “In many religious traditions, pain is utilized as a means for intentionally generating sacred states. Here, pain is used for healing, if healing is understood as not simply physical, but as a state of greater wholeness, or enhanced relationship with the sacred” (Norris 2009, 23). This is not to say that all religions have sacred pain rituals or that this form of pain is always culturally appropriate. Maria Maddalena de’Pazzi, a Catholic saint, inflicted sacred pain “self-tortures” that her superiors did not always automatically tolerate (Glucklich 2001).

Unlike biomedicine, which pathologizes pain, many religions incorporate various forms of self-inflicted pain as part of their traditions (Glucklich 1998). These forms of pain are important because they transform it into a meaningful experience – a characteristic which

is no longer prominent within mainstream American culture including biomedicine. In this section I explore how people relate to pain within a religious context. Whereas the secular biomedical perspective interprets self-inflicted pain as problematic, and even pathological (Glucklich 2001, 88). In many rituals, individuals experience pain as sacred and therefore connected to a greater purpose.

While sacred pain is a fixture in many religions, these forms of pain are not necessarily utilized in the same ways. In some contexts, sacred pain devotees are meant to suffer while in other contexts devotees have out of body experiences. As Pope John Paul II once explained in 1984, "What we express with the word 'suffering' seems to be particularly *essential to the nature of Man*…. Suffering seems to belong to Man's transcendence…. Christianity is not a system into which we have to fit the awkward fact of pain…. In a sense, [suffering] creates, rather than solves, the problem of pain (Glucklich 2001, 2). This highlights a point that runs through the history of Christianity, that pain is essential for spiritual transcendence. While Western biomedicine has created a cultural environment in which pain is symptomatic of something gone wrong, sacred pain continues to be valued in a variety of religions, including Western religions.

Background on Sacred Pain

For those belonging to a faith community, at least historically, the goal is not to live a completely pain-free life; instead, the goal is to transform one's suffering into a meaningful experience or even salvation (Glucklich 2001). As Glucklich (2001) notes,

“among the oddest forms of religious life around the world are rituals of self-hurting and even a theological glorification of suffering that seems entirely inconsistent with common sense” (3). Sacred pain has been incorporated in practices such as initiation rites, pilgrimages, and annual celebrations, among others (Glucklich 2001). In these examples sacred pain is instrumental in fostering a positive personal and/or communal experience.

A trope within Christian and Muslim doctrine is that the body is the enemy of the soul and not pain. Instead, pain is the “weapon by means of which the body is subdued, demons exorcized, temptations averted, in a battle for salvation” (Glucklich 2002, 23). Christian self-flagellation is often focused on suffering, like Christ’s, to assure one’s salvation in one’s life or afterlife. Many mystics and saints intentionally mortified their bodies to get closer to God. Traditional Christian practices of sacred pain include instances of “fasting, pilgrimage, flagellation, and cilicia or wearing of hairshirts' accompanied the devotions of countless holy men and women. The vitae of saints are filled with descriptions of ascetic practices that were performed in the belief that physical affliction would prepare the soul for God” (Flynn 1996, 258). Since the flesh is the devil’s realm, devotees hurt themselves to rid themselves of evil.

The idea that one can hurt the flesh to save the soul is tied to notion that pain is purifying. “When the body is either imagined or experienced as a filthy and purifying encasement of the pure soul, pain is felt as cleansing [and] The only way to purify this disgusting flesh is to discipline it harshly and mercilessly by means of asceticism – extreme mortification”

(Glucklich 2001, 27). Within these forms of sacred pain, the focus is on the purpose of pain and not on the pain itself. Even when pain is being induced to cause suffering, the suffering is seen as a religious tool to achieve a desired end. Unlike the Western biomedical cultural context, pain is being transformed into "good pain: educational, healing, bonding with God" (Glucklich 2001, 40).

Although there are many examples of ritualized pain within religions, they have become less common and more controversial as they come into conflict with. The "biggest obstacle to understanding the value of sacred pain is not its feel but our insistence that pain can signify a medical problem only. This is not an intellectual failure of a poverty of the imagination, but the amnesia that descends with the emergence of a radical new worldview" (Glucklich 2001, 7).

Transformative Suffering

While Western biomedicine has stripped pain of its religious meanings, sacred pain does just the opposite. Devotees embrace pain to show their devotion to a divine entity. Devotees conceptualize their pain and suffering as being intrinsically meaningful (Singh 2017). The "task of religious practitioners is often to convert accidental pain or illness (conceived perhaps of punishment) into a positive force acting on behalf of passage, healing, or some other spiritual advantage. [...] Thus, if a pain can be transformed into a sacrifice, higher ends benefit at the expense of lower ends, and oddly, suffering is reduced" (Glucklich 2001, 61-62). By establishing meaning within acts of ritualized pain,

the “destructive or disintegrative” effects of suffering can be reconstructed as a positive religious and psychological tool which generates valuable religious and social aftereffects (Glucklich 2001, 6).

Within religious communities, pain is often conceptualized as a form of punishment or as a source of healing and spiritual growth, but these perspectives are not mutually exclusive. When pain is understood in as a punishment, it is “experienced as a decentralized threat to the telic center (ego)” (Glucklich 2001, 61). With roots in punishment, these forms of sacred pain is often experienced as an expression of penance. By hurting the body, often in a public way, individuals absolve themselves of sin. The ways in which sacred pain can transform bodily punishment into spiritual healing is exemplified in self-flagellation. Many early Christian martyrs believed that pain would allow them to destroy a self separated from Christ. Later, medieval mystics, like the early Christian martyrs, physically harmed themselves in acts of sacred to identify with the “suffering savior” (Flynn 1996, 275).

When pain is understood as a solution, or medicine, it is experienced as “a higher telos than ego and is centralized or reinforced by the sacrifice of ego” (Glucklich 2001, 61). Self-flagellation practiced by Catholic Filipinos fits into this category because the goal of this self-hurt is to achieve spiritual healing and growth (Moratilla 2018). While Filipinos practiced flogging prior to colonization, it was associated with punishment. The colonizers, under the influence of Catholicism, gave this practice a new meaning by

associating it with purification. Today, during the Lenten ritual known as penitensya hooded penitents repeatedly whip themselves while walking in public. The Lenten ritual includes rituals and beliefs that are not officially sanctioned by the Catholic Church. Catholic Filipinos believe that public self-mortification expresses empathy for one's fellow humans. When self-flagellation occurs in public, like during penitensya, it changes the personal nature of pain into an experience that is not simply solitary or individual but communal. Although the Catholic Church subtly condemns the penitensya ritual, because it "borders on religious fanaticism," it continues because many devotees believe that the practice allows them to express their embodied empathy, specifically to the Christ's suffering, better than other techniques endorsed by priests (Moratilla 2018, 151).

Public Pain and Community Ties

Social theorists have often maintained that religious rituals and doctrine promote prosociality within a community. Religious rituals, such as those involving sacred pain, increase a devotee's cooperative behaviors and creates and reinforces social bonds (Xygalatas 2012). While some forms of sacred pain are practiced privately, there are many instances in which public rituals (such as forms of Christian self-flagellation[10] and the Thaipusam Kavadi) serve to build connections between individuals. A variety of pain discourses has situated "pain at the heart of religious discourse around the world. It is

[10] Christian techniques of self-inflicted pain, specifically self-flagellation, also have historically been implemented by a devotee in private. However, I am focusing on public displays of private pain to understand how the communal aspect of these painful rituals contribute to its cultural importance and a devotee's spiritual transcendence.

inconceivable that the suffering of Christ on the cross or that the astounding martyrdom of saints, or for that matter Rabbi Akiva or Al-Hallaj, would mean anything to anyone unless pain was intrinsically sharable" (Glucklich 2001, 63). Glucklich explains the foundation of pain within religious contexts and the importance that pain holds within these community roles. For these roles to be established in this way, pain must be shared. Therefore, sacred pain is often performed in a public manner to strengthen one's connection to God, or gods, and to establish or maintain the devotees' connection to other members by mirroring Christ's public suffering (Glucklich 2001, Shilling and Mellor 2010; Largier 2007; Kreuder 2008).

For cooperation to be assured within any group, including religious groups, members need to determine who is willing to cooperate for the benefit of the group and which members are simply free riders, individuals who reap the rewards of the group without contributing to the group's success. One way this can be done is through rituals. Rituals help forge powerful group identities and promote cooperation within groups because participation signals one's commitment and trustworthiness. A devotee can signal their commitment to their god(s) and the group by enduring excruciating. Sacred pain rituals are a reliable signal of a devotee's commitment to the group because participation is difficult to fake (Watson-Jones and Legare 2016).

While biomedicine isolates pain in the individual, many religions use pain as a means to create deep, long-lasting ties between individuals. Within this religious context,

participating in religious rituals that include self-hurting, reaffirms their social role, and reinforces their cultural unity to those participating in the ritual (in whatever way is religiously appropriate). Devotees learn to associate the experience of suffering with personal, social, and religious benefits (Glucklich 2001, 6).

In the Thaipusam Kavadi ritual (which is practiced in many different countries such as India, Malaysia, and Singapore), the devotees are accompanied by individuals tasked with helping the devotee maintain their trance or keep them from hurting themselves or others further (Ward 1984). The role of the helpers is very important to the devotee's participation because, "While subjective experience has been described in terms of lightness, peace, purity, euphoria, and detachment, outward manifestations of trance include shaking and trembling, temporary loss of muscle control, pupil dilation, and spatial disorientation" (Ward 1984, 321). Since the devotees are psychologically detached from their body and, at times, may not be in control of their bodies, their helpers make sure that their spiritual experience does not cause permanent damage to themselves or others.

While not all groups practice the piercing ritual within their Sun Dance ceremonies, it is the most prominent aspect of this ceremony. In this ritual, participants are often tethered to a tree by a long rope secured through piercings embedded in the devotee's chest. While others may only remain tethered for a few minutes, others remain in this state until their flesh tears" (Shrubsole 2011, Modaff 2014). The piercing ritual "involves the tearing of

flesh as an act of self-sacrifice, embodiment of pain and suffering, the dismantlement of egos, the initiation of visions and the attainment of power among other things" (Shrubsole 2011, 3; Hirschfelder & Molin 2001). Individuals often participate in this ritual to heal oneself and one's community. It is believed that "the Sun Dance created warriors, who could perceive the suffering of all indigenous peoples, cope with the pain and use that knowledge to relieve such suffering" (Shrubsole 2011, 5).

Acts of sacred pain can also be utilized as a political tool to create unity between communities. The Sun Dance is a critical example of how sacred pain can transform communities (Modaff 2014, 3). This ceremony was practiced by indigenous communities in the Great Plains. Many claim that the Plains Algonquins were the first to practice this ritual at the turn of the 18th century and that it subsequently "spread throughout the Great Plains to communities in contemporary Canada and the United States including the Arapaho, Ankara, Assiniboine, Blackfeet, Cheyenne, Comanche, Crow, Eastern Dakota, Gros Ventre, Hidatsa, Kiowa, Lakota, Mandan, Ponca, Plains Cree, Plains Ojibway, Sarsi, Shoshone and Ute" (Shrubsole 2011, 3; Hirschfelder & Molin 2001). "Splitting the Sky, the leader of the 1995 Gustafsen Lake Sun Dance and member of American Indian Movement (AIM) in the 1980s, identified the Sioux Sun Dance as one of the primary means by which AIM was able to establish a unified pan-indigenous community" (Shrubsole 2011, 4). While aspects of the Sun Dance varied between Native American communities, it also has been used to effect social change.

Effects on the Self

Devotees who participate in ritualized pain experience different emotional states due to the purpose of their self-hurting. Some who practice purposeful pain seek an outlet that will allow them to suffer. This is the case within many instances of Christian self-flagellation. In other instances, such as the Thaipusam Kavadi ritual, devotees enter a trance-like state that allows them to distance themselves from their pain. Devotees often don't experience pain due to their preparation and psychological state. Individuals participating in these painful rituals typically have an out of body experience, or experience depersonalization and self-transcendence.

Although the Thaipusam Kavadi ceremony involves self-mortification, Kasim found that local devotees described Thaipusam as a day of joy (2011). While devotees in the trance experiences "shaking and trembling, temporary loss of muscle control, pupil dilation, and spiritual disorientation," afterwards devotees have described the experience "in terms of lightness, peace, purity, euphoria, and detachment" (Ward 1984, 321). Devotees who participate in the ceremony, specifically the self-mutilation, body piercing, and heavy kavadi dragging, can go into a meditative trance which is thought to cleans one's soul. Even though they are inflicting physical pain onto themselves, many devotees do not experience or feel any pain (Kasim 2011).

Rituals involving sacred pain can act as a remedy for a range of ailments or illnesses, especially those relating to mental health. A patients' participation in these rituals are not

associated with any detrimental effects to their physiological health and instead are associated with subjective health improvements. Furthermore, devotees who are more engaged in the rituals experience greater health. And there is also a correlation between individuals who had health problems and/or are of a lower socioeconomic status often sought more painful levels of engagement within the rituals (Xygalatas et al. 2019).

Trancelike State

In the Thaipusam Kavadi ritual, devotees often experience a trance-like state that causes them to dissociate from the pain caused by the piercings and kavadis. Devotees experience spiritual transcendence during this dissociative state. Although many participants are pierced many times with an assortment of needles, hooks, and skewers and/or carry kavadis that may weigh up to 40 kg, they are able to make the pilgrimage to the Murugan temple with minimal pain and bleeding due to the ritual trance state they are in. The participants experience an altered state of consciousness, which allows the individual to experience operations of consciousness that vary greatly from their ordinary consciousness. Altered states of consciousness is used to refer to a hypnotic or meditative trance that are present in hypnosis, meditation, drug-induced states, brainwashing, mystical experiences, and ritualized pain (Ward 1984; Jilek 1982). These states may be produced by reducing one's sensory stimulation and/or specific movement, increasing external stimulation (such as emotional stimulation) and an increase in movement, targeted hyper alertness or focus, relaxation and decreased alertness, and other states like hyperventilation, sleep deprivation, and hypoxemia (Jilek 1984, 327).

This trance-like state is of particular importance because it allows the devotee to detach from their bodily pain, thus providing beneficial sensations associated with the painful ritual. Other participants bombard the devotees with repetitive and intense auditory and olfactory stimulation to induce this trance-like state. The devotees, who are already in a heightened emotional state due to their preparation, only need the repetitive stimuli, like the chanting of Sanskrit prayers and the inhalation of incense, to fall into the trance-like state (Ward 1984, 320). After devotees fall into this dissociative state, they are pierced. Many respondents report feeling minimal or no pain during the piercing (Ward 1984).

The devotees who participate in the Kavadi ceremony prepare for as little as one week and as much as a month. During this period, devotees will restrict both their diet, through fasting and only eating one vegetarian meal per day, and hours of sleep per night. Devotees also abstain from "alcohol, smoking, sexual intercourse, and social activities" during this time (Ward 1984, 319). If it is possible, during this preparation period the devotees live in the temple and participate in ritual purification baths, prayers, and meditation. By putting themselves into a state of deprivation, the devotees are able to access the mental state needed to beget their trance-like state during the ceremony. "Those who spend the preparatory phase in the temple may receive informal spiritual guidance with respect to Thaipusam practices and the religious trance as well as having the opportunity to observe outbursts of trance during group prayer sessions. Whether the preliminary phase is observed at home or at temple, the aim of the period is to cleanse

oneself and prepare for the offering by attaining the appropriate state of mind" (Ward 1984, 319).

When the final day of the Thaipusam finally arrives, participants perform temple rituals to induce a trance before the devotee bears the kavadi or is pierced. It is believed that if a devotee is properly prepared by performing rituals "to eliminate all thoughts of extraneous aspects of the external surroundings and to engage in fervent prayer, focusing their attention away from the body and centering their thoughts on Lord Murugan" then they will be able to experience this desired out-of-body state (Ward 1984, 320). The trance's "dissociative state is temporary, voluntary, and reversible and is generally attributed to the power of sympathetic deities. The Malaysian Hindus give various interpretations to the trance, with some believing that the devotee is protected by the gods and others maintaining that possession by Murugan or a member of his divine family occurs" (Ward 1984, 320).

Although devotees may experience a level of selective amnesia during this state, many are still able to remember aspects of the ritual. "Many devotees report sensations of weightlessness, feelings of upward movement, pure consciousness, or that they 'were not existing.' Detached from the external environment, feelings of depersonalization or cosmic unity may also occur. [...] Other characteristics of dissociation include a sense of timelessness, a sense of the ineffable and feelings of rejuvenation" (Ward 1984, 322). The separation from one's bodily sensations, in this instance a dissociative or trance-like

state, affects how someone perceives their pain. This separation from the self leads many devotees to report high rates of contentment and low rates of fatigue (Ward 1984). While their bodies are undergoing extreme physical trauma, devotees do not suffer during this experience because the experience is linked to cultural and religious beliefs and practices.

Through a ritualized trance that accompanies sacred pain, devotees "transform destructive or disintegrative suffering into a positive religious-psychological mechanism for reintegrating within a more deeply valued level of reality than individual existence" which is a major component of the experience of sacred pain (Glucklich 2001, 6). Extreme rituals involving purposeful pain may, paradoxically, be associated with health benefits (Xygalatas et al. 2019; Jilek 1982; Ward 1984). In culturally and religiously appropriate contexts, religious and spiritual practices create pain that provides "certain psychological benefits to their performers" after the ceremony concludes (Xygalatas et al. 2019, 702).

Sacred Pain in the 21st Century

Public performances of sacred pain are not as common as they have been in the past. Due to fluctuations in the cultural meanings associated with pain, public performances of sacred pain are now widely condemned by many religious leaders. Many religious leaders have contributed to this "flight from pain" in response to religion being marginalized within many societies, specifically in the West (Shilling and Mellor 2010, 532). Many religious groups have distanced themselves from these sacred pain

ceremonies to be more closely aligned with the dominant Western biomedical perspective on pain.

Within Western biomedical culture, "there is no framework for pain as a meaningful or transformational experience except as a necessary component of treatment or cure of the physical body. This viewpoint equates pain with suffering, and since pain is not meaningful the suffering it causes must simply be borne, without the possibility of greater value stemming from it" (Norris 2009, 23). The Western biomedical culture has shifted from a belief that someone could be saved by pain to the belief that people should be saved from pain (Shilling and Mellor 2010). Therefore, "as heirs to a cultural legacy that sensitizes us to pain and suffering but can no longer invest them with religious meaning, the necessity of pain avoidance becomes self-evidently desirable. This is the context in which those who actively seek pain out appear to us as 'deviant', 'barbaric' or 'mentally ill'" (Shilling and Mellor 2010, 533; Favazza, 1996). Instead of being associated with positive prosocial actions, many associate purposeful pain with socially non-conforming behaviors or psychiatric disorders.

Conclusion

While examples of sacred pain can be found across several religions, the way that pain is implemented and experienced varies between these practices. While many devotees in the Thaipusam Kavadi ritual claim to experience mild to no pain due to the dissociative trance and other preparatory methods, devotees who participate in Christian self-

flagellation often appreciate a level of suffering associated with the physical pain they are enduring because it symbolizes the suffering that Christ endured on the cross. However, both examples illustrate how pain can be used as a beneficial and transformative power. "In a context where pain and suffering are understood to be valuable, those experiences can be used for spiritual transformation and integrated within a meaningful identity. In contrast, in a context where pain and suffering are not understood to have value, that attitude can create more suffering, even in conditions meant to alleviate suffering, such as in biomedical situations" (Norris 2009, 22).

The culture of Western biomedicine "makes it very difficult to understand not only 'sacred pain,' understood as the intentional infliction of pain as a religious practice, but also 'sacred pain' as pain made sacred–the view that pain or suffering can bring one into [a] closer relationship with the sacred through intentional practices" (Norris 2009, 24). This perspective is ingrained within Western culture and contributes to widespread "cultural amnesia" that makes it difficult for people to acknowledge how forms of purposeful pain have been, and are being, utilized to improve one's health.

Those who engage in acts of sacred pain do not suffer from a disintegration of self which is a possible for those who have no cultural framework for making their pain purposeful or meaningful. In instances of purposeful pain, the individual often prepares themselves mentally for the physical and emotional sensations that will come. Through this preparation, they develop the tools needed to integrate their pain into a broader

framework of self-realization and actualization to signal their piety (Tilly 1991). Pain, in this context, acts to strengthen one's sense of self and connection to other humans and non-human agents (e.g. God, Lord Murugan, Creator, etc.) In this context, the meanings associated to pain contributes to a sense of belonging and interconnectedness as opposed to feelings of isolation or disintegration, that is typically experienced by those addicted to opioids.

Chapter III: Athletic Pain

Introduction

After completing the first draft of this chapter, I received feedback from my advisor that I, quite honestly, was dreading. “Bring more of yourself into these chapters. I am missing your perspective.” After researching pain through the lens of an intellectual inquiry, I feel empowered to discuss the relationship between opioids and pain and the ways that the Thaipusam Kavadi ritual transforms a devotee’s pain experience. But, when describing my experiences as an athlete, I feel as though I am writing in a way that pathologizes my own attitude towards pain. My sense of self is interwoven with my identity as a competitive athlete. In this research, I wanted so badly to write myself out of the narrative because I didn’t want to confront my own ways of making pain meaningful.

As someone who has experienced a lot of pain and suffering due to my experiences as an athlete, I find it difficult to present a completely objective perspective on this topic. My socialization as an athlete positions the way I interpret the themes and topics discussed in the literature. My perspective shapes how I interact and understand the description and analysis of pain. Acknowledging and experiencing my own experiences with pain is, quite frankly, terrifying.

While other researchers or theorists can study the role of pain in athletics in a detached manner, I do not have the same benefits. Even while writing this, I am experiencing hip “discomfort” exacerbated by a difficult morning workout. The burning of lactic acid

through my legs and the heaviness of full-body mental and physical fatigue is simply a part of my normal routine. If I simply saw this pain as meaningless, I would not be able to keep going. While my dedication to this brutally taxing sport seems irrational to others, it is completely logical to me. So, throughout my research, I assumed that to give an accurate account of athletic pain, I would need to limit my stake within this topic. However, by doing this, I now realize I risk omitting a key data source for my ethnography, my own experiences with pain. So, when my advisor asked me to discuss my own perspectives, I had to accept that implicating myself within this narrative allows me to use my subjective experiences to highlight the ways in which pain is understood and discussed within these athletic cultures.

The Culture of Risk

Participation in sports forces athletes to accept, at least to an extent, the risk that they may face pain and injuries that could potentially be life threatening or permanently debilitating. Due to this risk, it may be difficult to understand why athletes risk their health in this manner. Unlike Western biomedicine, which treats pain as something to be eliminated or prevented through treatment, athletes often charge headfirst into these painful conditions. Within athletics, pain and discomfort are expected. Athletes continue to put themselves in harm's way for many reasons that I will discuss in this chapter. Many athletes, even elite athletes, are not able to financially support themselves on income made from athletics alone. Therefore, athletes continually risk their wellbeing for financial and/or personal incentives. The personal incentives, such as establishing or

maintaining social roles, mirror some of the incentives for participating in sacred pain rituals.

For many athletes, the social benefits tied to their membership within their specific sporting subgroup is hugely rewarding; so, they continue to accept the risks of future pain. Athletic subcultures influence how players conceptualize and even react to their own pain and injuries because of the cultural values that have historically associated public displays of pain tolerance with masculinity and the continued membership within the subgroup (Nixon 1992, 128). In this instance, the pain that athletes endure is perceived as socially appropriate within the cultural environment established by the athletic subgroup. Even though Western biomedicine treats pain as unacceptable and unproductive, athletic subgroups encourage a mindset in which pain provides social and psychological benefits. Therefore, as Glucklich (2001) explains, "Closer examination reveals that 'sacred pain,' or pain in the service of higher ends, has not entirely vanished from the modern world, even outside the Vatican. Contests and sporting events are still often about the endurance of pain, either in performance or in training" (7). Athletic subcultures subvert the biomedical outlook on pain by making it, or the risk of it, vital to competitive athletics.

The Legacy of "Masculine" Ideals

Historically, men were able to establish an athletic identity through expressions of physical and mental strength and an ability to endure pain. Late 19th and early 20th

century biological and medical beliefs were based on the presumption that women were naturally fragile, and men needed to fit into a complimentary role of "protector" and exhibit bodily strength (Walk 1997). These ideologies contributed to the "dominant definitions of masculinity that encouraged instrumental orientations to the body, rewarded bodily sacrifice, and demanded tolerance of pain and injury" (Walk 1997, 27). Therefore, men often exposed themselves to pain by participating in warfare or sports, to establish themselves as a masculine figure within the community. Due to this, there are some instances where physical danger or enduring an injury "resonate with larger ideological issues of gender legitimacy and power" (Young and White 1995, 45).

Athletic competitions become a way for men to publicly establish themselves within their community or maintain their status within their community. By participating in these competitions, men were able to publicly present themselves as embodying traditional "masculine traits" like strength and courage (Young and White 1995; Walk 1997). Since these forms of endurance and cultures of risk were associated with masculinity, the development of modern sports "played a primary role in the identification of masculinity with bodily objectification, stoicism in the face of pain, and sacrifice in the service of manliness" (Crosset 1990; Sabo and Panepinto 1990; Walk 1997, 26). This has contributed to the current social environment within athletic subcultures in which the acceptance of the risk for pain and injury is "not only tolerated but required and rewarded" (Messner 1992; Walk 1997, 26). Masculine sport subcultures continue to

foster an environment where the acceptance of pain and injury is expected for an athlete to maintain their position on the team (Young and White 1995, Walk 1997).

With female athletes making space for themselves in the world of athletics, they also found themselves participating in a social environment “premised on historically dominant definitions of masculinity that encourage instrumental orientations to the body, reward bodily sacrifice, and demand tolerance to pain and injury (Walk 1997, 27). Female athletes, like their male counterparts, often adopt specific strategies based on masculine ideologies to cope with the pain associated with strenuous training and competitions. These strategies allow athletes, both female and male, "to show courage and character; to consolidate membership and kudos in the group; to avoid being benched; and to help make sense of compromised health in a lifestyle that demands and reveres fitness” (Young and White 1995, 53; Walk 1997).

The idea that an athlete must assume some awareness or acceptance of the risk of injuries or pain they may face is ingrained within these athletic subcultures. By accepting these ideas and performing the athletic activities, athletes, both female, male, and non-binary, are, in turn, embracing these historic “masculine ideals.” From one viewpoint, female athletes contribute to the masculine ideals held within these traditionally masculine areas by embracing the painful roles associated with “macho” social roles (Young and White 1995, 45). On the other hand, others believe that female participation in these traditionally masculine spaces can be seen as an act of colonization that subsequently

transformed these spaces. In these transformed spaces, athletic roles are not simply based on gender binaries and expectations (Young and White 1995).

The Pain Contest: An Analysis of Pain in Rowing

Pain is often an integral component of any competitive athletic training program due to the physical nature of athletics. The influence of the masculine sports culture and the acceptance and integration of pain is evident in rowing. Much of my research in this section is based on my experience as a rower. I made the decision to focus on rowing in particular because of previous research I have conducted on the role of pain in group dynamics in a Division I women's rowing team. As a rower myself, I have experienced first-hand how pain must be embraced and is often discussed within this sport. Also, this is the first anthropological study of pain as it applies to the sport of rowing.

For rowers, pain is not just a potential risk factor in competitions, it is an inevitability. As Olaf Tufte, a seven-time Olympic athlete and two-time Olympic Champion for Norway, explains, "It's not like, 'maybe the mail comes today or not.' It's-the pain is going to come to you, and you know exactly where it's going to come. So, you need to plan, 'what am I going to do when it comes?'" (World Rowing 2016; "Olaf Tufte n.d.). A rower at any level is likely to have experienced the burning muscular pain of lactic acid building up in their muscles if they are pushing themselves to their physical and mental limits. Therefore, a rower, like other athletes, needs to accept that this painful experience is inevitable if you are going to truly be competitive.

When I asked Amelia, a collegiate rower I interviewed, if and when she experiences pain while rowing, she responded without hesitation, “The whole sport is pain. Physical. Mental. Not one part of it isn’t” (Personal interview 5/11/21). This attitude that pain isn’t simply a risk, it’s an inevitability parallels that of Olympic rowers, like Tufte. It is important to note that not all the athletes I interviewed believed that pain must be an integral part of rowing. One rower believed that an athlete should push themselves to the point of discomfort and not pain. However, the more she described the experiences of “pain” and “discomfort” it appeared that she understood pain to be “bad pain” and related to injury while discomfort was synonymous with the “good” pain necessary for training. Therefore, although her terms differ, the meaning behind her terms support the idea that there is an expected level of discomfort or pain that an athlete experiences within their training and competitions. Unlike Amelia, she describes the muscle building experiences as “discomfort” instead of “pain.” She defines pain as when you “physically can't do the activity” and therefore associates pain with injury (Personal interview 5/11/21). This indicates that even within the same subgroup, athletes can create a personal distinction between what pain can be beneficial and what levels of pain cannot.

Whether the perspective that rowing is intrinsically associated with pain stems from historic ideals of “masculinity” or the nature of the sport itself cannot be simply teased apart. Many rowers have learned how to understand this normalization of pain within

their social environment both inside and outside of this sporting subgroup. As Paul O'Donovan of Ireland explained that:

> It's all in the legs really that you feel the burning. And, uh, you just keep pushing through and pushing through and then towards the final sprint in the last 200 meters, it's kind of your whole body taking over and you're struggling to breathe and you just keep pushing yourself and showing yourself up and down and pulling and hauling and then dragging and everything you can do with the oar handle just to keep the boat moving across the line and then you're across the line and you can hardly see or breathe or feel your legs or anything (World Rowing 2016).

But even after painting this painful picture, O'Donovan continues by explaining that it's "great craic all the same" (World Rowing 2016). The use of the noun "craic," a term commonly used in Ireland to describe an enjoyable activity, illustrates how O'Donovan views the pain sensation he experiences while racing in a jocund manner. Even after describing his pain in illustrative detail, he notes that the act of rowing is enjoyable even though there is a level of pain that is inevitable. Since pain is expected within these subgroups, athletes often find ways to conceptualize this pain in a way that mentally transforms their suffering into something that is meaningful as well as acceptable within western biomedicine. It is not that the pain is specifically "desirable" within this context. Rather, an athlete makes a conscious decision to put their body through emotional and physical pain to achieve a sense of satisfaction and accomplishment.

Pain as "Other"

Since athletes are often forced to occupy the mysterious boundary between a "healthy" and "unhealthy" pain, they often create strategies to interpret their pain experiences in ways that allow them to conform to existing dominant attitudes towards pain. The ways that athletes are socialized to embrace a level of bodily sacrifice and pain denial pushes them to dissociate. Sports psychologists have theorized that athletes may dissociate as a coping mechanism to separate their mental identity with the physical pain their bodies are bound to endure (Duquin 1994). This allows athletes to distance themselves from the sensory experiences, such as pain, that they might encounter and contributes to rationalizing the bodily sacrifices they make, like playing while injured, for their athletic pursuits.

It is not unheard of for an individual to deal with their pain through the process of depersonalization. The medicalization of pain in the nineteenth century "resulted in the separation of the pain symptom from the person, and its fragmentation into discrete phenomena. Today, most nursing and pain clinic guides focus on this depersonalization of the pain patient" due, in part, to Western biomedicine's use of Cartesian mind-body dualism (Glucklich 2001, 75).

The need to make sense of one's role in athletics and how that fits into one's understanding of pain, shaped by Western biomedicine, makes it so an athlete may disconnect their physical ailments from their sense of self. The "othering" of pain means

that they must also "other" the part of themselves that are in pain. Scholars refer to the techniques athletes utilize to deny or endure their pain as depersonalization[11]. Depersonalization allows athletes to construct their pain as "other" and "separated" from themselves. One way athletes do this is by conceptualizing their bodies as instruments to allow them to reach their desired athletic results (Walk 1997; Young and White 1995).

Athletes utilize the process of depersonalization to separate their physical pain experiences from their mental self. This results in them thinking and speaking about their pain as something that is outside of themselves, "Injured body parts assume the status of 'other.' [...] Legs become 'iced,' 'knees scoped,' ankles 'strapped,' aches and pains 'killed,' and mechanical glitches (i.e., pulls, strains, tears, breaks) simply 'fixed,' often artificially" (Young and White 1995, 53). When I have experienced muscular discomfort and strains, I am able to say "my left hip is weak" without calling myself weak because, in these contexts, I can view the knotted muscles as separate from myself and my own athletic strength. This distinction showed up in my research as well. When describing the pain associated with her current injuries, Amelia tells me about "*a* degenerating disk" before elaborating that "it's *the* hip that's worse" (Personal interview 5/11/21). In these

[11] The description "depersonalization of pain" has also been used to describe pain asymbolia. While athletes may experience a detachment from their pain experiences that somewhat resembles the way in which people with pain asymbolia experience indifference towards their pain; however, pain asymbolia is caused by brain damage and is not associated with cultural factors. Unlike an athlete, someone with pain asymbolia may be in a house fire and make no attempt to escape even after being severely burned (Klein 2015; Bain 2014; Berthier et al. 1988).

instances, she distances herself from the injured body part. However, she does refer to a previous injury, a broken foot, as "*my* foot" which points to the ways in which she is able to reclaim her connections to parts of herself which are no longer injured (or at least obviously injured).

When an athlete acknowledges a level of "ownership" of their pain, it is often in a way that portrays the ailment as a part of the "othered" body part (Young and White 1995, 53). This allows us to think of ourselves as people who can maintain a "healthy" relationship with our bodies. This depersonalization allows for athletes, like me, to view ourselves within the role of a physically fit athlete even when we are experiencing pain. If we accepted the Western biomedical perspective on pain, we would see our pain as unhealthy and as a sign of illness. The irony is that biomedicine depersonalizes the self as well, treating the person as a collection of independent systems and parts. So, maybe our perspective as athletes is simply an extension of the biomedical model in a way that is slightly different. Within biomedicine, the different systems and parts make up the self but when athletes distance themselves from painful muscles or injuries, they view those injured parts as separate from the self.

A disconnect between mind and physical state can be tied back to the history of "masculine ideals" embedded in competitive sports and the need for athletes to maintain a "healthy" social identity even as that identity defies the Western biomedical framework. This history helps to explain why risk taking became socialized within these subgroups

and, due to Western biomedicine formulating the concept that pain is unacceptable, why athletes utilized these contradictory models for responding to. The history of masculine ideals contributed to an environment where athletes "are socialized to distance themselves from their feelings about pain, injury, and aggression" (Walk 1997, 26; Messner 1992). This "othering" of their physical sensations from their mental experiences contributes to an athlete's potential mental distinction between the "healthy" social role their mind wants and the "unhealthy" or "sick" role that their body may experience when they experience pain or injury. This distinction is important when it comes to playing while injured.

"Good" Pain vs. "Bad" Pain

Another technique that athletes use to integrate contradictory models of understanding pain, the one typically within athletic subcultures and the other of Western biomedicine, is through distinguishing, either consciously or subconsciously, "good" (or playable) pain from "bad" (or non-playable) pain. This distinction first came to my attention during ethnographic interviews I conducted with two collegiate rowers. While they defined the terms differently, they both alluded to a distinction between playable pain and non-playable pain. While Amelia makes a distinction between "good" pain and "bad" pain, Blythe makes the distinction between "discomfort" and "pain." However, it appears that Blythe uses the term "discomfort" and Amelia uses the term "good" pain to describe a similar type of pain experience associated with building muscle that is productive and ideally makes them better athletes. Playable pain fits into the "good" pain category while

non-playable pain falls into the “bad” pain category because it is not athletically productive. This is a prime example of the subjective nature of pain and the nuanced ways in which people's experiences shape their definition and conceptualization of their own pain or pain-related experiences. “Pain” and “bad” pain are used by Blythe and Amelia, respectively, to describe a pain experience that leads to a potential injury or exceeds the “normal” level of discomfort associated with the training needed to make them better athletes. While their vocabulary may differ, it is important to note that both rowers articulated that there are productive and beneficial forms of pain.

To endure prolonged participation within these sporting subgroups, rowers, like other athletes, construct a distinction between beneficial pain and non-beneficial pain in order to participate in an athletic subculture where the definition of pain continues to be framed by Western biomedicine. Rowing subcultures normalize both “bad” pain and “good” pain. This allows them to view the way they are expected to participate in this sporting subculture without having to question any fundamental beliefs about the unacceptable nature of pain.

Although there is an abundance of pain in rowing, rowers agree that there is a level of understanding that this pain is more acceptable than other forms of self-inflicted pain. By defining pain as “good” pain, rowers are able to create a distinction between “necessary” pain and “unnecessary” pain. Through this framework, necessary pain becomes

conceptualized as “good” pain or “discomfort” while unnecessary pain became bad” or non-playable pain.

“You Gotta Be Crazy”

Another way that athletes learn to internalize the ideals presented by their athletic subgroup and the Western biomedical framework is to acknowledge that what they do is, in many ways, “crazy.” This outlook was presented in a hype video made by, and about, the Texas Women’s Team in 2021. On May 30th, 2021, Texas Women’s Rowing team clinched their first NCAA Division I championship. The race that clinched this victory for them was their varsity eight race[12]. In this final race, Texas came from behind in the sprint and edged in front of Stanford to win by 1.5 seconds. Following this victory, Rachel Rane, the coxswain of Texas’ top boat, posted a video on YouTube titled, “2021 Texas Rowing • You Gotta Be Crazy To Row.”

I was drawn to this video because it highlights how a sport like rowing can coexist with a biomedical paradigm that argues that all pain is a sign of illness or poor health. Sports, such as rowing, require athletes to push themselves to their physical and mental limits and endure a great deal of suffering. It requires athletes to train at an intense level and put

[12] An eight is a boat, or shell, with eight rowers, each with one oar, and a coxswain, the person who steers and motivates the rowers. The varsity eight race is the fastest boat created by the rowing program and, subsequently, their race accounts for the most team points in a championship compared to the second varsity eight and varsity four.

their body through incredible strain. This level of training goes beyond what is needed to be considered healthy or in good shape. A rowers' level of commitment to a painful sport is also unique because, unlike more profitable sports, there are very few financial incentives to continue after college. Even rowers who train for and medal at the Olympics must take up a part-time job to pay for their daily expenses and struggle to stay above the poverty line (Struby 2014). Even though these athletes receive limited monetary incentives or even prestige outside of the rowing community, these competitive rowers continue to push their bodies through multiple practices a day for years. Therefore, the motivations behind why they continually train to a level of discomfort and pain is the culture of the sport.

The video opens with Rachel Rane describing how, “There are 365 days in a year and we [Texas] train as a collective for 277 of those days. That’s 1,108 hours, 66,480 minutes, and 3,988, and 800 seconds” breaking down the total time that she and her teammates trained the year leading up to the NCAA championship (Rane 2021). This level of commitment is outside of normal expectations for maintaining one’s health. So, why would these athletes put themselves through these grueling hours of training? The video ends a little over 2 minutes later when Rane answers the question of “why” these athletes would put themselves through this. She describes how:

> “Being able to push your mind and body beyond unimaginable limits is a euphoric feeling that you just can’t get from anything else in the world. Rowing is a privilege. Those countless hours of training are hours that we get to sacrifice for

> each other; so that we are able to reach and exceed our goals. Sounds crazy, right? Maybe. But you gotta be a little crazy to row cause let me tell ya, it is so worth it" (Rane 2021).

With these final lines, the drone shot of two Texas eights fades out into blackness. With these lines, and the title of the video, Rane highlights how this extremely physical and mental taxation can manifest itself in a culturally appropriate way within the Western biomedical model.

The idea that, "You gotta be a little crazy to row" plays on the cliché phrase, "You don't have to be crazy to _____ here, but it helps." Instead of simply joking that they are "crazy," the video presents being crazy, or at least a little crazy, as a prerequisite for being a rower. Although tongue-in-cheek, this video celebrates it since being "crazy" because it has allowed them to train to the extent needed to be a NCAA national champion. By appropriating this label, athletes can do things to their bodies that a doctor would diagnose as unhealthy or even self-destructive, like participate in an activity that causes them to undergo extreme physical and mental pain. Due to the distinction within Western biomedicine between physical and mental health, rowers can maintain a physically "healthy" physical state even if they find themselves in a "sick" mental state due to the pain they endure due to training (or vice versa). From a cultural perspective, athletes have created a social environment where pain is accepted or required for continued membership within the group.

Since pain is normalized within this social sphere, the athletes must be “crazy” and therefore beyond the scope of biomedical rationale. Both Amelia and Blythe claim to discuss their injuries and everyday pain with their teammates. Blythe explained that she felt comfortable talking to her teammates about her back injury because they have also experienced similar injuries or similar forms of pain. Therefore, it is socially acceptable for them to exist in this liminal state between health and sickness. In this sense, they can exist within the overarching biomedical sphere without actively subverting the tenets that it is founded upon.

Normalizing Pain in Sporting Subgroups

Sporting subgroups are integral in the creation of social environments where pain and injury are normalized (Nixon 1992). Due to my desire to be a member of these formally and informally constructed groups, I willingly endure the pain associated with training at a collegiate level. The other members of the subgroups, i.e. the athletes and coaches, expect the athletes around them to subject themselves to pain and injury in the name of athletics and so athletes inhabit this role in order to live up to these expectations. Athletes believe that risking pain and injury are normal, or even natural, due to the ways in which we interact with our support system, this includes other athletes, coaches, and medical staff who reinforce the ideology that these risks are appropriate. The consensus regarding pain within these subgroups contributes to an athlete’s willingness to work through pain and return to play quickly after an injury (Walk 1997; Nixon 1992). Due to the environment created within these subcultures, accepting the risk of pain is necessary for

establishing or maintaining one's status within these subgroups (since membership is not necessarily stable or indefinite).

The role of historic perspectives of ideal "masculinity" and expectations that it can be performed through athletic endeavors, not only affects male athletes but female athletes as well. Since enduring pain becomes a way of maintaining one's membership within these subgroups, many athletes, both male and female, "fear being displaced from these masculine circles"; so, they will adhere to the social norms within the group (Walk 1997, 26). Engaging in these pain-inducing behaviors allows them to maintain or assert their status within the subculture and build trust between themselves and other members of this subgroup. Since there are currently fewer barriers to female participation within formerly male-dominated sports, these "masculine" ideals have become less gendered but have nonetheless been maintained within these athletic subgroups because these masculine ideals are often seen as intrinsically tied to athletic endeavors.

As Nixon (1992) suspected, "it is clearly possible that, while immersed within such a support system, athletes could have been vulnerable to exploitation, coercion, and other practices that would have led them to compromise their health and return prematurely to play, particularly if no other support system was available" (Walk 1997, 36). This can be the case for athletes among most, if not all, sporting subcultures; however, this perspective fails to acknowledge the benefits of continued membership within these subgroups. Membership in these subgroups can feel incredibly beneficial to its members.

Like sacred pain, these athletes may be “hurting the body for the sake of the soul” which makes it so the pain they experience, or at least most of it, is worth the sacrifices even if that idea is foreign to the biomedical perspective on pain (Glucklich 2001).

An athlete's pain and their relationship with their team becomes more nuanced when the distinction between playable pain and non-playable pain is examined. Pain, also termed “good” pain or “discomfort,” is integral to the process of being an athlete. Non-playable pain, or injuries, on the other hand, can threaten an athlete’s ability to maintain a sport on their team. While playable pain is something that athletes can work through, injuries often mean that athletes must indefinitely stop participating within the subgroup in the ways that they had before their injury.

Many athletes learn to play through “manageable” injuries or pain because it allows them to preserve their social role as an athlete (Walk 1997; Messner 1992). Due to the normalization of pain in many sporting subcultures, playing while hurt is a common occurrence. Many players can rationalize their pain and endure it until their pain reaches a level that cannot be ignored and signals a serious injury (Nixon 1996; Howe 2001). This distinction between payable and non-playable pain parallels the distinction made by Amelia about “good” and “bad” pain. The social role within athletic subgroups contributes to the pressure put on athletes to play while hurt to return to play as soon as possible. If an athlete is not able to maintain their role within the subgroup, they may find

themselves more willing to play through a potential injury to prevent being subjugated to a "sick" role (Nixon 1992).

Refusing to Cooperate: The Story of Sally Robbins

While communal suffering can help to unite a team around a common goal, a failure to comply with this norm can cause rifts between athletes. Since one's acceptance into these groups is predicated by their willingness to endure suffer, it is important to look at what occurs when an athlete refuses to endure athletic-related pain. A prominent example within the world of rowing is Australia's Sally Robbins, or "lay down Sally" as she was often referred to in the media coverage following her infamous performance in the 2004 Olympic women's eight rowing final in Athens. What occurred in the finals race was unprecedented within the world of rowing. Sally Robbins stopped rowing and lay down with around 400 meters left in the 2,000-meter race, subsequently ending her boat's chances at an Olympic medal. The reason why Robbins laid down was influenced by both physical exhaustion in addition to a mental block and stress which caused her to, simply put, "give up." Her action was "unfathomable" within the world of rowing because precise unison and a cohesive boat is necessary for success (*She's Not There* 2008).

After Sally lay down, Julia Wilson, the team captain who sat behind Sally, refused want to stop rowing. Teammate Jodi Winter explained, Wilson "jabbed Sally in the back, maybe in the head a couple of times" (*She's Not There* 2008). Monique Heinke, another

member of the boat, explained that, “Within the boat there was a lot of yelling going on and a lot of anger I guess because everyone was really frustrated and annoyed and pissed off that this is how it had to finish” (*She’s Not There* 2008). An athlete who refuses to continue within a competition, especially in a competition as elite as the Olympics and in a sport like rowing where there can be no individual lapses, blatantly defies the expectations, trust, and the roles associated with the acceptance of pain within athletic subgroups.

Many of Robbins' boatmates displayed their anger and frustration towards Sally through an onslaught of verbal assaults which only intensified after their boat finished last. After the race, Sally was able to row with the rest of the boat back to the pontoon to get the boat off the water. Jodi Winter, another boatmate, responded by yelling out to her, “We don’t want you now. We don’t need you now. We needed you before. There’s no point in rowing now” (*She’s Not There* 2008). As Julia Wilson, a captain and fellow boatmate, explained to the press after the race, “So we had nine in the boat. There was eight operating” (*She’s Not There* 2008). Robbins’ boatmates lambasted and even threatened to “throw her in the water” due to her decision to stop rowing during the final (*Rower Suffers Aussie Backlash* 2004). This may seem like an extremely harsh way to treat a suffering teammate because, ironically, Robbins acted in a way that aligns with the biomedical belief that someone should not be forced to suffer. This explains why the reactions of her boatmates varied so greatly compared to people outside the rowing community.

I first learned about Robbins as a high school rower when one of my coaches brought up this race as an example of what not to do on any occasion whatsoever. What she did was, and still is, unthinkable to me because I am positioned to view her and this race as a rowing tale that highlights what happens when an athlete fails to be "crazy" and play through pain. After working on this thesis, I find myself questioning my initial enmity towards Robbins. But, if I push past this deep-seated anger, I find myself able to emphasize with Robbins. When the infamous race occurred, Robbins was barely 23 years old. Many young athletes, especially those who are competing at such a high level, are under immense pressure that can cause term and even permanent psychological damage. This issue has become more prominent thanks to athletes, like Simone Biles and Naomi Osaka, who have prioritized their mental health by stepping away from a competition. However, there is one important difference. They withdrew before it began and not during. The unity and trust required in rowing contributed to an environment where quitting during a race is a serious transgression.

Whether or not you believe that Robbins' teammates responded appropriately or not, Sally's inability or unwillingness to continue is a key example of the social pressure put on athletes to play through their pain to maintain their social status and the trust of their teammates. Although Sally wanted to resume her rowing career after this infamous incident, she knew that she obviously had to "earn their trust" again due to her actions in Athens because, by failing to finish the race, she was no longer able to exist within the

social role she had established within the team (*She's Not There* 2008). This instance highlights how enduring pain is essential to one's membership within a group and even sporting subgroups cohesion.

Conclusion

Athletes often develop an indifference or an elevated tolerance to pain because it enables them to reach their individual, or collective team, goals. An athlete then rationalizes productive, playable pain as being distinct from non-productive, non-playable "bad pain" that disrupts one's ability to continue competing. Many athletes come to understand their pain in a way that sidesteps the Western biomedical framework.

While athletes experience pain throughout their practices and competitions, they don't always associate their pain with something intrinsically negative. The "good" pain they experience helps them feel as though they are improving physically and allows them to establish and maintain their social roles within their specific sporting subgroups. Like other forms of socially acceptable, or even desirable pain, (such as sacred pain) members gain a social or personal benefit from putting themselves in painful situations. Since these instances of pain are beneficial, it subsequently challenges the biomedical notion that pain is intrinsically "negative" and "unacceptable" (Glucklich 2001).

Conclusion

The Future of Pain

"I just think that each generation we've gotten increasingly more soft and less tolerant of any inconvenience or discomfort" Dr. Nichols postulated over the phone (Personal interview 10/7/21). As he was saying this, I felt my body recoil slightly in response to this assertion. Since I frame my athletic identity around my ability to endure pain with a phlegmatic, if not jocular, outward appearance, Dr. Nichols inadvertently undermined my place within my sporting subgroup. However, the more Dr. Nichols explained his position, the more I saw similarities between his view and mine. He explained to me that while he was growing up, his father ingrained in him and his two younger brothers the belief that pain, for the most part, is something that one should handle in a stoic manner. Dr. Nichols prefaced these insights by letting me know that his father was "in no means not caring" but that he instilled in him the attitude that "you get up and shake it off and you're gonna be okay" (Personal interview 10/7/21). I found this phrase quite similar to a question that I was often asked after I sustained small injuries as a child, "can you walk it off?" While we are from different generations, we were raised with the "old boys'" perspectives on pain, an outlook that is becoming less and less prominent within the Western biomedical culture.

In a way, Dr. Nichols is probably correct in his original assertion. In the past few decades, the rise of increasingly powerful pain medications has only enhanced the

biomedical perspective that pain is something to be managed and treated like any other illness or disease. But I argue that it is not because we have become "weak"; instead, the more likely reason is that Western biomedical outlook on pain has dramatically shifted. We have come to understand pain as a "monolithic and intrinsically averse or punitive [...] If pain is a single sensation, always 'bad,' then anyone who desires it must be perverse" (Glucklich 2001, 87). And, since most people want to be recognized as "healthy" and not as "sick" or "perverse," they understandably gravitate towards pain treatment. Within this new cultural context, pain represents a "perverse state" that Western biomedicine asserts it can (Jackson 2000). In this framework, individuals who purposefully seek or endure pain must be cultural oddities.

While it is often comforting to be able to say pain is either all good or all bad, we are forced to exist within a gray area that, to be quite frank, can be incredibly unnerving. As Glucklich (2001) states, "One hundred fifty years of this bourgeois medical physiology have all but erased the memory of pain as an experience that signifies something other than personal disintegration" (7). Effective pain treatment, resulting in the elimination of pain, is thus framed as an inalienable right (Glucklich 2001). While there is often no simple solution to pain, Western biomedicine frames it as though there is. While Western biomedicine promotes the idea that pain is a medical condition to be treated, Dr. Nichols and Dr. Elrich both highlight that this assertion, while technically feasible, is not always the best form of care. In these instances where pain management techniques used to eliminate pain (and maintain one's consciousness) are not successful or utilized, patients

are most likely forced to live with a pain that their cultural framework cannot make sense of. Unlike sacred pain or even athletic pain, the dominant biomedical model provides no conceivable benefit from pain.

By presenting pain in this manner, many athletes find themselves in a liminal state "betwixt and between" the biomedical and sacred perspectives on (Turner 2017). The way that athletes detach their physical pain from their mental state parallels the trancelike state common in sacred pain rituals like the Thaipusam Kavadi and the Sun Dance. Furthermore, an athlete's social role within their sporting subculture and their willingness to endure pain is similar to the ways that devotees of sacred pain rituals utilize their pain to strengthen their ties to their community or to a religious identity. Within both sacred and athletic cultural contexts, individuals assign meaning, if not purpose, to their pain which is a perspective that Western biomedical theory mostly rejects.

Is it that within Western cultures that we are actually becoming less tolerant towards pain, or could it be that we are losing the framework needed to understand our painful experiences as a part of a full and meaningful life? To frame this question to another way, have we discarded the ways in which we conceptualize pain because, due to the medications available, we are able to medicate away slightest discomfort? It is a difficult question to answer and one that is more difficult by one's own positionality. And it is a question that does not have an easy answer or at least an easy answer that is satisfactory to everyone.

So, where does this leave us? Duquin (1994) argues that we have become "dangerously close to making the term 'healthy athlete' an oxymoron" (278). And, in a way, there is truth in this. Athletic training "involves pushing the body to its limits, retired athletes commonly suffer from arthritis, while the term 'battered child athlete' has become commonplace in describing the effects of pushing young children into sports programs (Shilling and Mellor 2010, 524; Hargreaves 1994). That categorization, and much of the biomedical literature on the experiences of "battered" and "unhealthy" athletes, highlights the salient problems within athletics but it also fails to account for the mental and physical strength of athletes. If athletes are forced to exist outside of the dominant Western meta-narratives of health, they run the risk of enduring unnecessary "bad" pain for the sake of maintaining their status within their sporting subgroup.

As an athlete I've learned that there is some pain is beneficial for my training and other forms of pain that runs the risk of hurting my progress. Like many athletes, I have trouble distinguishing between these categories because they are so blurry. When I discuss previous injuries, even before rowing, I often answer jocularly, that my injury was worth it because we won. Is an athletic understanding of pain responsible for the harsh treatment Robbins received at the hands of her teammates and the media? There is no simple answer.

Biomedicine's attempt to put an end to the "epidemic of pain" resulted in the opioid epidemic (Keefe 2021, 176). The rise of opioids and opioid-related advertising has

contributed to the formation of a cultural in which pain is meaningless. This cultural shift is based not on weakness or moral failings but on the interests of people within biomedical and pharmaceutical fields. And, more recently, in response to the opioid epidemic, we may have overcorrected and made it more difficult for chronic pain patients to receive the medication they need to endure their pain and participate in society (Szalavitz 2022).

As an athlete and scholar, I have learned that there is no simple solution to dealing with pain. In the past few years, the need to find effective pain management treatments has only increased due to the COVID-19 pandemic. Recent research has theorized and even found that new-onset chronic pain may be associated with post-covid symptoms (Soares et al. 2021; Clauw et al. 2020; Kemp et al. 2020; Su et al. 2020; Vittori et al. 2020). There needs to be a concerted and collaborative approach to provide relief for an increasing number of individuals experiencing "bad" pain (to draw from an athletic framework) that doesn't lead to a further increase in opioid addiction rates. And maybe that will require changing the way that Western biomedicine views pain and socializes us to make sense of our pain experiences. Or, maybe the solution is to identify a pain killer that is actually non-addictive since, as Dr. Elrich told me, "Nobody has developed a new category of pain medication in three generations" (Personal interview 10/11/21).

As I finish writing this thesis and analyze the research I have spent a year collecting, I find myself reflecting on the ways that I have normalized my own pain experiences and

the ways in which I have failed to mirror the stoic responses of the "old boys" I grew up hearing about. And even after much research and introspection, if someone were to ask me, "How should we understand our pain?" I wouldn't be able to formulate a concrete answer. And maybe the answer is that there is no simple answer. While I will continue to aspire to the grit my grandmother had before her gallbladder surgery, I can also acknowledge that she probably shouldn't have had to put up with excruciating pain in order to maintain the stoicism that was expected of her by society. While it might seem that I am hedging around the answer by refusing to take a position, I have grown to believe that one position is not enough given the multifaceted nature of pain and the functions it plays in different socio-cultural and religious settings. If we simply ignore other frameworks that contradict our beliefs, we will fail to grasp the cross-cultural nuances of pain experiences. Our understanding of pain is not weakened but in fact strengthened by understanding the varied approaches to pain taken by religious devotees, athletes, and doctors.

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Appendix A: Interview Consent Form #1

I am asking you to participate in a research study titled "Understanding Pain: A Cross-Cultural Analysis of the Pain Experience." I will describe this study to you and answer any of your questions. This study is being led by Kathleen Meerscheidt. The Faculty Advisor for this study is Professor Searles, Department of Anthropology at Bucknell University.

What the study is about

The purpose of this research is to create a cross-cultural analysis of how purposeful, chronic, and accidental forms of pain are conceived of and experienced and the role these forms of pain play in strengthening or weakening social bonds. This research focuses on how pain defies our ability to successfully define it in its entirety due to the ways in which it destroys language. Due to the difficulty in conclusively and accurately defining the pain experience, I am researching how pain is conceived of and dealt with in different cultures. My research focused on three subsets of pain: purposeful, chronic, and acute. These different subsets are important to look at individually because they may alter how pain is perceived and therefore alter the pain experience.

What we will ask you to do

I will ask you to talk about your experiences with sport-related injuries and pain. I will ask you to talk about how you addressed the pain and how your pain and injury experience might have altered social bonds within the team. I will also ask you to discuss how you feel your sport/team addresses pain and injuries and whether pain is normalized within a team subculture.

Risks and discomforts

There are minimal risks involved in the study. There is the possibility of emotional risks associated with talking about a painful experience or a sports-related injury. However, you are free to stop the interview at any time or skip a question if you think going forward will be emotionally taxing.

Benefits

There are no expected benefits for the subjects because of their participation in this research; however, the informant may indirectly benefit from reflecting on a sports related pain experience and the interview may lead to a better understanding of oneself.

Compensation for participation

There is no compensation for participating in this study.

Audio Recording

There will be an option to record the audio of the interview. This will be incredibly beneficial for later transcriptions of the interview. The recording will be deleted after the

completion of the research. If there is any information on the recording that I feel is confidential or could be mentally or physically dangerous or distressing on it, I will delete the recording immediately after transcribing the recording (with redacted or disguised information to protect the informant).

Please sign below if you are willing to have this interview recorded (audio). You may still participate in this study if you are not willing to have the interview recorded.

☐ I do not want to have this interview recorded.

☐ I am willing to have this interview recorded:

*Signed:*_____
Date: _____

Privacy/Confidentiality/Data Security

The participant's privacy and confidentiality are of the utmost concern. Any identifiable information that is brought up in the interview will be redacted or changed for the participants privacy in the transcription of the interview. If there is any information on the recording that I feel is confidential or could potentially be mentally or physically dangerous or distressing on it, I will delete the recording immediately after transcribing the recording (with redacted or disguised information to protect the informant). The transcriptions and recordings will be separated from the signed consent forms.

Please note that email communication is neither private nor secure. Though I am taking precautions to protect your privacy, you should be aware that information sent through email could be read by a third party.

Your confidentiality will be kept to the degree permitted by the technology being used. I cannot guarantee against interception of data sent via the internet by third parties.

Sharing De-identified Data Collected in this Research

De-identified data from this study may be shared with the research community at large to advance science and health. I will remove or code any personal information that could identify you before files are shared with other researchers to ensure that, by current scientific standards and known methods, no one will be able to identify you from the information we share. Despite these measures, I cannot guarantee anonymity of your personal data.

Identifiers might be removed, and the de-identified information may be used for the continuation of this research in a future project without additional consent.

Taking part is voluntary
The participant's involvement is voluntary, the participant may refuse to participate before the study begins, discontinue at any time, or skip any questions that may make him/her/them feel uncomfortable, with no penalty to him/her/them.

Follow up studies
I may contact you again to request your participation in a follow up study. As always, your participation will be voluntary, and I will ask for your explicit consent to participate in any of the follow up studies.
May I contact you again to request your participation in a follow up study? Yes/No

If you have questions
The main researcher conducting this study is Kathleen Meerscheidt, an undergraduate student at Bucknell University. Please ask any questions you have now. If you have questions later, you may contact Kathleen Meerscheidt at kam065@bucknell.edu or at (206)792-6727. If you have any questions or concerns regarding your rights as a subject in this study, you may contact Professor Mathew Slater, IRB Chairperson at 570-577-2767 or email him at matthew.slater@bucknell.edu. You can also access Bucknell's IRB website at http://my.bucknell.edu/irb.html.

Statement of Consent

I have read the above information and have received answers to any questions I asked. I consent to take part in the study.

*Your Signature*_____*Date*_____

*Your Name (printed)*_____

*Signature of person obtaining consent*_____*Date*_____

*Printed name of person obtaining consent*_____

This consent form will be kept by the researcher for five years beyond the end of the study.

Appendix B: Interview Questions (Athletics)

1. How long have you been competing in competitive sports? What sports have you played?
2. How would you define pain?
3. Have you ever experienced pain or an injury due to your participation in sports?
4. If you have been injured, how did your coaches and teammates react to your injury?
    0. Did being injured affect your relationships with the people associated with your team?
    1. How did you react to your injury? Did you try to work through it?
    2. Did being injured affect your sense of identity as an athlete? If so, how did it alter your sense of self?
5. Are there experiences in your sport where you experience pain?
    0. If so, how do you deal with those experiences?
    1. Do you talk to your teammates about the pain you experience? Why or why not?
    2. Do you feel more comfortable talking to people about pain, injuries, both, or neither?
6. In your opinion, how is pain dealt with within your sport or your team?
    0. Is sport-related pain normalized in your sport? If so, how is it normalized?
7. Are you familiar with phrases like “no pain, no gain”? Are there any phrases that normalize pain or suffering that you have heard due to athletics? Do these phrases affect how you react to your own pain or injuries?
8. Is there anything else that you would like to mention? Or are there any questions you have for me?

Appendix C: Interview Transcript from 5/11/21

Kate Meerscheidt: Okay, so how long have you been competing in competitive sports? What sports have you played?
Amelia A: I started when I was like...how old do you start when you play t-ball?
KM: I think I was like 5 or 6?
AA: Is T-ball competitive?
KM: I mean it could be... *laughter*
AA: I didn't really stick with it. And then I played basketball but that wasn't really competitive. I don't think my volleyball was competitive. Let's just go with rowing.
KM: Yeah!
AA: I've been rowing since 7th grade. So, this is my tenth year. I played soccer for a bit.
KM: Yeah? I think you would be good at that.
AA: Yeah. My orthodontist thought I was a soccer player.
KM: What? *laughter* okay. So, ah, how would you define pain?
AA: *pause* Can I look up the dictionary…
KM: I mean like what is pain to you.
AA: I don't know. Mental or physical?
KM: Either one.
AA: Okay.
KM: When you think, "Oh, I'm in pain" or "Oh, I'm going to be in pain" what do you think?
AA: Oh, okay. What do you think?
KM: Yeah.
AA: Well, I don't want it but then I try to tell myself to suck it up and then I'm like, I make myself think I like the pain. And then, kind of get a thing from it. You know? And then, yeah, and then in rowing you're like "make it hurt more." It's like a good pain.
KM: Good pain.
AA: A pain that you just want to keep making more painful until you can't and then you're like "stop no" and then you're like I don't care. "I can get last" and then you're like "No, I can't get last" so you're like "More, more." Please don't transcribe that. *laughter*
KM: I mean, I can cut whatever you want.
AA: Okay, I'm good with whatever.
KM: Just the eye contact around that was very interesting. *laughter*
KM: Okay. That was a really interesting answer.
AA: Thank you. Thank you.
KM: Um, have you ever experienced pain or an injury due to your participation in sports?
AA: Well, I broke my foot once.
KM: Tell me about that.
AA: Oh, well.
KM: Or not.

AA: *Redacted* I rowed on it, and it wasn't bad. I mean it took a while to heal. Probably wasn't healthy for my mental state. I have a degenerating disk.
KM: Right now?
AA: Yeah, yeah. I have to get an MRI on my hip. That's fun. But again, I kind of like it. I dig it. You just go harder. You're like "wooo."
KM: Wait, you have a degenerative disk and a hip problem?
AA: Yeah, I have to get an MRI on Monday. Pretty upset.
KM: Oh my goodness.
AA: It's mild.
KM: At least it's after [the Championship] ...
AA: "After" Kate? We're going to win.
KM: After the championship, so then you can take your rest day and then we can go on to NCAA. Did being injured affect your relationships with the people associated with your team? If so, how?
AA: No, I don't think it affects my relationships.
KM: Okay.
AA: I mean maybe, well I've never stopped rowing so I can't tell you what it's like to be injured but not be able to be a part of the team.
KM: Uh huh. Cool. How did you react to your injury? Did you try to work through it?
AA: What if I answered no to this? Uh, yeah, I did row through it. I am rowing through it. I mean, I'm being told I can't do certain things.
KM: Yeah.
AA: Which annoys me and I'm like, "Yeah, but I can" and they're like "Yeah, but no" and then it's like "Fine." and then I do it but then it does hurt. So, then it's like, "Oh, they were right." But *inaudible* I won't do it but behind they're back I'm getting ready.
KM: Is it [the trainer's back] or [the coach's]?
AA: Both.
KM: Okay.
AA: They fully said no. He never says no to me, Kate.
KM: What did he say no to?
AA: "NO" capital letters. To erging. He's bringing a bike to [the Championship] so when we warm up on the ergs, I have to warm up on a bike.
KM: Aww. That's sad.
AA: Yeah, that's me. Okay.
KM: Did being injured affect your sense of identity as an athlete?
AA: No because it didn't bother me. I didn't stop. I just kept going which I think is my identity.
KM: Uh huh, yeah, the fact that you keep going through the pain.
inaudible
KM: Okay. Um, are there experiences in your sport where you experience pain?
AA: The whole sport is pain. Physical, mental. Not one part of it isn't.
KM: Yeah.
AA: Like, it's like, it's like, it's a different kind of pain.
KM: Can you elaborate on that?

AA: I don't know. I mean it's like, swimmers feel pain. And, track feels pain, and the like the pain doesn't stop until you stop but then it keeps going. I feel like that's pretty applicable.
KM: Yeah. How do you deal with those experiences?
AA: I like it. I make it work. I work harder.
KM: So, you make it work.
AA: And then I quit. I don't think I deal well.
KM: You *inaudible*
AA: I don't think I do deal well.
KM: Interesting.
AA: Sometimes I take a stroke and I'm like "No" and then, you know, let's restart that.
KM: Okay.
AA: How do I deal with it?
KM: Yes.
AA: I don't. You just keep going.
KM: Just keep going?
AA: I do it for my teammates. Not really, I'm a very independent person. I could care less. I do it for me.
KM: But at some state you do like the pain?
AA: At some state, where I have to keep going for them. Yeah.
KM: Yeah. Do you talk to your teammates about the pain you experience?
AA: That's all we talk about.
KM: Yeah? Why or why not. Do you think you know why you talk about it?
AA: Because it's so much a part of our sport.
KM: Yeah.
AA: And it has to do with every workout we do. And we're like "oh that workout." and then we're like "oh, you should be confident. You should say 'yay' and if you just smile the pain goes away." It doesn't work for a degenerating disk though.
KM: Isn't that what _____ had?
AA: Oh no no. It's not that bad. It's only mild. It's the hip that's worse. I'm not going to not row. I'm rowing next year.
KM: Of course. Of course. I'm just worried for your body.
AA: Whatever.
KM: Okay.
AA: It's like my foot. It's only broken if I want it to be.
KM: It's only broken if I want it to be? That's, that's a good one. Um, do you feel more comfortable talking to people about pain, injuries, both, or neither?
AA: I'm pretty open.
KM: Yeah.
AA: I don't really care.
KM: Yeah.
AA: I have no problem with it.
KM: Yeah, I feel like you're...

AA: Maybe the pain part I don't like talking about, like pain that's actually on my body, not like the pain from the sport but like the pain, an injury pain.
KM: Yeah, the difference between like an exercise pain versus like an injury pain.
AA: To someone who can take me out of the things, yeah. I don't like to talk to them. Yeah. My coaches or my trainer. Yeah. And then they wonder why.
KM: In your opinion, how is pain dealt with within your sport or your team?
AA: I think you just have to accept it because it's a part of our sport and build confidence.
KM: The pain builds confidence?
AA: Yeah.
KM: And could you elaborate on that? Is sport-related pain normalized in your sport? If so, how is it normalized?
AA: Well, it's the literally the sport. I can't describe it if you don't do the sport.
KM: Yeah.
AA: It's just the normal. You do it over and over and over again. That's how you normalize it.
KM: Yeah. Just the repetition of it?
AA: Yeah.
KM: Um, Are you familiar with phrases like "no pain, no gain"?
AA: That's my motto.
KM: That's your motto? Are there any phrases that normalize pain or suffering that you have heard due to athletics?
AA: Where your mind goes your body flows.
KM: Interesting.
AA: That's all I got.
KM: Are there other one's you've heard?
AA: Suck it up.
KM: Suck it up? Um, are there any phrases that normalize pain or suffering that you have heard due to athletics?
AA: Yeah, I suck it up.
KM: You suck it up. Okay?
inaudible
KM: Okay, are you ready? Last question. Is there anything else that you would like to mention? Or are there any questions you have for me?
AA: No.
KM: Sweet.
AA: I'm pretty confident in my decisions.
KM: Awesome. Well, thank you.

Appendix D: Interview Transcript from 5/16/21

Kate Meerscheidt: Okay, how long have you been competing in competitive sports? What sports have you played?
Blythe B: How many years?
KM: Yeah.
BB: Um, I mean I've been in sports since you know like when you're little and you do PAL sports. I did that. You know when you do like kindergarten, whatever, whatever. But I started rowing after, no, during. Sorry.
KM: No worries.
BB: The summer after eighth grade.
KM: Okay. Um, and was that the only sport you played competitively?
BB: After middle school yeah.
KM: Okay. And then, how would you define pain and your own experiences with it?
BB: Um, how would I describe pain?
KM: Uh huh.
BB: Well, I feel like there is a difference between a strain and pain. Strain, we put our bodies until like the breaking point every day because that's how you get stronger. But pain, pain is like when you physically can't do the activity you ar supposed to be doing. Like when you just stop. Like, one time we were on the erg, and I literally could not move. And the coach picked me up off the erg.
KM: I remember that. That was so scary.
BB: Cause your body just stops. I didn't know what to do. So, I think that's what pain is. You have discomfort because you're making your body stronger, and you do that by tearing your muscles slightly but that's not pain. That's just discomfort that you're using to move forward. But pain is when you physically can't do the activity. I don't know if that makes sense.
KM: No, that makes a lot of sense. So, have you ever experienced pain or an injury due to your participation in sports?
BB: Yes.
KM: Could you describe that a little bit for me?
BB: Yeah. Um, we were lifting in the weight room, and we were doing max deadlifts and you kind of just feel, it was kind of like a pop, but then I didn't feel...it...it wasn't like immediate pain. You felt it pop but then I was just like "oh, what was that?" and then like hours later when you can't move. I feel like that's a different type of pain than I've felt before. Because usually I feel like when you hurt yourself, you feel it like immediately. But I think my body like almost went into shock. So, it just like, absorbed the pain. Um, and then I felt pain later on. And then I went to the doctor. And then I went to many doctors.
KM: And this was in your back?
BB: Yeah.
KM: Do they like, do you have a, do you know what actually happened? Or…
BB: Yeah, so a few things happened. The muscles that...well, there's...I'm not a doctor

KM: Oh yeah, of course. Not yet!
BB: No, not yet. There's muscles going in different layers of your back and the...the...inner ones, like the underneath ones, stretched out. So, then the fluid came out of the back of my spine. So, there's no surgery to fix stretched out ligaments, and tendons, and muscles, and stuff like that. So, you just have to wait for it to re-go back. Um, there are things to help with the pain but it's just masking the pain. It's not fixing the problem. So, um, the things that they would hae wanted me to do, they do it for very elderly people. Cause like they don't care if it gets fixed, it's more of just, not feeling it.
KM: Uh huh. How did your coaches and teammates react to your injury?
BB: Um, I feel like everyone was really supportive of me. I had meetings with my coaches like all the time about it. After I went to every doctor's appointment, I went to talk to them. After like every major thing they would text me and see how I was doing. They would meet with the trainer. Um, I think also my teammates were also really supportive because they knew how much pain I was in and I… I… I think people know that I just want to do the sport and I don't want anything to get in the way. Um, so it was really hard for me to stop doing everything. Um, but I think everyone was like really supportive and everyone was so excited when I came back.
KM: Oh, that's great. Um, did being injured affect your relationships with the people associated with your team?
BB: I don't think it did for me, but I think it can for other people. Um, I feel like the team is a big part of my life and I spend most of everyday with them and just because I was injured doesn't... like, I didn't stop hanging out with them. I think if you dissociated yourself from them, you could have an issue with getting reconnected with your team later on.
KM: Okay.
BB: But I don't think I had that issue.
KM: That makes sense.
BB: We live with the team. Go to the trainer with the team. I think I'm always with the team.
KM: How did you react to your injury? Did you or could you try to work through it?
BB: Um, I did work through it because I'm back.
KM: Yeah.
BB: And it was hard because you don't know what's going to happen and doctors are telling you all different things. Um, but my doctors from home, and my doctors here, and my trainer here, and everyone worked together to get the best routine for me to get back as soon as possible.
KM: Uh huh. Did being injured affect your sense of identity as an athlete?
BB: Um, well I think you're just scared of losing that part of you when you're injured. And when they have you out for so long, all you want to do is get back.
KM: Right, right.
BB: But I think I knew that at the end that I would get back because I was putting in the work. And not saying that people that can't get back aren't doing the work, but I was able to work to get back and through my injury. So, I think that really drove my recovery.

KM: Definitely. Um, are there experiences in your sport where you experience pain? If so, how do you deal with those painful experiences?
BB: Um… Do I feel pain other than my injury?
KM: Uh huh, like, um, the discomfort you were talking about.
BB: Oh yeah. Well, I think you have to push yourself to get better. Like, if you just went on the elliptical every day and was like "oh yeah, thirty minutes or whatever" I don't think that, I mean, you'll stay the same and I mean if you want to be competitive, you want to get faster and stronger, you don't want to stay constant, so I think you have to push yourself to a limit but you don't have to push yourself into pain. You just have to push yourself to where it's tough.
KM: Um, do you talk to your teammates about the pain or the discomfort you experience? Why or why not?
BB: I think I do because it's relatable and I don't want people to think that just because they're in pain they can't say something because then you'll be more hurt in the end.
KM: Right.
BB: So, I think it's okay to talk about and I am really close with my team so I feel like I can tell them most things.
KM: Yeah. Do you feel more comfortable talking to people about pain, injuries, both, or neither?
BB: What?
KM: Um, do you feel more comfortable talking to people about pain or injuries? Or none of them? Or both of them?
BB: Uh, I think I can talk to them about anything. I think most people know that I injured my back and most people have felt pain at some point so it's not like I'm talking, and no one knows what I'm talking about.
KM: Right.
BB: So, I think I can.
KM: In your opinion, how is pain dealt with within your sport or your team?
BB: Um, I feel like on our team specifically our coaches always promote, um, self-care. I think going to our trainer really helps and I do a lot of stretching. More than I used to, I do a lot more now than I did prior. Just because I know that will keep me going. I didn't need to do all the weird stretches that I do now but now that I have an injury that needs to be kept up with I do more. But I think everyone has their own way. You just have to find it and I do go to the trainer often and I feel like if you keep up with the coaches and meet with the coaches and just tell people how you are feeling then people can get you what you need.
KM: Right, right. Is sport-related pain normalized in your sport? If so, how is it normalized?
BB: I think that, I think in every sport, if you are competing at a D1 level, you're going to feel pain of some sort and that's just because you are pushing yourself to a point of discomfort and you may hit pain but as long as it's not lasting, like if you feel pain in the moment but you didn't injure yourself your body's just fatigued and you're muscles are tired, I think that that's not necessarily a bad thing. It's just that if you injury yourself or have lasting pain, that's when there is an issue.

KM: Right. Uh, are you familiar with phrases like “no pain, no gain?”
BB: Yeah. Is that the end of the question?
KM: Uh, there’s some more. It was just a multiple point questions and I wasn’t sure when to stop. Are there any phrases that normalize pain or suffering that you have heard due to athletics? And do these phrases affect how you react to your own pain or injuries?
BB: I think “no pain, no gain” that’s kind of like… maybe I classify them as two different things, discomfort, and pain. And I don’t think that we should say “no pain, no gain” because I think we should push ourselves to a point of discomfort and that’s okay because that’s the zone you want to be in if you want to succeed. You don’t have to be in it all the time and that's not what I’m saying but, um... I don’t think we should try to push ourselves into pain because at some point the work that you’re doing if you’re in pain is not going to help anything. It’s going to just hurt you.
KM: Uh huh. Definitely. So, last question. Is there anything else that you would like to mention? Or are there any questions you have for me?
BB: Um, I don’t know… I think that...I keep saying it, but I think there is a difference between being injured and getting faster and stronger and you just have to find in yourself, through years of practice and work, the difference. Um, you shouldn’t… you shouldn’t strive to be in pain, but you should strive to maybe be uncomfortable. Not in all instances but… to gain strength and to get faster and better at what you’re trying to do; you need to be in that point at some parts of practice.
KM: Yeah, that makes sense. Well, thank you so much for talking with me. I really appreciate your insight.
BB: Of course.

Appendix E: Interview Consent Form #2

I am asking you to participate in research for my thesis, "The Fifth Vital Sign: An Anthropological Investigation of Productive and Unproductive Pain." I will describe this study to you and answer any of your questions. This study is being led by Kathleen Meerscheidt. The Faculty Advisor for this study is Professor Searles, Department of Anthropology at Bucknell University.

What the thesis is about

In my thesis, I will explore the ways that culturally sanctioned pain subverts the Western biomedical model of pain treatment. While many Western biomedical practitioners view a pain-free life to be one's ideal state, there are many cultural contexts where pain, specifically purposeful pain, is recognized as a valuable tool for strengthening social ties, showing one's piety, or healing. In addition to exploring the Western biomedical perspective on pain and pain treatment, my thesis will analyze the significance of sacred pain in religious ceremonies such as the Tamil Hindu ritual of Thaipusam Kavadi, and the act of Christian self-flagellation to establish the ways that purposeful pain can act to strengthen one's connection to their community. I will also focus on how conflicting perceptions of pain intersect in the culture of athletes, specifically at Bucknell, and chronic pain experiences. I am analyzing instances of purposeful or treatment resistant pain to explore the ways that understanding the purpose of pain will contribute to a greater understanding of the pain experience within a Western biomedical context.

By interviewing biomedical professionals, I hope to gain a better understanding of the Western biomedical perspective on how pain should be treated within a biomedical context.

What we will ask you to do

I will ask you to talk about your experiences with pain treatment.

Risks and discomforts

There are minimal risks involved in the study. There is the possibility of emotional risks associated with discussing pain or opioids. However, you are free to stop the interview at any time or skip a question if you think going forward will be emotionally taxing.

Benefits

There are no expected benefits for the subjects because of their participation in this research.

Compensation for participation

There is no compensation for participating in this study.

Audio/Video Recording

There will be an option to record the audio of the interview. This will be incredibly beneficial for later transcriptions of the interview. The recording will be deleted after the completion of the research. If there is any information on the recording that I feel is confidential or could be mentally or physically dangerous or distressing on it, I will delete the recording immediately after transcribing the recording (with redacted or disguised information to protect the informant).

Please sign below if you are willing to have this interview recorded (audio). You may still participate in this study if you are not willing to have the interview recorded.

☐ I do not want to have this interview recorded.

☐ I am willing to have this interview recorded:

Signed: _____

Date: _____

Privacy/Confidentiality/Data Security

The participant's privacy and confidentiality are of the utmost concern. Any identifiable information that is brought up in the interview will be redacted or changed for the participants privacy in the transcription of the interview. If there is any information on the recording that I feel is confidential or could potentially be mentally or physically dangerous or distressing on it, I will delete the recording immediately after transcribing the recording (with redacted or disguised information to protect the informant). The transcriptions and recordings will be separated from the signed consent forms.

Please note that email communication is neither private nor secure. Though I am taking precautions to protect your privacy, you should be aware that information sent through email could be read by a third party.

Your confidentiality will be kept to the degree permitted by the technology being used. I cannot guarantee against interception of data sent via the internet by third parties.

Sharing De-identified Data Collected in this Research

De-identified data from this study may be shared with the research community at large to advance science and health. I will remove or code any personal information that could

identify you before files are shared with other researchers to ensure that, by current scientific standards and known methods, no one will be able to identify you from the information we share. Despite these measures, I cannot guarantee anonymity of your personal data.

Identifiers might be removed, and the de-identified information may be used for the continuation of this research in a future project without additional consent.

Taking part is voluntary

The participant's involvement is voluntary, the participant may refuse to participate before the study begins, discontinue at any time, or skip any questions that may make him/her/them feel uncomfortable, with no penalty to him/her/them.

Follow up studies

I may contact you again to request your participation in a follow up study. As always, your participation will be voluntary, and I will ask for your explicit consent to participate in any of the follow up studies.

May I contact you again to request your participation in a follow up study? Yes/No

If you have questions

The main researcher conducting this study is Kathleen Meerscheidt, an undergraduate student at Bucknell University. Please ask any questions you have now. If you have questions later, you may contact Kathleen Meerscheidt at kam065@bucknell.edu or at (206)792-6727. If you have any questions or concerns regarding your rights as a subject in this study, you may contact the Institutional Review Board (IRB) for Human Participants at 570-577-3548 or access their website at https://www.bucknell.edu/azdirectory/institutional- research-planning/institutional-review-board.

Statement of Consent

I have read the above information and have received answers to any questions I asked. I consent to take part in the study.

Your Signature: _____ Date: _____

Your Name (printed): _____

Signature of person obtaining consent: _____ Date: _____

Printed name of person obtaining consent: _____

This consent form will be kept by the researcher for five years beyond the end of the study.

Appendix F: Interview Questions (Medical)

1. How were you trained to treat pain? How has this outlook been shaped by medical school and your experiences as a doctor?
2. What do you think about the “opioid epidemic”? Are doctors prescribing too may pain killers? Why?
3. Is pain becoming too medicalized? Should it be seen as an illness or a symptom of an illness or injury?
4. How do you know when a patient can get by with over-the-counter medicine vs prescription pain killers like opioids?
5. Do you have any thoughts on pain medication and addiction in the US that you would like to share?
6. Is there anyone else you would recommend talking to?

Appendix G: Interview 10/7/21

Kathleen Meerscheidt: Hi this is Kathleen.
Dr. Nichols: Hi Kathleen, this is Dr. Nichols
KM: Hi hi it's great to talk to you. Thank you so much for taking the time.
DN: Yeah, you as well. Yeah, sure. Uh, just to warn you, I am traveling in the northern part of the state. Heading up towards New York State and sometimes I have uh crummy signal up here so if I lose you, I will try and reconnect when services regain. So, I apologize in advance.
KM: Okay, perfect. No problem, thank you for...for being accommodating. Um, I appreciate it.
DN: Yup.
KM: Um, and before we start, I just want to double check that you're fine, with this being recorded for transcription purposes.
DN: Yeah, that's fine. You did get my signed document?
KM: Yes, thank you so much.
DN: Sure.
KM: Um well. If you don't have any other, we could just drop jump right into it, if...if that works for you.
DN: That's fine.
KM: Okay perfect um. So, the first question I have is about how you were trained to treat pain and how has your outlook been shaped by Medical School and your experiences as a doctor.
DN: Yeah, you know, I don't know frankly that I have any real formal training, with the exception of, sort of, what I see and what typically the *inaudible* or the surgical rotations. That's typically were pain medication is prescribes. But typically, any rotation in a pain clinic or with an...an anesthesiologist doing such. Really, it was exposure by accident *inaudible* surgical specialties.
KM: Okay interesting um. So, uh what, what do you think about the opioid epidemic. Um, are doctors prescribing too many painkillers? or why or why not?
DN: Yeah, I mean, I think I think clearly we are. I mean I think I've seen statistics that show, and maybe others have heard this but I've seen statistics that show that the US medical professionals have been responsible probably for better than 90% of the world's the global opioid prescription. So, yes, of course. The US is guilty as charged.
KM: going off of…
DN: It's unfortunate. Unfortunate.
KM: Uh huh. Have you had experience with the opioid epidemic, I know, since PA is on the map for opioid use and abuse?
DN: Yeah. Yeah. Clearly. I mean–I–not only do I spend three days a week, doing primary care my office but I'm also the medical director seven county prisons State of Pennsylvania.
KM: Oh wow.

DN: And I can tell you, yeah, I can tell you the large percentage of those inmates, I believe, are undoubtedly there because of their...their drug abuse and use. So, you know I see it, firsthand not daily but two days a week I'm in the prisons, you know it's clearly– Clearly, an epidemic. There it's really obvious that you know, if nothing else, unfortunately it's job security for me, but it's really sad and *inaudible*
KM: Uh huh. Speaking of...of opioids um, how do you like know when a patient can get by with like an over the counter medicine versus prescription painkiller like an opioid.
DN: Why, I you know I historically have been a wall, if you will, I–I grew up in a obviously well I'm the oldest of three boys, my father was a coach of varying sports and you know not certainly by any means was he not caring but if I had a sore ankle or if my brother had a sore knee or whatever, he [his father] might be, "Hey get up and get at em." So, you know I've always had that mentality of, you know, it's not that bad and I've always been very lac–er–very reluctant to use opioids. Um, you know, initially frequently and with any significant volume so. You know I would say that that life experience um, and again my father, by no means was not caring, it's just sort of that that attitude you get up and shake it off and you're gonna be okay so. I rarely... rarely jump to opioids initially and I think studies would support the fact that that's really not a necessary thing. At least first line (or first time) for sure.
KM: Uh huh. Oh, definitely I totally get what you're saying there. Um, I-is is...is paid becoming too medicalized in your opinion, then, and by that, I mean I should pain be seen as an illness or simply a symptom of an illness or injury.
DN: Um, you know, well I think it's uh it's becoming more of a more of a norm that patients are expecting something like...like that for sometimes even the mildest of pain. Um you know as I mentioned before, we are, in the US, although we are getting better, we are uh trying to curb our use, statistics would also suggest that we are working on that and making progress but I just think that uh, I don't know if we are too soft in the US regarding pain but uh but clearly it is an uh has been in any ways a knee jerk for prescribers to...to do that. You know, I think surgeons especially are guilty uh I see a lot of patients in primary care that uh that are sent to me and are given a prescription for 30 days and say either "I didn't take it" or "I took it for two days, what do I do to dispose of this medicine?" and this stuff uh we still got a lot of work to do.
KM: And...and going off of that do you think the push to receive medicine or give medicine is typically, from the side of the patient or from the side of the doctor who wants to treat the pain effectively.
DN: Well, I-I think that um I think it's more I think it's something in the medical profession are too accustomed to doing but I also say, and you may or may not agree, you're...you're obviously a generation or two younger than I, but I just think that with each generation we've gotten increasingly more soft less...less tolerant of any inconvenience or discomfort. And so, I think it's just, I think its yield some of the fire, if you will.
KM: Right...right...definitely. Um, do you have any thoughts on pain medicine medication or addiction in the US that you would like to share?
DN: Um, I mean honestly, not more than what we're already... I'm seeing it, I'm living it. You know. Not necessarily daily but I'm seeing the unfortunate reality and fall out with

the inmates that are responsible for carrying for
KM: Right.
DN: At _____ prison, so I see it, firsthand. It's consistent in my practice I–I see very little of it in my practice honestly, I think my practice my...my colleagues, my colleagues at my practice have been, I don't want to say–We certainly don't torture, but...but it's certainly not–not something that is a knee jerk that patients to get an narcotic right off the bat. I think there's other modalities that have been proven to be equally, or better effective and so yeah, I think we've got a long way to go, you need to educate much, much better about the complications and side effects, I think it's given the unfortunate addiction potentially even for a little bit of exposure is significant. Things, things need to change.
KM: Right definitely. Um you mentioned the, *cough* excuse me, um you mentioned the other modalities that are used to treat pain within your clinic. Could you speak a little bit more to that?
DN: Yeah, so I'm not an osteopath, I'm an allopathic. I think, certainly things like this physical therapy, osteopathic manipulation, um chiropractic, acupuncture, um you know some anti-inflammatories y'know Tylenol all those kinds of things are well within the realm of possible alleviation. I think.
KM: Okay.
DN: We might need more than the narcotics are given.
KM: Okay wonderful, um, and for why that's more common within your practice versus at the prison is that due to just perspectives on how to treat things or is that data like resources available in a prison.
DN: The therapy and those kinds of things.
KM: Yeah.
DN: Yeah, right so, obviously in the prison. The inmates are confined, restrained because of the uh and limited to their outside movement and-and-and most prisons, I'm not aware of anything and certainly that I take care of inmates that have access to in-facility therapy modalities. We certainly don't we certainly don't use narcotics, in the uh prisons. We don't we don't want to dump gas on an already raging fire.
KM: Right.
DN: Uh, so yeah, it's more for the nature of the facility and what what...what has access to and really if you're law abiding and you're in my out-patient practice that's one thing. If you are behind bars incarcerated those modalities are going to be more restricted.
KM: Okay, thank you um. Is there anyone else you would recommend talking to for this project?
DN: I don't know. Have you spoken to any uh any local provider that uh MAT treatment, semi-test of naloxone? Those kinds of things?
KM: Uh no, that would be a great thing to look into I am going to speak to it ER doctor and a little bit. So hopefully that'll give another perspective but I'll–I'll look into that. Did you say EMT or AMT?
DN: It's called MAT.
KM: Okay.
DN: Medically assisted treatment it's the use of suboxone, Subutex, methadone those kind of things to...to curb the addicted to opiates

KM: Okay.
DN: I mean, I have that certification. I basically got it to perhaps uh I saw the evolution of that need something that would be used in the prisons. I don't currently do that in my outpatient practice, but there are some decisions around this. There is a doctor up in Williamsport who does it rather extensively, _____. There's a doctor in Williamsport also that works for Geisinger, Dr. _____. Um, so somebody like somebody like that would...that would be an excellent resource to be able to talk about the opioid epidemic and that line of treatment. Um, so they may be able to give some great insight and help you out as well.
KM: Oh perfect. Thank you so much for those recommendations. So, those were all of my questions. *cough* Um if you have any questions, for me, let me know about like my project or anything um but yeah. If not, I can you know, let you go back to the road or you know get back to focusing on driving completely.

Appendix H: Interview 10/13/2021

KM: So, um, my first question is uh, how were you trained to treat uh pain and how has this outlook been shaped by medical school and your experiences as a doctor?
Dr. Elrich: Okay, so um, yeah, I am an emergency room doctor.
KM: Uh huh
DE: I...um started medical school in 1995 and uh graduated in the summer of 99. Did residency. Um and, at that time, the big emphasis was on the undertreatment of pain, or oligoantigenic as they called it. Um, and all the research had shown that members of groups that are disadvantages, you know whether that be blacks or women or the elderly or whoever, would not receive as much pain treatment in in ER's as...as I guess white males. And–and there was a big push for us to treat pain more. Um because our...our teaching of pain is that it is it can be a symptom of a disease and and...and so when I was going through medical school there was still a bit of a controversy about whether or not it was useful or harmful to treat pain because um because the generation of physicians before that, the worsening or getting better of pain was all you had to go with for...for diagnosis. And...and so there was a debate you know oh should we give pain medicines because it will mask the development of symptoms subsequent research has seems to show that it doesn't affect our ability to diagnose with more modern diagnostic equipment. So, therefore, that pain is sort of a byproduct of your disease process is but that–um–it–it–its suffering without any particular value. And so, for many years, we were taught, "you're under treating pain. You have to document" I don't know if you've ever gone to the doctor and they asked you "On a scale from 1 to 10, how bad is your pain?" Um, that was really pushed by...by regulatory bodies, not just individual physician's societies but by you know government regulatory bodies. Pain is the fifth vital sign. It's that important and you have to treat it. Then, a few years ago, and of course this was aided and abetted by research sponsored by opioid companies that appeared to show that opioids, when used for short durations in emergency room cases, uh, of course all my–everything I'm talking about is going to be biased towards the emergency room cause that was my residency and training.
KM: Of course.
DE: We're non-addictive. But then a few years ago they're like, all of a sudden, "Oh no, you guys are over treating pain. You've been treating pain too aggressively. You've been using too many opiates. And now everyone is addicted and it's your fault." Um, and–and, we were like, "Just five years ago you were telling us that we weren't doing enough and now you're telling us we're doing too much? We haven't really changed in the meantime.
KM: Right.
PE (his wife): Did you tell her about how doctor efficacy is judged by pain ratings?
DE: So, it um…
PE: This is what wives are for.
KM: *laughing*

DE: Uh, so, one of the things that was used to in–in some places to judge whether or not a doctor was doing a good job is, you know, "did you treat the patient's pain? Or not?" And higher percentage, more insidiously, in my mind, a physician's rating, or even sometimes their financial bonuses, were tied to their um patient satisfaction scores on these surveys.
KM: Uh huh.
DE: Um, a lot of which revolves around, y'know did the patient, did the doctor treat my pain adequately? And–and so you had had this flip side where you have some patients who are, pain medicine addicts coming into the ER, making up symptoms to get opioids. Um, and then, so then you were in a bad place if you made that worse. And then you had people coming in in "real pain" and if you didn't treat it, that was bad too. So, your constantly stuck in the, we're constantly stuck in this dilemma of "Am I just feeding someone's addiction? Is–am I giving them the antidote that is also the poison or um and I'm and I suppose I'm being a bit sloppy with my terminology. I'm using pain medicine and opioids interchangeably because most people do not consider things like Tylenol and ibuprofen to be pain medicines.
KM: Right.
DE: Also, in many cases, they are as effective or more effective than opioids.
KM: Oh, really?
DE: Um…
PE: Wonder drug
KM: What?
inaudible
DE: Judging by the… Well, yeah, I mean there are... Every time–every time a research study comes out, um, and it says–asks the question "are–is acetaminophen, or ibuprofen, or an opioid more effective, and it always turns out that they're all equally effective. Um, so, um so the...the sort of your question had a couple of parts
KM: Yeah.
DE: There was a question about the...the teaching about it and learning about it and we...we pretty much learn that it's um a symptom that can be useful for diagnosing disease
KM: Okay.
DE: Also, in some cases it could be a disease unto itself.
KM: Uh huh.
DE: In many cases we don't know what's causing a person to be having pain
KM: Right.
DE: For many conditions, like, I don't know, fibromyalgia, and um even very well documented syndromes like migraines like, we don't really know what the biochemical process is that's causing a person to have pain. Um, we know some things work to treat it. So, we're–we're taught that it can be useful, it can be a disease on its own, and that treating it either is the most important thing you can possibly do or the worst thing you could possibly do depending on what exact year you ask me about it.
KM: Wow, that's so wild. It's so interesting how it's changed so much

DE: Yeah, and this is, this is over the span of 20 years. But this is pretty common with medicine, that practices reverse. And they reverse back.
KM: Oh interesting. I know you mentioned earlier that there was a push to keep prescribing medicine, was that, er or keep prescribing opioids and pain medication, was that um was that from people higher up in the medical establishment or was that like patient–like–trying to advocate for themselves.
DE: So, it was both.
KM: Okay.
DE: Um, *phone rings* sorry.
KM: Oh, no problem.
DE: It's a spam call, I'm sure.
PE: Nobody calls *inaudible* this is one advantage of ER work, it's shift work. So, nobody calls you at home unless…
DE: If you're not working.
PE: Unless like a plane has crashed which *inaudible* or someone gets sick.
KM: Right, okay.
DE: So, the patients were demanding opioids. Particularly ones who were addicted.
KM: Right.
DE: And would often, if they were refused opioids, would file complaints with–um–the patient advocate or the director of your department or whatever. Um also, um, the regulatory bodies, the biggest one of which is CMS the government thing that controls Medicare.
KM: Uh huh.
DE: Basically, what it does is it decides what rules are for paying hospitals and all the private insurances basically take their template and fiddle with it a little bit and use it. Um, and so they decided that treating pain was important. And all the state department of health's y'know determined that it was important. The joint commission on that that um certified hospitals, which its name used to be *inaudible*, they–they've changed it over the last 10 years, I don't remember what it is now, made that a requirement for continuing to certify your hospital. That you put these plans in place to measure and treat pain. Um, so–so it's supposed to be quantifiable. Of course, if you want to see an ER nurse roll their eyes, ask them about how accurate the pain scale is. Um, because it's supposed to be that 0 is no pain 1 is like "I'm barely uncomfortable" and 10 is like the most severe pain you coil imagine.
KM: Yeah.
DE: And people will routinely come in with, walking, talking with a half inch cut on their hand, and say their pain is a 10 out of 10. At the same time…
PE: They've clearly never given birth.
laughter
DE: At the same time, there'll be people who are burned on 30% of their body and they're sweating and they're gritting their teeth and their saying, "Oh, my pains about a seven." Y'know.
KM: Oh, right.

DE: It's, while it is useful for measuring the response to treatment in an individual, it's not useful as the kind of–um–population wide metric that I think hospitals are always looking for and regulatory bodies are always looking for in the elusive quest for metrics to measure, "Is this hospital, is this group of doctors, is this individual doctor giving good care to patients?"
KM: Uh huh.
DE: Because objective things like mortality rate are typically so low that they don't vary between good providers and bad providers and our influence over whether a patient lives or dies is actually relatively small. Our influence over a patient's pain can be pretty large but they...they measured absolute pain scores and not changes in pain scores. So, anyway, it was, there...there was definitely pressure from both professional organizations and patients and patient advocates.
KM: You mentioned changes in pain scores. Is that something that's used now or just something that should be used.
DE: It–I'm not aware of...of it being incorporated as a standard metric because–because now all patient data is entered into computers. They, they do big data style number crunching with everything.
KM: Okay.
DE: But I'm not aware, I haven't seen a chart where that comes up.
KM: Interesting.
DE: Average change in pain score for a particular patient ER for a particular physician or a particular department, I've never seen that. Maybe they're measuring it and I don't know about it but I've never seen it.
KM: Okay, interesting. Um, *cough* excuse me. Um, what do you think about the opioid epidemic. I know that's very broad but do you think doctors are prescribing too many pain killers? Why or why not? And what have you seen in your experience?
DE: Mhm, so, um there's there's certainly plenty of blame to go around for the opioid epidemic. Um, part of it is the companies that manufactured them.
KM: Yeah.
DE: That sold us studies that told us that they were safe and effective. There were the government regulatory bodies that did not regulate their use appropriately. There were the physicians that did not appropriately um question the validity of the research or–or perform research of their own to refute it. There were the patients who were demanding it.
KM: Right.
DE: Because, for an opioid addict, running out of opioids is sort of like for you or me running out of water.
KM: Yeah.
DE: It's uh y'know. A horrible fate to be avoided at all costs.
KM: Uh huh.
DE: So, um now, it's not like there was no...and interestingly this has happened before. Um, this happened in the 19th century with morphine
KM: Oh, interesting.

DE: Because opium and morphine had um y'know long use and morphine was being synthesized and it was widely available in the US. Um, and there...there was in those days no DEA, no requirements. And so there were a lot of addicts. So, German chemists came up with a more, they came up with a more potent opioid that they said will help break people from the morphine epidemic
KM: Uh huh.
DE: And they named it after the German word for stronger, heroisch, heroin.
KM: Oh.
DE: Um and uh yeah that turned out to be bad too and there was prohibition, war on drugs but it's not like...before I practiced here, I practiced in _____ and there was no shortage of people snorting and injecting heroin. It was widely available um but then the pills also got a lot of people hooked.
KM: Uh huh.
DE: And at least with the pills, you knew what you were getting.
KM: Right.
DE: Um, so, it–it was in many ways became a way for...for addicts to, I mean for people to get high but the–it just became a way for people to function by not going into withdrawal.
KM: Uh huh, yeah.
DE: And so, we certainly prescribed a lot of them and all of us were plagued with y'know the specter of the drug seeker. So, the idea is that there's patients who come in and in "real pain" and it's appropriate to give them opioids. Then, there's patients who come in with "fake" pain because they are drug seekers, they just want the drugs. But of course, biochemically what they're actually experiencing is the same thing. It's the activation of new opioid receptors or-or-or p fibers or whatever (I can't remember the biochemical thing) but y'know and...and its–it led to this constant thing of second guessing yourself and getting in the way of the doctor-patient relationship. Like, is the patient trying to manipulate me just to get drugs? Is the patient...Am I unfairly signaling this person out because of their race, gender, religion, whatever and...and saying "no" am I appropriately saying "no" because we're just y'know just feeding their addiction. So, it...it was a big tangle um one of the one of the more helpful things that they've that they could have implemented years ago um and finally have are these databases of prescriptions. So, now I can look up and see if the patient has received any prescriptions for controlled substances in the state of Pennsylvania in the last year. Um and that that can help prevent… what–what patients used to do was taking advantage of the fragmented nature of the medical health records system. They would go, they would y'know go with a condition to Geisinger and they'd get a few pain pills. Then, they'd go to Shamokin and get a few pain pills then they'd go to Bloomsburg and get a few pain pills. And none of them would know–and they wouldn't tell any of them about the other visits. Now, it's much easier to see if they've been in those other systems and whether or not they've got prescriptions so...so that that actually, that part of fighting the opioid epidemic has worked but there certainly was, there certainly was enough blame to go around. And then, if you try to talk to it, then everybody's like "y'know, oh it's the ER that's giving out too many pain medications" and the ER is saying "oh, no it's the...it's the family

doctors who are running pill mills. And then family doctors, family medicine doctors, are saying it's the management doctors who are running the pill mills.
PE: There...there was a real pill mill in this area.
DE: And there was a massive pill mill.
PE: Yeah, they just busted it. I mean.
KM: Oh yeah.
PE: *inaudible*
DE: He just pleaded guilty. Ray Kraynak.
PE: *inaudible*
DE: And we knew for years.
PE: Oh yeah, everybody knew.
DE: If it was a patient of his, there was like a 75% chance that they were also an opioid addict
PE: Didn't you have people come to your ER after they shut him down *inaudible*?
KM: Oh, yeah.
DE: Yeah, cause *inaudible.* And they would come in, well, nobody else will take me as a patient because they' found out my previous doctor was Ray Kraynak. Because, doctors are used to getting, a lot of times, a lot of times if the patient, the patient starts off playing nice. And if they don't get opioids, they become abusive or even violence. Um, and doctor's offices are permitted to refuse such patients will emergency rooms are not.
KM: Interesting.
DE: Um, so, yeah uh, certainly I've seen a lot of patients with what is now called "opioid use disorder" um, in its various stages. It seems like the treatment is more enlightened now. We like to think because it's more *sighs* supposedly treatment based with medications to replace the opioids like buprenorphine commonly called Subutex or suboxone. Um, whereas before it was regarded more as a law enforcement issue um that uh y'know, you should report these people for forging your DEA number or whatever.
KM: Right.
DE: And a cynical observer might observe that when the opioid epidemic, which was massive and raging, was a problem largely of communities of color in large urban areas, it was treated as a law enforcement problem. Whereas when it became white, rural problem as well. All of a sudden it was treated as a medical problem.
KM: Right. And it's so interesting. I know you mentioned how it spread so much. I feel like, at least in my a–at least what I've read, more and more is coming out about the role of pharmaceutical companies.
DE: Oh, well the pharmaceutical companies have a–have a–have a sweet scam going. Like, a lot of scams going. One of them is, so, it's unlikely that you've ever bought a prescription medication in another country. But prescription medication costs in every other country is half of ours or less.
KM: Uh huh.
DE: Because they all have national health services which use their bargaining power to strike favorable price deals with pharmaceutical companies. The pharmaceutical lobbyists got it written into law, I think in the 90s it could be the 2000s, that Medicare and the US government were not permitted to do that. So, we all have to pay full price. Um, also the

lobbyists got it written that medications could not be imported from other countries. Um, ostensibly as a safety measure but pretty sure that a medication from Britain, Canada, or Germany is exactly the same as a medication in the United States. And was probably made at the same factory in y'know Buenos Aires or wherever. Um, but that's one of their many scams. Um, they have falsified research data, they have um, and it's all based on the premise that they'll make more money in the short term than they'll lose, even paying the fines and the lawsuits, they'll still come out ahead. So, they've made that cynical calculation and they do that routinely. Also, for instance, the government, it is the law that a company that has been convicted of fraud cannot do business with the government for something like ten years. So, what they do is the justice department allows the company to form these shell companies that then plead guilty to the fraud. The shell company, which had nobody to begin with, pays the fine, can't do business with the government but it doesn't do business anyway because it's not a real thing. And they continue doing business and they continue doing the exact same abusive practices. Um, all the while, making profit margins that year–year by year are 10-20%, roughly double that of any other industry. Um, and–and spending more on direct-to-consumer advertising than they do on research and development. It's, I mean, you can tell which drug is profitable just by how often it appears on ads on tv.
KM: Oh interesting.
DE: Um, now, so this'll be, let's see, the period of exclusive patent is about 7 years. So, it–it will no longer be profitable in about 7 years. You'll start seeing more and more lawsuits and eventually there will be some sort of admission of guilt of fraud or deceit for all these uh medications whose names end with–mab. Um, there monoclonal antibodies, you see the "for treating my moderate to severe crohn's disease," "for treating my rheumatoid arthritis," "for treating my psoriatic arthritis," "for treating my eczema," "for treating my asthma," "for treating my migraines," um it–it's a brilliant new field of medications but some of these are chemotherapeutic agents. Like, they were developed as cancer busting agents that they're now using to treat a skin condition. Uh, and...and while I'm not trying to minimize the discomfiture of someone with severe psoriasis, um, I'm...I'm predicting in 7-10 years, these, this class of medicines will be where opioids are now. In the, in the "you're way overusing them. Blah-blah-blah."
KM: Well especially since opioids were uh originally for like cancer pain or stuff like that, if I'm correct, and then the push was to get it for other forms of pain but...
DE: Well, part of the problem is the financial incentives. I mean, right now we have three medications, three categories of medication for treating pain: acetaminophen, or Tylenol which is its own thing, then there's what are called non-steroidal anti-inflammatories, which are things like ibuprofen and naproxen and that whole family of medicines which your probably pretty familiar with if you do any athletics.
KM: *laughs*
DE: Um, and there's the opioids. And y'know the non-steroidal are derivatives of aspirin, which has been around for a couple hundred years. The opioids have been around for thousands of years. Tylenol is the newest of them and it's from the 60s.
KM: Wow.

DE: So, nobody's developed a new category of pain medication in three generations. Um, because it's not profitable to do so. It's more profitable to sell variants of–of an addictive medication. Um, that will treat pain, yeah. But, at considerable cost over the long term. And–and sometimes it's your only choice
KM: Right.
DE: Um in patients who have severe conditions. Uh, so, you have to balance that with the prospect of like ruining their life, for good.
KM: *long pause* Definitely...definitely. *pause* cause I know you were talking about falsified studies and a read one that it was y'know they were saying that uh you originally thought that they someone goes into withdrawals after 12 hours um when they take like OxyContin but it turns out it was eight hours. So, they weren't prescribing enough pills
DE: So, er, it's...yeah...it's well we didn't well we weren't collectively aware of enough is the fact that it...it changes a lot over a course of treatment
KM: Okay.
DE: It...it, like if you take, if you take Tylenol everyday it will work about the same everyday.
KM: Okay.
DE: If you take opioids every day, the *pause* pain relieving effect will be less and less everyday whereas the times between withdrawal symptoms becomes shorter and shorter. So, to keep the same level of pain control, you need constantly escalating doses.
KM: Right.
DE: Um, because your body adapts to them in a way it doesn't to other pain medicines. And, that, you know it...it...it may have been perfectly *long pause and sigh* and...and it's hard to say where fraud begins and civil incompetence ends.
KM: Right.
DE: Y'know, it might have been that in opioid naive individuals, opioid withdrawals didn't start until 12 hours.
KM: Right.
DE: But after you've been on it for six months, then it was 8 hours. And after you've been on it twelve months it was six hours. Y'know. *Long pause* and so…
KM: Right.
DE: …a lot of our patients have–they're no longer taking pills their doing heroin laced with fentanyl from y'know the streets. And only the wide-spread availability of the reversal agent, naloxone, has...has prevented it from being an even worse.
KM: Right.
DE: Y'know, slaughter.
KM: Definitely *long pause* um, so I know you were talking about like dealing with patients who are y'know in "real pain" versus pain that comes from opioid withdrawals or people who want to get opioids.
DE: Right.
KM: So, um if–if we take that back a second, uh, how do you know when a patient needs opioids versus like Tylenol or when something over the counter could do the trick.
DE: So, y'know, the short answer is you don't.
KM: Okay.

DE: They've–they've actually *pause* st-studied this um and it...it turns out that, like, if you say, say you've got a patient and you ask like, "how bad is your pain and how strong of a pain management do you need?" You ask the nurse, you ask a doctor, you ask a different doctor. We're horrible at um the correlation is really poor, let me put it that way.
KM: Okay.
DE: Y'know th-this is not to say that one person is more right than the other but we're really bad at our estimate of how much pain a patient is in matching the amount that a patient thinks that they're in. Um, so, what I do anymore is, I just ask the patient. I say, y'know, "you're obviously in a lot of pain, I'd like to give you some pain medicine." Y'know, if they're like sweating and their heart is pounding and their arm is obviously broken, I'll say, "I'd like to give you some morphine." Um, or if...if they're like flopping around, like someone with a kidney stone, y'know. But if–if it's something that's less *pause* extremely obvious, I'll say, "Do you want–want something like Tylenol, something stronger?" Um, and uh, y'know, the patient will say, "Oh, I don't want any of the opioids they make me throw up" or "I don't wanna, I don't wanna get hooked."
KM: Uh huh.
DE: And then, then I'll say, "We can give you Tylenol" and if–if it doesn't work we can always give you more, or something else or–or…
KM: Right.
DE: Something else. Um, that's–that's *laughing* that's the best solution I've come up with.
KM: Yeah.
DE: Just ask the patient.
KM: *laughs* that's really interesting. I feel like – cause a lot of it is about, like, the conversation like goes away from the patient and I think it's interesting to like put them back and it's like your pain experience. How do you…
DE: Right, and–and you're the one who's ultimately going to have to deal with the consequences of the treatment. Y'know. Like, I'm happy to write you–an-and again it asl depends on why they are there. If they're...they're because like, "I'm having back pain" and this their eighth visit this year for back pain and um they have a record going back as far back as the health record will read going back about back pian. Then I won't prescribe them opioids.
KM: Oh, okay.
DE: Because they're proven to be ineffective in chronic pain...pain and um there's just, sometimes I'll say like, "I'll give ya...y'know, I'll get ya a...a dose here to take the edge off for the night but this is not a–a long-term solution. I can–I can treat you while you are here in front of me but I'm not gonna, I can't do anymore.
KM: Right.
DE: Um, whereas so–so–so there's a divide between acute pain and chronic pain. There's the divide between known patients and unknown patients. And then there's the divide between known causes and unknown causes.
KM: Uh huh.
DE: And uh I've seen, I've seen more than on patient who comes in and, I remember this one woman, I feel bad for her. She–she came in with abdominal pain

KM: Uh huh.
DE: and she got a CAT scan, and the CAT scan was read as "you possibly have diverticulitis which is an infection of these outpouchings in the colon.
KM: Okay.
DE: So, we treated her with antibiotics. And she didn't get better. She came back and was still having abdominal pain. So, she got *another* CAT scan, and it was normal. So, then we didn't know what was going on. She went home. Then she came *back again* only this time she was having diarrhea which was caused by the antibiotics. A kind of infection that happens after you've been treated with antibiotics. So, she underwent several rounds of treatment with that.
KM: Oof.
DE: Which were painful. Then she came back to the ER again and she got more pain medicines, and she got more CAT scans and eventually it got to the point where she was chronically on opioid pain medicines and every time she started to, they would run out, they would run out of her system, she would get abdominal pain.
KM: Oh, okay.
DE: She would come back to the ER and get another CAT scan. And a CAT scan um is is about the same as getting 500 regular x-rays, in terms of your x-ray exposure.
KM: Oh, right.
DE: So, it's not a big deal if you get one or two probably but when you start getting tens of these, you're–you're getting into levels of radiation exposure that like exceed anything reasonable all because everybody–at the same time–everybody wanted to treat her if she had "real pain."
KM: Right.
DE: Which is some condition for which she might need surgery which we can diagnose. But, I don't want to treat her if it's "fake" pain which is just caused by opioid withdrawal which is real pain but *pause* it's–it's like whether the pain is a symptom of a disease or if the pain is the disease.
KM: Right.
DE: That it-it became-became very difficult sometimes to know what to treat the patient with… And then, of course, if you didn't treat her with morphine, she would become abusive and say that you don't care about her, that you just want her to go home and die, like.
KM: Right.
DE: That you're a horrible person. Like, often she would storm out.
PE: Was she eventually diagnosed with something else?
DE: *pause* E-eventually she stopped coming to the _____ system. I don't know what became of her after that. There was another patient like that…
PE: Okay, maybe I was thinking of their...their case.
DE: Where it was her back pain. And she eventually was diagnosed with cancer.
KM: Oof.
PE: Oh, that's the one I was thinking of.
DE: *pause* Um, *pause* but whether or not it had anything to do with all the scans and x-rays she had gotten or whether just got cancer, who knows? Who can say?

KM: Did you go through the same process of "is this real pain? Is it not? Let's get more scans?" Or–
DE: Well, kin–I–I'm sure she did, I don't remember the details of that case super well
KM: Okay. *pause* Um, speaking of like, you mentioned like pain being y'know the disease vs. pain being just the symptom. Do you think–eh–pain is becoming too medicalized and seen as an illness instead of like a symptom of an illness or injury or do you think it's like, y'know, should be treated in this way?
DE: *pause* Um *pause* so *pause* I guess there's a couple of possible questions I could answer in that.
KM: Okay.
DE: I–I mean, saying, do I think pain should be medicalized is really hard because *pause* at this point, I sort of automatically medicalize everything.
KM: Right. *laughing*
DE: Now, should we recognize that *pause* pain can be a sym–we should recognize that pain can be a symptom of an underlying disease that needs specific treatment. Pain is also a symptom that can be treated just like a runny nose can be treated without treating a cold.
KM: Right.
DE: But at the same time, recognizing that pain is complicated in that the sensor that tells us whether or not we are having pain can also malfunction. So, like in your car, if your gas tank is reading empty, it may be because your gas tank is empty, but it may be because the sensor is broken.
KM: Right.
DE: In the same fashion, *pause* a person whose experiencing pain, it may be because something is wrong with the effected tissue and it's warning your body, but it may also be that the sensor is malfunctioning. That the nerve is just going nuts and saying, "Haha, you're having pain" but the subjective experience is, of course, the same.
KM: Right.
DE: And, and so therefore, the medical understanding of it is–is limited by the fact that y'know we have no–we have no way of measuring pain. Like, there's no, there's no blood pain level in the same way that there's a blood oxygen level for instance.
KM: Right.
DE: Or a blood sugar level. *pause* um so *pause* and added to the fact that patients will often lie to us.
KM: Right.
DE: Because–because pain is unknowable and because patients, for whatever reason y'know, they want attention, they want a day off work, or they've got a lawsuit pending against the guy who rear ended them or whatever.
KM: Right.
DE: They may have external incentives to report higher levels of pain than they might otherwise report for the same injury. So, it–it–it's a very complicated thing. Now, *pause* another part of your question is not what it is, it's from the patients' perspective.
KM: Okay.
DE: Should I expect to live a lifetime free of pain?

KM: Right.
DE: Um, should my doctor treat me for any–like if I have any pain at all is it unacceptable? Or is there a level of pain you just deal with?
KM: Right.
DE: And um *pause* that is uh–uh very different, it's a philosophical question. Um, it is in part, we're the victims of our own success. I mean like no society ever has even had the opportunity to even ask that question. Um *pause* and you know, in part because we do have medications that can treat pain without sometimes without terrible side effects–um–but to what extent is pain or discomfort *pause* an expected part of life and you wait to see if it goes away, or you rush to the emergency room? Um, and–and then that can often depend on a lot of factors, economic factors, where you live. [Redacted] Um, whereas, again, if you want to see an ER nurse roll their eyes, y'know, people come in because they threw up one time or because they y'know…
PE: Their kid threw up one time.
KM: Oh yeah?
DE: Their kid had a fever of 102° that started an hour ago. Or, um...
PE: I was talking to DE, and I was like, "They're trying to tell you they're good parents." Right, like, my kid's sick so I came right away. Whereas like, DE is like…
DE: Well, and–and...
PE: Come back in a day or two if it's still a problem.
DE: T–t–to be fair, like, we're not really fair to our patients because if they come in immediately, we say, "Why are you coming in? This is just a virus. You've only had it for an hour, it's going to take a few days." But if they wait too long then we say "Why'd you wait so long? Why didn't you come earlier?"
KM: Yeah. *Chuckling*
DE: So, that's y'know, it's kind of unfair to expect patients to have–um–an extensive degree of medical knowledge but at the same time like *pause* social expectations of pain and death and declined *dramatically* over the last y'know 50-100 years of the United States. Um, I mean like 100 years ago it was rare when you had a family that hadn't lost a child. Whereas now, its rare when you have a family that has. And...and so that's...that's extending into y'know pain as well. Um, and then–but then there's a lot of pain conditions that don't have good sort of...like chronic back pain.
KM: Right.
DE: Like all–sometimes there will be y'know some bulging disk that's pinching a nerve and then you do an operation, and the pain goes away. But sometimes they do that exact same operation for that exact same patient and the pain doesn't go away.
KM: Yeah?
DE: And–and so why is that? Is the pain a symptom of a disease? Or is it–is it the disease itself? And sometimes we don't even know. We can't tell.
KM: Right, interesting. *pause* Um yeah uh. Are there any other thoughts on pain and addiction in the US that you would like to share?
DE: Um.
KM: *awkward chuckle* Anything we haven't talked about?
PE: Every hospital he's worked at had different drug of choice.

KM: Oh, interesting.
PE: And it's interesting because doing drugs of course is a social activity. So people are doing the drugs together but like they've all had like a different drug of choice and here it's opioids.
DE: Yeah–yeah.
KM: To prescribe?
WE and DE: To abuse.
KM: Oh okay. *Laugh*
DE: So, when I worked at _____, we saw of course heroin, but we saw a lot of cocaine like GHB.
KM: Okay.
PE: Different sides of the city.
KM: Right.
DE: No.
PE: Oh, okay.
DE: Um…
PE: Cause you worked in the southside and the northside.
DE: That–this is–this is Northwestern this is the downtown area. Then in the west side it was all heroin and crack cocaine. And *pause* here is was pills until recently. Opioid pills. For a while it was bath salts, that was fun. *pause* Now–now it's–now it's opioids and meth.
[Redacted]
DE: *pause* Our–I mean–so–so the model we're taught is that pain *pause* is an indicator that there is an underlying process of damage.
KM: Right.
DE: And we need to figure out what is causing the damage and fix that problem. But the problem is that maybe half of painful conditions don't fit that model. There is no actual damage going on. The person can live their normal lifespan with their normal organ function, it just hurts. And so *pause* then we don't know what to do with it.
KM: Right.
DE: We, being Western biomedicine. Um–and–and that–that's an area where the complimentary medicines, you know your chiropractic medicines, and your acupuncture and you're whatever else probably play a considerably better role. Y'know, *pause* uh–I think one of the least well used and least well remunerated um and effective treatments for pain and...and particularly for sports pain is physical therapy and things like massage therapy.
KM: Right.
DE: Which are typically–um–like–insurance will pay for you to be in the hospital for 30 days, but it will only pay for you to get five physical therapy sessions in a twelve-month period. Y'know?
KM: Yeah.
PE: It won't pay for massage at all.
DE: And it won't pay for massage at all.
PE: That's a luxury.

DE: E–E–E-
KM: Yeah.
DE: Expect in unusual circumstances or whatever or maybe for specific conditions but um and *pause* in fairness, none of those have a high track record of *pause* high quality publications to show that they work.
KM: Interesting.
DE: Um, by anything other than a placebo effect. Eh. Which… *pause*
PE: OF course, there isn't money in that.
DE: Right.
KM: Right.
PE: Pharmaceutical companies…
Inaudible discussion for a few seconds
DE: There is no "Big Massage" you're right. Um, y–you know if Merk got a patent on massage, you could bet that within six months you would have studies showing its effectiveness.
KM: Yeah? *pause* So, when like the biomedical model of pain fails to…
DE: Uh huh.
KM: Uh you know, figure out like the cause of the pain or like stop the pain…
DE: So, then what you end up with is the patient is frustrated.
KM: Right.
DE: Cause they say, "I keep going to the doctor and they never do anything for me." The *doctor* is frustrated because they're saying, "I can't do anything for you. Why do you keep coming to me?"
KM: Right.
DE: Um, the insurance is frustrated because y'know…
KM: They've got to pay for it.
DE: They have to pay for more MRI's and more spinal taps and more this, that's, and the others. And a lot of it is driven by the patient's absolute certainty that there is something wrong.
KM: Right.
DE: Um, and "nobody listens to me."
KM: Okay.
DE: Those are, those are two of the most common complaints I hear, *pause* especially in chronic pain patients, or y'know "they were so incompetent it took them two years to figure out what was wrong with me."
KM: Right.
DE: Y'know, um, because you had some weird ass condition that nobody'd ever heard of. Or that–that y'know there's no reason why you'd be getting cadmium poisoning. Like, why were you licking cadmium? Like, or whatever. But, at the same time, um, and–and so it results in these very negative interactions. Where then, what happens is…
KM: Right.
DE: the patient is suffering, so they're going to their physician to alleviate suffering. The doctor is not able to do it; so, they feel like a failure. And they tend to take it out on the patient.

KM: Right.
DE: So, then what they do, is they look for reasons to fire their patient.
KM: Okay.
DE: Um, and...and what happens then is the patient gets mad and yells at them um and they say, “Oh, well you’re too aggressive. Y’know you can’t come back.”
KM: Right.
DE: “Here’s a thirty-day refill for all your meds, go find a new doctor. And it–it’s–it’s in many ways, ex-except you can’t do that in the emergency room, but for everyone else–I’m not–not saying *everyone* else and that everybody does this but it certainly is a trap people fall into.
KM: Oh.
DE: Of the chronic pain patient.
KM: Interesting, well, thank you so much. For talking with me.
PE: Ask him about media perceptions with pain
KM: Ooh, yes, could you tell me about that?
PE: *Laughing*
Inaudible laughter and comments
DE: I don’t know about media perceptions and pain specifically…
PE: No, but like tv shows and stuff.
DE: Um, tv shows?
PE: Do the House rant, c’mon do the house rant!
KM: *laughing*
DE: So, I–I mean yeah, In *House*. You’re familiar with *House*?
KM: I–uh yeah.
DE: He’s uh–Hugh Lawrie is able to diagnose and treat any condition no matter how obscure or complicated in 45 minutes minus commercials. Whereas in real life it often takes *pause* well, in real life it often takes either 6 really smart doctors working for a year or there is no cause at all. There is no detectable cause for your symptoms. And then the patients say, “Oh, well, you’re just telling me it’s all in my head.”
KM: Right.
DE: And–or, “You’re just saying I’m nuts” which sometimes actually is true, sometimes the patients are just nuts. But more often it’s just, “No, you a condition that we can’t diagnose, and we can’t treat.
KM: Uh huh.
DE: The–the medical term for that is idiopathic.
KM: Oh, okay.
DE: Every symptom includes idiopathic as, usually, the largest or the second largest cause of that symptom. Um, *pause* whereas on tv, that would be an incredibly unsatisfying drama like…
KM: Yeah.
DE: Where the doctor does all these tests and “nope, you’re just nuts.”
PE: Or you can’t figure it out.
KM: Yeah. *laughing*
DE: And then four years later…

Inaudible discussion
DE: After three years the symptoms just go away. And the patient goes on with their life. Or, or so y'know so *pause* I do think that plays into patient's expectations. "If my doctor was a little smarter or a little more dedicated or ran one more test or broke into my house and searched through my belongings…"
PE: That was the one episode I watched where like they did that.
KM: No!
PE: and they found a ham sandwich and they were like, "see, the guy doesn't keep kosher. We've solved the case."
KM: *laughing*
PE: Why did you break into your patient's house?
KM: What?
PE: *laughing*
DE: Um, that like…
KM: Interesting.
DE: And-and-and, so like so that even if the patient is lying to you, that the-the all-knowing doctor should be able to figure it out and come up with a disease which is both nameable and treatable.
KM: Right.
DE: Um *pause* it's the same for um *pause* cardiac arrests. Like, whenever they're doing CPR on tv, the survival rate is 95%. Um, whereas in real life it's more like 10%.
KM: Right.
DE: or 5%. Um, because that would make an incredibly unsatisfying tv drama.
KM: Yeah.
DE: Um, like "uh well, you did all of these heroic things and the guy died anyway."
KM: Yeah.
DE: "Oh well, sucks to be you" Y'know?
PE: Remember when I did CPR training, they were like, "The thing with CPR is the person's already dead. Right. Their heart is stopped and they're not breathing. You can't make it any worse."
KM: Oh gosh.
PE: *laughter* "Get in there and see if you can make it better!"
DE: Well, actually there is–there are certain interventions you can do to make it worse.
PE: Well, thanks. *laughter*
Inaudible laughter and chatting
DE: To make your chance of *pause* return of spontaneous circulation lower.
KM: Uh huh.
PE: Okay.
DE: And it would be y'know, option A has a lower success rate than option B. So, I guess you could say, if everyone knows B is better, than A is making it worse.
PE: Compared to B?
KM: Compared to nothing?
PE: But not compared to the current state.
Slight inaudible chatter over one another

DE: But not compared to doing nothing at all. I guess that's true.
KM: Yeah.
DE: Unless you start like yeah kicking him in the head or something.
PE: But they're already dead?
DE: That's true.
Inaudible
KM: A very interesting *House* episode. He just needs to be kicked in the head.
PE: No worries just kick him in the head.
DE: Up you!
Laughter
KM: We broke into your house and now we are going to kick you in the head!
Laughter
DE: That's you know a medical drama has finally gone off the rails.
PE: That's kind of like scrubs, right?
KM: Uh huh?
PE: I remember when scrubs came out and DE was like, "Scrubs is medically not correct, but this is what it feels like to be in the ER." And it was more of a comedy, right? So, the absurdity of what you're doing. Whereas *House* was totally medically correct, and every–every week was a case you might see once in your entire life.
KM: Oh wow.
PE: You know, like this case is so weird like if you diagnosed it in 45 minutes you'd be like a *god*.
DE: Yeah, people would be talking about it *years* later. "Do you remember that time you diagnosed that guy with leprosy?"
PE: Well, I remember when you–when you saw the person who had rabies. And, you got the closest diagnosis, right? But I mean nobody thinks–rabies is so rare.
KM: Yeah.
PE: Um this was in _____.
KM: Ah.
DE: It's actually less rare in _____, apparently but…
PE: It's still rare *inaudible, something about vaccine campaigns*
KM: But it's still, yeah.
DE: It's still so rare that–that–that four–that–that–that y'know, three internists, a neurologist, and a psychiatrist all missed it.
KM: Yeah.
DE: I mean…
KM: But I mean if you go into everything thinking "rabies."
PE: Yeah, exactly.
KM: You–You're gonna look–you're gonna look *pause* a little out of it.
PE: Most of the time, most of the time.
KM: Yeah.
PE: Well, later on we looked it up and like–like there's been fewer than 50 cases of rabies in the US since like 1970s.
KM: Wow.

DE: Yeah.
PE: Like the rabies, it's so rare.
KM: Yeah.
DE: And none are from a domestic dog or cat *pause*
PE: And even in _____, it was totally rare. They–they did vaccination campaigns on street dogs and like, it's not like.
DE: But y'know it's certainly it was more comparable to *pause* what it would have been like it the US a hundred years ago. Y'know. *pause*
KM: But it's still interesting to, going back to the shows, how the media does portray like ER doctors and like doctors in general. It's very like–just gods y'know. And like an all-knowing being that has the ability to figure out everything. Do you think that could be–
DE: In–In–In many ways, there's sort of–there's sort of parallels with shamanistic…
KM: Right.
DE: practices, right? You find the evil entity, you name it, so you gain power over it.
KM: Right.
DE: You perform a ritual, whether it's a surgery or medical treatment where the patient's purified. I mean like *pause* it's so shamanistic *pause* we are permitted to give patients some pills to go home with. Particularly if it's like, they come in at 9 o'clock at night and they've broken their arm. So, they might want some pain pills before the pharmacies open the next morning. So, we're allowed to give them some, but the nurses are not allowed to hand the medications directly to the patient. They have to hand it *to me,* and I have to hand it to the patient. Um, now, if the patient were taking the pill right then, *pause* they...
KM: The nurses?
DE: would be allowed to give it to them and I'm not allowed to get it out of the locked machine where it's stored. Only they're allowed to get it out of the machine but only I'm allowed to hand it to the patient. All these rules that make no sense.
PE: First I've heard of that.
DE: That make no sense until you start thinking about them as like rituals.
KM: Right.
DE: Like ritual roles.
KM: Yeah.
DE: Like Santa Claus can't go around distributing eggs on Easter. That'd be like fucked up.
Laughter
KM: I feel like that was a children's show–like a children's movie…
PE: Yeah, *The Guardian*s.
KM: *The Guardians*. Yeah, its–its movie worthy.
DE: Yeah. So, it and–and I think part of it is people have less and less experience with illness and disease. They have less and less experience with um *pause* death.
KM: Right.
DE: With life threat. Um, and so *pause* and our education system does not always produce the most medically literate people. Like, people, don't understand what a cell is,

or a germ is it can kinda make it hard to explain what you're doing. Um–and–and so *pause* I mean part of that is what doctors want to aspire to, I'm sure.
KM: Right.
PE: Part of it too is like doctors are the scientists that everyone deals with. Most of us don't know botanists.
DE: Or astronomers or whatever.
PE: Astronomers, yeah.
DE: Particle physicists.
Inaudible
PE: Most people, the only scientist they kind of deal with is a doctor. And so, the fact that medicine is also a craft. Where sometimes–y'know, you could have the same symptoms with radically different causes…
KM: Right.
PE: Or not be able to figure out what the cause is.
DE: Right, and it's become–it's become awe-inspiringly more complex in the last 50 years. Exponentially more complex. Um *pause* both in terms of treatment options, medications, and transplantations, imaging, and x-rays, and MRIs, and ultrasound.
PE: Oh, and just like when you had appendicitis. You went in the morning and came back that night and had dinner.
KM: Wow.
PE: He had his appendix removed. And it was…
DE: Right.
PE: It was remarkable to me, like, shouldn't you be like absolutely bedridden and unable to eat? Like…
DE: Tw-two hundred years ago, I would have just died.
PE: You would have just died, yeah.
DE: One hundred years ago, I might have lived but I would have been in the hospital for like a week.
KM: Okay.
DE: Fifty years ago, I would have been in the hospital–I would have lived, y'know almost for sure, but I would have been in the hospital for a week.
PE: Right, and this was like, he came home the same day.
KM: Yeah.
PE: And started eating and I was like–the hardest thing was actually that he couldn't pick [his daughter] up. And she was very young, so she took that personally, like "Daddy won't pick me up"
KM: Right.
PE: And so, we'd actually pick her up and put her on him, but you know, it was remarkable.
KM: Yeah, definitely.
PE: Or like rabies shots. People still think about them as like, you get the shot in the stomach. They haven't done that in like 30 or 40 years.
KM: Oh really?
PE: It's just a vaccine, yeah.

DE: Or how *inaudible* people have a lot of screwy ideas that they get from t.v.
PE: Well, they have …
DE: Ah, you've got to get the bullet out. Err
Laughter
PE: I was waiting for that
KM: Do you not have to get the bullet out?
PE: Oh, no!
DE: Never!
PE: Never!
DE: Almost never, so um starting in the 15th century when firearms were first introduced. There came this belief that gunshot wounds had a suppurative property.
KM: Oh.
DE: Tendency to get infected and that this must therefore come from a poison that was in the bullet itself. And so, the standard that was done was that you dug around with your unsterilized…
KM: Oof.
DE: instruments until you found the bullet and then pulled it out. Um,
PE: People still got infections, so weird (sarcastic)
KM: Really strange. Maybe the bullet was in there too long? (sarcastic)
PE: *Laughter*
DE: Yeah, they weren't really doing a lot of randomized control trials. Now–now
Laughter
DE: Now, in the 18th century, a–a doctor named, I think his name was Hunter, actually did an experiment sort of, unintentionally.
Laughter
DE: So, what had happened was, he-he was the surgeon for this regiment.
PE: Was this the knife guy?
DE: Yeah...
inaudible
DE: So, they had a battle, gunshot, people who got shot in the arms and legs. And he realized that, the ones he pulled bullets out of, about 5% survived. Whereas this group of ten guys, they'd all been shot in the arm or leg, they've been stuck in a barn. So, they couldn't get any medical care for like a few days. And only one of them died. So, they concluded that leaving the bullet was actually less...less harmful than trying to get the bullet.
KM: Right.
DE: Because the heat of firing um *pause*
PE: Sterilizes
DE sterilizes the bullet. And particularity now, the older muscat balls and stiff, low velocity, soft lead, they often picked up a lot of gunk in their trajectory so maybe that made more sense but at least since the 19th century high velocity bullets, we just leave them.
KM: Interesting.
Inaudible

PE: Unless they're gonna damage them.
DE: Unless in the rare circumstance that the bullet is pinching a nerve or something, where its mechanical presence is causing a problem.
KM: Right.
DE: But that almost never happens. But–but to this day every tv show, every movie, they get the goddamn bullet out.
PE: This is the rant.
DE: Then…
PE: Okay, we got it, we got it.
DE: I wish they would not show that, then the patients ask you to do it and you have to spend 45 minutes telling them why you shouldn't.
KM: That'd be such an easy fix in a tv show.
DE: And then they don't believe you.
PE: I mean because in *The Matrix.*
DE: Right, they took the bullet out. And the person got better. Yeah, right.
PE: That wasn't the real-world man, that was *The Matrix*.
KM: Shouldn't be falling for it.
DE: The other one was–the other one is, if you hit your head, don't go to sleep.
KM: Yeah.
DE: You've probably heard that one.
KM: Yeah.
DE: So, *pause* the problem is that they've reversed cause and effect. People with a severe brain injury *pause* so–so the question is, people with a hematoma, bleeding, expanding, and squishing your brain, you're gonna fall unconscious.
KM: Okay.
DE: If you do not, then it doesn't matter whether you go to sleep or not.
KM: Oh, okay.
DE: But they had reverse cause and effect because they didn't have CAT scans and all that stuff. They had autopsies. And, so, it was seen that if that person was falling asleep, that was a bad sign. So, therefore, maybe if we could keep them awake, maybe it would turn out better. But–but it actually like, no you cannot will your brain to like stop bleeding. Yeah *inaudible*
KM: *jokingly* Maybe in 30 years…
DE: Maybe if they're sufficiently trained *pause* sufficiently trained *pause* religious aesthetics or something.
KM: Yeah.
DE: If they train in a monastery with Tilda Swinton.
chuckling
KM: That's the cure for everything, I think.
PE: Tilda Swinton?
KM: Monasteries.
Laughter
PE: She's just a weird actress. In a good way but every time she's in a movie, I'm like *inaudible* worth it. Because she's just so bizarre and she takes such strange roles.

Laughter
PE: But yeah, media portrayals of pain. That would be another interesting thing– *inaudible* I mean we've talked about how insanity is portrayed,
DE: Right.
KM: Yeah.
PE: or amnesia, like um severe mental illness is often portrayed in ways *inaudible*
DE: They tend to be portrayed in very unrealistic ways. Whereas pain *pause* pain–I– pain is only ever portrayed as the result of an acute injury.
KM: Yeah.
DE: Because people on American tv are always getting injured.
PE: They're always getting shot or whatever.
DE: Shot or hit by a car.
PE: Or labor, sometimes.
DE: Yeah, labor pain but people never just get like a kidney stone on a tv show. Maybe a comedy.
Laughter
PE: Yeah, it's hilarious. Kidney stones are so funny.
DE: That–that–that must be a Seinfeld episode or something.
Laughter
DE: Yeah, it's just–what makes good tv. I haven't thought about media portrayals in that aspect.
Pause
PE: But yeah, the media portrayal of medicine is like they can always find the answer.
KM: Yeah.
PE: And there's always a discrete, obvious, treatable answer...
DE: There–there…
PE: and you can always find it.
DE: That–that there always is an answer.
PE: Yeah.
DE: Y'know.
KM: Yeah.
PE: As opposed to, human bodies are just weird. And sometimes we just don't know what's going on.
KM: And sometimes–oh no, go ahead–oh I just, to have that much knowledge in your head about like all these different like medical ailments, it's like how–sometimes it's not, how do you keep it all straight. I would imagine…
PE: Y'know and sometimes...
inaudible
KM: Other than looking at books.
PE: Well, yeah, looking at books, I imagine–but–but also, it's like 90% of the time you see this it's this and it's that 10% of the time where it's like, oh this is gonna be a migraine, oh it's not a migraine, now what.
KM: Yeah.

PE: Um, but I think–I don't know if you look stuff up in the hospital but my doctor's look stuff up.
DE: All the time.
PE: I'm always like, total respect.
DE: All the time. Yeah. All the time. I'll, y'know, I know this, this and this causes this symptom, but she doesn't have any of those, so is there anything else that causes it? Y'know. Oh, I didn't know that. I didn't know that ketamine abuse causes the symptoms of a urinary tract infection for instance. Um...
PE: I didn't know that *inaudible* to abuse.
DE: Not at any of the hospitals that I've worked at.
PE: Huh. Well, *inaudible*
DE: It's chemically similar to PCP.
PE: Ah but it's a... it's a club drug then?
DE: It's a little more–it's a little more, well, yeah. Party scene drug.
PE: My life is pretty boring. *laughter*
DE: It's also used–it's also used in both for–for humans and in veterinary medicine. So, it's available.
KM: Oh.
PE: Maybe that's why I've never heard of it.
DE: It's sometimes called "special k."
laughter
PE: This is one thing; doctors know all the street names for drugs.
DE: We just know some of them.
KM: All the fun ones.
PE: Yeah.
DE: More than we would be personally acquainted with or what you would expect.
KM: Yeah.
Inaudible
PE: But it sounds like a really interesting study. I mean, I was sort of thinking of pain as sort of illness or symptom but in some ways it kind of doesn't matter from the point of view of the doctor.
KM: Yeah.
PE: If like once–if you want to–if it's symptomatic–you want to treat that thing, but you also want to treat that pain. Um...
DE: Well, no because–I–I mean yes but
PE: Go for it, go for it
DE: But–as medical doctors we're trained–our primary training is to treat the disease. Treat the disease that is causing damage to the patient. If no damage exists, *pause* you're done. *pause* and–and so treating the symptom is really secondary
KM: Okay.
DE: Unless you think of the symptom as the disease itself. In which case, maybe treatment would make sense in a biomedical standpoint. But, um, *pause*

KM: But when it's something like pain, that seen sometimes as the "fifth vital sign", when does that, like, turn into, a, something that you need to treat right away instead of just a symptom?
DE: *sigh* I–I mean, pain–pain is–is weird. It's one of the main reasons people come to the ER, obviously. Um, nobody has ever died from pain. *pause* so there is no medical urgency in treating it. On the other hand, *pause* um *pause* it is the only condition that I can treat 100% effectively. Like, *pause* if you have pneumonia, our treatments are like, 85% effective. If you have a brain tumor, our treatments are 40% effective. But if you have pain, just pain, my treatment will, at least in the short term, be 100% effective. I can give you morphine until you are unconscious.
KM: *Chuckles*
DE: No pain.
PE: I was gonna say–I was actually going to ask if this–if 100% effective is with the patient being conscious.
DE: No, no. So, sometimes–sometimes the only relief from pain, that's really severe, is unconsciousness.
KM: Right.
DE: Um, I think that's why sometimes people faint. But, um, *pause* you um–and–and so it's–it's 100% treatable and 0% medically necessary to treat it. But, uh, medically in the pure sense of prolonging a person's life.
KM: Right.
DE: Um, it is often imperative to treat the underlying cause of their pain but at the same time, it is ya know *pause* it–it would be really– a really bad doctor who did not treat people's pain routinely. Like...
KM: Right.
DE: like, sometimes you get into this–this dilemma where the patient is like, *pause* they're having severe breathing problems and they're also having pain somewhere. And, if you give them pain medicines, you can treat the pain, but you may suppress their breathing and they might die. *pause* Um, and so then, *pause* which is worth more. Often times the patient, at the time, will probably say *pause* that they would rather take the chance with the pain medicine and if they die, so be it. Um, but *pause* someone who is in considerable pain is also under duress of a kind. So, they are not really making freely informed decisions um and–and they'll do illogical–you know they'll do things *pause* that are out of proportion to the western biomedical degree of damage that is occurring to their body. Y'know?
KM: Right.
DE: *Pause* and–and so it's a difficult subject. So, it's not *pause* there–there's no–there's a consensus that you should "treat pain*." Y'know. You should always treat a patient's pain* um, where the asterisk is "unless you think the pain medicine will kill them or unless you think the pain medicine will make them worse. Or y'know. Unless you think the pain medicine, or like the lack of pain medicine is critical to um making a diagnosis for instance. If you have a condition like a compartment syndrome where–athletes must get this sometimes–where you get swelling in a muscle to a degree where the pressure inside the fascia builds up enough to cut off circulation to that muscle and it

could die. And the symptom–the main symptom is pain. And so, if you have a patient who's having a lot of pain and you treat them with enough pain medicine that they're unconscious, you can't tell if they are developing a compartment syndrome or not. Because they can't tell you. Um, and y'know, you can't like you can measure the pressure in a muscle like you can measure the pressure in a tire. But you are also putting a needle in the patient. You can't just like leave it in like a thermometer.
Laughter
DE: A turkey baster. So, so there are conditions in which you have to balance treating the pain with treating the life or limb threat.
KM: Right.
DE: But um, fortunately, those don't come up very often.
Pause
PE: So, how does this differ from the kinds of sacred pain cases you've been looking at?
KM: Um *coughing* So, I've been looking at Christian self-flagellation and uh the Tamil Hindu ritual, the Kavadi ritual, and so a lot of those have–obviously they're two different um rituals but um there's like a level of um, at least for Christian self-flagellation, or for both of them, there's a level of community aspects and uh it shows like *cough* –excuse me– shows like one's ties to y'know that they're a trustworthy member of society, they're a religiously pious person–uh, and that can strengthen bonds there. And then for Christian self-flagellation, at least for the articles I've been reading about, have been more about penance, getting like closer to God, and like um like hurting the body for the sake of the soul kind of things. And to suffer allows you to…uh…y'know get through all of the, y'know, allows you to be like closer to God in some level.
Inaudible
[Redacted]
PE: But like, um, y'know, I wonder how much of it is kind of like y'know. *inaudible* like pain induced euphoria.
KM: Yeah and...
DE: You could say the same thing about people who run a marathon for instance
PE: Yeah, it's true. Those people are crazy.
DE: The first guy who ever did it died, and you just want to do it for fun, like…
KM: Yeah?
DE: Okay.
Inaudible
[Redacted]
PE: Is that sort of an element they talk about? That sort of consciousness or?
KM: Yeah, uh more so in the Kavadi ritual where there's a lot of piercings and stuff of that manner and like y'know, they walk, the final day, they'll walk like ten miles to the final spot and a lot of them are holding heavy kavadis that are like 40 pounds and they have the piercings *cough* all that sort of stuff and they, a lot of them who participate in the ritual talk about like being in a ritual trance. *inaudible* And so they, there's not as much, like a lot of bleeding and there's also um y'know not a horrible amount of pain like as someone y'know who has looked at pictures y'know, "How are you not… how are you functioning?"

DE: How are you not incapacitated.
KM: Um, and it's like, there's some sort of ability to like *pause*
PE: It's like the adrenaline and the endorphins carry you through.
KM: Yeah, and you're in physical pain, like your body is hurt but you're not like experiencing pain in the same way.
DE: Yeah, but…but in the same way pain can be, people can perceive pain to be less.
KM: Right.
DE: than the degree of injury would warrant. They can also perceive it to be more.
KM: Uh huh.
DE: So, I think that's probably something more along the lines of something we get with a lot of chronic pain syndromes.
KM: Interesting.
DE: Y'know, the sensory is malfunctioning and telling you that you're getting severe damage when you are actually not.
KM: Right.
Inaudible
KM: Like, it was interesting, I read an ethnography about uh, by Jean Jackson, and she went into a pain clinic, and it was interesting to see the amount of people suffering from severe chronic pain and the amount of people who are like, "I wish it was like, even like cancer
DE: "I wish it was cancer. Cause then at least I would know."
KM: Yeah, "At least I would…"
inaudible
DE: Yeah, I've definitely heard that.
KM: Interesting. *pause* In chronic pain instances or?
DE: In chronic pain, yeah.
PE: Where people would prefer to name it.
DE: And know what to expect. Um, y'know.
KM: Or just like a level of um like society understanding it a little bit more. Cause I feel like uh from what I've read, a lot of people dealing with chronic pain y'know go through the "Am I faking it? Am I not? Do people believe me?" Um…
DE: Definitely.
KM: And it's interesting to see how, uh, it uh, made social ties… it hurt social ties between people suffering from chronic pain and like their family. Um, but the people within the chronic pain community, er the center, were able to really bond quickly with one another because they like *cough* had that shared experience.
DE: And everyone just assumes they're malingering.
KM: Yeah.
PE: Right, and they all believe each other.
KM: Yeah.
PE: And that, that comes back to that question, [DE] you asked you patient, "How much pain are you in? What do you want?" Because y'know, if you believe your patient–I mean there's always going to be some patients who…
DE: Yeah.

Inaudible
PE: Does it matter if they're really in pain because they're clearly in distress?
DE: And part of it too is that the model is medicines–is medicine a *pause* commodity like anything else. Like, are we a service industry where the customer is always right?
KM: Right.
DE: Or are we something else? And unfortunately, a lot of the business models and corporate organizations, y'know, are biased towards "the customer's always right" so like when a patient comes in and they are asking for opioids, any you have a specific reason not to give it to them–like, shouldn't you just do it? Is that the right thing to do for your patient?
KM: Right.
DE: Are you doing the right thing for you or are you doing the right thing for them or are you just guessing? Which, unfortunately a lot of the times it's guessing.
Laughter
PE: I always thought it was funny [DE] was always like, "Kids are great. When kids are in pain, you know. And when they feel better, you know cause they get up and start playing."
DE: Right.
KM: Yeah.
PE: It's the adults that lie to you.
Laughter
PE: The kids–like–they don't know how to lie, like…
DE: Kids-kids, I've seen a very few kids who malinger and that's really creepy.
KM: Oh, yeah…
DE: Like the kid who was faking seizures.
KM: *surprised* Oh.
Inaudible
PE: No but tell her.
DE: So, the intern comes up panicked, "the kid in room eight is seizing!" I go in there and he's...he's doing this kind of thing. *Makes gestures to mimic that fake seizure*
KM: Oh, yeah.
DE: That doesn't look like a seizure. So-so then I said to the intern, y'know, this isn't a real seizure because if it was a real seizure, he'd be turning his head side to side. And then like a second later he [the kid] starts going like this *DE turns his head side to side to demonstrate.
Laughter
DE: So, I was like, "see, he's not seizing. That's not a real seizure.
Laughter
[Redacted]