

BECOMING NORMAL:
THE SOCIAL CONSTRUCTION OF BUPRENORPHINE
&
NEW ATTEMPTS TO MEDICALIZE ADDICTION

by

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Abstract

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Drawing on theories about the social construction of knowledge and the sociology of the body, this dissertation analyzes the social construction of buprenorphine, a medication being used to treat addiction to opioids, to better understand the processes of medicalization. Buprenorphine was central the passage of the Drug Addiction Treatment Act of 2000, a law which overturned an almost one hundred year prohibition preventing physicians from prescribing narcotics for the treatment of addiction in an office-based setting. Buprenorphine is seen by many as central to moving addiction treatment into the medical mainstream. Using documents from government regulators, industry, and addiction researchers, I show that there are many different “buprenorphines,” each being strategically constructed and deployed to serve different political and economic interests. I also use qualitative interviews with individuals taking buprenorphine to examine the ways in which their embodied experiences of the medication shape and are shaped by different discourses about buprenorphine, addiction, and addiction treatment. I show how buprenorphine and medical theories of addiction act as a new system of constraint, while allowing new possibilities for agency and action. I conclude with a discussion of how the discourses about and embodied experiences of those taking buprenorphine challenge but also

reflect the larger sociopolitical context in which they are contained. This research builds upon and challenges existing theories about the medicalization of social problems.

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Several years ago in the middle of my long career in public health, I enrolled as a non-matriculated student in a medical sociology class. Each week, I sat enthralled as a talented professor taught me an entirely new way of thinking about health and medicine. That professor was Barbara Katz Rothman, who has not only supported me throughout each step of my academic career since but has profoundly shaped my professional career for the better. I owe her deep thanks for her unfailing humor and support, thoughtful insights, generosity, and most of all for leading me down the medical sociology path -- where I have been engaged, challenged and delighted. I am also indebted to Victoria Pitts-Taylor, an enthusiastic supporter who strengthened my love of theory and taught me how the subjective and embodied experiences of individuals can deepen and enrich the field of sociology. I knew starting my dissertation that I would need focus, rigor and clarity, and I knew that Juan Battle could deliver these. He did, and I am grateful to him.

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Glossary

ASAM:	American Society of Addiction Medicine
BHIVES:	Buprenorphine and HIV Evaluation and Support Program
Bup:	Buprenorphine
CSA:	Controlled Substances Act
CSAT:	Center for Substance Abuse Treatment
DATA 2000:	Drug Addiction Treatment Act of 2000
DEA:	Drug Enforcement Agency
FDA:	Food and Drug Administration
NHSDUH:	National Household Survey on Drug Use and Health
NIDA:	National Institute on Drug Abuse
NIH:	National Institutes of Health
RB:	Reckitt Benckiser (manufacturer of buprenorphine)
SAMHSA:	Substance Abuse and Mental Health Services Administration
Suboxone:	Brand name for buprenorphine combined with naloxone
Subutex:	Brand name for buprenorphine without naloxone

Chapter 1: Introduction and Background

Mr. President, last week the fight against heroin addiction took a major leap forward... The new law, the Drug Addiction Treatment Act of 2000 permits, for the first time, such anti-addiction medications to be dispensed in the private office of qualified physicians. ... I believe that the system we have finally put in place will effectively put America on the right road to fighting and winning the heroin addiction war.

Senator Levin, Congressional Record 2002: S01656

In October 2002, in a radical departure from almost a century of U.S. drug policy, the U.S. Food and Drug Administration approved the use of the pharmaceutical buprenorphine (bup) to treat opioid dependence¹ in office-based settings. Not since 1914 have physicians been legally permitted to treat addiction by prescribing a narcotic. In contrast to methadone (the most widely used treatment for opioid dependence), which remains mired in restrictive government oversight and requires daily attendance at a highly regulated clinic, buprenorphine is available through any certified physician in any office-based setting. A physician-based model of addiction treatment, bup treatment was intended to collapse the historical separation between medical care and drug treatment, which has been maintained at the level of financing, regulation, professional education and credentialing, and discourse. Bup, delivered by physicians in medical settings, is supposed to bridge these chasms and has been heralded by addiction medicine experts as the technological breakthrough that will finally move the treatment of addiction into the medical mainstream. As such, it provides a unique opportunity to explore a new effort to

¹ Opioid dependence refers to any physical dependence on an opiate-based substance, whether heroin, opium or prescribed narcotics, like Oxycontin, Hydrocodone and Codeine.

medicalize addiction – a social problem that has been described as resistant to medicalization.

Although the medical model of addiction has gained in prominence in the U.S. over the past thirty years, scholars have noted neither alcoholism (Appleton 1995; Valverde 1998) nor drug dependence (Smart 1984) fit easily into the medicalization model. There has been no graceful arc from deviance to medicalization in the case of addiction. Using the guise of science, researchers and medical practitioners generally claim to be morally neutral and to base their assertions and practice on objective truths. In reality of course, scientific constructions are infused with moral paradigms and assumptions (Brandt and Rozin 1997). This slippage between medicine and morality, a characteristic of many medicalized conditions, has been especially pronounced and problematic throughout the history of addiction medicine in the United States and has created ambiguity in how we understand drug users, the professionals who treat them, and drug treatment itself.

According to the National Household Survey on Drug Use and Health (NHSUDH), an estimated 200,000 people used heroin and 5.3 million people used pain relievers nonmedically² in the past month (SAMHSA 2010). The NHSUDH estimated that 1.85 million Americans are dependent on or abuse pain relievers and 399,000 are dependent on or abuse heroin.³ Variations in the rates of illicit drug use overall by race are modest (9.6 percent for blacks, 8.8 percent for whites, and 7.9 percent for Hispanics).

² Nonmedical use is defined as using a medication in any way other than as it was prescribed.

³ The National Household Survey on Drug Use & Health does not separate abuse and dependence. Abuse of illicit drugs or alcohol was defined as meeting one or more of the four criteria for abuse included in the *Diagnostic and Statistical Manual of Mental Disorders (DSM-IV)* (American Psychiatric Association 1994) and if the definition for dependence was not met for that substance. Dependence on illicit drugs or alcohol was defined as meeting three out of seven dependence criteria (for substances that included questions to measure a withdrawal criterion) or three out of six dependence criteria (for substances that did

The major treatment modalities for addiction in the U.S. have been abstinence-based and “drug free” programs that rely on behavioral interventions or self-help models like Narcotics Anonymous (SAMHSA 2010). Because medicine has historically had little to offer in the way of treatment, May argues that “the process of medicalisation has, at the very most, been only partially successful” (2001: 386) and that “the clinical constructions of addiction still engage a set of moral questions” (2001: 386). These moral questions are often directly built into treatment programs, many of which have explicit crime control functions (Fox 1999) but rely on medical language to describe addiction.

Along with morality-infused and behaviorally-based treatment programs, criminalized approaches to drug use have continued to play a large role in drug control policy. The increasing criminalization of drug use over the past thirty years, as evidenced by lengthy mandatory sentences for drug convictions and dramatic increases in federal funding for the “War on Drugs,” has had a significant impact on the number of people incarcerated in the U.S., now exceeding 2,000,000 (Glaze and Palla 2004). Although Black Americans are no more likely than whites to use illicit drugs, they are for more likely to be incarcerated for drug offenses (Rich et al. 2011). Black men in the U.S. are more likely to have been in prison than to have graduated from college or joined the military by middle age (Rich et al 2011). While medical and criminalized views of addiction are often considered contradictory approaches, the margins between the two have increasingly blurred through criminal justice practices such as drug courts, where

not include withdrawal questions) for that substance, based on criteria included in the 4th edition of the *Diagnostic and Statistical Manual of Mental Disorders* (DSM-IV) (APA 1994). In general, “dependence” often refers to physical symptoms, such as withdrawal in the absence of the drug, that have not necessarily caused any harm to the individual. “Abuse” is usually seen as a more severe form addiction characterized by continued use of the substance despite harm to self or others. There is considerable debate over these terms and about whether those who are dependent on drugs require drug treatment. For example, an entire issue of the journal *Addiction* (2010, 106:5) was devoted to these questions.

defendants with drug-related offenses are mandated to drug treatment (Tiger 2008). Buprenorphine is being framed within this complicated environment and, moral, law enforcement and medical perspectives on addiction are all infused throughout the rhetoric surrounding its promotion.

Bup is an interesting case of medicalization not only because of the historical ambiguity between addiction as a moral, criminal and medical problem but also because of medicine's role in both causing and treating addiction. Many addictive drugs, for example, originated as medicines, and several have been used as medicines to treat addiction. Morphine was once used to treat addiction to opium; heroin was first introduced for the treatment of morphine addiction; and methadone, used to treat heroin addiction, is also widely bought and sold on the street as an illicit drug. Articulating a coherent rationale for the line between illicit drugs and legal medicines has become increasingly difficult. Marijuana is now a prescription medicine in many states; addiction to prescription medications far outstrips the use of any illegal drug, except marijuana (SAMHSA 2010); and opioids (like buprenorphine, methadone, and even heroin) have all been prescribed to treat opioid dependence. As this dissertation makes clear, maintaining the line between drugs and medicines is a major preoccupation for proponents of bup who understand that to succeed at medicalizing addiction, bup must be seen as a legitimate medication and not a potential drug to be abused.

Part of the challenge in maintaining this distinction comes from the fact that buprenorphine, like methadone and other opiate replacement therapies, is a synthetic opiate that occupies the same receptor in the brain as "natural opiates," such as heroin. The difference between the heroin and opiate replacement therapies, which is used to

justify their different legal status, is that synthetic opiates are slow acting and do not produce the “high” associated with heroin (Food and Drug Administration u.d.(a)). By slowly acting upon the body, synthetic opiates minimize the cravings that are associated with drug dependence. Opiate replacement therapies are called “agonists” because they mimic, rather than block, the effects of the “natural” opiate. Synthetic opiates can and do cause physical dependence, and buprenorphine is used to treat addiction to prescribed opiates as well as to heroin. Buprenorphine is referred to as a “partial agonist” because it has a ceiling effect beyond which no additional “high” can be achieved and thus, according to its proponents, has less overdose potential than methadone and lower resale value (I analyze these claims in detail in Chapter 5). Despite the fact that buprenorphine is similar to methadone in many ways, buprenorphine’s advocates have successfully argued for completely different system of distribution. In 2009, the last year for which data are available, an estimated 640,000 people were treated with bup (Clark 2010). In contrast, methadone, which has been available since the 1970’s, treats about 250,000 people per year (Egan et al. 2010).

Indeed, the discourse surrounding buprenorphine is best understood against the backdrop of this country’s history with methadone, as researchers and regulators alike have specifically framed bup as an alternative to methadone. Dole and Nyswander – two physicians in the U.S. – began using methadone to treat opiate addiction, which they claimed was a metabolic disorder. Dole and Nyswander argued that addicts should be maintained on methadone much as diabetics maintain their use of insulin to treat their illness. When methadone was introduced as a treatment for addiction, it was subject to considerable controversy with opponents, many from competing abstinence-based

treatment programs, arguing that it replaced one addiction for another (Nelkin 1973). Describing methadone in 1973, sociologist Dorothy Nelkin wrote that “the controversy over methadone maintenance reflects the tangle of often irreconcilable legal, moral, political, and medical attitudes toward addiction and its treatment” (Nelkin 1973: 66) – an observation that remains salient today.

This amalgam of conflicting attitudes and interests were brought to bear on the methadone’s system of distribution in significant ways. Initially intended as a medication to be distributed by physicians, federal guidelines developed by the Food and Drug Administration (FDA) and state regulations – influenced heavily by methadone opponents – severely restricted the distribution of methadone to specially regulated clinics (Attewell 1979). Methadone clinics, operating in a “bureaucratic jungle” (Nelkin 1973: 47) of federal and state guidelines, are subject to considerable oversight from regulatory agencies that have greatly affected the nature of the setting in which methadone is distributed. Methadone patients must adhere to strict rules for obtaining methadone that some have argued are more punitive than therapeutic in nature (see for example Bourgois 2000; Rosenbaum 1995). For instance, methadone patients must go to the clinic daily (or several times a week), take methadone while being observed by clinic staff, provide urine for random drug screenings, and meet with clinic counselors. Clients have little or no say over their course of treatment. The result is a setting where punitive and medical perspectives come together in an “unhappy compromise” (Bourgois 2000) for patients receiving methadone.

Conrad and Schneider (1992) argue that, because of the large governmental involvement in methadone and in its system of distribution, methadone treatment was

never justified on a theoretical level by a well-developed disease model. It is out of this context that buprenorphine has emerged. As I will demonstrate, buprenorphine advocates are actively constructing a disease model of addiction in ways that seek to address the problems that have plagued methadone. They use medical justifications – largely about the nature of the drug itself – to argue for physician control over its distribution.

At its core, this dissertation is a case study looking at the processes of medicalization through the lens of buprenorphine. In their widely cited book, Deviance and Medicalization: From Badness to Sickness, Conrad and Schneider (1992) suggest that medicalization occurs at the conceptual, institutional and doctor-patient relationship levels. Recently, Halfmann (2011) has proposed a refinement to that theory and suggests that most analyses of medicalization focus too much on the macro level and neglect an examination of how medicalization can occur through the identity construction of individuals, including “patients.” He argues that to be more effective those interested in medicalization need to look at an array of causal factors, different dimensions and levels of analysis: “Scholars of the medicalization of social problems often fail to examine the multiple dimensions of medicalization and the multiple levels of analysis at which it occurs” (2011: 1). This dissertation takes up multiple dimensions of buprenorphine to better understand medicalization.

Some attention has been paid to the drivers of medicalization, which guide my analysis of buprenorphine. Conrad (2005), for example, argues that, while medical professionalization drove medicalization in the past, it is now increasingly driven by market forces. Other scholars have demonstrated the central role of the pharmaceutical industry in the medicalization of conditions (see for example, Busfield 2006; Healy 2004;

Lewis 2003; Moynihan, Heath, & Henry 2002). For instance, Moynihan et al. (1992) document the role that the pharmaceutical industry has played in defining diseases specifically to create markets for medications to treat everything from social phobia to irritable bowel syndrome. As Moynihan and his colleagues put it: “the social construction of illness is being replaced by the corporate construction of disease” (1992: 886).

Since the introduction of theories of medicalization, several authors have noted changes in the language and content of how medical problems and solutions are framed. Clarke et al. (2003) argued that medicalization should be reframed as biomedicalization, which is characterized both by the increasing technologization of medicine and by the shift from external control to the transformation of internal biological processes through biomedical technologies. More recently, the role of neuroscientific culture and discourse in medicalization has received attention. Vrecko notes: “Over the past few decades, neurosciences have expanded dramatically, not only in terms of the resources they command and the authority they wield, but also in terms of the scope and range of problems and phenomena they territorialize” (2010c: 2). Rose (2010) also notes the escalation of efforts to use neuroscience to explain a range of individual behavior from “normal” to “pathological.” I include the role of pharmaceuticalization, biomedical technology and neuroscientific discourse in this analysis.

Addiction in general and buprenorphine specifically offer a unique opportunity to study and better understand processes of medicalization as well as many of the issues raised in the medicalization literature. Theories of addiction have kept pace with scientific innovation and accompanying changes in rhetoric. Addiction has been

explained by metabolic theories, genetic theories, and, most recently, neuroscientific theories. The introduction of buprenorphine is an opportunity to understand how a new biomedical technology is integrated into competing theories of addiction and how it contributes (or doesn't) to the medicalization of addiction. And as a relatively new treatment, buprenorphine does not come freighted with a long history of representation. It is in the process of being actively constructed, shaped and understood.

My aim is to interrogate whether or not and how bup has contributed to the medicalization of addiction. Taking seriously Halfmann's critique of medicalization studies, I offer an analysis of macro level discourses (via regulatory and government documents, marketing materials, and scientific literature) and micro-level discourse through interviews with people who have been prescribed bup. This multi-level analysis reveals new insights into the drivers and processes of medicalization and how these are resisted and adapted at the level of the individual. I am interested in medicalization of addiction not just for what it tells us about the processes of medicalization but also for what it tells us about how medicalized identities are interiorized and shape the experiences and subjectivities of individuals. This attention to the lived experiences of those taking bup addresses a gap in the literature about medicalization and in social constructionism more broadly by bringing the embodied experiences of individuals into a conversation which too often remains at the level of representation.

One of the key questions that arises through theories of medicalization (whether framed in terms of medicine, biomedicine, or neuroscience) is role of personal responsibility. One claim that often arises from proponents of medicalization is that it lifts both stigma and moral condemnation from the individual by placing "the blame" for

the problem or the condition onto a biological factor. Both government agencies and addiction neuroscientists who advocated for the regulatory change that made the prescription of bup possible based their arguments in large part on the claims that addiction treatment delivered by physicians would reduce the stigmatization and criminalization of drug use by locating the cause of addiction in a medical disorder rather than in individual moral failure. I question these claims relying on the work of Rose, Foucault, Lupton and other theorists who suggest that medicalization has led to new forms of governmentality that increase, rather than decrease, the responsibility of individuals.

I also suggest that addiction shares some features with other medicalized conditions but has its own complexities. First, the coexistence of and ardent support for more punitive responses to addiction (e.g., prison and methadone) haunt discussions of addiction as a disease and allow for a continuum of medicalization depending on one's social location. Second, the medicalization of addiction medicine is profoundly shaped by the strategic intervention of two arms of government – one focused on drug use as a crime (the Drug Enforcement Agency) and the other focused on drug use as a disease (the Department of Health & Human Services). Finally, the medicalization of addiction is troubled by medicine's historical role in fostering or causing addiction through the prescription of narcotics, many of which were introduced as treatments for addiction.

This dissertation is structured into nine chapters. In Chapter 2, I offer more detail about the theoretical and conceptual framework for this dissertation. I situate my work within a social constructionist tradition that recognizes that “facts,” including scientific ones, are constructed and produced within a cultural, social and political context. I also

address critiques of social constructionism as being too dismissive of material reality by drawing on the sociology of body. Specifically, I explain how my work foregrounds the embodied experiences of those being prescribed bup in order to better understand how their lived experiences shape and are shaped by different discourses about addiction and bup. I also explain how my work is informed by theorists, like Foucault and Rose, who link knowledge and power to forms of governmentality. I describe the ways in which a social constructionist analysis of addiction can inform contemporary theories of biopower. Chapter 2 concludes with a discussion of my research methods, including background on the larger Buprenorphine and Integrated HIV Evaluation & Support (BHIVES) study from which my interview data are drawn. I also provide a description of the qualitative interview sample as well as the methods through which I collected and analyzed other sources of data, including regulatory documents, marketing materials, and scientific literature.

In Chapter 3, I begin with a brief history of how addiction treatment has been regulated in the U.S. to provide some context for the ways in which the Drug Addiction Treatment Act of 2000 (DATA 2000) represents a radical new regulatory attempt to medicalize addiction. I then provide an analysis of the discourse used by key government agencies in the passage of DATA 2000 as well as the DEA rescheduling and FDA approval bup. I explain how bup is tactically constructed and deployed differently by various government actors in ways that reveal and support their wide-ranging interests. Some, like NIDA, SAMHSA and their legislative supporters, construct bup as the medication that will move addiction treatment into the medical mainstream and expand access to drug treatment, especially for a new kind of heroin addict. On the one hand,

they acknowledge the shortcomings of the regulatory scheme for methadone and note that methadone treatment is highly stigmatizing, but nonetheless appropriate, for “hard core,” “urban” presumably African American drug users. They depict bup, on the other hand, as an effective treatment for suburban, young new users – despite offering no evidence to support such claims. They also represent bup as being less addicting and less euphorogenic than methadone. In contrast, the DEA, which is focused on preventing bup from becoming another street drug, emphasizes bup’s high potential for abuse and diversion but argues that its higher safety profile justified it being scheduled differently than methadone. This analysis suggests that constructions of bup are subject to the bifurcated and often confused understandings of U.S. drug policy that view addiction as both a crime and a disease, bup as both a drug and medicine, and drug users as both criminals and patients. These varied constructions allow both the criminal justice and the methadone systems to remain intact as the appropriate response to “hard-core urban users,” while laying the groundwork for a more medicalized approach that is seen as the appropriate response for “young, suburban users.”

In Chapter 4, I focus on the ways that the rise of a pharmaceutical culture lays the groundwork for the development and marketing of bup. I offer an analysis of the marketing incentives and disincentives for developing bup as way of explaining the unusual partnership between NIDA and Reckitt Benckiser, the manufacturer of bup, and the particular ways in which bup, addiction and the addict are constructed by Reckitt Benckiser. Unlike the development of many medications that is driven by pharmaceutical companies using medicalization to generate profit, I suggest that bup was an unusual case where the medication development was driven more by government than

corporate interests. However, once developed, Reckitt Benckiser constructs bup and addiction to maximize their profit by focusing on white, suburban users of prescription pain medications. I also argue that this focus reinforces a construction of addiction treatment, wherein particular kinds of users are seen as appropriate for treatment with bup in a medical setting. My analysis also suggests the pharmaceutical manufacturer goes to great lengths to distinguish bup from other potentially addictive opiates, a move made necessary by the history of addiction treatments becoming abused drugs and their interest in differentiating bup from the prescription pain medications that are the main driver of their target market. I conclude that manufacturer presents a hybrid notion of addiction that contains both medical and behavioral elements and constructs the “bup patient” as someone who responsible for both controlling the physical symptoms of their addiction and returning to a “normal life” marked by responsible, productive citizenship.

Chapter 5 offers an analysis of the ways in which addiction neuroscience constructs our understandings of the addict, addiction, and addiction treatments, like bup. Although the discovery of bup predates much addiction neuroscience, advocates of bup recast it in neuroscientific terms as a way to bolster its legitimacy and currency. Through an analysis of the scientific literature, I argue that researchers use neuroscience to explain issues they believe are central to addiction, including the regulation of pleasure, the loss of control and rationality, the role of environmental factors, and erosion of volition. They construct addiction as a chronic relapsing brain disease that is beyond the control of the individual and explicitly state that they hope this understanding will medicalize addiction in ways that lead to the end of drug-related stigma and criminalization. Despite these claims, they also construct addiction in ways that permanently mark addicts and make

them perpetually “risky” and susceptible to relapse. The neuroscientific construction of addiction also largely erases social and environmental factors, such as racism and poverty, and creates an understanding of addiction that is radically individualizing. Consistent with neoliberal and new public health emphases on individual responsibility for achieving health and wellness, the brain disease model of addiction works to make addiction and recovery from it the responsibility of the affected individual, while promoting a particular vision of what means to be “healthy” or “normal.”

In Chapter 6, I use an analysis of interviews with people with HIV who are also taking bup to explain how their lived experiences enfold, adapt and resist different constructions of addiction and of bup. I argue that individuals have complicated views of addiction as hybrid entity that includes physiological, psychological, environmental and social, spiritual, and moral elements. I also argue that most people in the sample understand bup in relation to methadone, a substance which many view as another drug that prevents them from living a “normal” life because of the way it makes them feel, the stigma that surrounds it, and a restrictive regulatory framework that disrupts their ability to work or take care of themselves and their families. Their embodied experiences of bup, in contrast, suggest that bup remains in a liminal state somewhere between a legitimate medication and drug. In general, people say that, compared to methadone, bup makes them feel more “normal” and, because they can take it at home, they are better able to engage in “normal” everyday activities (i.e., because they do not have to endure withdrawal, “score” heroin, obtain money for drugs, or attend a daily methadone clinic). However, both because bup creates physical dependence and because some people feel that it is “crutch” that prevents them from overcoming their addiction “on their own”

without the help of medication, bup's status remains ambiguous. Despite the importance placed on the role doctors and the medical setting by government regulators and the manufacturer, these factors are not a primary driver of individuals' perceptions of addiction as a medical condition.

Having offered an analysis of the ways individuals taking bup construct addiction as hybrid entity, in Chapter 7, I turn to an in-depth examination of how these understandings of addiction and of bup affect issues of agency and constraint. I suggest that the premise that medicalization fosters autonomy and reduces blame is false. Rather, I analyze the ways in which drug treatment generally and bup particularly create systems of constraint, particularly for individuals, like those in my sample, who are already at the margins of society. Threats of expulsion, close monitoring through urine toxicology screens, and requirements of frequent clinic visits all restrict the ability of individuals taking bup to act autonomously. However, I also show how people find ways of subverting these systems of constraint, such as taking "medication holidays," changing their doses, and fluidly moving between prescribed and street drugs. Just as they resist and adapt discursive constructions of addiction and bup, so too individuals resist and adapt the medical systems they enter into. I conclude Chapter 7 with a critique of the dichotomy found in many addiction studies between the "free addict" and the "constrained drug treatment patient" suggesting that we are all always operating within a system of constraints. My analysis suggests that bup operates as a "productive constraint" that allows individuals new possibilities for the exercise of agency at the same time it places limits on them.

In Chapter 8, I examine how the discourses about and embodied experiences of those taking bup reflect and challenge the larger sociopolitical context in which they are contained. Specifically, I argue that through the control of pleasure, the restoration of rationality, and the redirection of consumption, bup provides the conditions for neoliberal citizenship. The commonly expressed desire of individuals in my sample to “be normal” is one imbued with a specific notion of responsible, productive citizenship. Being normal means not experiencing too much pleasure, returning to work or school, and reentering the system of consumer capitalism. I argue that bup, in ways consistent with neoliberalism, increases the responsibility (and blame) of individuals, by reducing social problems to individual ones. While a medicalized notion of addiction treatment encourages the production of a neoliberal subject, it cannot and does not overcome the stigma, racism, and poverty that characterizes the lives of most of the people in my study. I conclude the chapter with a discussion of how our hybrid notions of addiction (as both a disease and a moral failing) resting within a neoliberal framework can result in segmented governance, where some drug users (white, affluent abusers of prescription drugs) are more likely to receive a medical intervention and others (Black, poor users of heroin) are more likely to receive either highly stigmatized methadone treatment or prison.

I conclude with a discussion of what the social construction of bup reveals about our relationship to drugs, medicines, addicts and addiction and what it reveals about U.S. drug policy. I suggest that bup is strategically deployed by a range of different actors to achieve particular political and economic ends. I examine what the differences between the differently constructed “buprenorphines” tell us about the processes of medicalization

and how addiction draws upon but also differs from other medicalized conditions. I also discuss the role of bup in shaping the self and what possibilities for agency and systems of constraint it generates. I end by examining the implications of this work for drug policy in the U.S.

Chapter 2: Conceptual Framework & Methods: Vantage Points on the Social Construction of Buprenorphine

Conceptual Framework

This project is informed by theories about the social construction of knowledge. As Berger and Luckmann (1967) argue in their landmark book, The Social Construction of Reality, all knowledge is socially situated and is created out of social interactions. The sociology of knowledge is concerned with analyzing the processes through which facts are produced. This dissertation is particularly concerned with the production of scientific and medical knowledge, a powerful force shaping our understandings. In fact, David (2005) argues that contemporary society is a knowledge society based on the penetration of scientific knowledge into all spheres of life. With increasing medicalization of society, medical knowledge is among the most influential forms of scientific knowledge (Zola 2005). One feature of scientific and medical knowledge is its claim to “objectivity,” that it is by design free from influence by social and cultural factors -- a stance antithetical to social constructionism. Weinberg and Turner argue that: “At the epistemological level, psychological approaches... suffer for their total lack of reflexive regard for the conditions of their own production” (2005: 200). My goal is not to prove that scientific facts are true or untrue; it is not their veracity which interests me. Rather, it is to expose the contexts in which facts about addiction and addiction treatment arise and how those contexts shape the ways that buprenorphine specifically and a medical model of addiction more generally are understood and acted upon.

Several scholars have done detailed analyses to explicate how specific medical conditions and the bodies of knowledge surrounding them have been social constructed

(see for example, Epstein 1996; Lewis 2003; Katz Rothman 1982; Timmermans 1999). For example, Katz Rothman (1982) demonstrates that obstetrical knowledge is socially situated and has a clear political, historical and social context that has led to the increasing medicalization of birth. These kinds of studies illustrate both how much is at stake in shaping knowledge and how knowledge is shaped by contests over meaning or as Conrad and Schneider (1992) call it, “the politics of designation.” Epstein (1996), writing about AIDS, asserts that knowledge is a collective product that emerges out of credibility struggles. Credibility struggles about bup and how it is collectively constructed are the subject of this dissertation.

Related to Epstein’s notions that knowledge is a collective product is David’s (2005) assertion that those things we call “empirical facts” are influenced by a range of social factors and actors. For this dissertation, I am adopting David’s theoretical framework of *reflexive epistemological diversity*, which acknowledges that no singular community of knowledge can claim to capture the whole truth from within their own realm of expertise. To understand a fact, we must adopt a skeptical questioning of all standpoints and seek understanding by looking at a thing from multiple perspectives. In her book, The Body Multiple, Mol (2002) examined the ways in which atherosclerosis was enacted by several different departments in a hospital. She concluded that there was no one True atherosclerosis but rather an assemblage of coordinated understandings -- each enacted differently but connected. My goal is to similarly expose different understandings of bup and the relationships between them.

In the case of addiction, the boundaries between medicine, government, and industry have always been porous, and it is within these fields that I will seek to

understand the many meanings of bup. I will explore how key claims-makers are enacting and constructing bup, in particular, and addiction and addiction treatment more broadly. Specifically, I will look at the perspectives of government regulators, the pharmaceutical industry, researchers, and people taking bup. For example, I will examine literature on the neuroscience of addiction to uncover how its contours, arguments, inconsistencies, and gaps construct a particular understanding of addiction and how that understanding reflects larger moral and political projects. In the words of Kushner, I hope to reveal “dominant social values in the guise of science” (2006: 127).

Science is never alone in making meaning, and increasingly science and the state work hand in hand to establish regulations and set policy. Rosenberg has argued that medicalization:

... remains complex, inconsistent, and contingent, even if expansive and increasingly pervasive. The relationship among disease concepts and painful or socially problematic behaviors have been and are being contested and recontested... in countless clinical, bureaucratic and administrative contexts (2006: 409).

This is especially true in the arena of drug policy, which has long drawn upon seemingly contradictory medical and regulatory frameworks, including a vast and complex system of criminal justice interventions that rely heavily on medical knowledge (see Tiger 2008; Tiger 2011). In the case of bup, significant legal and regulatory change was required to bring it to market, and the scientific community worked closely with government agencies to produce a set of regulations that reflect the interests of both. Through close examination of the regulatory documents and the Drug Addiction Treatment Act of 2000, I hope to show both the historical genealogy of how bup came to be the only medication that can be prescribed by physicians to treat addiction to opioids and how government

agencies and actors have framed bup and addiction in very particular ways to meet their professional and political interests.

I also build upon the work of scholars who have illustrated that pharmaceutical knowledge is an especially rich area in which to explore social constructionism. Busfield (2006), for example, investigates how the economic and political power of the pharmaceutical industry has led to their almost complete control over the production of pharmaceutical data and pharmaceutical “facts.” This control over knowledge about medications, their efficacy, and their safety is directly linked to the culture of pill-taking that permeates contemporary society (Busfield 2006). Parrish (2003) extends Busfield’s argument to suggest that the government serves an integral role in validating and enforcing the knowledge being produced by the pharmaceutical industry. In the case of bup, I will examine the role that its manufacturer played in changing U.S. drug policy to promote its product, the complex relationships between industry and the scientific community, and how bup is framed and constructed through the strategies used to market it.

I am interested, not just in pharmaceutical knowledge, but also in the social construction of pharmaceutical objects – medications. Closely aligned with theories about the social construction of knowledge are those involving the social construction of objects. Simply put, objects are socially and historically situated and reflect larger social, cultural and political forces. For example, Cohen et al. (2001) argue that medications are socially embedded objects with biographies and multiple meanings depending on standpoint. They suggest that to understand the ideological and cultural dimensions of a medication we must take into account subjective experiences of those who use the

medication as well as representations, the power relations, and interests among the actors involved in its production and use. Similarly, Lewis (2003) argues that we must articulate the social, cultural, and political dimensions of medical technologies, like Prozac. While pharmaceutical companies, researchers, and advertisers seek to lay claim to objective scientific Truth about Prozac, Lewis suggests that there are many different situated truths about the drug and that the discourse that surrounds Prozac is never neutral. My project will attempt to uncover the situated truths about buprenorphine and to uncover their social, political, and economic dimensions.

While I rely heavily on the tradition of social constructionism, it is not without its weaknesses or critics. Shilling (2003), in tracing the history of social theory, notes a dualism between naturalism (which he says overstates the importance the material body and leads to dangerous forms of essentialism) and social constructionism (which he says reduces the body to discourse or purely social forces). Weinberg and Turner (2005) and Gootenberg (2005) argue that addiction studies specifically are bifurcated between social constructionist studies that reduce addiction to representation and biomedical studies that rely on naturalism or biological essentialism. Weinberg and Turner further argue that a key limitation of social constructionism is its failure to account for the very real embodied experiences of many of those labeled as addicted or insane:

Given the pervasive evidence that people treated their own and each other's insanities and addictions as causally influential things-in-the-world, I have not felt entitled to trade on sociological theories that systematically debunk such notions by reducing insanities and addictions to myths, discursive categories, narrative accounts, or social roles (2005: 127).

Others, like Rothman (1990), have critiqued approaches that focus on the production of knowledge as being more concerned with rhetoric than reality. Similarly, Barad criticizes

the assumption she feels is inherent in social constructionism, “the asymmetrical faith in our access to representation over things... a Cartesian habit of mind” (2003: 806-807).

She rejects the ontological distinction being made by social constructionism that there are two kinds of entities -- representations and those things (presumed to be more real) that are being represented. She suggests we need to look more critically at the relationship between the social and the scientific as the relation of the “exteriority within” (2003: 803).

To overcome some of these concerns, I draw on the sociology of body in order to foreground the embodied and subjective experiences of individuals and the ways those embodied experiences are both shaped by and help shape discourse and representation. A focus on embodiment is also important because the body is seen as increasingly constitutive of the self (Shilling 2003). In addition, the body is what makes human agency possible – it is the place from which individuals can seek to transform themselves and their social worlds. In both of her books, Pitts-Taylor (2003, 2007) bridges the gap between representation and embodied experiences by exploring the ways in which specific discourses (e.g., those about body modification and cosmetic surgery) reach the psyche and identity of the subject and are used to define the self. She also explores how the embodied experiences of the subject in turn reshape those discourses. It is this kind of analysis that I do using interviews with individuals taking bup. I am especially interested in how different claims about bup are understood, interiorized, adapted, and/or resisted by people who take bup and how their embodied experiences of the medication reshape their understandings.

How understandings about addiction and bup are interiorized is especially interesting because it helps inform theories about biopower and governmentality, which are also the subject of this dissertation. In Birth of the Clinic, Foucault (1973/1994) elucidates the relationship between medical discourse and the structure of power in society. He notes that knowledge-power is organized around the body (individuals) and bodies (populations). These systems of language and knowledge structure *what* we can know and *how* we can know ourselves. We may be able to modify our bodies and remake our selves, but we are both produced and constrained by existing categories and forms of knowledge. Scholars also argue that knowledge-power increasingly operates through exercise of liberal autonomy. In Governing the Soul, Rose (1990) traces the history of what he calls the “psy sciences” to show that the power-knowledge regime that operates today is a hermeneutics of the self. That is, selves are constructed in psychological terms and subject to self-inspection, examination, and actualization. This form of knowledge makes it possible to govern people in ways compatible with principles of liberalism and democracy. Citizenship is manifested through the exercise of free choice among marketed options, which are experienced as personal desires.

The work of Rose builds upon the Foucauldian ideas of biopower and governmentality. Biopower refers to strategies for intervening upon collective existence in the name of life and health (Rabinow and Rose 2006). Compared to more traditional forms of top-down power, power today is more diffuse and operates in ways that encourage individuals to govern themselves through the internalization of certain discourses. Rabinow and Rose (2006) argue that the psy sciences have produced modes of subjectification in which individuals are brought to work on themselves in the name of

individual or collective life or health. Lupton (1995) makes a similar argument, suggesting that it is public health discourse (along with public health's considerable power of enforcement) that encourages governmentality by uniting the public in a quest for self-improvement. Public health plays a key role in rationalization, normalization, and social ordering. And by appealing to widely held norms, like "better health," it encourages individuals to continually police themselves and their own health. These kinds of theories are especially interesting to explore in the context of addiction, which relies on ideologies of self-improvement and health, on the one hand, and more repressive forms of power, like incarceration, on the other.

Several scholars have applied the work of Foucault, particularly his notions of biopower and governmentality, to the study of methadone (see, Bergschmidt 2004; Bjerg 2008; Bourgois 2000; Gomart 2002, 2004; and O'Malley and Valverde 2004), though to date none have explored it in relation to bup. Using this theoretical frame to analyze interviews with individuals taking bup, I explore how constructions of bup and addiction support and challenge these theories, how they constrain agency, and how they also offer new opportunities for freedom and action. In particular, I expand the work of Rose and Foucault to understand the drive of drug users to become "normal" and what kinds of agency are possible for the "normal" self in contemporary neoliberal society.

Methodological Approach

In the *Craft of Inquiry*, Alford (1998) argues that using a broad range of theoretical and methodological choices and integrating different paradigms in a dialectical manner produces the richest research. My project integrates different

approaches, while relying heavily on an interpretative framework. Based in symbolic-interactionism, an interpretative approach foregrounds empirical observations about human interactions with theoretical concerns about their symbolic meaning. I rely on several data sources, but one key source of data are in-depth qualitative interviews which are the focus for the second half of this dissertation. According to Rubin and Rubin (2005), qualitative interviewing as a methodological approach emphasizes the relativism of culture and an interpretative approach to social knowledge. The goal is to understand how people understand their world and create shared meanings. As such, this method is well suited both to my research questions and my epistemological stance. My methodological approach is also informed by Becker (1998), who urges researchers to maintain a dynamic dialect between theory and data. As I describe in more detail below, I approached the data with some preconceived ideas but also allowed for new themes and contradictions to emerge from the data. My methods are also shaped by a commitment to placing the voices of drug users at the center of this research. Drug users are a highly stigmatized and often stereotyped group. While theirs is just one perspective and one construction of reality, it is one too often left out of research about addiction (Neale, Allen and Coombes 2005).

Data Collection Strategies

My data collection strategies include:

- Review of regulatory documents including the Federal Register and the Congressional Record as well as materials produced by the Food and Drug Administration (FDA), National Institute on Drug Abuse (NIDA), the Substance Abuse and Mental Health Services Administration (SAMHSA), the Drug Enforcement Agency (DEA), and the American Society of Addiction Medicine (ASAM) and supporting documents that resulted in the reclassification of bup as a schedule III medication and the passage of the Drug Addiction Treatment Act of 2000.

- Review of websites and materials about bup produced by the pharmaceutical manufacturer of bup, Reckitt Benckiser.
- Review of NIDA's website, NIDA publications, and articles from the scientific and medical literature about bup and neuroscientific approaches to addiction treatment.
- Qualitative interviews with individuals being treated with bup.

The Buprenorphine & Integrated HIV Evaluation and Support (BHIVES) Program

Data for the qualitative interviews with people taking bup were collected by The New York Academy of Medicine (NYAM), a research institution where I am employed. Under the auspices of the NYAM Institutional Review Board (IRB), staff there conducted a five-year, national multi-site evaluation of ten programs that were integrating bup treatment into HIV care settings (known as the BHIVES study). I served as the study's project director for the first half of the study and was integrally involved in the development of all study protocols and instruments as well as the data collection.

BHIVES, which completed data collection in September of 2009, was a mixed methods study that collected qualitative and quantitative data from HIV-infected individuals receiving bup and the healthcare providers who were treating them. The BHIVES study consisted of ten different evaluation sites and one Evaluation and Support Center based at NYAM that ran the multi-site evaluation and offered technical assistance and training to the local sites. At the time the study was initiated, bup treatment was very new, and only one of the sites had experience in delivering bup care, though all were longstanding and experienced HIV care providers. The sites were located throughout the U.S. and included academic medical centers (n=7), community based clinics (n=2), and a public hospital. The sites were allowed significant autonomy in the design of their

programs as long as they offered integrated HIV medical care and bup treatment for opioid dependence, and this resulted in considerable variation in how bup treatment services were delivered. Of the ten sites, 7 participated in the qualitative study of individuals taking bup from which data for this dissertation are drawn (see Table 1).

Table 1: BHIVES Sites Participating Qualitative Study

Lead Site	Lead Site Characteristics	Location
Ruth M. Rothstein CORE Center	Public Hospital	Chicago, Illinois
El Rio Community Health Center	Community Health Center	Tucson, Arizona
Miriam Hospital Center	Academic Medical Center	Providence, Rhode Island
Montefiore Medical Center	Community Health Center within Academic Medical System	Bronx, New York
Oregon Health & Sciences University	Academic Medical Center	Portland, Oregon
University of California at San Francisco	Academic Medical Center	San Francisco, California
Yale University	Academic Medical Center	New Haven, Connecticut

Source: Adapted from Weiss, Egan et al., 2011

The objective of the larger BHIVES study was to develop and evaluate programs that integrated bup treatment into HIV care, since there is a high prevalence of opioid use among people living with HIV. While there are no definitive numbers of people living with HIV/AIDS (PLWHA) currently addicted to heroin and other opioids, data suggest that problems of drug use and addiction are widespread among PLWH/A. Overall, the CDC estimates that injection drug use (IDU) accounts for approximately 36% of cumulative AIDS cases in the U.S. (CDC 2001). A nationally representative sample of

PLWH/A in care found that close to 40% reported using an illicit drug other than marijuana and 12% were drug dependent (Bing et al. 2001). Given the prevalence of opioid dependence among people with HIV, integrating bup treatment into HIV care was seen as a promising way to increase access to drug treatment for a group likely to need it. The main focus of the study was a quantitative evaluation (based on patient surveys and medical chart abstractions) about the feasibility of using bup within HIV care settings and whether integrated bup treatment and HIV care reduced drug use, increased retention in both bup treatment and HIV care, and improved health outcomes. The primary outcomes of the quantitative study have been published elsewhere (Altice et al. 2011; Fiellen et al. 2011; Weiss et al., 2011).

Qualitative Interviews

In addition to the quantitative study, investigators received supplemental funding to conduct a smaller, qualitative study about individual's perceptions and experiences of integrated bup treatment and HIV care. The analysis for this dissertation is centered on qualitative data collected from this sub-study. I received permission from the study's Principal Investigator to use these data for my dissertation, and the CUNY IRB has determined that, as a secondary data analysis, this project was exempt from further IRB review. Semi-structured, face-to-face interviews were conducted with 37 HIV-infected individuals who had been successfully started on bup treatment at one of the participating BHIVES study sites. The interview protocol included questions on the participants' background and drug use history; attitudes and motivations regarding cessation of drug use; perceptions of bup and bup treatment; experience with other treatment modalities, including methadone; advantages and disadvantages of integrating substance abuse

treatment into HIV care; opinions on ancillary services including counseling and groups; and perceptions of their HIV, physical, mental health and overall quality of life before and after initiating bup treatment. This protocol was designed to guide but not limit the discussion; interviewers had freedom to explore additional emergent themes. Interviews were conducted in private rooms at the study site. Participants received a \$25 gift card as reimbursement for their travel and in recognition of the efforts made to attend the interviews. Interviews lasted approximately one hour, were audio recorded, and professionally transcribed.

Overview of the Qualitative Interview Sample

Study participants were recruited by, and at the discretion of, local project staff. Participation was voluntary, and all participants signed an informed consent form. Any person who was part of the larger study (N=340) and had been prescribed bup was eligible to participate as long as they spoke English. Eligibility criteria for the larger quantitative study included being HIV-positive, being diagnosed with opioid dependence, able to speak either English or Spanish, and able to consent (i.e., not mentally or cognitively impaired). Because of the medication being prescribed to some participants, pregnant women were excluded from participation as were individuals on high doses of benzodiazepines or with poor liver function. See Table 2 for a full list of inclusion and exclusion criteria.

Table 2: Participant Eligibility & Exclusion Criteria

<p><u>Inclusion</u></p> <ul style="list-style-type: none">• Willing and able to consent to study procedures• Speak either English or Spanish• Age 18 or over• HIV infected• Meets DSM IV criteria for opioid dependence
<p><u>Exclusion</u></p> <ul style="list-style-type: none">• Pregnant• Liver function tests 5 times normal level or great• Benzodiazepine dependence or abuse in the prior six months• Alcohol dependence• High doses of methadone• Suicidal or severe psychiatric impairment• Inappropriate according to provider's clinical judgment

Source: Weiss, Egan et al. 2011

The sample for the qualitative study was geographically diverse and includes individuals located in the South, West, Northwest, Northeast, and Midwest of the United States. Sixty-six percent of the sample was male. Over half of the participants were African American (58%); 19% were white; and 17% were Latino. Participants had an average age of 47 years and reported using heroin for an average of 22 years. Eighty-one percent were unemployed and 25% were homeless at the beginning of study.

Demographically, there were no significant differences between the people who participated in the qualitative study compared to the larger BHIVES study who had also started bup (see Table 3). However, those in the qualitative study were 3 times less likely to report opioid use while in treatment ($p < .01$) (Egan et al., 2011). The better drug use outcomes are likely due to a sampling bias, since those most likely to participate in the qualitative interviews were individuals who were connected to care (i.e., they had not

dropped out of treatment). Furthermore, it is possible that site staff responsible for recruitment selected the most successful clients.

Table 3							
Qualitative vs Quantitative Sample Baseline Characteristics							
	Qualitative Sample		Quantitative Sample		χ	p	
	(n = 37)		(n = 303)				
	n	%	n	%			
Gender							
-Male	24	64.9	205	67.7	0.09	ns	
-Female	13	35.1	98	32.3			
Ethnicity/Race							
-White	7	19.4	68	22.7	3.01	ns	
-Black	21	58.3	154	51.5			
-Latino	6	16.7	67	22.4			
-Asian	0	0.0	3	1.0			
-Other	2	5.6	7	2.3			
Age at Study Enrollment							
					F	p	
Mean	46.9		45.2		1.14	ns	
SD	7.9		8.1				
Education							
-LT High School	17	46.0	128	42.4	0.31	ns	
-HS Grad/GED	11	29.7	104	34.4			
-College	9	24.3	70	23.2			
Employment Status							
-Unemployed	30	81.1	225	74.3	0.76	ns	
-Employed	7	18.9	78	25.7			
Self-reported Homelessness							
-Housed	27	74.9	227	74.9	0.08	ns	
-Homeless	10	25.1	76	25.1			
Note: Tests of significance compared qualitative sample to non-qualitative sample of participants taking bup at baseline sample.							

This sample is not representative of all people taking bup, but the goal of this dissertation is not to generalize but rather to explore the interpretative meanings and ways in which individuals understand addiction and psychopharmaceutical treatment for addiction in the context of a medical setting. As such, this sample is particularly well suited to my research questions because of their intensive exposure to both drug treatment and medical systems. Their older age and length of time using with heroin, their HIV status, and their relative success with bup treatment all suggest that they are inculcated into medical paradigms, have exposure to traditional drug treatment (i.e., behavioral approaches and methadone), and have at least some experience with bup treatment. These are precisely my issues of interest.

Document Analysis

In addition to my analysis of qualitative interviews with people taking bup, I also conducted an analysis of regulatory, scientific, and marketing documents about bup. To elucidate how bup is both being framed by and framing contemporary notions of addiction and addiction treatment, I looked at documents generated by three key constituents influential in shaping the discourse surrounding the prescription of bup by doctors for addiction treatment: 1) governmental agencies, 2) the pharmaceutical manufacturer of bup, and 3) addiction researchers. I focused on the period prior to and several years following the passage of DATA 2000, when the legislative changes and implementation of bup treatment were being intensively discussed and written about by government and addiction medicine specialists. I collected many of these documents in the course of my work at NYAM and conducted additional reviews of the websites of the following government agencies and sources: 1) Food and Drug Administration; 2) Drug

Enforcement Agency; 3) Substance Abuse and Mental Health Services Authority; 4) the Office of National Drug Control Policy; and 5) the Federal Register and Congressional Record. To ensure that I capture all discussions in the Federal Register and Congressional Record, I performed searches of www.gpoaccess.gov using the search terms: “DATA 2000,” “Drug Addiction Treatment Act,” “Reckitt Benckiser” and “Reckitt and Coleman” (the two names of the pharmaceutical manufacturer of bup), and “buprenorphine” between 1995-2010. I also closely reviewed materials produced by the National Institute on Drug Abuse (NIDA), which dictates much of the direction of addiction research in this country. To identify scientific documents, I conducted searches of PubMed, using the search terms “buprenorphine” and “addiction” and “neuroscience.” Documents produced by the maker of bup, Reckitt-Benckiser, were collected by searching the world wide web, paying particularly close attention to two of the websites they sponsor: 1) www.suboxone.com (a patient- and provider-focused site they maintain); and 2) their corporate website www.rb.com (which provides financial data about their pharmaceutical division). While other forces clearly shape social constructions of addiction (e.g., media, political groups, patient advocacy organizations), bup is relatively new in the U.S., and few people beyond government agencies, researchers and those marketing it are currently writing about this drug. The social construction of bup is, at the moment, being controlled primarily by these government agencies and industry groups, and, therefore, these are the subject of this analysis.

It should be noted that physicians who prescribe bup are another interesting source of data. In fact, the BHIVES study did collect both quantitative and qualitative data from physicians about their experiences prescribing bup. Some of these data have

been published elsewhere (Netherland et al. 2009; Weiss et al. 2011), and it is beyond the scope of this project to do a more in-depth examination. Instead, I analyze the role of physicians from the perspective of the individuals they treat (see Chapter 6).

Data Analysis

I was given de-identified transcripts from BHIVES staff that were prepared by a professional transcriber. I imported these into Hyper Research, a software program for analyzing qualitative data. Using a grounded theory framework (Glaser & Strauss 1967; Strauss 1997), I developed a preliminary coding scheme incorporating themes from my knowledge of the field, my research questions, and a review of the first five transcripts. Using these preliminary codes, I coded five transcripts to see how well the codes fit and then added additional codes to account for themes that emerged but were missing from my original code list. I subsequently added a few additional codes when new themes emerged. My approach was not to test hypotheses but rather to build theory from data, looking for underlying themes and then linking these together to form a theory (Rubin & Rubin 2005). At several points during the analysis, I returned to the data to seek out inconsistencies or counter-examples that did not fit my conceptual schema. This allowed me to expand and refine my theories (Becker 1998; Rubin & Rubin 2005).

In reviewing documents about bup, I was primarily concerned with interpreting the meaning of discourse - what were the images and analogies used, what were the recurrent themes, and what was the content and techniques of the arguments being made. My approach is not a quantitative content analysis that focuses on the frequencies of words in order to test hypotheses. Rather my approach is a qualitative content analysis that emphasizes textual analysis to generate theories (Daniels 1993). I noted words,

images and recurring themes (e.g., the use of “brain disease” or analogies between addiction and other chronic conditions, like diabetes). From these themes I developed theories, which, like the interview data, were tested by specifically seeking out counter examples.

Limitations

This project has some limitations. The data for this work were collected with a different purpose in mind and, as qualitative data based on a convenience sample, they are not generalizable. In addition, the interviews with people taking bup are drawn from a population of individuals who are also HIV-infected. Although these data were collected for a purpose other than this dissertation, I was involved in the development of all the instruments and particularly the qualitative interview guide. This allowed me to include questions relevant to my research interests. While the sample is a convenience sample and was never meant to be generalizable, almost all of the participants compare their experiences on bup to methadone and other forms of drug treatment. This allowed me to look at how their understandings and experiences of bup differed from those of other drug treatment. As noted above, the fact that participants were living with HIV/AIDS makes this sample unique but also serves my research interests well. This is a group of individuals who for the most part had long been involved in medical systems, which allowed me to explore more in depth if and how they understood this new form of treatment and addiction more generally in medical terms. This project is primarily interested in the processes of medicalization; therefore, data from the BHIVES study, which was interested in how addiction treatment could be integrated into medical settings, is well suited to my research questions.

Conclusion

Using the data sources described above, this project examines bup as a new attempt to medicalize addiction. Specifically, I explore the following questions:

- 1) How does buprenorphine affect attempts to medicalize addiction?
- 2) What does an analysis of the social construction of buprenorphine reveal about the processes and conditions of the medicalization of addiction?
- 3) How do people being medically treated for addiction understand medical and neuroscientific frameworks? In what ways do they resist or adapt these frameworks?
- 4) What kinds of new constraints and possibilities for agency and resistance are possible for those taking bup?

To answer these questions, I approach bup as a case study in the medicalization (or re-medicalization) of a social problem. As the conceptual framework above suggests, knowledge is produced and phenomena are enacted by multiple actors. Therefore, I examine bup from different perspectives (government agencies, the pharmaceutical manufacturer, and addiction researchers), paying close attention to how bup “patients” themselves understand, assimilate, resist or change these varied perspectives and constructions.

My analysis focuses on key drivers of medicalization. Institutions, like the government or industry, operate through and in conjunction with the prevailing logics that under-gird our understanding of addiction. Therefore, I look at the influence of the state in shaping bup by examining the role that specific agencies (e.g., the Drug Enforcement Agency and the National Institutes of Drug Abuse) played in the

classification and FDA approval of bup (which allowed it to be treated differently than methadone).

As indicated above, the pharmaceutical industry is an ever more important force for medicalization. Until late 2009 when a generic form was developed, bup was manufactured solely by Reckitt Benckiser, a multi-national company that primarily produces household cleaning products. They played an instrumental role in lobbying the U.S. government to reclassify bup from a schedule V to a schedule III medication, insuring that it would not be subject to the same constraints and regulations as methadone. However, in many ways, Reckitt-Benckiser is not a typical pharmaceutical company. Through an exploration of Reckitt-Benckiser's role in the scheduling and marketing of bup, I uncover their particular "pharmaceutical reason" (Lakoff 2005) as well as their role in the social construction of bup. Through this analysis, I also examine how these discourses reinscribe or subvert existing ideologies of race and class.

Science is another powerful force of medicalization. By laying claim to objectivity, science also lays claim to a power and authority to define and control reality (Wilkerson 1998). Epstein (1996), building on the work of Latour and Woolgar (1986), demystifies the biomedical research process by uncovering the subjective decision-making, uncertainty, and murkiness that is inevitable in the production of scientific facts. Although bup was first examined as an addiction treatment in the late 1970's long before the ascendancy of addiction neuroscience, in recent years it has been recast in neuroscientific terms. I look at the ways that bup and addiction more generally are reframed in the scientific literature, explore what kinds of ideologies that literature reflects and produces, and discuss the implications of those ideologies.

Within the literature on addiction, there is a great deal of well-placed critique on our systems of treatment and punishment, but comparatively less attention paid to the embodied and subjective experiences of addicts. By exploring the subjective experiences of people taking bup, I reveal how the medication shapes their senses of self and/or how they use the experiences of bup to shape new identities. Medicalization is not generally done to people but more and more is something in which people actively participate. However, this does not mean that individuals fail to resist or adapt medical models. The final chapters of this dissertation are concerned with exploring the relationship between medical frameworks and individual agency.

Taken together, this analysis of regulatory, marketing, scientific and individual constructions of bup provide rich insight into the processes of medicalization as well as forces that undermine or resists medical frameworks. There is not One True Buprenorphine. In the chapters that follow, I reveal many different buprenorphines and in doing so add to our understanding of medicalization and the role of individuals in interiorizing and resisting these processes.

Chapter 3: Regulating Addiction: The Drug Addiction Treatment Act of 2000, Buprenorphine and Contests Over Meaning

Introduction

In 2000, the Drug Addiction Treatment Act (DATA 2000) was signed into law ending an 80-year prohibition against doctors prescribing narcotics for the treatment of drug addiction in office-based settings. Prior to DATA 2000, the only way to be medically treated for opioid dependence was through the highly regulated and stigmatized methadone clinics – a system intentionally and almost completely cut off from mainstream medicine. In contrast, under DATA 2000, anyone can go to any certified doctor to get a prescription for bup and treat their own addiction in the privacy of their own home. This extraordinary change in drug policy and treatment practice was possible only through the cooperation and coordination of three powerful forces: government agencies, addiction medicine professionals, and the manufacturer of buprenorphine, Reckitt Benckiser. The overlapping relationships, interests, and logics shared by these three groups -- along with the wider ascendancy of neuroscience, acceptance of pharmaceutical treatments for behavioral problems, and understandings of addiction as a disease – made possible one of the most remarkable changes in U.S. drug policy in decades. I argue that this change in drug policy was propelled by the promise of a new treatment medication, buprenorphine. Though only modestly different from methadone, buprenorphine was constructed strategically and differentially by a range of stakeholders in an effort to launch a new system drug treatment and a new medical understanding of addiction.

However, to suggest that these stakeholders hold a uniform or even an internally consistent understanding of addiction is misleading. Rather, while powerful interests did align to make its passage possible, the story of DATA 2000 reveals the contradictory and ambivalent drug policies of the U.S. in which medical, criminal and moral understandings of addiction continue to coexist, often uneasily. For bup to become the first office-based addiction treatment in 80 years, four federal agencies and the U.S. Congress had to wrestle with what a shift towards a more medically-based approach to addiction treatment would mean and how it could be justified given the coexistence of a vast system of criminal sanctions to address drug use.

In this chapter, I will look at the influence of the state in shaping bup by examining the role that specific agencies (e.g., Substance Abuse and Mental Health Services Administration, Food and Drug Administration, the Drug Enforcement Agency and the National Institutes on Drug Abuse) played in the classification and FDA approval of bup (which allowed it to be treated differently than methadone). I will also offer a detailed analysis of the congressional record surrounding the passage of DATA 2000. Because of their close relationship with government agencies and their part in implementing key elements of DATA 2000, I will also briefly discuss the role of the American Society of Addiction Medicine (ASAM).

The construction and regulation of bup as a medicine by state actors rests on defining opioid addiction as a disease amenable to pharmacological intervention and shifting the responsibility for treatment to physicians. As I will discuss later, the brain disease model of addiction has grown in prominence in recent years along with the ascendancy of neuroscience and pharmacological treatments for psychiatric disorders.

This trend has both been shaped by and shapes government agencies charged with dealing with addiction, addiction treatment, and the regulation of drugs and medicines. For instance, in a 1980 NIH publication, Research Monograph on Theories of Addiction, biomedical models were given little attention compared to behavioral and psychological theories (Lettieri et al. 1980). In contrast, in 1997, NIH issued a consensus statement on the treatment of opioid addiction that claimed:

Through careful study of its natural history and through research at genetic, molecular, neuronal and epidemiological levels, **it has been proven that opiate addiction is a medical disease** characterized by predictable signs and symptoms (NIH 1997: 10). [emphasis added]

As I discuss in Chapter 5, NIDA was intimately involved in promoting a brain disease model of addiction through both its research and educational agendas. In the 1990's when lobbying for DATA 2000 began, addiction neuroscience was still relatively new, but NIDA's commitment to bringing addiction treatment under the purview of physicians is longstanding. NIH clearly states its intention to "invigorate the medical profession to become more involved with drug abuse issues" (Volkow u.d.). It is not surprising, therefore, that they also played an active role – in fact, a central role -- in the passage of DATA 2000 and bringing bup to market.

The passage of DATA 2000 and subsequent rescheduling of bup that allowed it to be used for office-based treatment is marked by several key events and documents that I will discuss in turn. These include: 1) the publication of the National Institute of Health's (NIH) Consensus Statement on the Effective Medical Treatment of Opiate Addiction; 2) the Center for Substance Abuse Treatment's National Advisory Council statement; 3) the congressional debates and testimony that led to the passage of DATA

2000; 5) the DEA's rescheduling of bup; 6) the FDA's approval of bup for the treatment of opioid dependence; and 7) the American Society of Addiction Medicine's (ASAM) implementation of one of the first training for physicians required under DATA 2000. While they differ in important ways, an analysis of these events and the documents that surround them shows that each of these actors wrestles with the same key issues, such as whether addiction is a disease or a crime and whether bup is a medication that can be distinguished from methadone and heroin. They also reveal the ways in which the disease model of addiction and the pharmacology of bup are used differently by different actors to advance their agendas. These dynamics are best understood in the context of a brief overview of the history of opiate regulation in the U.S.

History of Addiction Treatment Regulation in the U.S.

The distinction between legal medicines and illicit drugs is relatively recent and changes over time. Indeed, the history of opiates is one of new formulations brought to market to treat addiction to older formulations. Substances that start out as therapeutic medicines become drugs of abuse. How these distinctions between medicines and drug are made, maintained and challenged has everything to do with the prevailing logic about addiction as well as the professional, political and economic forces of a given era. And while these distinctions are largely historical and artificial (heroin has been both a medicine and a drug), they become enormously significant because of the social, cultural and legal meanings and actualities we attached to them.

In the 1800's, any adult could buy any medicinal product made by any manufacturer for any reason (Parrish 2003). Our current system of regulating,

prescribing, and controlling medication evolved in the early 1900's beginning with the passage of the Harrison Narcotics Act in 1914. Designed in part to raise revenue and in part in response to efforts to professionalize medical practice, the Harrison Act required the registration and licensing of pharmacists, physicians and manufacturers; levied taxes on the sale of medicines; and restricted the sale and use of narcotics to those prescribed by a physician for a medical reason (Parrish 2003). For the first time, narcotic use was divided into legal use for a medical purpose and criminal use.

Having restricted the sale of opiates to medical use, the Harrison Act created a controversy over whether using opium or morphine to maintain an "addict's" supply was a legitimate medical use (Weinberg & Turner 2005). It raised a question that remains in play today -- is addiction a medical condition that should be "treated" by prescribing either the substance to which the person is addicted or a substitute/treatment medication? Are "substitution" therapies a legitimate treatment for a medical disorder or is it just another way of dealing drugs? The Treasury Department,⁴ then charged with the enforcement of the Harrison Act, argued that prescribing opiates to addicts did not constitute medical treatment and that doctors who made such prescriptions could be arrested for narcotics trafficking. In 1919, just months before alcohol prohibition took effect, the U.S. Supreme court concurred with the Treasury Department, and in 1920, the American Medical Association condemned the prescribing of opiates to addicts (Jaffe & O'Keefe 2003). Physicians could then, as now, prescribe narcotics for medical reasons *other* than treating addiction, and the prescription of opiates for pain remains a

⁴ Early efforts to control substances focused on taxation strategies. Therefore, the regulation of narcotics began as a function of the Treasury Department. The Federal Bureau of Narcotics was created in 1930 but still operated under the Treasury Department. As drug control efforts focused more on law enforcement strategies, new administrative structures were created at the federal level, including the U.S. Interdepartmental Committee on Narcotics in 1954 and the Drug Enforcement Agency in 1973.

widespread practice. Heroin, for example, though it could not be legally manufactured in the U.S. after 1924 (DeGrandpre 2006), could still be legally prescribed for conditions other than addiction until the Narcotic Control Act of 1956 (Carnwath & Smith 2002). Even today, opiates like methadone, can be prescribed by a physician for pain but *not* to treat addiction (unless through the highly regulated methadone clinic system). With these regulatory changes and without the support of the American Medical Association, physicians quickly withdrew from having any formal role in addiction treatment. Rather than being seen as a medical condition that could be treated by doctors using prescribed narcotics, overcoming addiction came to be seen largely as a matter of transforming people's will and behavior (Carnwath and Smith 2002; White 1998).

Following the passage of the Harrison Act, U.S. drug policies generally became more punitive and oriented towards a criminal justice rather than a medical approach. In the 1950's, minimum mandatory sentences were imposed for selling opium, coca, cannabis and their derivatives. And in 1970, the Comprehensive Drug Abuse Prevention and Control Act (also known as the Controlled Substances Act) established a 5-tier scheduling of drugs by the Drug Enforcement Agency purportedly based on the substance's potential for abuse, accepted medical use, and accepted safety under medical supervision. For example, heroin is classified as a schedule I substance because it is seen as having a high abuse potential and no legitimate medical use. Methadone, in contrast, is a schedule II narcotic because, although it is seen as having a high abuse potential, it also has purported medical value (both for the treatment of opioid dependence and pain). However, as a schedule II substance, it remains highly regulated. See Table 4 for examples of narcotic scheduling.

Table 4: Examples of Narcotic Scheduling Under the Controlled Substances Act

Most restrictive ←-----→		-----→ Least restrictive		
Schedule I	Schedule II	Schedule III	Schedule IV	Schedule V
Heroin	Methadone	Buprenorphine	Low dose formulations of codeine	Cough suppressants with codeine
	Opium	Buprenorphine with naloxone		
	Morphine	Hydrocodone (Vicodin)		
	Fentanyl			
	Oxycodone (Percoset)			
	Codeine (certain formulations)			

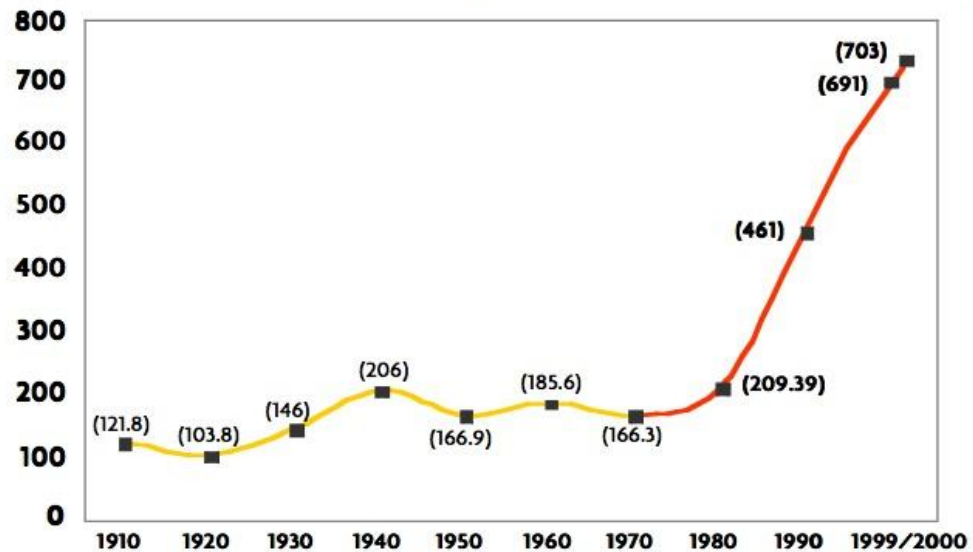
NOTE: Scheduling based on purported abuse potential and currently accepted medical uses

The Controlled Substances Act (CSA), which plays a central role in the social construction of bup, was considered an unhappy compromise even when it was passed because it embodied all of the tensions and ambivalence in our relationships to substances and to drug policy more generally. Courtwright (2004: 11-12) argues that the CSA framework was intentionally flexible to “give experts the authority and the resources to continuously fine-tune the nation’s medico-legal response to the drug problem.” In the case of bup, the CSA meant both that bup proponents had to win over DEA officials and that the DEA had to do some creative interpretation of the science behind bup to justify its classification as a schedule III narcotic.

Following the CSA, the trend in drug policy was towards increasingly harsher and more punitive laws to lock up those who either possessed or sold drugs. Beginning with

New York's Rockefeller Drug Laws passed in 1973,⁵ both states and the federal government established an increasingly draconian set of penalties that resulted in the mass incarceration of those who used or sold drugs, particularly among people of color. Incarceration rates have sky-rocketed (see Figure 1), largely as a result of increasingly punitive drug laws (Shiraldi & Ziedenberg 2000). These drug laws have resulted in wide racial disparities in rates of incarceration even though illicit drug use does not vary significantly between Blacks and whites (Alexander, 2010; Rich et al. 2011).

Figure 1: Trends in Incarceration Rates (per 100,000)



Source: Justice Policy Institute analysis of Bureau of the Census and Bureau of Justice Statistics Data

While the general trend after the 1900's was to treat the non-medical use of narcotics as a crime, there was always some recognition that addiction might be more amenable to treatment than incarceration. In 1919, forty carefully regulated narcotic

⁵ When passed, the Rockefeller Drug Laws were toughest drug possession and sales laws in the country, establishing mandatory minimum sentences for relatively low-level offenses and greatly curtailing the discretion of judges to offer alternative penalties or sentences. Despite the fact that these laws were criticized for treating non-violent offenses as harshly as violent ones, they quickly become the model for other drug laws across the country. In 2009, more than 35 years after their passage, some of these laws were reformed to limit the use of mandatory sentencing and restore judicial discretion over some drug offenses.

clinics were opened in the U.S. with the goal of providing morphine to opiate addicts until they could be “cured.” However, by 1923 these clinics were closed, in part due to the urging of the American Medical Association (AMA) which was trying to distance the medical profession from having any perceived role in supporting or fostering addiction (Conrad 2002). According to White (1998: 119), “[i]t was universally understood that physicians had played a significant role in the development of this problem through their excessive administration of narcotics to their patients.” Ever since this strategic move by the AMA, the role of physicians in the treatment of addiction has been minimal -- that is, until the Drug Addiction Treatment Act of 2000 and the FDA approval of bup in 2002.

Following the passage of the Harrison Act and the subsequent court decision barring physician treatment of addiction through prescription medications, addicts were either locked up or sent to “narcotic farms” where they were “rehabilitated” through behavioral therapies, isolated to prevent the spread of addiction, and removed from the temptations thought to encourage their drug use (White 1998). During this same period, individuals who classified themselves as “addicts” developed Alcoholics Anonymous and the 12-step method of treatment, which favored “self-help” over professional interventions. For the next several decades, addiction treatment relied on a variety of self-help or behavioral models, all of which held abstinence from all drugs (and many medications) as their ultimate goal (White 1998). These kinds of treatments reinforced the notion that changes in environment or behavior could overcome addiction, which was understood primarily as a failure of will or morality (White 1998).

The return to using a drug/medication substitute to address the problem of addiction did not re-occur until the advent of methadone in early 1970's. Methadone marked a profound shift in U.S. drug policy but also revealed the deep ambivalence of policymakers and the public over drugs and drug treatment. Indeed, methadone was not originally billed so much as a medical treatment but as a solution to the problem of urban crime (White 1998). Early research on methadone showed that methadone reduced crime and the consumption of heroin while allowing individuals to return to "productive citizenship" (Jaffe & O'Keefe 2003). The first studies focused on, not only how methadone reduced heroin use, but how it increased people's ability to get and hold a job and reduced their need to obtain money for heroin through illegal activities (Nelkin 1973). The Nixon Administration, elected on a law-and-order platform, faced enormous pressure to solve the "drug problem," including rising rates of urban crime, and became champions of methadone treatment. Drawing on the work of a small group of pioneering scholars who lobbied for a medical approach to addiction, Nixon create a national network of methadone programs that was serving 80,000 by 1973 (White 1998).

However, many people – then, as now -- viewed methadone treatment as simply substituting one drug for another (White 1998), and the regulatory apparatus that grew around it reflects methadone's ambivalent status as both a legitimate medication and a problematic drug. As methadone treatment became institutionalization in the 1970s, it became mired in a maze of bureaucratic and regulatory restrictions meant to prevent people from using it to get "high" and to stop methadone from being bought and sold on the street as an illicit drug. The Department of Justice and Treasury opposed methadone, and in the early 1970's, the FDA imposed strict rules on how it was to be dispensed

essentially creating a special, closed system for methadone treatment (Jaffe & O’Keefe 2003). Rather than being distributed like other medications, methadone was (and still is) dispensed through a highly regulated system of clinics. Daily attendance is generally required, and patients must consume their doses on site in front of staff. The amount of the dose is also carefully regulated, and unlike other medications, methadone cannot be taken home or self-administered without special permission and privileges. Even the form of the medication – a thick syrup -- is designed to guard against the diversion of the drug and to insure that it can not be illegally injected. In short, from a regulatory point of view, methadone (when prescribed for addiction treatment) is like no other medication in the U.S. As Jaffe and O’Keefe (2003: 55) put it, methadone represents a “substantial departure from the usual practice of allowing licensed physicians to use their own professional judgment, guided by the drug’s labeling to determine how to prescribe a medication.” Because of their historical role in fostering narcotic addiction, the general prohibition on prescribing narcotics for treating addiction, and methadone’s excessive regulation, very few physicians are involved in methadone treatment. Rather, methadone clinics generally have a medical director who oversees the prescriptions, but they are largely staffed by counselors and other mental health professionals.

This ambivalence over using medications to treat addiction was codified in 1974 through the Narcotic Addict Treatment Act. The Act gave the newly created Drug Enforcement Agency (DEA) control over the storage and security of drugs used in the treatment of addiction and required the DEA registration of practitioners, but it gave the Department of Health and Human Services responsibility over setting treatment standards (Jaffe 2003). While there was some limited success in the 1990’s to ease methadone

regulations, the dual system of oversight that includes both the criminal justice (in the form of the DEA) and the medical (in the form of Health & Human Services) approach to dealing with addiction medications remains in place. It is into this confusing and contradictory regulatory world that bup entered.

Buprenorphine as an Opportunity for Change

The efficacy of bup in reducing the consumption of heroin was established in the early 1990's, and it has been used for the treatment of opioid dependence in Europe since 1996. The National Institutes of Health alone funded more than 50 studies about bup in the U.S., many of which focused on the effectiveness of providing bup to patients in office-based (i.e., not methadone clinic) settings. Interestingly, some of these same researchers also tested the effectiveness of providing methadone through physicians in office-based settings and found that it too was as or more effective than treatment in methadone clinics (Fiellin et al. 2001). However, methadone was already under a highly regulated system, and previous efforts to change the regulation of methadone were both slow and modest (Jaffe & O'Keefe 2003). While some experts advocated for trying to change the way *all* addiction medication therapies were regulated (NIH 1997), others saw bup as an opportunity to establish a new structure for addiction treatment while leaving the methadone system intact (Jaffe & O'Keefe 2003).

As the discussion below suggests, the decision to separate bup regulation from methadone was a largely political one, but one that required a medical or pharmacological justification. The key pharmacological differences between bup and

methadone are the subject of some debate, and these arguments rest, not on the relative efficacy of bup or methadone, but rather on the medications' safety and abuse potential.

Whatever the purported pharmacological properties of bup, it offered an opportunity for addiction medicine proponents to argue for a new way of treating addiction. According to Jerome Jaffe, who was Nixon's "drug czar" and remained involved in government drug policy for decades, addiction medicine specialists had explicit conversations about how bup could overcome the two obstacles it faced in circumventing the regulatory morass of methadone -- first, it needed to be exempted from the provisions of the Controlled Substances Act that made it illegal to prescribe a narcotic for the treatment of addiction; and second, it needed to be approved by the FDA for the treatment of opioid dependence (Jaffe & O'Keefe 2003). These interests aligned with those of bup's manufacturer, Reckitt Benckiser, who believed that bringing the drug to market in the U.S would be profitable only if physicians could use it to treat opioid dependence in the course of their normal practice; that is, it would not be profitable if it were to be dispensed only through the highly regulated system that governed methadone. In a remarkable article in the *Journal of Drug and Alcohol Dependence*, Jerome Jaffe and Charles O'Keefe (2003), detail how Reckitt Benckiser, working closely with addiction medicine and government allies, undertook a multi-year strategy to bring bup into the medical mainstream.

Reckitt Benckiser's first attempt to get bup into the hands of physicians was to propose a legislative change that would end the exemption that prohibited physicians from using opioids to treat addiction (Jaffe & O'Keefe, 2003). The proposed legislation simply stated the Controlled Substances Act did not apply when a physician was treating

addiction with a Schedule V narcotic (which was the schedule bup was under at the time). This proposal died in 1998 in large part because Reckitt failed to include a number of key parties and agencies in the process (Jaffe & O’Keefe, 2003), including the Food and Drug Administration and the Drug Enforcement Agency. The company began new efforts that solicited input from the DEA, SAMHSA, FDA, NIDA, HHS and leaders in addiction medicine. Mainstream medical associations, like the American Medical Association, remained silent in these debates. The analysis below focuses on how these key entities perceived bup and the role they played in its journey from an experimental drug to the first medication for office-based treatment of opioid dependence in 80 years.

NIH Consensus Panel

In the late 1990’s there were two government panels that laid much of the groundwork for the passage of DATA 2000 – a consensus panel convened by National Institutes of Health and a subcommittee that made recommendations about bup to the National Advisory Committee of SAMHSA’s Center for Substance Abuse Treatment (CSAT). In 1997, a prominent group of addiction medicine specialists convened by NIH published a consensus statement on opioid addiction in which they emphasized the genetic, neurobiological, metabolic and physiological aspects of addiction. The very need for a consensus panel suggests the array of different attitudes and practices even among researchers and practitioners. While acknowledging that the cause of addiction was unclear, they agreed on a number of issues and asserted: “There is no question that... [drug] dependence constitutes a medical disorder” (NIH 1997: 8). They advocated that public and private insurance programs cover addiction treatment “with parity of coverage

for all medical disorders” (NIH 1997: 24). In addition, the panel urged the government to provide “vigorous effective leadership” to inform the public that substance abuse dependence is a medical disorder than can be treated (NIH 1997: 18). Their overarching goal was to reclaim addiction treatment as the appropriate purview of medicine and to free it from government regulation and control. Referring to the current system of methadone regulation, the Panel (NIH 1997: 19) said: “We know of no other area where the federal government intrudes so deeply and coercively into the practice of medicine.” Indeed, NIDA had been arguing for some time that this system of regulation, as well as the stigmatization and criminalization of addiction, had kept medical professionals from being more engaged in addiction treatment. NIDA Director Volkow (u.d.: 1) set a clear goal for her Institute “to invigorate the medical profession to become more involved with drug abuse issues.” Medications, like buprenorphine, provide one avenue for doing just that and doing it in ways that could potentially circumvent many of the difficulties that had plague the methadone treatment system.

CSAT National Advisory Council Subcommittee on Buprenorphine

Following the publication of this consensus statement, SAMHSA, through its Center on Substance Abuse Treatment (CSAT) brought together its own advisory panel of experts that had enormous influence is shaping the statutory changes codified in DATA 2000. The recommendations of the Buprenorphine Subcommittee of CSAT’s National Advisory Council (NAC) published in 1999 represent another clear attempt to shift control of addiction treatment from government regulators to medical professionals. The subcommittee asks, “Doctors treat all kinds of illness; why is addiction different”

(National Advisory Committee's Subcommittee on Buprenorphine 1999: 12)? The advisory board also condemned the methadone clinic model for being “over-regulated... and allow[ing] little room for clinical judgment” (National Advisory Committee's Subcommittee on Buprenorphine 1999: 14). They suggest that clinical practice guidelines, not federal regulations, should govern addiction treatment and that the management of buprenorphine should be controlled through established systems for physician licensing and credentialing rather than government regulators, like the FDA and DEA (National Advisory Committee's Subcommittee on Buprenorphine 1999). In their final report they say:

The federal regulations [for bup] should be made as close as possible to other medical models, which help destigmatize pharmacotherapy for opioid addiction treatment. The Subcommittee supported the use of minimum federal regulations combined with medical credentialing standards and... standards of clinical practice (National Advisory Committee's Subcommittee on Buprenorphine 1999: 9).

By arguing that clinical judgment and standards should be reinserted into the treatment of addiction, they are attempting to move ownership of the problem from the DEA to the medical community. The Subcommittee concludes that “office-based buprenorphine treatment is desirable, since it can help to promote the shifting of opioid treatment into mainstream medicine and expand access to opioid treatment services” (National Advisory Committee's Subcommittee on Buprenorphine 1999: 1). While the earlier NIH Consensus Statement suggested that *both* methadone and bup needed less regulation, the CSAT Subcommittee focused specifically on bup, saying that it was less addictive and less likely to be diverted than methadone (claims which other research suggests are questionable).

Despite these efforts to construct addiction as any other disease and buprenorphine as any other medication, there is ample evidence that law enforcement and punishment constructions linger, particularly in government documents surrounding the passage of DATA 2000. SAMHSA published its final rule about DATA 2000 in the Federal Register following a required period of public comment. Despite suggestions from some medical commentators that the definition of “addiction” be revised to “remove behaviorally-oriented concepts and rely on medical constructs only” (SAMHSA 2001: 4080), SAMHSA defined opioid addiction as “a cluster of cognitive, behavioral and physiological symptoms” (SAMHSA 2001: 4091). Retaining a behavioral component leaves open the possibility of non-medical responses to addiction, including incarceration. Current drug policy makes both drug use itself (possession) and drug-related crime (e.g., robbery or prostitution to support drug use) illegal. A purely biomedical definition of addiction makes treatment, not prison, the logical response to drug use, if not drug-related crime. The congressional record surrounding the passage of DATA 2000 draws heavily on the science and medical model put forth by NIDA but reveals that these medical constructions are used strategically to argue for an adjunct to, not a replacement of, criminal justice responses.

Absent the American Medical Association

Addiction medicine experts involved with both NIH and SAMHSA tried to use bup to reframe addiction as a medical problem that was the appropriate purview of medicine. Given this, the absence of any formal statements from the American Medical Association (AMA) surrounding the regulation of bup is notable and merits brief

comment. In fact, more than 10 years since the passage of DATA 2000, the AMA remains largely silent on the issue of bup even though they are one of only five professional organizations allowed to train doctors on how to treat individuals using bup (discussed further below). Their absence from this debate is less surprising when one considers both their deliberate distancing from addiction treatment following the Harrison Act and the history of addiction of medicine.

In his recent dissertation on the history of addiction medicine, Chris Freed (2008) details the struggle of addiction medicine to gain legitimacy within the AMA. Although the AMA first refers to alcoholism as an illness in 1956, addiction medicine has faced a number of challenges in being taken seriously by mainstream medicine. According to Freed (2008), attempts to professionalize addiction medicine have suffered from: a lack of consensus over terminology, competition between addiction medicine and addiction psychiatry to “own” the problem of addiction, stigma associated with addiction generally and with addiction medicine doctors (many of whom identify as recovering addicts themselves), a dearth of effective treatment options besides self-help and behavioral interventions, and the absence of a strong research and scientific base. Although the AMA recognized the American Society of Addiction Medicine as a “self-designated” medical specialty in 1990 (Freed 2008), to date they have not been able to obtain official status as an AMA specialty or sub-specialty. Addiction medicine’s marginal status within the AMA and mainstream medicine’s continued ambivalence about their role in addiction help explain the AMA’s absence in the debates over DATA 2000. This history also helps explain how much was at stake for addiction medicine advocates in enshrining bup as the first office-based medical treatment for addiction.

Congressional Debates about DATA 2000

The congressional record surrounding the passage of DATA 2000 shows just what an important role bup played in transforming U.S. drug policy. Politicians rely heavily (though selectively) on scientific and pharmacological arguments about bup, emphasizing, in particular, its low potential for diversion and abuse. They hold out visions for the way the legislation will transform the lives of addicts and “effectively put America on the right road to fighting and winning the heroin addiction war” (Congressional Record 2002: S00156). Most remarkably this transformation rests on a medication that at the time was two years away from even being approved for use by the FDA.

In the congressional hearings about DATA 2000, the committee acknowledges that they are working to pass legislation that would not apply to any existing medication:

S324 would not apply at this time to any approved product. It would apply to buprenorphine and buprenorphine/nx [nx = naloxone], if approved, and to any other narcotic drugs in schedule IV or V which are approved for use in the maintenance of detox treatment, if certain conditions are met (Congressional Record 1999b: 12).

This is one of the only times in the entire congressional record that the **un**availability of bup is acknowledged. Much more commonly, bup is the centerpiece of arguments for the passage of legislation as if its approval by the FDA is a foregone conclusion. Senator Daschle asserts: “this is one way in which we can fight and win the war on drugs – by blocking the craving for illegal substances” (Congressional Record 1999b: S144472). Here, the problem of drug use is to be solved – not by the international and multi-billion dollar law enforcement effort to reduce supply – but by intervening at the level of the individual brain to stop craving. Senator Levin remarks:

This legislation...will allow us to effectively utilize a new medical discovery of a substance called Buprenorphine, which has proven to be an extraordinarily effective means for combating heroin addiction by blocking the craving for heroin (Congressional Record 2000: S9111).

In fact, bup was not a “new medical discovery” but had first been evaluated as an addiction treatment by NIDA in the late 1970’s (see Chapters 3 and 5). But it did offer a new opportunity to reframe addiction treatment and with it U.S. drug policy.

As the quote above suggests, it is not just bup’s existence that is used to justify this legislative change, it is also its particular pharmacological properties -- even though DATA 2000 could theoretically apply to a medication with completely different pharmacology than bup. Craving – the uncontrollable desire for a drug – is seen here as the root cause of addiction and the problem that bup can solve through its pharmacological action. Equally important, however, are the pharmacological properties that can help distinguish bup from illicit drugs. In fact, the pharmacological property that is referenced most often, almost exclusively, in the congressional record surrounding DATA 2000 is bup’s low potential for diversion and abuse. Senator Levin asserts: “Of critical importance is the fact that Buprenorphine is not addictive like methadone so the likelihood of diversion is small” (Congressional Record 2000: S9112). A letter from Donna Shalala, then Secretary of Health and Human Services, notes:

Published studies suggest that it [bup] has very limited euphorogenic effects and has the ability to precipitate withdrawal in individuals who are highly dependent on other opioids. Thus, buprenorphine and buprenorphine/nx products are expected to have low diversion potential (Congressional Record 1999b: 10).

This emphasis on low abuse and diversion potential is important not only to address concerns that bup will become another street drug but also to justify

circumventing the restrictive regulations that govern the dispensing of methadone. Alan Leshner of NIDA tells the committee considering DATA 2000 that:

The current regulations for administration and delivery of narcotic medication in the treatment of narcotic dependence was written for the use of full agonist medications such as methadone with demonstrated potential for abuse and do not take into account the unique pharmacological properties of these drugs [like bup] (Congressional Record 1999a: S1092).

In addition to the pharmacological properties, advocates of the legislation also point out a number of key provisions within the legislation designed to prevent diversion. Levin notes, “the legislation includes protections against abuse” (Congressional Record 1999a: S1092). (The specific provisions are analyzed in more detail below).

Bup is not simply heralded because it has low potential for diversion. It is also constructed as the substance that can “help those who abuse drugs to change their lives and become productive members of society” (Congressional Record 1999b: 2). The ability to rehabilitate drug users into “productive members of society” is central to a political strategy that seeks an alternative to drug policies centered on incarceration. Senator Moynihan makes an impassioned plea to include a public health approach in drug policy relying entirely on a disease model of addiction:

Congress and the public continue to fixate on supply interdiction and harsher sentences (without treatment) as the ‘solution’ to our drug problems, and adamantly refuse to acknowledge what various experts now know and are telling us: that addiction is a chronic relapsing disease; that is, the brain undergoes molecular cellular and physiological changes which may not be reversible. What we are talking about is not simply a law enforcement problem... it is a public health problem and we need to treat it as such (Congressional Record 1999c: S144473).

What is interesting about this quote is that Moynihan moves quickly from the molecular level to the level of public health. Biden makes a similar move when he invokes medical science to solve a social problem. He says: “it only makes sense to

unleash the full powers of medical science to find a ‘cure’ for this social and human ill” (Congressional Record 1999b: 22). On the one hand, comments like these seem to epitomize medicalization -- a social problem is recast in medical or public health terms. On the other hand, it is important to note that even those who rely on a scientific paradigm do not propose doing away with law enforcement approaches to drugs. Biden, for example, introduced DATA 2000 in conjunction with a bill aimed at harsher enforcement against methamphetamine labs. In fact, the only person on record arguing that DATA 2000 should completely transform our approach to addiction is a scientist from Columbia University who says: “The major innovation of the FDA approval and the Drug Addiction Treatment Act, however goes well beyond the particular medication and instead to how we think about addiction” (Congressional Record 2002: S10658). The politicians use the scientific language strategically to advance their goal of expanding medical approaches to addiction, but they do not use it to replace more punitive approaches.

Throughout the congressional record, proponents of DATA 2000 suggest that bup specifically and office-based treatment more generally have the potential to increased treatment capacity and reach a different kind of drug user. When discussing DATA 2000, legislators focus on the increase in first-time heroin use among suburban teens in the 1990’s as the driver of need for treatment expansion. The implicit idea of segmented treatment begins to appear in the congressional record -- some kinds of addicts “need” methadone and others “need” bup delivered in the privacy of their local doctor’s office. Wesson, then President of the American Society of Addiction Medicine, tells the Senators considering the legislation:

Some [opioid abusers] need the highly-structured, behavioral modification services and maintenance with methadone or LAAM. Others require less intensive drug abuse treatment... such as buprenorphine, provided within the context of physicians' offices (Congressional Record 1999a: S1092).

Exactly what kind of patients need more structure becomes clearer as one reads on.

Leshner from NIDA testifies at length about how bup is uniquely appropriate for a new kind of heroin user:

Narcotic addiction is spreading from urban to suburban areas. The current system, which tends to be concentrated in urban areas, is a poor fit for the suburban spread of narcotic addiction... [There is] an increase in the number of younger Americans experimenting with and becoming addicted to heroin. ... Treatment for adolescents should be accessible, and graduated to the level of dependence exhibited in the patient. Buprenorphine products will likely be the initial medications for most opioid-dependent adolescents (Congressional Record 1999a: S1092).

Leshner, like several others in the congressional record, draw on a culture of fear about the threat of heroin reaching young children in the suburbs to give a sense of urgency to the legislation. But he does much more. The urban/suburban divide can be read as code for race and class (Anderson 1990; Davis 2007) as can the "graduated levels of dependence," which is a more refined way of distinguishing the long-term, "hard core" user from the neophyte. Importantly, Leshner cites no studies here that demonstrate bup's higher efficacy among those with "graduated levels of dependence" or among adolescent users because no such studies had been done at that time. Despite its lack of empirical basis, this notion that bup is better for newer, less severely addicted people became a fact that was repeatedly cited throughout the policy debates.

By arguing that bup is better for some kinds of addicts, legislators are also able to suggest that certain people will be able to avoid the methadone system. The implication is that white, suburban adolescents in particular will no longer have to go to urban

methadone clinics to receive treatment alongside “real” addicts. In the congressional committee report on DATA 2000, the hard core addicts (those being treated with methadone and living in urban areas) are basically banished to the methadone system and portrayed as beyond redemption:

Methadone treatment is largely reserved for those who have been addicted to relatively high levels of opioids (generally heroin) for a relatively long period of time. Typically, an addict cannot be enrolled in a methadone program until he or she has been addicted for a year, by which time the drug has done its damage and the addict can no longer work productively (Congressional Record 1999b:13).

Congress admits that the current system of methadone is largely restricted to the most severely addicted individuals and sets people up for failure. At the congressional hearings about DATA 2000, we learn another reason why the methadone system is not suitable for all addicts – the stigma associated with methadone:

The stigma and prejudice against patients in methadone treatment comes not only from the fear that they may be denied access to certain jobs, child custody or even medical treatment, but also from prejudice within the greater community, where they are likely to be labeled as weak and as ‘trading one drug for another’ (Congressional Record 1999b: 12).

This is the most forthright admission in the congressional record about methadone’s failure as a system and as a medication. Those associated with methadone are depicted as hard-core, urban heroin users burdened by stigma and discrimination and perceived as substituting one drug for another. The issue of drug substitution is an important and recurring one. Methadone, like morphine and heroin before it, has slipped from being perceived as a medication to being perceived as a just another drug.

Missing from debates about different types of addiction and treatment is any mention of prescription drug abuse. Prescription drug abuse far exceeds the abuse heroin and was then, as now, rapidly escalating and causing huge numbers of overdose deaths

(see Chapter 4). Nonetheless, the only allusion to an opioid addiction other than heroin is this reference in a letter from Secretary Shalala:

It [bup] would be available not just to heroin addicts, but to anyone with an opiate problem, including citizens who would not normally be associated with the term addiction (Congressional Record 2000: S9113).

What is clear from this quote is that bup is seen as an opportunity to reclaim at least some “addicts” and “addiction” from the stigma that surrounds them and that surrounds methadone. However, it was certainly not lost on everyone that the proposed legislation could essentially result in a two-tiered system of addiction treatment. The only opposition to DATA 2000 in the entire congressional record was from a group of legislators who felt that the law was too narrow and should be accompanied by a massive new investment in *all* drug treatment systems. They summarized their opposition this way:

Bup is expected to be an effective treatment of mild to moderate heroin addiction. A majority of heroin addicts are severely addicted. Thus, many persons who are in the treatment gap will not benefit from the bill for pharmacological reasons. . . . The bill may help some heroin addicts. . . . These will be mild to moderately addicted persons with the financial resources to obtain access to a physician or other healthcare provider who will either dispense or prescribe the medication. The bill does not address the need of most heroin addicts; namely, those who are severely addicted or who lack the financial resources to see a doctor (Congressional Record 1999b: 29).

Those with resources will receive bup; those without are consigned to methadone, prison, or no treatment at all. This assumption of segmented treatment helps explain why the methadone clinic lobby did not oppose DATA 2000 and, in fact, was on record supporting the rescheduling of bup to make it available in doctors’ offices. While there is no evidence to support the claims that bup is better for those with mild to moderate addiction, it is true that methadone is more widely supported through publicly-funded

programs (both Medicaid and state funds) than bup (see next chapter). This argument about different kinds of addicts not only helps construct the bup patient as someone who is less addicted, suburban and likely white; it also preserves a clientele for the methadone clinics. As long as bup is targeted to a different population and is not replacing methadone, then it poses no real threat to the core business of methadone clinics. Despite some fairly harsh critiques of methadone as stigmatizing and impeding the advancement of other medical treatments for addiction, there are repeated assurances throughout the record that the methadone system is needed and that bup will not replace the role of methadone clinics. According to Secretary Shalala:

Buprenorphine and buprenorphine/nx would not replace methadone. Methadone and LAAM clinics would remain an important part of the treatment continuum. (Congressional Record 1999b:10).

It should be noted that despite, or perhaps because of, efforts to assure the methadone clinics that they would not be losing any business, DATA 2000 does not seem to have faced much opposition. As mentioned above, the original efforts failed largely because of opposition from the FDA and DEA, which were subsequently consulted and ultimately convinced to support DATA 2000 through the inclusion of safeguards against diversion discussed below. The only opposition on record for the 1999-2000 effort came from those who wanted a more comprehensive bill granting a significant increase in funding to SAMHSA. Like much legislation, DATA 2000 was bundled with several other bills that also improved its chances of passing. In addition to ecstasy and methamphetamine anti-proliferation bills (based on traditional law enforcement approaches of interdiction and criminal sanctions), DATA 2000 was attached to the

popular reauthorization of the children's health program. On October 17, 2000, President Bush signed DATA 2000 into law.

Drug Addiction Treatment Act of 2000

The final version of DATA 2000 that was passed in October of 2000 reflects both the influence of the disease model and the ongoing concerns that addiction is a crime and medications to treat it can become abused street drugs. The legislation reveals a series of compromises between the older, punitive framework and a medical approach. Several provisions in DATA 2000 indicate acceptance of the construction of addiction as a disease requiring medical treatment. The law permits doctors to prescribe any Schedule III-V drugs for “the medical treatment of opioid addiction” (35 USC 3502). In order to prescribe bup, physicians must obtain special certification granted through existing addiction medicine credentials or through completion of an 8-hour training conducted by addiction medicine specialists. This emphasis on training and education, which is conducted by medical professional organizations, has the effect of privileging medical knowledge above government regulation – something the NIH Consensus Panel explicitly sought. The ascendancy of medical expertise is also seen in the DATA 2000 stipulation that no regulations developed to implement the law “shall authorize any Federal official or employee to exercise supervision or control of the practice of medicine or the manner in which medical services are provided” (35 USC 3502). This stands in stark contrast to methadone where the extensive regulations had been characterized as the most intrusive and restrictive guidelines in any practice of medicine.

Despite these concessions to the medical model, law enforcement/crime and punishment constructions of addiction are also codified in DATA 2000 itself and in the DEA and FDA regulations controlling bup. Doctors, like patients, are not to be entirely trusted around this new “medicine.” For instance, originally under DATA 2000, doctors could only have 30 patients on bup in their practice at any given time. This provision was put in place to prevent doctors from become “narcotics peddlers” or “pill mills” where “addicts” could easily obtain their supply of drugs. The law was later amended to allow 30 patients per doctor rather than per practice and again to allow up to 100 patients per doctor. Responsibility for monitoring violations of this rule rest not with the nation’s drug treatment agency, CSAT, but with the nation’s law chief law enforcement officer, the U.S. Attorney General (21 USC 114). DEA and FDA also retain important roles under DATA 2000. Physicians must submit a waiver to DEA that affords them a narrow exemption from the Controlled Substances Act for the purposes of treating opioid addiction with a schedule III or higher medication. DEA makes clear that diversion of bup remains a serious concern; they intend “to conduct regular investigations of practitioners” (Federal Register 2003: 37431). In addition, the FDA reports that it will monitor “drug distribution channels” and set up “active and passive surveillance, [including] monitoring local drug markets and interviews with active users” (Food and Drug Administration u.d.(a): 2). Despite claims that bup is like any other medication for chronic medical conditions, these provisions suggest it is also viewed as an illicit drug.

Government ambivalence about bup is also evident in the provisional nature of DATA 2000. Although the government permits office-based treatment of opioid addiction, this endeavor is framed both as an experiment and as an exception to existing

legislation. For example, the law requires that data be collected and analyzed to determine both the effectiveness of and harm caused by office-based pharmaceutical treatment (i.e., adverse medical events, misuse and diversion); these data will be used, in part, to evaluate whether or not such treatment will continue. Furthermore, DATA 2000 includes a sunset clause that gives the Secretary of Health and Human Services and the U.S. Attorney General the power to disallow or extend office-base treatment depending on their assessment of whether or not prescribed medication is increasing drug treatment capacity, resulting in adverse consequences and/or being diverted and misused. Interestingly, both the country's highest law enforcement and health official are given this power, symbolic embodiments of the crime and disease models of addiction.

DEA Rescheduling of Buprenorphine

As noted above, DATA 2000 itself did not legalize the prescription of bup. The law is carefully crafted so that final authority for whether or not a drug can be prescribed in an office-based setting rests with the FDA and the DEA. The DEA must classify a medication as a schedule III-IV drug, and the FDA must approve it for use in addiction treatment. Methadone is a schedule II drug, excluding it from DATA 2000. Bup, in contrast, has been classified as a schedule III drug, making it the first (and to date the only) medication that can be prescribed under DATA 2000.

The history of how bup was rescheduled provides another interesting example of how scientific facts are used strategically for political ends. The DEA must publish its rationale for rescheduling a medication and any public comments it received in support or opposition to the proposed rescheduling in the Federal Register. A great deal was riding

on having bup appropriately rescheduled, since it had been the foundation for the passage of DATA 2000. Despite being portrayed as a revolutionary new scientific innovation, bup has been known to the DEA since 1970. It was originally classified as a schedule II narcotic with the same abuse potential as methadone and morphine. Then in 1985, when it became available as an injectable analgesic, it was reclassified as a schedule V medication, indicating the lowest possibility of abuse (Robitussin AC is another schedule V drug). According to the DEA, bup as an injectable analgesic warranted this scheduling because “the product has limited use outside hospital and clinic settings” (Federal Register 2002: 62354). Technically, bup in this form met the scheduling requirements of DATA 2000; however, it could not be used because it had not been approved in this form for the treatment of opioid addiction by the FDA.

When the manufacturer wanted to bring two new forms to market in 2002 explicitly to treat opioid dependence -- a sublingual tablet that was a bup-only formulation and one that was a bup-naloxone⁶ combination -- the DEA had the opportunity to reschedule it once again. Nine different organizations commented on the DEA’s proposed rescheduling of bup and bup/naloxone as a schedule III medication. These included all of the major addiction medicine professional organizations, the industry lobby for methadone, Reckitt Benckiser (the manufacturer of bup), and Purdue Pharmaceuticals, the maker of several prescription pain opioids, including Oxycodone. Reckitt Benckiser and Purdue argued that bup should receive a higher (i.e., less restrictive scheduling), while the addiction medicine professionals argued that the bup-only

⁶ Described further in subsequent chapters, naloxone is added to bup because it is thought to decrease the potential for diversion and misuse. If the combination form is injected, the naloxone causes someone already using other opioids (like heroin or oxycontin) to experience unpleasant withdrawal symptoms. Almost all formulations of bup on the market in the U.S. contain naloxone.

formulation (subutex) should be scheduled as to exclude it from DATA 2000, while bup/naloxone formulation (suboxone) should be a schedule III to encourage physicians to prescribe the less “abusable” form. In each of the public comments, the commentators relied on scientific studies to argue their (often conflicting) positions and assert either that bup has no potential for abuse or that it has a high potential of abuse.

The DEA had to address several conflicting claims and competing interests in issuing their ruling, and they had to do it in a way that appeared objective and factually based. One commentator said:

The DEA has not been consistent in its final decision making process and has failed to meet the non-arbitrary agency action requirements. The finding that buprenorphine has a potential for abuse less than Schedule I or II substances is arbitrary and capricious and not supported by the underlying administrative record (Federal Register 2002: 62356).

In response, the DEA offers one of the most thorough reviews of the literature on bup available and accuses commentators in both sides of misinterpreting the data: “in several cases, the same medical, scientific and other data cited by the FDA and/or the DEA in scheduling review documents are interpreted differently by the commentators” (Federal Register 2002: 62356). They then go on to provide the “correct” interpretation of data -- one that leads to the conclusion that both bup and bup/naloxone should be receive a schedule III designation. Because they are rescheduling bup from a less restrictive category (V) to a more restrictive one (III), the DEA spends an enormous amount of time detailing bup’s potential for diversion and abuse as the rationale for controlling it more tightly. The pharmacological profile of bup that the DEA describes bears almost no relation to the one described by politicians that downplayed bup’s potential for diversion and misuse.

According to the DEA, bup “may produce significant dose-related euphoria, drug-liking, respiratory depression and sedation” (Federal Register 2002: 62357). We also learn that “in opioid dependent patients, buprenorphine can substitute for heroin” (Federal Register 2002: 62358). The DEA is most emphatic in recognizing that bup does, after all, have a high potential for abuse and diversion. To make its case, it turns to data from New Zealand and France where bup has been widely available for years. They conclude:

Buprenorphine has been diverted, trafficked and abused in many countries throughout the world... [B]uprenorphine’s low cost, easy accessibility, high purity and substantial morphine-like effects have contributed to its popularity on the illicit market (Federal Register 2002: 62359).

Given this profile of the drug, the DEA is able to argue that it should be rescheduled to a more restrictive schedule III (not coincidentally the most restrictive category allowed under DATA 2000). To explain why it should *not* be classified with methadone as a schedule II, they assert that compared to schedule II drugs bup is safer because it is less likely to lead to purposeful or accidental overdose. They argue:

This [lower overdose potential] is an advantage over drugs like morphine, oxycodone and methadone and a relevant factor that carries considerable significance when weighing public health risks and the need for regulatory scrutiny (Federal Register 2002: 62362).

The rationale by which bup is distinguished from its chemical cousins is not that will not be abused but that such abuse is less likely to result in death. Safety is the reason bup can be less tightly regulated than methadone. This reasoning is suspect given that marijuana – one of the safest illicit substances available – has never alone caused an overdose death but remains in the most restrictive class of substances, Schedule I.

The DEA must retain its position of objectivity and neutrality and does so by a careful and argument based on “science” that cites dozens of journal articles. However, they have clearly been put in a compromising position by the pressure to reschedule bup created by the passage of DATA 2000, and their critics accused them of being swayed by legislative rather than scientific interests. In fact, one critic noted that, when they first proposed the rule for the rescheduling of bup, the DEA said: “The DEA recognizes the need to expand narcotic treatment and this factor was a consideration in proposing Schedule III placement for buprenorphine” (Federal Register 2002: 62364). In the final rule they seem to realize their mistake in acknowledging the role of anything other than drug safety and efficacy and say the complete opposite: “The DEA did not consider the need to expand to narcotic treatment as a specific factor in determining the placement of buprenorphine under the CSA” (Federal Register 2002: 62363). One factor they do admit considering was the impact on methadone clinics. They provide an analysis of why they believe that the availability of bup will have no economic impact on the methadone clinics. Unlike the politicians who argued that the segmented system would protect methadone clinics, the DEA argues that methadone clinics will also be allowed to prescribe bup and thereby attract new patients.

The rescheduling of bup provides another instance of the strategic use of science and framing the pharmacology of bup in support of yet a different set of interests. For the DEA, whose primary mission is stop the “misuse” of drugs, bup is clearly a drug that can cause euphoria and has a high potential for diversion. Ultimately, the DEA relies on arguments about bup’s greater safety in terms of overdose risk to distinguish it from methadone or heroin. Because it based its arguments on safety, the DEA did not

distinguish between bup and bup/naloxone (which is thought to prevent diversion) and classified both as Schedule III narcotics, the most restrictive classification possible that still allowed for their use under DATA 2000.

FDA Approval of Buprenorphine

In October of 2002, one day after the DEA rescheduled buprenorphine and two years after the passage of DATA 2000, the FDA approved it for treating opioid dependence. In announcing its decision, the FDA relied heavily on the same scientists that had testified before Congress on behalf of DATA 2000. Other scholars have found that organized interests shape the FDA's drug review process, like the one described here. Carpenter (2004: 54) argues "the FDA is very responsive to what I would call 'opinion leaders' in the scientific and medical communities. ... Another critical audience lies in Congress." Indeed, the FDA literature largely mirrors the language of the scientists and politicians who supported DATA 2000, focusing on bup's potential "to provide patients greater access to needed to treatment" (Food and Drug Administration 2002: 2) and trying to alleviate concerns about its diversion.

The FDA claims that bup "is considered to have less risk for causing psychological and/or physical dependence than drugs in Schedule II such as...methadone" (Food and Drug Administration 2002: 1). But in its Q&A for consumers of bup, the FDA answers the question, "How are Subutex and Suboxone [brand names for two bup medications] different from current treatment options like methadone?" by saying: "They are the first drugs available under DATA 2000 that can be prescribed in a doctor's office" (Food and Drug Administration u.d.(a)): 1). The

difference is largely an artifact of law. By relying on where the medication is dispensed to explain differences between methadone and bup, the FDA is acknowledging these differences are merely legal constructions.

Despite claims that bup has less diversion and abuse potential than methadone, the FDA appears quite concerned that it will be used illicitly without medical supervision. Over half of the FDA Q&A on bup is devoted to describing its “risk management program designed to deter abuse and diversion from its legitimate use” (Food and Drug Administration u.d.(b): 2). The FDA suggests: 1) doctors limit prescriptions of Subutex (the pure bup formulation considered to have greater abuse potential than Suboxone, the bup/naloxone combination) to supervised use (i.e., directly observe the doses taken); 2) “keep tight control of ... prescription pad[s];” and 3) adhere to all controlled substance storage and record keeping laws (Food and Drug Administration u.d. (b): 6). These include careful inventories of drugs dispensed, locked storage cabinets, and multiple copies of each prescription. They also recommend that doctors keep patient photographs and social security numbers in the patient record to avoid being deceived by patients (Food and Drug Administration u.d.(b): 7). Implicit here is not only that bup is a drug that can be used for “non-medical” purposes, but also that those being treated with bup likely have criminal intent.

American Society of Addiction Medicine & The Implementation of DATA 2000

The American Society of Addiction Medicine, despite their tenuous status within the AMA, played a pivotal role in the passage and implementation of DATA 2000. As the above discussion suggested, addiction medicine experts working with NIDA and

SAMHSA strongly promoted the idea that addiction treatment should be governed by clinical expertise and practice guidelines rather than regulations, like methadone. With the passage of DATA 2000, they got their wish, and the role of addiction medicine in treating addiction was codified in the law.

When bill was reintroduced, addiction medicine organizations added provisions which both served their financial interests and enhanced their prestige. Specifically, at the behest of these organizations, the legislators added a provision that doctors must receive eight hours of training on opioid addiction in order to prescribe bup.

Furthermore, DATA 2000 lists five specific addiction medicine organizations that have the exclusive right to conduct these trainings. The trainings generate revenue⁷ and strengthen the credibility of addiction medicine, which has long struggled for legitimacy within the medical profession (Freed 2008). These organizations (the American Society of Addiction Medicine, the American Academy of Addiction Psychiatry, the American Medical Association, the American Osteopathic Association, and the American Psychiatric Association) have come to be known as “the DATA 2000 societies.” For the first time, doctors from other specialties had to turn to the addiction medicine specialists for credentialing and expertise.

Following the passage of DATA 2000, ASAM received funding from SAMHSA to develop and deliver the 8-hour training that physicians needed to complete before they could register with the DEA and obtain a waiver to prescribe bup. The “waiver” refers to a waiver of the restriction under the Controlled Substances Act that prohibits physicians from treating addiction by prescribing a narcotic. The ASAM training reveals the

⁷ In my role as project director of the BHIVES study, I had to arrange a ‘DATA 2000’ training for physicians involved in the study. Quotes given for the training of about 25 physicians averaged \$16,000.

Society's strong interest in constructing addiction as a disease and medical doctors' right to treat it but also belies the troubled and ongoing history of doctors being implicated in *causing* addiction (see for example, Weinberg & Turner 2005). Addiction medicine, like other fields of medicine that deal with "mental health" or "psychological" problems, faces additional challenges as well. First, despite recent advances in neuroscience that attempt to somatize addiction, the diagnosis and treatment of addiction still remains elusive and largely intangible undermining its credibility as a "real" disease (see also Lakoff 2005). The second struggle facing addiction medicine is the murky relationship between its therapeutic and social control functions. While much medicine can be viewed as a form a social control, the line between the treatment and control of the addict is particularly blurred since the goal of treatment is almost always the control of deviant behavior (that is, using drugs). As Lakoff (2005: 5) explains, these fields of practice struggle "to separate [themselves] from its association with the custodial administration of deviances." As their resistance to the methadone system suggests, doctors do want to view themselves or be viewed as agents of the regulatory apparatus of the state. Rather, they want to maintain autonomy to exercise "clinical judgment." The ASAM training, however, merges the therapeutic and the punitive in an uneasy amalgamation of treatment and control. On the one hand, they do everything possible to construct bup as a medical treatment for a medical disease. On the other hand, they emphasize the importance of avoiding even the appearance that they are drug peddlers supporting the habits of addicts.

The ASAM training adopts wholesale the construction of addiction as disease that should be treated by doctors with pharmacological agents, like bup (Strain, Liberto et al. 2004). The training topics are themselves telling; they include, pharmacology, clinical

use (i.e., dosing), patient assessment, medical comorbidities, case presentations, clinical management, and record keeping. Not coincidentally, these topic names could be applied to almost any medical education initiative about almost any disease. Psychological issues and theories, which once dominated discussions of addiction, are almost completely absent except in discussions of possible interactions between bup and other psychotropic medications.

The disease model of addiction is applied to almost every aspect of bup treatment. For example, the clinical protocol cited in the ASAM training mandates that patients undergo urine drug testing to screen for illicit drug use, a provision seen as punitive in most contexts. In response to the rhetorical question, “Why conduct urine drug testing?” the training materials offer the following reasons: 1) addiction is a chronic disorder; relapse can occur; 2) patients may deny or minimize drug use; and 3) drug testing is part of patient evaluation and treatment planning. Not only is medical terminology and rationale used (e.g., “chronic disorder,” “patient evaluation,” “treatment planning”), the trainers explicitly distance themselves from law enforcement models, asserting that “[drug testing] is **not** to punish the patients” [emphasis in original] (Strain, Liberto et al. 2004: 10). Throughout the training, ASAM builds around bup all of the trappings of traditional medical treatment – clinical guidelines, dosing protocols, assessment forms, diagnostic criteria.

However, for all its emphasis on the clinical issues of prescribing buprenorphine, the ASAM training spends a great deal of time on how to protect doctors from accusations of drug dealing and to convince outsiders (most likely the DEA) that they are legitimately treating a “disease,” not supporting a drug habit. For example, there is great

detail advising doctors about appropriate record keeping, particularly on how to document opioid dependence. This emphasis stems from DATA 2000, which narrowly restricts bup prescription for the treatment of documented opioid dependence only. The Federation of State Medical Boards, which issued model policies for bup treatment, tries to reassure doctors, while also attempting to guard against the perception that doctors are drug dealers:

Qualified physicians need not fear disciplinary action from the Board or other state agency for appropriate prescribing, dispensing or administration of opioid drugs...for a legitimate medical purpose in the usual course of opioid addiction treatment. The Board will consider appropriate use...to be for a legitimate medical purpose if based on accepted scientific knowledge and in compliance with state and federal law (Federation of State Medical Boards 2002: 2).

Of importance here is language – like, “legitimate medical purpose” and “appropriate prescribing” -- that simultaneously tries to reassure doctors and tightly limit the prescription of bup.

Patients, as well as doctors, are caught up in lingering crime and punishment notions of addiction. For instance, the ASAM bup training provides a sample form that they suggest doctors require patients to sign before a witness. Through this form, a contract of “patient responsibilities,” patients agree (among other things) to store bup properly (to keep others from “ingesting it”), take it only as prescribed, comply with pill counts and urine tests, and notify the office immediately if pills are lost or stolen (Strain, Liberto et al. 2004). It is difficult to conceive of doctors requiring a signed, witnessed agreement like this for many other medical treatments. Those being treated with bup are being simultaneously constructed as patients with a legitimate medical condition and as

drug addicts with a propensity for lying, manipulation, and theft. They are “patients” but patients that require special scrutiny and treatment.

The ASAM training contains additional evidence suggesting opioid addiction might be different from other chronic diseases after all. On the one hand, the training cautions clinicians prescribing bup that *other* staff are likely to have concerns and preconceptions about bup patients as addicts, and that, unless these are addressed prior to beginning treatment, patients may feel unwelcome. On the other hand, the training devotes an entire section to “managing problem behavior,” including establishing rules and “consequences for infractions.” As if implicitly acknowledging the effect of these special rules and provisions, the training materials warn: “be prepared for defensiveness” (Strain, Liberto et al. 2004: 21). While preconceptions, problem behavior and defensiveness are conceivable issues in treating other illnesses, that they the subject of a required training, sets bup apart from other medical treatments and casts addiction as both a behavioral and medical problem.

An article in *Wired* explained that rather than encouraging doctors to prescribe bup, the DATA 2000 required training may actually deter them:

Meanwhile, even private-practice physicians open-minded enough to seek bup training find that it reinforces old stereotypes. ‘The courses are a disaster,’ says Columbia’s Herbert Kleber, who has a contract from the federal Center for Substance Abuse Treatment to redesign the curriculum. The classes rely on scenarios instead of letting doctors interact with live patients - who tend not to be the monsters that many doctors imagine, Kleber says. The message that comes across? ‘Addicts are a difficult group to deal with. They’ll rob your office blind and steal your nurse’s purse,’ Kleber says, frowning. ‘You’re a general practitioner: Tell me if you’re going to prescribe.’ (McGray 2005).

Physicians are routinely asked to use new medications in their treatment of patients but are seldom required to receive training (much less 8 hours of training) before prescribing

it. Other research based on interviews with physicians prescribing bup confirms that they view the required training as setting bup apart from other medications that they routinely use (Finkelstein, Netherland, et al. 2011). Bup may be a medical treatment delivered in a medical setting supported by addiction medicine rhetoric and training, but it cannot seem to escape the competing constructions of and stigma associated with criminal understandings of drug use and its treatment.

Conclusion

DATA 2000 was one of the most profound changes in U.S. drug policy in decades and represented a major departure from the 80-year policy of restricting the role of physicians in addiction treatment. Bup, even though it had not been approved for use in addiction treatment at the time DATA 2000 was passed into law, was central to arguments for its passage. Advocates for bup constructed the medication in particular ways and simultaneously constructed an idealized user of bup to ensure the law's passage. The addict constructed by those lobbying for regulatory change is a young, suburban heroin user who has just recently starting taking drugs. This user (presumably white) is contrasted with the urban (presumably Black), hard core user who is beyond redemption and consigned to the methadone system, which is portrayed as both highly stigmatizing and largely a failure. This idealized bup "patient" is a more sympathetic figure for legislators than the hardcore urban user. Moreover, s/he does not invoke the troubling specter of prescription drug abuse. By excluding any mention of the huge numbers of people addicted to prescription opioids who could presumably benefit from bup, advocates avoid raising the difficult problem of medicine's role in fostering

addiction. Raising the issue of prescription opioid addiction brings to the fore questions about bup's status as a legitimate medication, since bup is in fact a potentially addictive opioid itself. Rather, in these debates, doctors armed with a legitimate medical treatment are the solution to (not the cause of) the problem of addiction.

Despite efforts to construct bup as a legitimate medical treatment, bup patients as sympathetic and treatable young addicts, doctors as the appropriate administrators of addiction treatment, and addiction as a disease, the debates leading up to and surrounding DATA 2000 reveal deep ambivalence, tensions, and contradictions about addiction and medical treatments for it. Bup is sometimes constructed as a revolutionary new medication completely different from methadone with almost no potential to be diverted or misused and at other times as completely analogous to methadone except for its greater safety profile. Arguments about bup, its abuse potential, and whether or not it can really be distinguished from methadone and heroin are muddy, shifting and sometimes tortured. Jasanoff (1987) argues that: "In areas of high uncertainty, political interests frequently shape the presentation of scientific facts" (195). That seems to be the case here where the pharmacology of bup is strategically deployed (and changes) depending on who is framing it and for what ends. Nowhere in the record of its regulation is the ambiguity over bup's status as medicine or a drug fully resolved.

The debates over the regulation of bup reveal both enduring incongruities inherent in U.S. drug policy and ongoing struggles to "own" the problem of addiction. The government stakeholders demonstrate the bifurcated nature of U.S. drug policy. NIH and SAMHSA are clear proponents for a more medicalized approach to addiction and use bup to lobby for the passage of DATA 2000. The FDA and the DEA, although they

eventually support DATA 2000, focus on the potential for bup to become yet another street drug that will require a criminal justice response. The addiction medicine community, which should presumably have the clearest stance on bup as a legitimate medical treatment for a “real” medical condition, seems plagued by uncertainty and fear that physicians will once again be seen as causing, rather than curing, addiction. Addiction medical professionals and their government colleagues in the NIH and SAMHSA achieved a huge victory in legalizing the medical prescription of bup, but their constructions of bup are not uniform or internally consistent nor are they alone in constructing meaning about this medication.

In recent years, scholars have argued that the main drivers of medicalization are shifting (Conrad 2005). They are no longer medicine and professional organizations but industry. In the next chapter, I explore the role of industry by taking a close look at the role of Reckitt Benckiser, the manufacturer of bup, in the development of bup and their efforts to bring it to a wider market by transforming US drug policy. I will also look at what particular constructions of bup and addiction they promote through their marketing materials.

Chapter 4:
Selling Buprenorphine:
NIDA, Reckitt Benckiser and the Development and Marketing of an Addiction
Treatment Pharmaceutical

Introduction

The passage of DATA 2000 and the introduction of buprenorphine as the first treatment for opioid addiction in 40 years could not have been possible without the involvement of Reckitt Benckiser (RB), the manufacturer of bup. Reckitt Benckiser's ability to shape the social construction of bup and opioid dependence is influenced by a complex web of relationships that in many ways distinguish bup from other medications and Reckitt Benckiser from other pharmaceutical companies. RB played an active role in lobbying Congress and were ultimately successful in becoming the first company to market a pharmaceutical treatment for opioid dependence that could be prescribed by a physician in the privacy of a doctor's office. Until bup's orphan drug status expired in late 2009, RB remained the only company selling bup for addiction treatment in the U.S.

Increasingly, scholars have recognized the important role of corporate interests in medicalization and the social construction of disease (Conrad 2005; Healy 2004). In this chapter, I explore the role of RB in the social construction of bup paying particular attention to the ways in which addiction treatment might differ from other "pharmaceutical logics" (Lakoff 2005). I will also draw on literature suggesting that the cultural histories of medications themselves shape how we understand disease. While Reckitt Benckiser (RB) played an undeniably important role in the development of bup and legislative changes needed to bring it to market, this is not a typical story of a pharmaceutical company "selling sickness" (Moynihan et al. 2002). Reckitt Benckiser is

far from a standard pharmaceutical company, and, its interests in bup were completely intertwined with those NIDA, who worked closely with the RB to bring bup to market. In fact, it seems unlikely, that without NIDA's intervention, bup would have ever been developed and sold as an addiction treatment medication.

Pharmaceuticals have distinctive social histories (Greene 2007), and the social history of bup -- how it was developed, formulated, marketed and sold -- provides a lens through which "we can observe the social tectonics underlying contemporary politics of health and normality" (Greene 2007: 5). Medications and the marketing that surrounds them affect how we understand disease and even how disease is experienced by those being treated (Greene 2007). Understanding the social history of bup and how it is being constructed through marketing materials helps uncover another underlying logic that is being used to shape addiction and addiction treatment. Moore (2004: 419) has argued that illicit substances "play an active and generative role within the drug/crime nexus in determining both the nature of the nexus and also legal and therapeutic responses." That is, the way drugs are categorized and the cultural histories that surround them influence how we respond to their use. I would extend this to medications, like bup, being used to treat addiction. As consumer capitalism in general and pharmaceutical responses to social problems specifically continue to dominate contemporary society, the business of bup has the potential to reshape bodily experiences, cultural understandings, and policy responses to addiction. In addition, because addiction is by definition a condition of excessive consumption (Aronowitz 2008), addiction treatment medications provide a particularly interesting window into the marketing and politics of pharmaceutical consumption.

My analysis of how bup was developed and is being formulated and marketed relies on a review of documents produced by RB, including their Annual Reports, websites, and educational materials produced for both patients and physicians. After providing some context about the rise of the pharmaceutical industry and some background on Reckitt Benckiser, I offer a brief history of the development of bup, followed by an analysis of the way in which RB frames addiction as a medical disorder, how it is also framed as a behavioral problem, and how RB works to distinguish bup from the illicit substances it is meant to replace. As the discussion below demonstrates, RB's construction of bup is distinct from those described in the previous chapter and is meant to maximize the sales of bup while differentiating it from other prescribed opioids, particularly those used to treat pain.

Rise of Pharmaceutical Solutions

In 2009, Americans between the ages of 19-64 filled an average of 11.3 prescriptions per year (Kaiser State Health Facts 2009). Total sales equaled more than \$217 billion. The U.S. has become a pharmaceutical culture, and increasingly pharmaceuticals are seen as the solution to ever-expanding array of personal and social problems. The rise of neuroscience (discussed at length in Chapter 5) means that behavior that deviates from the norm is more and more likely to be understood in biological terms as some sort of dysfunction of the brain. As Diller notes, treatment with medication inevitably follows: "if the problem is neurologically based, it should be treated with a drug" (1998: 110). Pharmaceutical companies have been persuasive in convincing Americans that they have biochemical solutions to a wide array of problems

and, in the case of “mental illnesses,” they have been tremendously successful in moving treatment from behavioral therapy to medications. For example, conditions like depression, which were previously treated by specialists in behavioral therapy (e.g., psychologists and social workers), can now be treated by any physician with a prescription pad. Not coincidentally, this shift is concurrent with the rise in managed care with its emphasis on brief treatment, outpatient care, and cost containment.

The rise of a pharmaceutical culture has not gone unnoticed by social scientists. Abraham (2010: 106) refers this to transformation as the “pharmaceuticalization” of society, which is driven largely by the promotion and marketing of pharmaceutical solutions by drug companies. This transformation was accelerated by the FDA Modernization Act in 1997, which allowed pharmaceutical companies to advertise directly to consumers. In “Shifting Engines of Medicalization” (2005), Conrad argues that, as healthcare becomes more commodified and subject to market forces, it becomes more like other products and services. Individuals as consumers play an important role in the scope and demand for medical treatments to human problems, but the pharmaceutical industry is seen as a central driver of medicalization (Conrad 2005). Commercial and corporate stakeholders play a major role in how technologies are framed, and drug companies in particular are having an increasing impact on defining the boundaries between the normal and pathological.

The development and manufacturing of new “diseases” has gone hand in hand with the rise of pharmaceuticals. Several scholars have demonstrated the essential role of the pharmaceutical industry in the medicalization of conditions to create new markets (see for example, Busfield 2006; Healy 2004; Lewis 2003; Moynihan et al. 2002).

Medicalization is increasingly entangled with corporate interests. In fact, Moynihan et al. argue that: “The social construction of illness is being replaced by the corporate construction of disease” (2002: 886). Behaviors or moods, like shyness, are transformed into “disorders” like social phobia and treated pharmaceutically with medications like Paxil. While Reckitt Benckiser cannot be credited with corporate construction of addiction (which has been viewed as a disease for decades), they frame opioid dependence and its treatment in specific ways that build a market for bup while carefully negotiating the concerns of government regulators and navigating between competing notions of addiction as a disease and a moral failing.

Lakoff (2005) argues that the pharmaceutical paradigm implicates a wide array of forces and actors:

There is an internal and external logic to it. The internal part involves drawing a connection between illness phenomenology, neurobiology, and pharmaceutical indications. But the external elements are what give it strength: globalization, money, publications, graduate training... (64).

In the case of bup, the important external factors center around the relationships and money that flowed between NIDA, the research world, and RB. Some have argued that one reason for the pharmaceutical industry’s success is the tremendous power the industry wields over the production of scientific knowledge and the government’s support and subsidy of the industry (Parrish 2003). Busfield (2006), for instance, explores how the economic and political power of the pharmaceutical industry has led to their almost complete control over the production of pharmaceutical data and pharmaceutical “facts.” Often pharmaceutical manufacturers run the clinical trials that produce the data that the government uses to determine a drug’s safety and efficacy. According to Busfield (2006), this control over knowledge about medications, their

efficacy, and their safety is directly linked to the culture of pill-taking that permeates contemporary society. Moreover, the relationships between researchers, government, and industry are often quite close and overlapping leading to questions about the true “objectivity” of decisions regarding the approval and regulation of medications. The development of bup epitomizes these complex relationships and also complicates the narrative of corporate interests as driving the medicalization of disease.

Pharmaceuticalization and Anti-addiction Medications

In contrast to theories about corporate interests and profit driving medicalization and pharmaceuticalization, a landmark 1995 Institute of Medicine Report concluded: “the disincentives for the pharmaceutical industry in the development of anti-addiction medications are formidable” (Fulco et al. 1995: 187). According to Alan Leshner, former Director of NIDA, “There are virtually no market incentives for pharmaceutical companies to develop medications for drug addiction” (Leshner 1999). Indeed, NIDA’s Medications Development Program, founded in 1990 has received substantial government funding precisely to overcome the reluctance of industry to develop addiction medications on its own. For example, NIDA received a \$500 million infusion of cash in 1996 for new medication development. Bup received significant assistance from this program and probably would never have been brought to market without the substantial support and involvement of NIDA. The development of bup is best understood by placing it within a broader context of the market, regulatory and cultural forces that both foster and impede the development of opioid addiction medications.

Market Forces

There are no precedents for a highly profitable addiction medication.

Pharmaceutical companies traditionally base their business models of investments in medications with large sales potential (Mark et al. 2009). And while some kinds of addiction appear to be quite prevalent, there is no history of an addiction medication becoming a blockbuster (Mark et al. 2009). Estimating the potential market for bup is difficult and clearly depends on how one defines opioid dependence as well as the recommended course of treatment. One of the primary confounders in estimating the market for bup has to do with the recent increase in prescription drug abuse. With the possible exception of alcohol, our cultural understandings of and our policy responses to addiction have centered on illicit drugs, like heroin and cocaine. Largely absent from our conversations about drug policy is attention to prescription drug abuse, which is far more prevalent than any other kind of substance misuse except alcohol and marijuana. Moreover, the medical community, especially those working for the medicalization of addiction treatment, have been reluctant to address this problem probably because the vast majority of “abused” prescription drugs come from doctors (SAMHSA 2010).

Epidemiological studies indicate that 1.7% of people aged 19–30 have tried heroin and 18.7% have used other opioids (prescription) in their lifetime (Veilleux et al. 2010). The total numbers of those dependent on heroin are actually quite small from the perspective of a pharmaceutical manufacturer looking for a market -- just over 200,000. From a marketing standpoint, non-medical use of prescription medications is a more attractive market than heroin use (see Figure 2). As Figure 3 suggests, opioid-based pain relievers are the most widely misused of all prescription medications -- in 2007, an

estimated 5.2 million reported using prescription pain relievers nonmedically (SAMHSA 2009).

Figure 2: Number of Past Month Users of Drugs

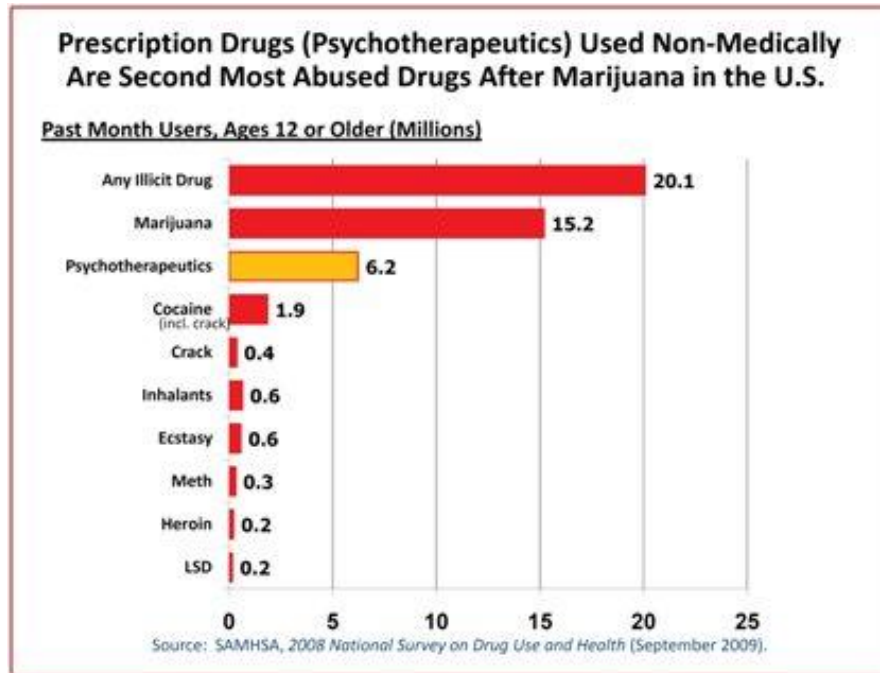
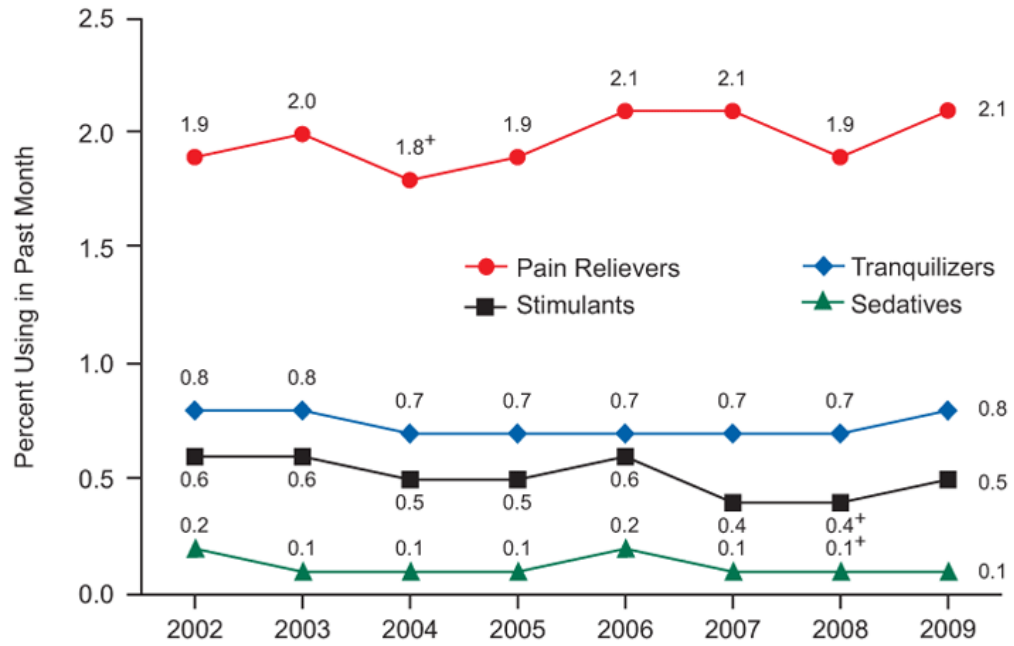


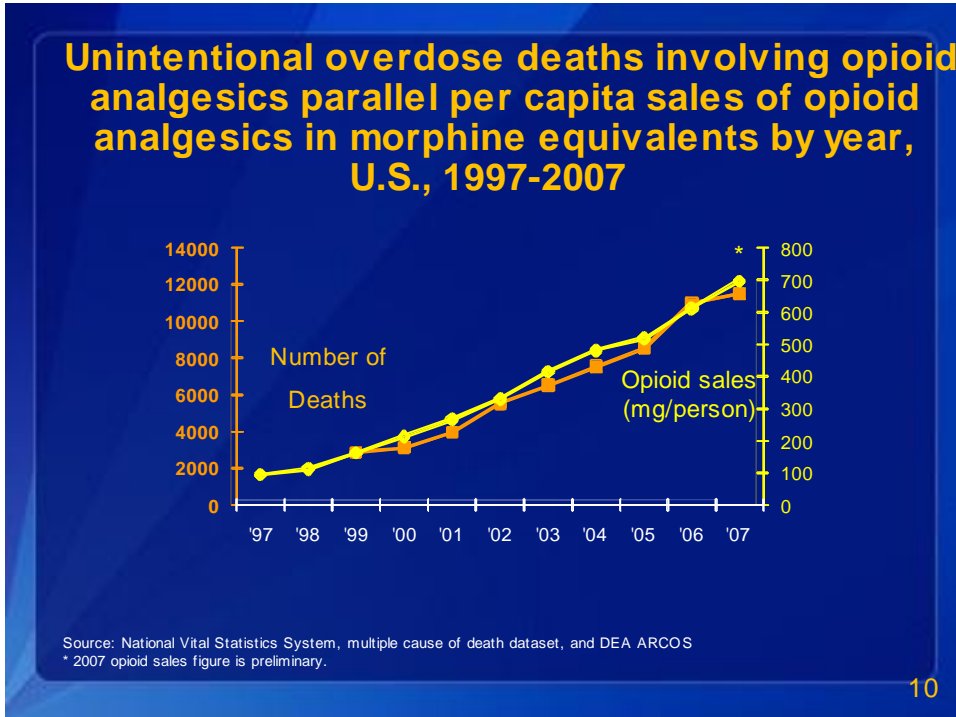
Figure 3: Rate of Past Month Non-medical Use of Prescription Drugs



Source: (SAMHSA 2010)

These high rates of prescription drug abuse are not surprising when one considers that between 1991 and 2009, prescriptions for opioid analgesics increased from about 45 million to nearly 180 million, a 4-fold increase (NIDA 2010). As Figure 4 indicates, prescriptions for pain relievers have sky-rocketed along with deaths caused by individuals overdosing on these medications.

Figure 4: Sale of Opioids and Rates of Opioid-involved Overdose Deaths



According to SAMHSA, in 2004 approximately 1.4 million people were dependent on or abused prescription pain medications. Unfortunately, SAMHSA does not separate out dependence from abuse (SAMHSA 2009). According to the CSAT National Advisory Committee considering the regulation of bup: “eligible patients should include vulnerable people who are using heroin often despite experiencing adverse effects on their lives, even if they are not physically dependent” (1999:18). If the market for bup extends to both prescription opioids and heroin and to those who are “dependent” and “abuse” these substances, the number of potential customers rises quite large.

The potential market for bup is also affected by the course of treatment -- how long people should be prescribed bup. The length of treatment is affected by two factors – the physical dependence created by the medication itself and the social construction of

opioid dependence as a chronic, relapsing disease. There is little debate over the fact that bup, like most opioids, is physically addicting and therefore will be difficult for people to stop taking. Some scholars suggest that people will substitute affordable treatment for drug use if it is accessible (Charles 2003). That is, bup can be seen as essentially a substitution for heroin or other prescription opioids, but one that is legal, more economical, and easier to obtain from the user's perspective. From a macro-economic standpoint, shifting people's dependence to bup moves the profit from the sale of the addictive substance to the pharmaceutical manufacturer (and the healthcare system) away from the illicit drug trade. This is not to deny that personal and societal benefits may result from this shift, but from the standpoint of who profits -- it is the healthcare and pharmaceutical industry. Moreover, to the extent that the addiction being treated is caused by prescribed narcotic medications, the healthcare and pharmaceutical industry is profiting on both ends -- from the original prescription of the addictive opioids (i.e., pain medications) and from the prescription of the addiction treatment (i.e., buprenorphine). Bup "treats" the harm caused by iatrogenic medicine while the pharmaceutical industry profits.

Another potential source of profit stems from the social construction of bup as a chronic, relapsing disease. The chronic, relapsing disease model has become ascendant in recent years (Dunbar, Kushner and Vrecko 2010). This particular construction of addiction means that individuals being prescribed bup will be taking it "for long periods of time, or perhaps even indefinitely in some cases" (National Advisory Committee's Subcommittee on Buprenorphine 1999). Like insulin for diabetics, bup will be needed, if not forever, then for months or years. In addition, acceptance of relapse as part of the

“disease” means that, rather than being seen as a failure of the medication, relapse presents another opportunity to re-engage the patient/customer in a new course of treatment. The chronic, relapsing disease frame works to the benefit of the manufacturer by developing a customer base that will be advised by professionals to take their medication indefinitely and, if they should relapse and stop taking the medication, they will be encouraged to resume taking it as soon as possible.

Despite the potential market for bup, realizing this market faces a number of barriers. Addiction medications are competing with a very well established behavioral drug treatment industry as well as criminal justice responses to addiction. Moreover, treatment for addiction is often not covered or has limited coverage by insurers (Finkelstein et al. 2011). Both the delivery and payment of addiction treatment has historically been separate from medical care, which poses a number of financing barriers (Finkelstein et al. 2011). Bup treatment, being one of the first and only medications for addiction treatment delivered in medical care settings poses unique financing challenges. For instance, it is often not clear which payer is responsible for covering the cost of medication and which, if any, is responsible for the cost of the visit itself, particularly if it involves counseling. And because bup is considered novel (as one of the only addiction medications that can be prescribed in a physician’s office), many insurers, hospitals, and pharmacists do not offer it at all (Finkelstein et al. 2011).

Regulatory

The regulatory barriers to developing an addiction medication market are clear -- if such medications can only be dispensed through the highly regulated and intensely stigmatized methadone clinic system, they will reach relatively few people. In 2000, Joe

Biden, then a Senator, lamented the ways in which the regulation of addiction treatment stifled the pharmaceutical industry's involvement:

The difficulty of distributing treatment medications to addicts not only hurts those who are not getting the treatment they need, but also stifles private research. I have often bemoaned the fact that private industry has not aggressively developed pharmacotherapies. As we increase access to these drugs, we increase incentives for private investment in this valuable research (Congressional Record 2000: S9115).

Here, Biden recognizes that the longstanding prohibition on physicians prescribing medications to treat addiction creates a disincentive to industry to invest in the research and development needed to bring new medications to market. Government regulation of addiction treatment -- which is, in fact, quite different from that governing any other "disease" -- suppresses the profit motive. If addiction is to become like other diseases, he argues, then regulations must change so that market forces can drive medication development.

RB clearly understood that trying to market bup through the existing methadone clinic system was unlikely to be profitable:

...from a corporate perspective it seemed unlikely that a drug confined to a limited number of clinics that were already comfortable using generic methadone would be used enough to justify the investment involved in taking buprenorphine through the regulatory process... [T]o recover any significant portion of corporate expenditures... **buprenorphine would need to reach the mainstream practice of medicine...[and] a period of market exclusivity** would be needed to protect the product (Jaffe & O'Keefe 2003: S7-8). [emphasis added]

RB was unwilling to invest in bup without some prospect that it could be marketed outside of the methadone clinic system to the medical mainstream even though they recognized that this required a significant legislative change. Moreover, they required a period of exclusivity to insure that they could recoup some of their investment without

competition from a generic brand. Reckitt Benckiser succeeded in achieving both of these aims. Through the passage of DATA 2000, they created an entirely new distribution system (or “expanded access to treatment” in the parlance of policymakers) and a huge potential market for their product. They also succeeded in insuring a period of exclusivity by getting bup protected by the orphan drug law. Periods of market exclusivity are routinely granted to incentivize the development of new medications, so it is perhaps not surprising that RB obtained a 7-year orphan drug status designation from 2002 to 2009.

Stigma

In addition to regulatory disincentives, the stigma surrounding addiction and its treatment for both “patients” and physicians has been cited as impeding the development of anti-addiction medications (Congressional Record 2000: S9115; Fulco et al. 1995). The stigma surrounding drug addiction as well as its ambivalent status as a disease may also be the reason why there are few, if any, established patient advocacy groups calling for the expansion of medication treatments for addiction.⁸ And despite the high prevalence of people thought to have opioid dependence, stigma is widely perceived as keeping them from seeking treatment (Cunningham et al. 1993).

Perhaps even more daunting for industry than patient stigma is the stigma surrounding physicians who treat addiction (see previous Chapter). The restriction on physicians prescribing medication to treat addiction, which dates back to the court

⁸ While bup is discussed on some blogs about addiction, I am aware of only one group dedicated to advocacy around bup (National Alliance of Advocates for Buprenorphine Treatment, www.nabbt.org). However, this group is founded and run by medical professionals (the founder is a nurse at Yale Medical School who was deeply involved in some of the early clinical trials of buprenorphine) and funded in part by pharmaceutical companies, including RB. Their primary mission is to link patients with physicians who prescribe bup, and there is no evidence of active patient involvement.

decisions following the Harrison Act, stemmed directly from the perception that much of the blame for addiction fell upon the physicians and pharmacists who manufactured and sold addictive medications (e.g., tonics containing opiates or cocaine) (Weinberg & Turner 2005). Moreover, many of the early medical cures for addiction soon became seen as addictive agents themselves. This is especially true with opiate dependence, where synthetic (and legal) opiates have long been touted by medical experts as the solution to addiction. This historical cycle of prescribed narcotic medications becoming the cause of addiction itself has contributed to the stigma surrounding addiction medicine (Weinberg & Turner 2005). The recent rise in and attention to prescription drugs abuse has re-raised the specter of the drug-peddling doctor.⁹

The ways in which pharmaceutical companies and doctors were implicated in causing addiction historically have continued to impact addiction treatment today. Some scholars believe that medical professionals have actively abjured their role in the treatment of addiction and have thus discouraged the development of pharmaceutical treatments (Weinberg 2002). Since doctors got out of the business of addiction treatment following the passage of the Harrison Act, medical education has largely excluded any attention to addiction or to treatment. On average, medical students receive 12 hours of education on addiction (Miller et al. 2001), and only 8% of medical school curricula require a course on addiction (Physician Leadership on National Drug Policy 2000). Even if one surmounts the regulatory barriers to physicians' treating addiction as NIDA

⁹ There are an increasing number of popular media accounts about doctors supplying pain medications for nonmedical use like this headline from the New York Daily News (11/17/2010): *Staten Island's 'Dr. Feelgood,' 83, accused of peddling OxyContin to junkies, even had 'bouncers.'* Available at http://articles.nydailynews.com/2010-11-17/local/27081466_1_bouncers-oxycontin-lanting.

and RB did, one must still overcome the reluctance of physicians to treat addiction and fears of being tainted by accusations that bup is just another addictive drug.

NIDA's Role in the Development of Buprenorphine

The market, regulatory constraints, and stigma surrounding addiction have all been used to justify NIDA's extraordinary involvement in the development addiction medications, including bup (Congressional Record 2002; Harwood & Myers 2004). The relationship between NIDA and RB in the development of bup goes back 25 years and exemplifies a tangled web overlapping relationships between government and industry. Despite the repeated references to bup as a *new* medication by policymakers in the debates leading up to the passage of DATA 2000, the first study of bup's efficacy as a treatment for narcotic addiction was published in 1978 by Don Jasinski, who worked for NIDA's research division (Jasinski, Pevnick & Griffith 1978). Shortly after this study was published, NIDA approached RB (who held the patent rights to bup and were developing it as analgesic) and asked them to develop it as an addiction treatment medication (Campbell 2008).

NIDA entered into a Cooperative Research and Development Agreement with RB, the terms of which are described at a DATA 2000 hearing. It is worth quoting at length because it details the close relationship between government and industry in the medication's development as well as the ways in which NIDA rationalizes this relationship:

Buprenorphine and buprenorphine combined with naloxone are being developed under a Cooperative Research and Development Agreement (CRADA) between NIDA and Reckitt & Colman Pharmaceuticals, Inc. The terms and conditions of the CRADA specified that Reckitt & Colman

would collaborate in the development of buprenorphine and buprenorphine combined with naloxone. Reckitt & Colman was required to produce all dosage forms, collaborate on the design of clinical trials and participate in joint analysis of clinical trial data, permit investigators to publish the results of their studies, produce New Drug Application (NDA) reports as required by the FDA, and file NDAs as warranted by the study results.

NIDA's role was to provide access to a clinical trials network suitable for undertaking trials acceptable to the FDA under its Good Clinical Practices Guidelines, monitoring the trials and reporting adverse events to the FDA, to participate in meetings with investigators and the FDA, and to participate as appropriate in publications resulting from the studies. Under the terms of a CRADA, no federal funds are provided to the outside collaborator.

NIDA estimates that it provided in kind services (clinical pharmacology, analytical resources, and clinical trial support) related to the development of the buprenorphine products of approximately \$26 million over a five-year period, or about \$5 million per year. It is important to note that the pharmaceutical industry estimates the cost of bringing a new medication to market at approximately \$500 million. Therefore, the expenditure of these funds, in pursuit of an orphan medication, and in view of the fact that two new dosage forms were developed and tested to potential NDA status is very reasonable. It is also important to note that without the support of Reckitt & Colman, the cost to the Federal Government would have been substantially higher.

NIDA was pleased to have Reckitt & Colman as the sponsor in the development and marketing of these products, especially given the reluctance of pharmaceutical companies to invest in the development of pharmacotherapies for drug abuse and addiction. This is mainly due to the lack of market incentives and the societal stigma that companies perceive can be created if one of their products is approved for use in the treatment of drug abuse and addiction. This reluctance by the private sector to develop anti-addiction medications is the main reason why NIDA's medications development program was created by Congress in 1988 (Congressional Record 1999b: 100-103).

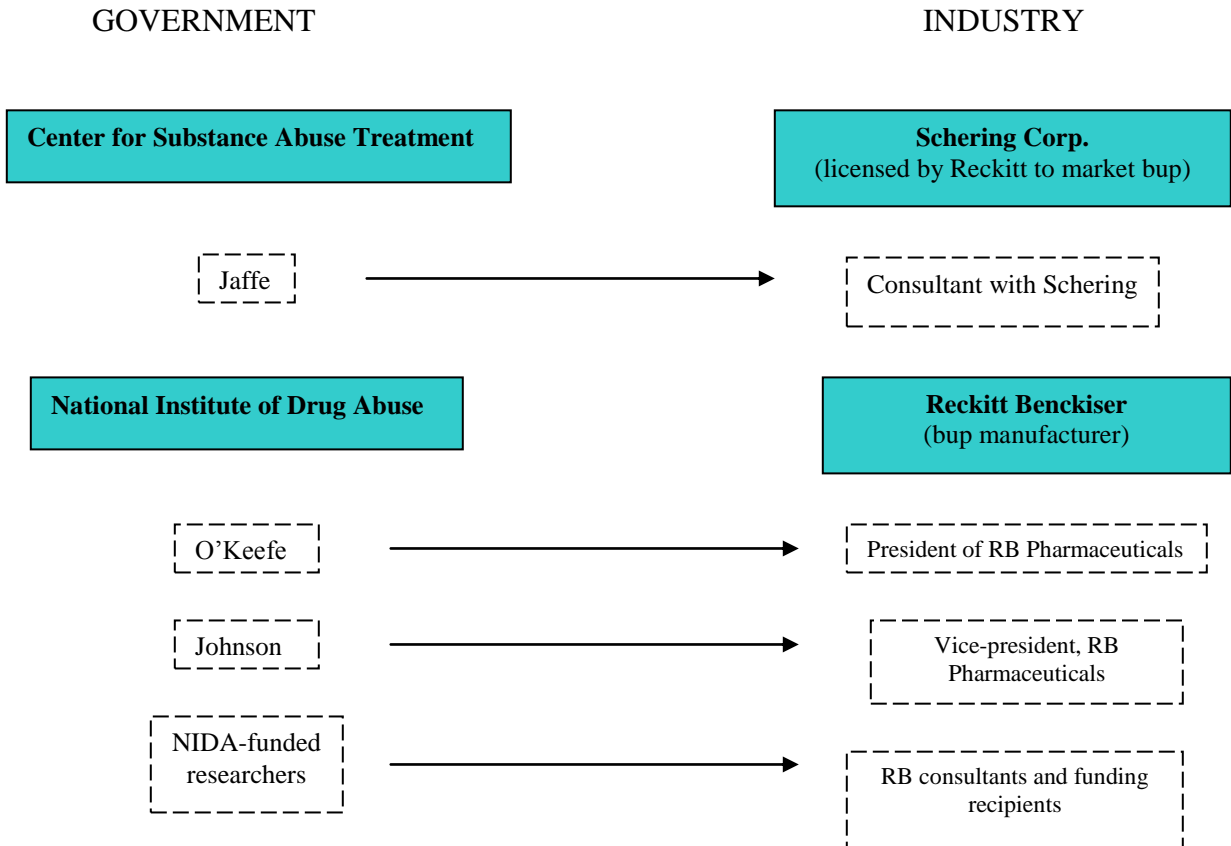
There are several things of interest in this description. First is the extensive collaboration between NIDA and RB. Bup was formulated and provided by RB, but it was NIDA's clinical trial networks that provided the research infrastructure needed to test the medication and get it approved for addiction treatment through the FDA. Also notable

are the financial incentives created by government for the development of bup, which include both the in-kind support of NIDA and the granting of orphan drug status, insuring that RB would get exclusive access to the market for at least 7 years. Finally, the explanation of how the development of addiction medications differs from that of other pharmaceuticals because of the lack of “market incentives” and “societal stigma” is used to rationalize this government investment on behalf of industry. NIDA is investing millions because of stigma that is generated in part by other government interventions and regulations surrounding addiction, like incarceration and the methadone clinic system. This is just one example of the inconsistency in drug policies at the federal level, where NIDA is investing millions to overcome the stigma that is largely a result of the policies of other federal agencies, including the National Office on Drug Control Policy and the Drug Enforcement Agency.

This description of the Cooperative Agreement between NIDA and RB in the public record obscures the fact that the government and industry players are completely overlapping and intertwined (see Figure 5). O’Keefe, President of RB Pharmaceuticals, worked with Jasinski, the original researcher of bup, at NIDA, and Jerome Jaffe, the nation’s first “Drug Czar” under Nixon and a long time leader at the U.S. Center for Substance Abuse Treatment, worked for the Schering Corporation during the critical time when DATA 2000 was being lobbied for and negotiated. At the time, Schering was licensed by RB to market bup. In 2003 just after bup was approved by the FDA, Jaffe (who by then was working for University of Maryland Medical School) co-authored an article with Charles O’Keefe, the President of Reckitt Benckiser Pharmaceuticals explaining how the company had worked with addiction medicine interests to pass

DATA 2000 (Jaffe & O'Keefe 2003). It seems likely that RB benefited from O'Keefe's and Jaffe's relationships and reputation with government officials. Most of the "experts" consulted during the legislative process were government-funded research scientists. Not surprisingly, some of these doctors are also connected to RB as consultants (see for example, the financial disclosures in Kleber 2008), which funds clinical trials and provides other benefits to addiction medicine doctors (like under-writing training, research and conference costs).

Figure 5: Relationships Between Government Actors & Reckitt Benckiser



NIDA’s involvement in the development of bup runs counter to other narratives about the role of the pharmaceutical industry in promoting the medicalization of social problems. In the case of bup, the official story is that government investment was needed to overcome industry’s reluctance to develop an anti-addiction pharmaceutical. While industry’s reluctance to develop addiction medications may well be true, by emphasizing the barriers that industry faces, NIDA justifies the continued investment in its Medications Development Program. Moreover, the porous boundaries between NIDA officials, researchers, and RB staff suggest that many individuals both within and outside of RB stood to profit both personally and professionally from bringing bup to market, especially if it could be dispensed in mainstream medical settings. From a social

constructionist perspective, what is important are the ways in which NIDA and RB work together to shape the meaning of bup. Bup is not unusual just because the manufacturer worked so closely with government; it is unusual because the company that developed the pharmaceutical is not a pharmaceutical company at all.

Reckitt Benckiser

Founded in 1823 as an industrial chemical company, RB is a multi-national manufacturer of household and personal care products and the world's leading manufacturer of fabric cleaners, disinfectants, and a host of other cleaning products. In addition, it is the worldwide leader in several health and personal care categories, including antiseptics, depilatories, and over-the-counter sore throat medications. RB also owns French's Mustard and Frank's Red Hot Sauce. In 2009, the company overall had more than \$12 billion in revenues and almost 25,000 employees worldwide. The sole products in its pharmaceutical division are different formulations of bup.

RB's transition from producing mustard to transforming U.S. drug policy came through its efforts to find an over-the-counter analgesic. RB has developed a number of over-the-counter medications and was looking at bup as a possible pain reliever in the 1970's when Jasinski of NIDA first showed its efficacy as a treatment for opioid dependence. Charles O'Keefe, who was being mentored by Jasinski and also worked at NIDA, had been hired as a consultant with RB on drug scheduling issues. Following Jasinski's bup study, O'Keefe went to work for RB, forming the pharmaceutical division of the company, which was focused solely on developing bup (Campbell 2008). O'Keefe became the President of Reckitt Benckiser Pharmaceuticals, and Ed Johnson, another

colleague of Jasinski from NIDA, became its Vice President of Clinical, Scientific, and Regulatory Affairs. According to O’Keefe, it was NIDA who pushed RB to develop bup for addiction treatment since RB felt that the drug had no market. In an interview with addiction researcher Nancy Campbell, O’Keefe explains:

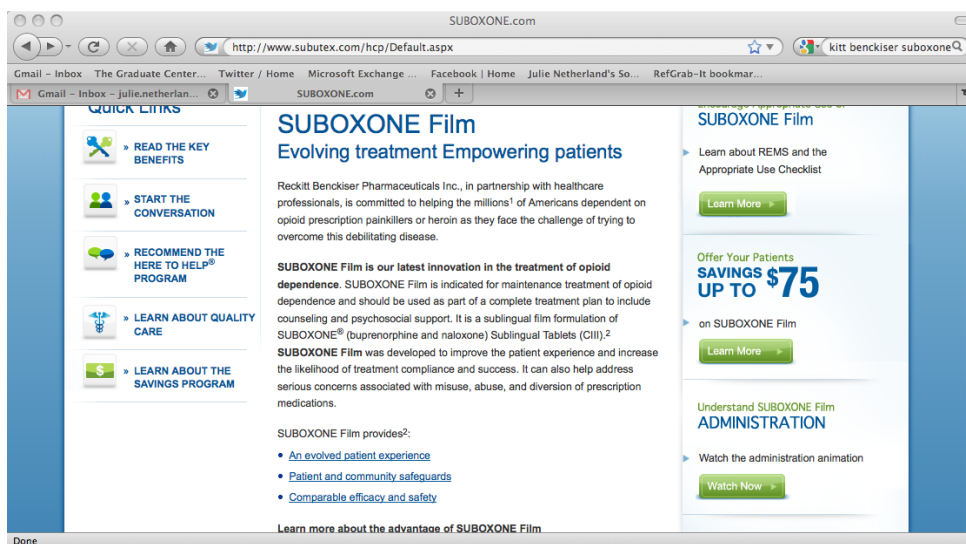
I was fortunately able to go to the board of Reckitt and say, guys... It’s the right thing to do. ... The only future for this drug is going to be in addiction treatment, and you’re not in that business. ... So why don’t you just work with NIDA and make it happen. They said, no, we can’t do that, we make mustard and shoe polish. Ultimately, we just leaned on their sense that it was the right thing to do. They were in fact English gentlemen who believed that they did have some social responsibility. Once you talked with them long enough, they said, go ahead and do it, but don’t spend any money (Campbell 2008).

Recognizing that addiction treatment was beyond the scope and comfort zone of the company, O’Keefe pushed RB to join forces with NIDA, which was actively seeking medication treatments for addiction. Again contrary to narratives about pharmaceuticalization being driven by profit, the story O’Keefe tells is one of a company driven by social responsibility. Indeed, Suboxone and Subutex (brand names for bup) comprise a relatively small portion of RB’s overall business (7.5% of total net revenues). But they have been increasing in profitability. According to RB’s most recent annual report, the net revenue from Subutex and Suboxone grew 50% between 2008 and 2009, an increase “predominantly driven by a continued increase of Suboxone in the United States” (Reckitt Benckiser 2010a: 8). While the increase in profits is remarkable, 2009 also marked the year that bup lost its exclusivity granted under the orphan drug act. According to the company: “In the U.S., Suboxone lost the exclusivity afforded by its orphan drug status on 8 October 2009... the protection of this business has a finite term unless replaced by new treatments or new forms” (Reckitt Benckiser 2010a: 4).

In October 2009, the FDA approved a generic form of bup manufactured by Roxane Laboratories, a subsidiary of Boehringer Ingelheim, one the top 20 global pharmaceutical companies with net sales for the company overall exceeding \$15 billion. Sales data on the generic versus the brand name of bup are not yet available, but sales for bup overall reached \$75 million for the 12 months ending June 2010 (Business Wire 2010). These figures suggest that whether or not RB was originally motivated by “social responsibility,” bup has become fairly profitable.

To address their loss of exclusivity, Reckitt Benckiser has recently developed two new forms of bup. One is a film that dissolves when place under the tongue. Pictures and references to the film formulation have replaced all earlier references to the sublingual tablet on RB’s Suboxone website. They claim that the film “increases the likelihood of compliance” (Reckitt Benckiser u.d.(a)) and addresses concerns about diversion and abuse (see Figure 6). Given the new generic form of tablets available, RB wants its customers to use the film, which does not yet have a generic equivalent.

Figure 6: Website Promoting Suboxone Film



Source: www.suboxone.com

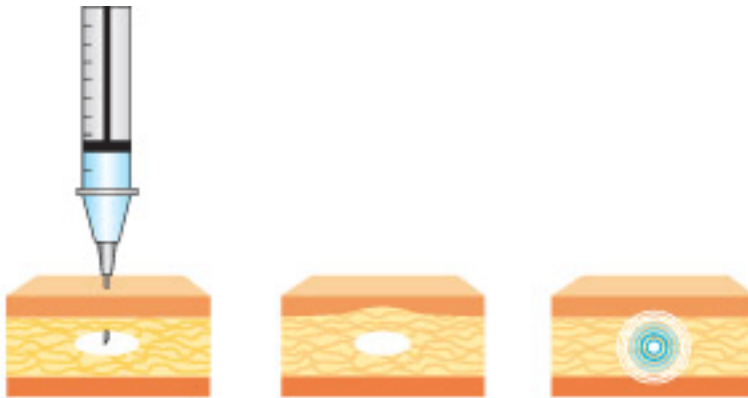
In late 2008, RB also announced a partnership with Atrigel, a company that manufactures “biodegradable polymers dissolved in biocompatible carriers” (Reckitt Benckiser 2008:

1). This can only be a precursor to a form of bup that is implanted subcutaneously and slowly released over an extended period of time (see Figure 7). According to a press release by Reckitt Benckiser and Atrigel:

When the liquid product is injected into the subcutaneous space through a small gauge needle or placed into accessible tissue sites through a cannula, water in the tissue fluids causes the polymer to precipitate and trap the drug in a solid implant. The drug encapsulated within the implant is then released in a controlled manner as the polymer matrix biodegrades with time (Reckitt Benckiser 2008).

Subcutaneous implants, like the one described above, have been used for contraceptives and for drugs to treat schizophrenia. A competing pharmaceutical company recently published a study in JAMA (Ling et al. 2010) about the safety and efficacy of these kinds of bup implants. The partnership with Atrigel and the recent research surrounding new formulations of bup suggest that RB and other companies are looking for ways to capture the bup market. Both the sublingual film and implant forms of bup address concerns not only about loss of market share, but also about compliance and diversion. With the medication literally implanted under the skin, the company no longer has to rely on the “patient” to take the appropriate dose, and stopping the medication becomes much more difficult, if not impossible.

Figure 7: Diagram of Subcutaneous Buprenorphine Implant



Source: Atrigel u.d.

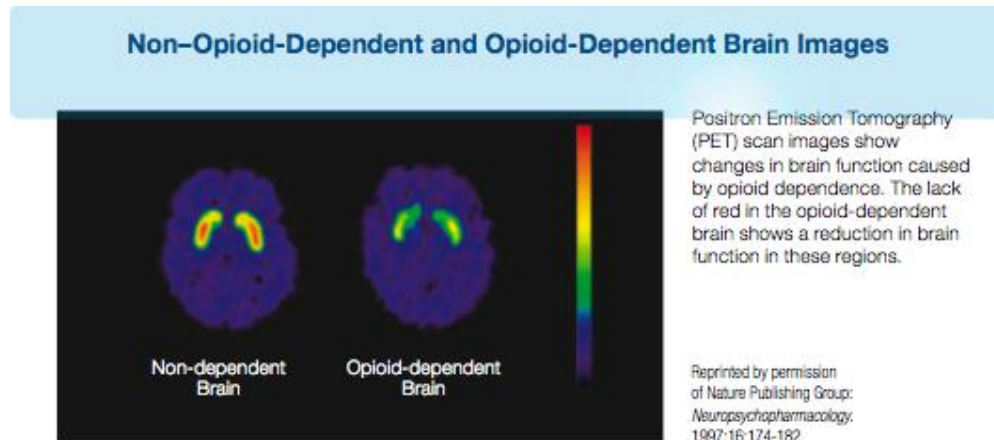
Reckitt Benckiser: Constructing Buprenorphine & the Buprenorphine Patient

Following the development of bup and successful changes to regulations allowing it to be prescribed by physicians, RB began a marketing campaign targeting both patients and medical providers. RB's portrayal of opioid addiction relies heavily on neuroscientific research and language (analyzed in the next chapter), which is not surprising given their close connection to NIDA, the chief proponent of the brain disease model of addiction. However, RB's understanding of addiction is more inclusive of behavioral components than that seen in the neuroscientific literature. In addition, like the proponents of DATA 2000 discussed above, RB appears to be constructing addiction in ways that particularly appeal to people unlikely to seek treatment through the methadone or traditional behavioral drug treatment systems.

While debates over DATA 2000 throughout the 1990's drew upon a disease model of addiction, references to neuroscience were rare. RB's marketing materials in contrast understand addiction in part as a brain disease. In their key publication for the general public, "Evolving Treatment Empowering Patients: A Guide for Friends and

Family About Opioid Dependence and Treatment with Suboxone Film,” they explain opioid dependence causes long-term changes in the structures of the brain. In fact, they reprint a PET scan of the non-dependent and opioid dependent brain (see Figure 8).

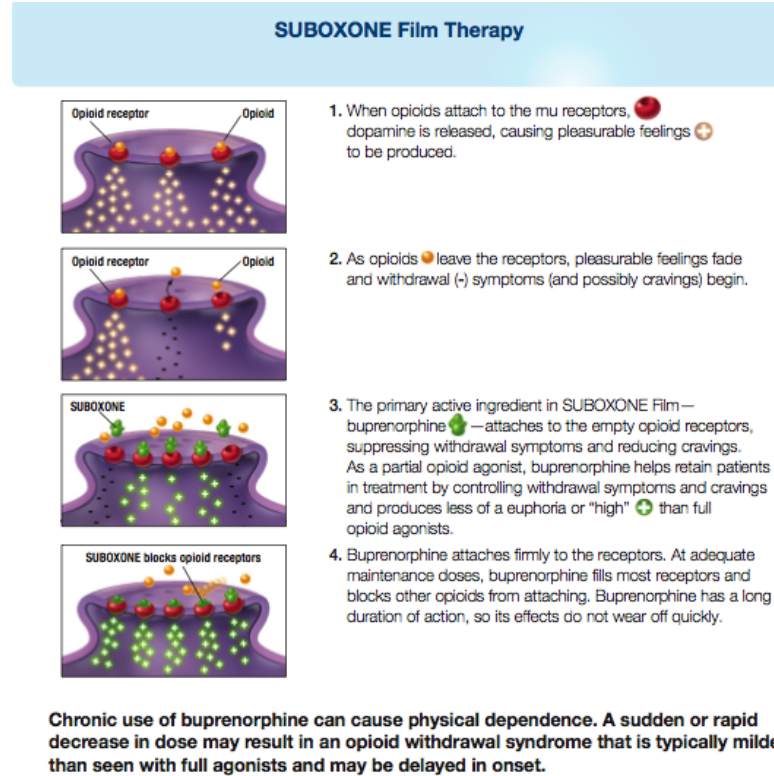
Figure 8: PET Brain Scan of “Addicted” and “Non-addicted” Brains



Source: Reckitt Benckiser u.d.(a)

This PET image constructs addiction as a physiological illness that can be located in the human brain. Addiction, which for so long was diagnosed through self-report, now has a material and embodied presence. RB emphasizes the medical and neuroscientific aspects of addiction in a number of other ways. In explaining how Suboxone film works, they offer an illustration that shows how the pharmaceutical intervenes in the dopamine receptor system (see Figure 9). As this figure suggests, RB explains addiction and bup treatment at the molecular level by showing how bup attaches to the brain’s opiate receptors and blocks opiates from activating the pleasure systems in the brain.

Figure 9: Diagram of Neuronal Activity of Buprenorphine



Source: Reckitt Benckiser u.d.(a)

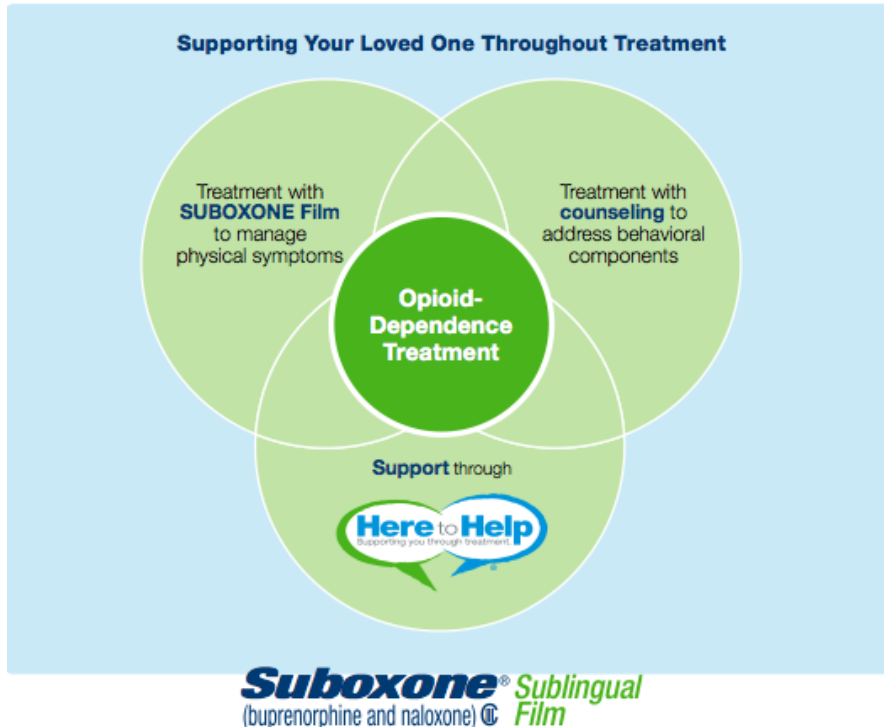
In addition to scientific diagrams and explanations, RB constructs addiction as a medical disease through other cues. For example, the way that bup is packaged and the consistent verbal and visual linkages to physicians emphasize the medical aspects of addiction and its treatment. Throughout their literature, doctors are both referenced and depicted to drive home the point that addiction is a disease appropriately treated by physicians. As they note in a press release about Suboxone film: “Suboxone can... be dispensed for take-home use, just like any other medicine for other medical conditions” (Reckitt Benckiser 2010b).

Despite this framing of opioid dependence as disease and bup as medicine, RB defines what bup treats in fairly narrow terms, noting that the medication addresses just

one small component of the larger phenomenon known as addiction. On the home page of their website (www.suboxone.com), they note: “Keep in mind that opioid dependence is so much more than a medical condition.” For RB, addiction also has a behavioral dimension, and they acknowledge the widely held belief that addiction is due to a failure in morality. They advise the reader: “try and stay non-judgmental. Acknowledge that dependence is a medical condition, not a moral failing” (Reckitt Benckiser u.d.(a): 18). Elsewhere, they clearly state that bup addresses only the physical symptoms of craving and withdrawal – and that does not a cure make. In fact, they describe bup as a tool to “focus on treatment” by which they mean psychological counseling (Reckitt Benckiser u.d.(a): 6). In contrast to the neuroscientists (discussed in the next chapter) who de-emphasize the behavioral components of dependence, RB continually acknowledges the importance of behavioral change, counseling, and the support of family and friends. They adhere consistently to the model of treatment depicted in Figure 10.

In this model, addiction is presented as a physiological, behavioral and social hybrid. Addiction is not just a brain disease; it is a complex phenomenon that requires medication, counseling and social support. Suboxone helps manage the physical symptoms of craving and withdrawal; counseling addresses the behavioral aspects (which include things like avoiding triggers, steering away from “high risk” situations, and managing craving through exercise and music); and *Here to Help* offers professional and peer support. *Here to Help*, which is run by RB, offers anyone who takes Suboxone free access to the following services: a “personal care coach,” a special website, email support, online counseling, community message boards, and patient success stories.

Figure 10: Reckitt Benckiser Model of Addiction Treatment



Source: Reckitt Benckiser u.d.(a)

All of these behavioral strategies are placed within a medical frame by emphasizing analogies to other illnesses: “[O]pioid dependence treatment is similar to treatment for other chronic diseases, such as diabetes and asthma, where medication and behavioral changes may make a difference in the end result” (Reckitt Benckiser u.d.(a): 5). And while these services receive a great deal of focus, physicians remain the primary source of authority. In the disclaimer section about *Here to Help*, they note: “Your doctor is your best source of information about your treatment” (Reckitt Benckiser u.d(b): 1). RB carefully constructs a chronic disease that has both biological and behavioral components, while ensuring that medical expertise remains ascendant over personal experiences and lay knowledge.

RB's materials also acknowledge that hybrid notions of addiction leave open the possibility of a moral framework for understanding addiction as a failure of will or character. In section called "What you should know about relapse," they write:

Opioid dependence is a chronic disease, and people dependent on opioids may have cravings years after their last drug use. Sometimes these cravings may lead to relapse. In fact, studies show that relapse is a fairly common occurrence among opioid dependent patients. It is important to realize your loved one who relapses is not a "failure" – he or she just needs a little more help getting back on the right track (Reckitt Benckiser u.d.(a): 14).

This passage implies not only that bup may not resolve all cravings, but also that individuals, with the help and support of their families, can "get back on track." As noted above, when not seen as a failure of treatment but as a routine part of recovery, relapse can be an important business opportunity for RB. But this also suggests that RB places some, if not all of the responsibility, for overcoming their disease with the individual. It is he or she that needs get him or herself "back on the right track."

This emphasis on the behavioral and psychological aspects on opioid dependence is striking. In contrast, the website for Prozac (Lilly u.d.), a treatment for another "disease" that has also been portrayed as having both a psychological and biochemical element, has none of the same language and no resources comparable to *Here to Help*. Rather, it contains the medication guide and nothing else.¹⁰ While the economic motives for constructing opioid dependence as a chronic, relapsing brain disease are clear and were described above, it is less certain why they give so much attention to the behavioral and psychological components of the disease. Many "illnesses" are constructed as having both behavioral and physiological elements, but the pharmaceutical manufacturer

¹⁰ Since I retrieved this page (www.prozac.com) in February 2011, Lilly, the manufacturer of Prozac has removed this page altogether.

has an investment in promoting the biological aspects of the disease which their medication is designed to treat. One possible explanation for RB's emphasis on behavioral treatment adjuncts to bup is that they understand (and research supports) that those who receive counseling stay in treatment (i.e., will take bup) longer. Another possibility is that they are going out of their way to help patients and physicians meet the DATA 2000 requirement that bup be accompanied by some kind of counseling. For many mainstream physicians that do not traditionally treat addiction, finding a source of appropriate counseling may be a difficult (Netherland et al. 2009). For example, the CSAT National Advisory Committee considering legislative changes to bring bup to the medical mainstream was concerned that physicians not be put into the position of providing uncompensated counseling services. They ask:

What measures can we take to assure physicians that they will be adequately paid for their buprenorphine patients and will not be expected to provide un-reimbursed psychosocial services (National Advisory Council's Subcommittee on Buprenorphine 1999: 8)?

These addiction medicine professionals understand that, because of the historical separation between financing for behavioral health and medical services, doctors will not receive payment for counseling their bup patients. RB, through its *Here to Help* program solves that problem by removing one more barrier to physicians prescribing bup by offering that counseling for free. *Here to Help* may also be a strategy to establish ongoing personal relationships with their customers to build brand loyalty. As Lakoff describes, this kind of "disease management" builds a relationship between consumer and producer:

[T]he concept of 'disease management' ... helped to structure an ongoing relationship between producers of health interventions, especially pharmaceutical companies, and their consumers. In a similar fashion, the

novel concept ... of ‘personalized medicine’ is an innovation linking production and consumption through the invention of a new need (2005: 169.)

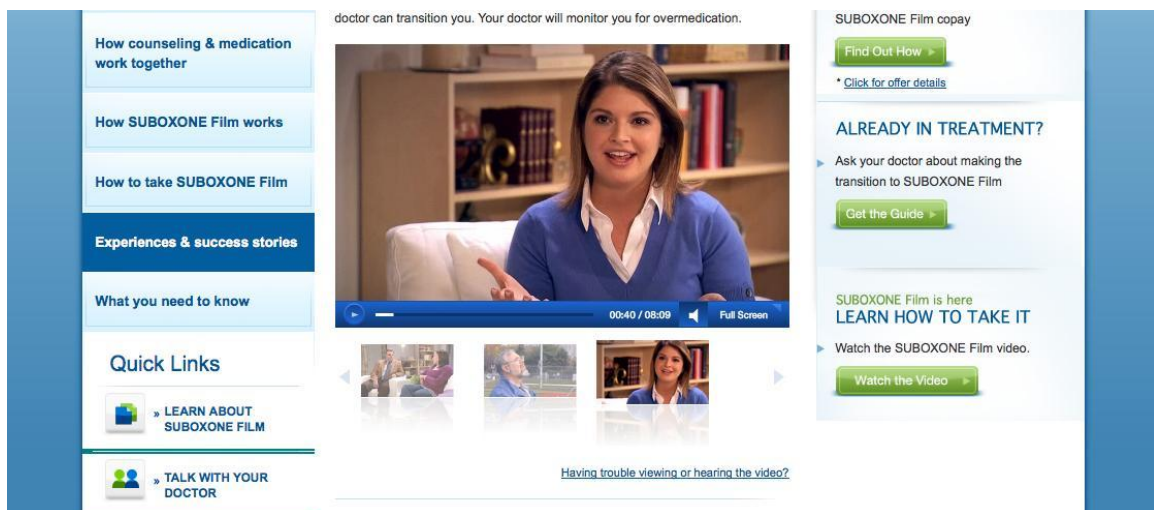
Here to Help offers just this kind of ongoing relationship that both personalizes an individual’s bup treatment and helps ensure that they stick to the treatment.

While the RB website and documents show a balance between the medical and behavioral aspects of addiction in a way that is fairly nuanced, there are absences in their construction that are worth noting. First, references to how structural or environmental factors might affect drug use and its treatment are missing. Poverty, racism, exposure to drug markets, the meteoric rise in prescriptions for pain medications -- none of these are referenced in their materials. In addition, there is repeated emphasis on the private and confidential nature of treatment with bup, an implicit recognition of the stigma associated with traditional drug treatment, but no explicit mention of the existing drug treatment system. RB emphasizes psychological counseling but not therapeutic drug treatment communities, intensive outpatient programs, or methadone clinics. This absence, while more subtle than the condemnation of traditional drug treatment seen in the debates over DATA 2000, helps distance bup from these highly stigmatized forms of treatment and the equally stigmatized people who generally end up there (i.e., “hard core urban heroin users”).

Campbell argues that drug treatment is class-stratified in ways that medicalization supports: “Medicalization [of addiction] remains the province of the insured middle and upper classes... addiction science has fitted seamlessly into the disciplinary regimes of drug control” (2007: 22). RB constructs bup as a treatment for white, suburban people who “accidentally” become addicted to pain medications. Nowhere on RB’s main

website or the *Here to Help* website are *any* images of people of color. The featured video, a “patient success story,” is about Jennifer, a white suburban stay-at-home mom who became addicted to prescription pain medications following a tonsillectomy. All six of the “patient success” story videos feature white individuals all of whom are addicted to prescription opioids – none of them mention heroin. The “care coaches,” Jess and Sandy are both young white women (see Figure 11) who closely resemble the addicted individuals featured on the website.

Figure 11: Sandy, “Care Coach” for Reckitt Benckiser



Source: www.suboxone.com

These kinds of images combined with the distancing from traditional drug treatment suggest that RB is trying to get away from the stigma associated with drug use and drug treatment. It is also likely that they are trying capture the market of prescription pain medication drug users, which as discussed above, is far bigger than the heroin user market. While heroin addiction is mentioned occasionally as a problem that bup can treat

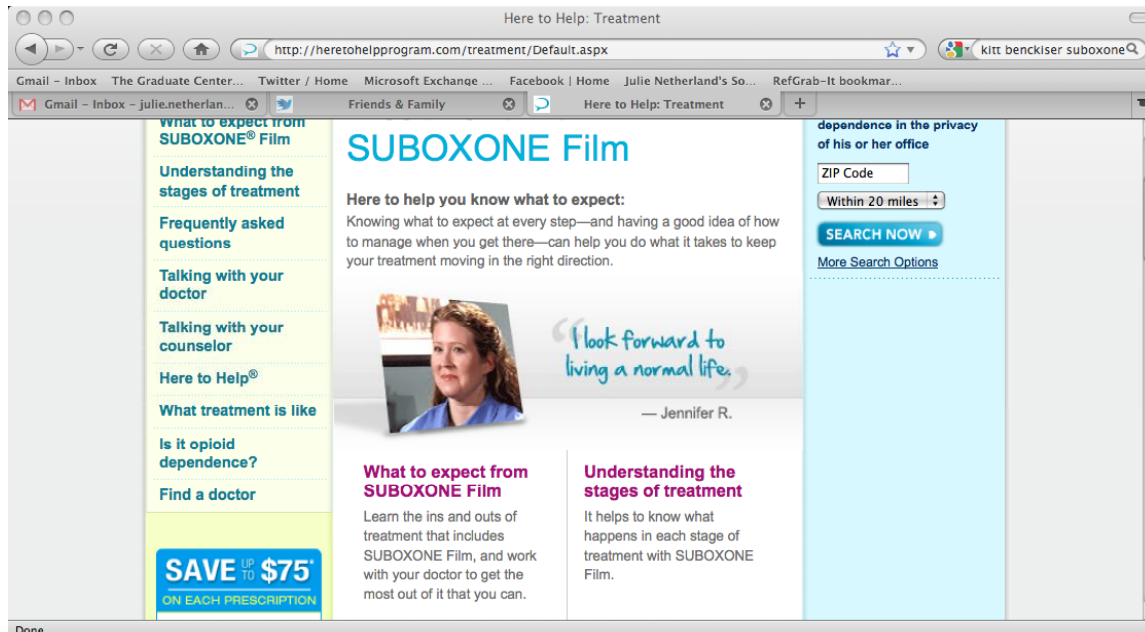
in RB's materials, the images and languages used throughout their educational information point to a different market – white, prescription pain medication users.

RB frames the problem of opioid addiction largely in terms of addiction to prescription medication to accomplish two related aims. First, it orients bup towards a larger and more lucrative market than if they were to target heroin users alone because prescription drug misuse far exceeds heroin use. Secondly, it frames addiction as a problem of white, middle class people. The “non-medical use” of pain relievers is almost twice as high among whites as Blacks (SAMHSA 2010). Rates of heroin use among Blacks, Latinos, and whites are almost identical (National Office of Drug Control Policy u.d.); however, because of the highly racialized war on drugs, stereotypes of heroin users tend to cast them as Black urban dwellers (see Scotti & Kronenberg 2001; Steiner & Argothy 2001). By focusing on white, prescription drug users, RB avoids the stigma associated with heroin, heroin users, and traditional treatment for heroin (i.e., methadone). In the RB literature, those who use bup are largely untouched by the world of heroin use and methadone treatment.

Being untouched by this world is also important in framing the “recovery” of people in the RB literature. Unlike those on methadone -- which (in the language of the Congressional report on DATA 2000) is generally for addicts “can no longer work productively” (Congressional Record 1999b: 13) -- the idealized bup user that RB constructs is one who only recently left and can return to a “normal life” with the help of bup. As Jennifer, a young white woman on the RB website, puts it, by taking bup she can “look forward to living a normal life” (see Figure 12). A normal life is one unmarked by drug use, a history of incarceration, or by having to undergo stigmatizing treatment

within the traditional drug treatment system. Jennifer and others like her can be treated in any medical setting just as if they had any medical disease. The “normal condition,” we can deduce from the RB materials, involves being white, middle class and responsible.

Figure 12: Reckitt Benckiser Marketing Materials



Source: www.suboxone.com

Drug vs. Medicine

While focusing on bup as a treatment for prescription drug use may appeal to a lucrative market for RB and reclaim addiction treatment as the province of white middle class users, it creates the need for the manufacturer to clearly differentiate bup – a prescribed opioid—from the pain medications it replaces -- also prescribed opioids.

Early chapters have suggested that the regulation and pharmacology of bup has been used strategically to distinguish it from illicit drugs (including the nonmedical use of

prescription pain medications). RB, through the ways in which it packages, formulates and markets bup, is also working to distinguish bup from illicit drugs and to shape the experiences of the individuals who take it. For bup to succeed as a medication and for opioid addicts to become a viable market, “patients” must experience bup as a medication and not as a drug. A number of scholars, beginning with Howard Becker and his classic work on marijuana users (1963/1997), have noted that the meanings and experiences of substances are socially contingent. While the rhetoric of scientific empiricism and the randomized controlled trial (which specifically seeks to neutralize social and environmental variation) would have us believe that substances cause specific biological effects independent of any social or cultural influence, substantial evidence suggests that both the meaning of and a substance’s “drug effect” are mediated by the “psycho-socio-cultural matrix” (Cohen et al. 2001) in which the drug is ingested. Bergschmidt (2004), for example, cites reports that prescribed heroin is experienced as less pleasurable than expected by drug users, and Gomart (2002) notes that the differences between methadone and heroin are largely interpretative. This is not to say that substances have no biological effect on the body but rather that the effects and meanings of substances are not static truths revealed in their chemical structures. They are dynamic social phenomena that can be controlled, shaped, and imbued with meaning. RB, through its formulation, packaging, and marketing of bup, is actively working to imbue bup with specific meanings and to maintain the distinction between bup as a medication and as an illicit drug.

Opioids are a particularly interesting case in which to look at if and how such efforts can succeed precisely because there has been so much historical slippage between

their status as medications and their status as illicit drugs. Increasingly, with the rapid rise of prescription opioid abuse, they are often both at the same time. While the meaning of some substances (e.g., aspirin) is fairly unambiguous and seldom contested, those substances at the edge of the drug/medicine and addiction/treatment border must be defined and controlled with particular vigilance. Gomart (2002: 112) argues that, compared to some medications, “methadone is an under-determined object which can and must be controlled.” She notes that such control happens at multiple levels, including through rhetoric and discourse, regulation, and cultural representation.

Government regulators relied on bup’s purported pharmacological properties to make distinctions between it, methadone and heroin. RB uses different tools and plays a central role in creating a synthetic, commodified product that may share pharmacological properties with heroin but is packaged and branded to look like a legitimate medication (see Figure 13). This figure, which shows street heroin on the right and Suboxone on the left, illustrates how RB uses professional branding and packaging to shape bup as a legitimate medication. From the dosage listed on the front to the medication warnings and bar code on the back, this packaging signals to doctors and “patients” that this is legitimate pharmaceutical commodity.

Figure 13: Packaging of buprenorphine and street heroin



Sources: www.suboxone.com and www.talkofdetroit.com

In his book, The Cult of Pharmacology, Degrandpre (2006) argues that the pharmaceutical industry synthetically manipulates substances to transform them from a natural product into artificial commodities from which they can profit. He goes further to suggest that, as substances like cocaine and opium were prohibited, the pharmaceutical industry manufactured both their replacements and a justification for people to take them.

The pharmaceutical industry, he argues:

...synthesized new artificial angels that could substitute for the organic ones that had fallen from grace... And finally in order to legitimize drug use under the guise of medical treatment, drug makers carried the day in redefining the stress of everyday life in terms of illness and disease... a new white market of “ethical” drug use erected side by side with emerging black markets of illegal drugs (DeGrandpre 2006: 139).

RB has taken bup, a synthetic opioid, and repackaged it literally and through its marketing to be a legitimate medication to treat addiction – despite the history of addiction medications becoming the cause of addiction and even though bup itself causes

physical dependence. Bup, like methadone before it, is constructed as an ethical medical antidote to illegal drugs, like heroin, and misused prescription drugs, like Oxycontin.

Unlike some policymakers and regulators who argue that bup is pharmacologically different from other opioids (e.g., heroin, methadone, and prescription pain medications), RB openly acknowledges that bup is an opioid that causes physical dependence. In answer to the rhetorical question in their primary patient education brochure “What Are Opioids?,” they write: “Examples of opioids include some prescription pain killers (such as oxycodone, hydrocodone, buprenorphine, and methadone) and heroin” (Reckitt Benckiser u.d.(a):4). They go on to say that “Suboxone Film can be abused in a manner similar to other opioids legal and illicit” (Reckitt Benckiser u.d.(a):4). Given this acknowledgment, RB is faced with the task of trying to distinguish bup from illicit drugs on the one hand and mitigating against its potential abuse and diversion on the other. Throughout their literature, one sees this tension. Bup is a legitimate medication, and bup is a potential drug of abuse.

Having acknowledged that the chemical properties of bup are similar to heroin, RB must find other ways to distinguish bup. The biggest boost to its legitimacy as a medicine was the passage of DATA 2000 allowing for its prescription by doctors, and RB draws attention to this difference whenever it can. Keane and Hamill (2010) did an interesting analysis comparing how opioids are constructed in the context of pain treatment to how they are constructed in context of addiction. They concluded: “A key factor that separates the pain patient and the addict is the nature of their drug supply” (2010: 61). Indeed, a primary feature of bup that distinguishes it from abused opioids is that its use is controlled and regulated through a series of careful relationships between

RB, government agencies, and physicians. In some European countries, heroin has been prescribed for the treatment of opioid addiction with great success (Bell et al. 2002), which suggests that even a “demon drug” can be made therapeutic when brought under the control of the state, repackaged by the pharmaceutical industry as a medication, and imbued with the authority of medicine.

However, just because bup is manufactured, packaged and distributed by doctors does not mean that it will not slip into becoming an abused drug. RB, with the encouragement of NIDA, therefore, took another step to keep bup from becoming an illicit drug-- they fundamentally changed its formulation. In the U.S., almost all sales of bup are a formulation that combines bup with naloxone. Naloxone is added for the sole purpose of preventing diversion. According to RB’s materials:

It [naloxone] is there to deter people from crushing or dissolving suboxone film and injecting it... When suboxone film is used incorrectly (by injection) in an individual dependent on a full opioid agonist (i.e., oxycodone, hydrocodone, morphine, methadone, or heroin), its naloxone component can cause withdrawal symptoms to rapidly occur (Reckitt Benckiser u.d.(a): 9).

RB acknowledges the illicit market for bup, which is dissolved and injected by people already addicted to other opioids. To prevent the illegal use of bup, they add another pharmaceutical with the sole purpose of making people who inject bup while on other opioids experience rapid withdrawal symptoms – a kind of aversion therapy. This phenomenon, known as precipitated withdrawal, causes a sudden onset of extreme withdrawal symptoms -- nausea, sweating, cramps, agitation. If Suboxone is taken as prescribed (i.e., dissolved under the tongue), the naloxone has essentially no effect. In addition to the including naloxone in the formulation of bup, the new products developed are also designed to insure that individuals only use bup as prescribed. For example, the

new film formulation “discourages misuse and abuse” (Reckitt Benckiser u.d.(b): 1). because it is difficult to crush and snort. The sustained-release, surgically implanted forms of bup now being tested in clinical trails are also meant to take away any ability of individuals to “misuse” or fail to take their bup.

RB has also used packaging to deter misuse and abuse. Suboxone is packaged in single dose units that each have a unique ten-digit code “to discourage diversion” and “facilitate medication counts” (Reckitt Benckiser u.d.(b): 1). In addition, RB has developed a comprehensive risk management program with the goal of “minimizing risk of diversion and abuse” (Reckitt Benckiser 2010b). This program includes: “monitoring and control of drug distribution,” “an active surveillance and intervention program to detect and deter misuse, abuse and diversion,” and a “field medical advisor to monitor and advise practicing clinicians... on ways to minimize abuse and misuse” (Reckitt Benckiser 2010b). All of these safeguards suggest that bup can only be maintained as a medicine through extraordinary efforts to keep it from becoming a drug. In their advice to physicians, RB reveals more of the same concerns about guarding against diversion as well as a sense that those taking bup are not to be trusted. They (Reckitt Benckiser 2010c) created an “Appropriate Use Checklist” for physicians that includes:

- Prescribing only a limited amount of the medication at the first visit
- Assessing and encouraging patients to take the medication as prescribed through the use of pill counts/dose reconciliation (i.e., have they taken more or less than what was prescribed)
- Making sure the dose is appropriate (i.e., not too high). They suggest “the need for a higher dose should be carefully evaluated.”

- Assessing whether the patients is making progress towards treatment goals by conducting urine screens to assess the use of illicit substances.

All of these checklist items are aimed at insuring that bup is taken only “as prescribed.” Any use outside of that dictated by the doctor is seen as a sign that the individual, instead of treating their addiction, is feeding it with bup. RB’s materials show a preoccupation with diversion and misuse that belies just how close bup is to the illicit and “abused” drugs it is meant to replace. Through their packaging and formulation of bup, they have created a synthetic and commodified opioid and taken what steps they can to “medicalize” it. These include, of course, giving physicians control over its prescription, formulating it to discourage misuse, and working with physicians to prevent and monitor the diversion of bup -- single use packaging, coding packets for pill counts, encouraging urine screening, and tracking sales. No doubt, many of these steps were taken to reassure the DEA and other government agencies that were wary of bringing bup to market. But beyond alleviating the concerns of government regulators, RB is also clearly working to construct bup as a legitimate medication by doing whatever it can to maximize physician’s control over its dosage and administration. Bup succeeds as a medicine only when it is “taken as prescribed.” When “patients” control either the dosage or the way it is ingested, then bup runs the risk of becoming yet another illicit drug.

Conclusion

The development of bup occurred during the rise of pharmaceuticalization in the U.S. However, bup troubles the narrative of corporate disease construction in important ways. The push to develop bup came largely from NIDA and the government's interest in finding a medical solution to addiction. RB was driven partly by profit and partly through the persuasion of people at NIDA and people with strong ties to NIDA working within the company itself. The challenge to developing and marketing bup centered on overcoming the historical, cultural and regulatory barriers that limited the role of physicians and the use of narcotics in the treatment of addiction. This meant constructing bup as a legitimate medication that was different from heroin or from methadone, both widely perceived drivers of, rather than treatments for, addiction. Through its marketing of bup, RB plays an active role in constructing bup, addiction, addiction treatment, and the addicted subject in ways that separate them from heroin and early treatment medications. As the only manufacturer of bup until very recently, RB is particularly influential in shaping these discourses.

As constructed by RB, recovery comes both through neurochemical and behavioral changes. As such, this discourse is similar to that surrounding the medicalization of obesity, diabetes, and other "public health problems," which are seen as having both a physiological and behavioral component (see for example, Rogan & Morone 2005; Saguy & Ameling 2007). RB relies heavily on neuroscientific understandings of addiction but consistently advocates for counseling and social support. Bup controls the physical symptoms of craving and withdrawal, but will power and changes to behavior are also required. In his cogent analysis of Prozac, Lewis (2003: 57)

argues that a key message undergirding the pharmaceutical logic of Prozac is that “all people/machines need is to take a pill and get back to the New World Order Inc. of hyperactive consumption/production.” That is, the medication alone restores the “patient’s” ability to reenter contemporary capitalist society obviating the need for solutions to the deeper causes of depression that might be rooted in personal or societal problems.

In contrast, RB suggests that something more than just a pill is needed for those who are opioid dependent. Greene (2007) argues that we are ambivalent about drugs that short circuit personal responsibility, and RB materials carefully avoid such a short circuit. The opioid dependent customer needs a pill to be sure, but they must also take responsibility to deal with the psychological aspects of their addiction and to seek out support to overcome their “disease.” “Most people wouldn’t try to treat diabetes or asthma with willpower alone,” RB tells us, implying that both willpower *and* medication play an important role (Reckitt Benckiser u.d.(b)). For RB, those with opioid dependence are not passive subjects; rather they must actively engage to take their medication as prescribed *and* address the behavioral components of their illness. They should act upon themselves both as a neurological subject (intervening at the level of their opioid receptor systems with a medication) and as a moral subject with responsibility for their own behavior and choices.

Vrecko (2010b: 44), who has studied naltrexone, an anti-craving medication used to treat alcoholism, says that:

...anti-craving medications do not simply materialize over pre-existing conceptions of behavioral addictions. Instead, they help create a new one, insofar as they play an active part in reconfiguring or ‘mangling;’ clinical and laboratory understandings of behavioral problems.

RB's discourse about bup reveals a mangled medical-behavioral hybrid. The effect of the medication is defined narrowly as addressing craving and withdrawal symptoms. That leaves a whole world of responsibility in the hands of the individual who must still, it seems, overcome his or her disease of the will by exerting willpower, seeking counseling, and turning to friends and family for support.

Chapter 5: This is Your Brain on Buprenorphine: Neuroscience & the Chronic, Relapsing Brain Disease Model of Addiction

It's all hypothesis at this point yet because we haven't sliced open anyone's brain yet, but it seems that normalizing the GABA receptor takes away the craving and anxiety that one would typically experience in the absence of the drug. And it doesn't appear to be happening because of will power, love, God, discipline, family support, or anything else. It seems to be happening because the protocol resets a faulty mechanism in the brain.

Sanjay Sabani of Hythiam Corporation talking about a new psychopharmaceutical treatment for addiction (Denizet-Lewis, New York Times, 2006)

Introduction

In the United States, the National Institutes on Drug of Abuse (NIDA) has spent millions of dollars promoting one simple message: “addiction is a brain disease.” As the opening quote suggests, neuroscience is changing the ways in which we understand, respond to, and treat drug addiction. It also implies new ways in which addiction and addiction treatments, like bup, are being embodied within the brain and materialized at the level of biochemical processes. Between 1980 and 1989, eighteen studies of the neuroscience of addiction were published in the medical and scientific literature; between 1990 and 1999, the number rose to 129. Between 2000 and 2009, 1,117 studies were published. Neuroscience has expanded to encompass a wide array of medical and social phenomena (Vrecko 2010c), and addiction is no exception. Neuroscience not only explains “pathology” – increasingly, it is a prism through which we understand all of human behavior, including drug use. Rose (2003) has referred to this proliferation of

neuroscientific understanding and authority as the birth of the neurochemical self; the “neuromolecular gaze” has become an ethos that provides a common vision of life (Abi-Rached & Rose 2010). Neuroscience is not just important within scientific communities; it has increasing cultural resonance, and some research suggests that “folk neurology” – lay understandings of neuroscience -- is the frame through which people now comprehend themselves and their behavior, including addiction (Vrecko 2006). Neuroscience has become one of the dominant frames for understanding addiction, and, as I discuss below, many believe neuroscience is the key to the medicalization of addiction.

The earliest studies of bup predate the rise of addiction neuroscience and, neuroscientific arguments about bup were largely absent from the debates surrounding it in the 1990’s (see Chapter 3). Nonetheless, in recent years, neuroscientific arguments have been adopted by proponents of bup and used to explain both how and why it works. In her work on the history of addiction research, Campbell argues that “neuroscience hijacked the field of substance abuse research... and gave substance abuse research the stamp of legitimacy” (2007: 200-1). Increasingly, bup is explained through the discourse of addiction neuroscience. As one of the only medications available to treat to addiction, bup also plays an important role in shaping addiction neuroscience; it is among very few treatments that can be understood as a neurochemical solution to the brain disorder of addiction.

While disease models of addiction have been around for decades, previous attempts to explain addiction as a biological phenomenon have only been partly successful (Dunbar, Kushner and Vrecko 2010; May 2001; Tiger 2011; Valverde 1998).

Medical constructions of addiction have consistently vied with paradigms that understand addiction as a criminal problem rooted in a failure of morality or character. Moreover, historically, medical models of addiction have been troubled because the diagnosis of addiction relies on the self-report of a failure of will, and treatment has generally consisted of the reassertion of will power to “kick the habit” - rather than on biomedical interventions per se (Valverde 1997). According to addiction researchers, neuroscience marks a new era because of its potential to locate the causes of addiction within the brain and to treat addiction through neurochemical fixes. From the perspective of addiction researchers, neuro-imaging technology holds the *promise* of making visible that which has heretofore relied largely on “patient” self-report: the diagnosis of addiction and the efficacy of treatment.

Like other paradigms before it (e.g., genetics), neuroscience is also giving shape to new kinds of subjects and providing new contours to the ways in which individuals are governed (Campbell 2010; Fullagar 2009; Rose 2010; Vrecko 2010a; Vrecko 2010d). The proliferation of neuroscientific research and rhetoric to explain addiction surfaces core questions inherent in addiction discourse and in contemporary society more broadly, such as the role of pleasure, rationality, and volition in the formation and governance of the self. Neuroscience also has the potential to shape subjectivity, offering “new means for individuals to understand themselves and manage their thoughts and behaviors” (Vrecko 2006: 301). In the past decade, neuroscience has demanded more resources, wielded more authority, and has become central to how we understand both “normal” and “pathological” human conduct (Rose 2010; Vidal 2009).

In this chapter, I examine the ways in which addiction neuroscience helps constitute new formations of knowledge and power that influence subjectivity and governance. As one of the only medical interventions for the treatment of addiction, bup both shapes and shaped by this neuroscientific discourse. I offer a detailed analysis of current neuroscientific discourse about addiction both to understand how bup is constructed within this literature and to lay the groundwork for my examination of the influence of neuroscientific discourse on the understandings of those being treated under this paradigm with bup (see Chapters 6-8). If the “neuromolecular gaze” is becoming the prism through which we understand life, then addiction neuroscience is becoming the prism through which we understand addiction.

Existing analyses of addiction neuroscience have focused primarily on issues of craving and pleasure (Keane & Hamill 2010). This chapter expands the work of others by including an exploration of rationality, plasticity, and volition. My analysis of these themes helps provide context for my examination of how individuals taking bup understand addiction, its effect on their rationality, and their ability to exercise agency (see Chapters 6-8). To explore these issues, I first offer some background on the rise of addiction neuroscience in the U.S. and briefly introduce neuroscientific treatments for addiction with a particular focus on how bup is being cast in neuroscientific terms. Just as addiction has historically been conceived in multiple and flexible ways, the neuroscience of addiction is not a uniform paradigm but rather a set of assemblages that are enacted differently by different actors and in different settings (Mol 2002). However, certain premises from the neuroscientific literature on addiction are particularly dominant. I examine how four major themes in addiction neuroscience are being

addressed by the scientific community (and by individuals being treated with bup in subsequent chapters). Those four themes are: first, pleasure and the limbic system; second, rationality and the role of the prefrontal cortex; third, the influence of environmental factors and theories of plasticity; and last, the place of volition in neuroscientific theories of addiction. I conclude with an analysis of the strengths and limits of the neuroscientific paradigm.

This chapter is based on an examination of the research and scientific literature located through searches of PubMed on the terms “addiction” and “neuroscience” and “buprenorphine” and “neuroscience.” I focused on the last decade of research and selected review articles and those articles most cited by other researchers. I also reviewed the National Institute of Drug Abuse’s website for both scientific and “patient-centered” publications to better understand the discourse being used to explain addiction neuroscience to those seeking information about addiction – whether researchers, clinicians or the general public.

NIDA’s Role in Promoting the Chronic Relapsing Brain Disease Model

For decades, behavioral interventions which attempt to address the psychosocial world of the addict have dominated drug treatment. Indeed, programs focused on helping individuals achieve “abstinence” through behavior change still make up the majority of treatment in the U.S. (SAMHSA 2010). Addiction, even when conceptualized as disease, was viewed as a mental illness best treated through behavioral interventions (Foddy 2010). Nonetheless, the brain disease model now clearly dominates addiction research and has recently received attention from social scientists as well (Dunbar,

Kushner and Vrecko 2010). As the brain disease model has gained traction, technologies that target the biochemical processes of the brain have been developed as potential interventions to treat addiction. Since its founding in 1990, NIDA's Medications Development Program has tested more than fifty medications to treat cocaine dependence but obtained FDA approval for only two medications to treat opiate dependence (bup and levo- α -acetylmethadol or LAAM).¹¹ In 2004, the National Research Council and the Institute of Medicine published a book on the use of immunotherapies, vaccines and a variety of sustained release formulations of medications to prevent and/or treat addiction (Harwood & Myers 2004). With neuroscience as their rationale and medication at their disposal, addiction researchers and medical professionals have heralded bup as that which will finally move addiction treatment into the medical mainstream (e.g., Fiellin et al. 2002; Merrill 2002; National Advisory Committee's Subcommittee on Buprenorphine 1999).

It is difficult to overemphasize the role of NIDA in promoting the brain disease model of addiction. Until recently, NIDA claimed to be the funder of 85% of the world's research on addiction (Vrecko 2010a); it is behind much of the scientific and popular discourse about addiction as a brain disease (Courtwright 2010). NIDA's commitment to a biomedical model of addiction dates back to the early 1970's when Jerome Jaffe became the first director of the Special Action Office for Drug Abuse Prevention created by President Nixon. Jaffe was "committed to the view that addiction was rooted in an individual's biochemistry" (Vrecko 2010a: 58) and was responsible for promoting methadone and more generally trying to shift national drug policy towards a

¹¹ LAAM is synthetic opioid similar to methadone, though said to be longer acting. Unlike bup, LAAM, a Schedule II narcotic, can only be dispensed through the same restrictive regulatory system as methadone.

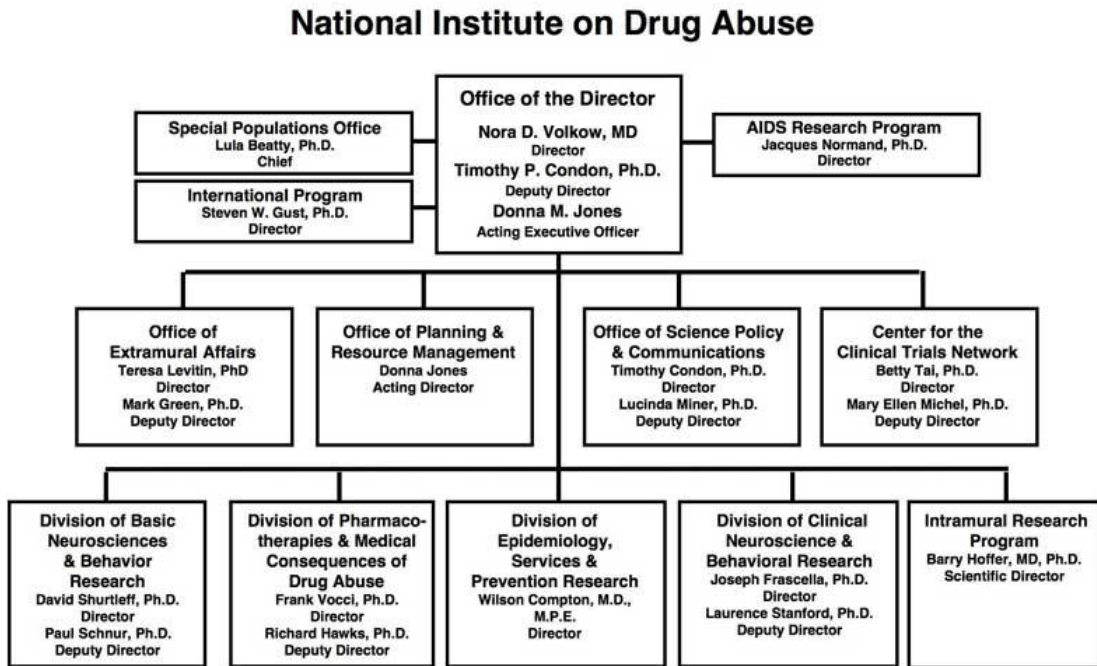
pharmacological approach. As noted above, he also played a central role in the development of bup. In the 1990's, addiction research was able to take advantage of advances in neuroscience and brain imaging to formulate the brain disease model of addiction. By the late 1990's, NIDA was actively promoting the brain disease model, which continues to dominate their rhetoric and their funding today. NIDA began to reframe medications, like bup, that had already been developed in neuroscientific terms.

In 1997, Alan Leshner, then Director of NIDA, published a landmark article entitled, "Addiction is a Brain Disease, and It Matters." In the article, Leshner argues that addiction is as much a medical as a social problem and that the field and the public have focused too much attention on the latter. He says:

That addiction is tied to changes in brain structure and function is what makes it, fundamentally, a brain disease. ... Understanding that addiction is, at its core a consequence of fundamental changes in brain function means that a major goal of treatment must be to either reverse or compensate for those brain changes (1997: 46).

It is this perspective that has guided NIDA since. In 2003, Nora Volkow, a prominent neuroscientist who pioneered the use of PET scans in addiction research, became the Director of NIDA. Since her appointment, she has vociferously championed the brain disease model in both NIDA's scientific and public education arms. As Figure 14 suggests, three of NIDA's five divisions are explicitly geared towards a neuroscientific paradigm, and a fourth, the Intermural Research Program, provides funds to outside researchers to investigate a range of issues, including those informed by neuroscience.

Figure 14: National Institute on Drug Abuse Organizational Chart



Source: www.drugabuse.org/about/organization

NIDA has also worked to promote the brain disease model to the general public. For example, in 2005 NIDA underwrote a widely-cited issue of *Nature* devoted to addiction neurobiology, and in 2007, NIDA, the Robert Wood Johnson Foundation, and the television channel HBO produced a multi-part series on addiction, involving some of the most prominent addiction researchers in the world. Supported by brain scans and interviews from neuroscientists, the message that addiction is a brain disease came through loud and clear. NIDA has also produced a series of curricula for elementary and high school students to explain addiction. These include: “Brain Power,” “Mind Over Matters,” “Heads Up,” and “The Brain.” NIDA’s educational materials closely track the scientific literature, which has centered primarily on the biochemical changes drugs cause in the dopamine receptor and limbic systems; the relationship between drug use and

damage to the prefrontal cortex of the brain; and the role of the brain's plasticity in both the causes and effects of drug use (Koob & Simon 2009). NIDA's power in the field of addiction neuroscience has led one scholar to describe them as largely responsible for making "the neuroscientists' laboratory ... an obligatory passage point for the production of truths about addiction" (Vrecko 2010a: 58).

Brain Scans and Images of Addiction

Brain imaging has played a central role in the development of addiction neuroscience. As Vidal explains, the enthusiasm for "reading" the brain has historical antecedents and deep appeal:

[F]rom 19th century phrenologists palpating head bumps through EEG's starting in the 1930's and to today's brain scans the hope of being able to read the mind and the self through brain recordings has not subsided (2009: 19).

As May (2001) suggests, one of the primary impediments to medicalizing addiction has been the necessity of relying on patient self-report for its diagnosis. Brain science and the ability to depict the cause and effect of addiction holds the promise of "objective" scientific validation about addictive states that is not dependent on the subjective and distrusted accounts of individuals. Addiction neuroscience increasingly relies on brain imaging techniques, such as positron emission tomography (PET) and functional magnetic resonance imaging (fMRI) (Dackis & O'Brien 2005) and, to a lesser extent, proton magnetic resonance spectroscopy (Licata & Renshaw 2010). PET and fMRI have been used to show how the brain responds to triggers or cues (e.g., Dackis & O'Brien 2005) and how the brains of those who have used drugs differ in their structure and functioning from those who have not (e.g., NIDA u.d.). Imaging has also been used to

argue that drug dependency is a single disorder because diverse drugs trigger a common neuronal response (Dackis & O'Brien 2005; Koob & Simon 2009). Licata and Renshaw argue that:

The strength of this technology in drug addiction research may lie in its utility as a diagnostic tool to predict treatment matching, to monitor the progress of treatment, or to prevent relapse (2010: 14).

Despite their enthusiasm for the role of PET in drug addiction diagnosis and treatment, Licata and Renshaw acknowledge that the “potential of these applications has not been explored thoroughly in the context of drug abuse” (2010: 14). The clinical application of brain imagery in addiction has been limited, but it has been widely used as a political and discursive tool to shore up the brain disease model of addiction. NIDA uses brain images liberally in both its scientific and public education materials, and as the discussion below will make clear, brain images are central to neuroscientific arguments about addiction.

While images of drug-related brain damage or craving-induced brain activity are compelling, several scholars have noted that imaging technologies, far from being objective or neutral, are shaped by their social and economic context (see especially, Beaulieu 2001; Dumit 2004; and Joyce 2005). In a review of fMRI technology, Logothetis notes that imaging technology is a powerful tool, but the beautiful images it produces “often mask the immense complexity of the physical, biophysical and engineering procedures generating them” (2008: 870). While brain imagery technology is rife with subjective decisions about how to visually display data, perhaps one of the most important is the decision to contrast the “normal” or “healthy” brain with the “addicted” brain. Brain scans could be used to suggest a continuum between “normal” and “addicted” but instead almost universally display a sharp dichotomy (Kaye 2006).

Moreover, much brain mapping relies on the same data analysis software package that includes a “normal” reference brain, which is, in fact, a composite based on averaging multiple brain images in ways that obscure important differences (Beaulieu 2001). Increasingly brain imaging has been discredited as “voodoo science” for inappropriately correlating brain activity with participants' emotional state and a host of other statistical errors (see Vul et al. 2009). Nonetheless, brain imagery remains particularly important in the study of addiction, which has not previously had a somatic marker of and physiological location for addiction.

Neuroscientific Treatments for Addiction

Similar to the largely unrealized promise of gene therapies, the application of addiction neuroscience to prevent, diagnose, or treat addiction is limited. As noted above, while brain imaging is being widely used in addiction research, it has not yet been employed as a diagnostic tool for addiction in clinical practice - though many continue to hope it will be (e.g. Koob and Simon 2009). In terms of treatment, as an editorial in the aforementioned special issue of Nature put it: “our understanding of the neurobiology of disease has progressed substantially... [but] researchers have been less successful in translating this knowledge into effective therapies” (Taking addiction research into the clinic 2005: 1413).

The development of a successful medical intervention is critical to the project of medicalization. Courtwright, a leading scholar in the history of addiction, writes:

[I]f the brain disease model ever yields a pharmacotherapy that curbs craving, or a vaccine that blocks drug euphoria, as some researchers hope, we should expect the rapid medicalization of the field (2010: 143).

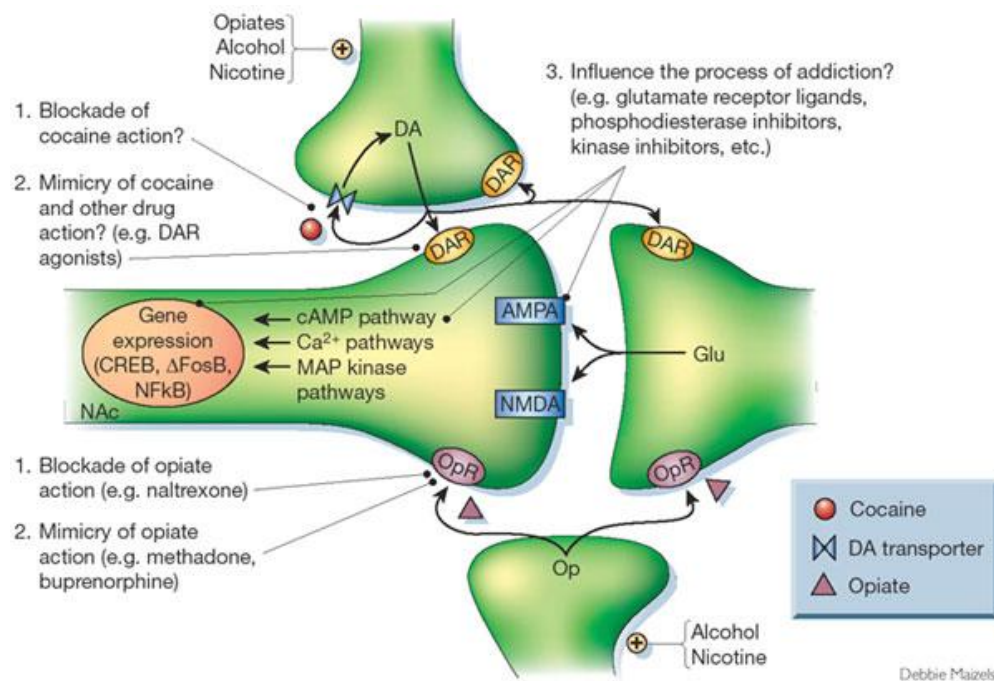
As Courtwright suggests, theories about a brain disease model alone will not accomplish the medicalization of addiction. He hypothesizes that a key driver of medicalization is a concrete medical intervention, a pharmaceutical – like bup -- that can address the physiological symptoms of addiction that are increasingly understood in neurological terms.

This drive to find a medical solution to the brain disease of addiction has propelled an intensive research effort and several experimental interventions. In general, these experimental treatments fall into three categories: 1) efforts to intervene directly on the brain; 2) immunotherapies and vaccines to prevent addiction and/or relapse; and 3) pharmacological strategies. Researchers have developed only a few experimental therapies that intervene directly on the brain. These include repetitive transcranial magnetic stimulation, which uses rapidly changing magnetic fields to induce weak electrical currents in order to influence neuronal activity (Camprodon et al. 2007), and stereotactic surgery, which involves drilling holes in the skull and inserting electrodes into the brain (Gao et al. 2003). Vaccines for nicotine and cocaine, which prevent these drugs from passing the blood-brain barrier, are currently being tested in clinical trials (Harwood and Myers 2004). However, all of these approaches are experimental, and none are in widespread use.

The most advanced and widely used neuroscientific treatments for addiction are psychopharmaceuticals. The diagram by Nestler (2005) below (Figure 15) highlights the three pharmaceutical approaches currently being pursued by addiction researchers: 1) medications that block the effects of drugs; 2) medications that “mimic” drugs; and 3) medications that directly influence the processes of addiction. Although methadone has

been around since the 1970's, there remain relatively few psychopharmaceutical treatments for addiction. In addition to naltrexone (which has been used to treat alcoholism, opioid addiction and impulse control disorders, like kleptomania), disulfiram (an aversion therapy that creates sickness when alcohol is ingested), and acamprosate (used to treat alcoholism), bup (which Nestler classifies a mimicry medication) is the only addiction medication to enter into widespread usage in the past 40 years.

Figure 15: Effects of Addiction Medications at the Neurochemical Level



Source: Nestler 2002

As Figure 15 illustrates, addiction neuroscience focuses at the neurochemical level to understand the ways in which abused drugs and treatment medications are attracted to and blocked by different receptor cells. Within this paradigm, bup acts at the level of the opiate receptor cells within the brain and is classified with methadone as a substance that mimics the action of other opiates.

The Neuroscience of Buprenorphine

Bup plays a central role in addiction neuroscience, not because it addresses broad neurological issues, but because it became the center of discursive and political arguments over the nature of addiction. Bup was not a new scientific discovery that transformed understandings of addiction neuroscience. Rather, it was developed at a time when a medical solution to addiction was being fervently sought, and it came onto the market just as neuroscientific understandings of addiction were gaining momentum in the scientific and popular press. By being reframed in neuroscientific terms, bup bolstered the chronic, relapsing brain disease model that was increasingly being used as unifying conceptual framework for addiction science, the basis for a significant proportion of NIDA's appropriations, and a source of scientific legitimacy for the field (Campbell 2007).

With the explosion of addiction neuroscience research funded by NIDA in the 1990's and early 2000's, bup was easily recast as a pharmaceutical treatment for a brain disease. By being framed as a neurochemical intervention, bup could better escaped being seen as a "substitution therapy," like methadone,¹² and help propel the medicalization of addiction. Simply put, if the disorder is amenable to medical treatment that acts on the brain, then it must be a brain disease. Dackis & O'Brien (2005) explain how pharmaceutical treatments like bup fit into the political and professional project of addiction neuroscience:

¹² Methadone is widely known as a substitution or replacement therapy in that it acts as a substitution for heroin. This language is problematic for those seeking to medicalize addiction because it acknowledges that methadone, an opiate, is simply replacing one 'drug' for another. Although some early studies of bup use these terms, most do not but focus instead on bup's action on the receptor cells of the brain to block the effects of opioids.

[P]harmacological strategies are emerging that target specific clinical components of addiction, including drug-induced euphoria, hedonic regulation, cue-induced craving and even denial. The development of treatments that dramatically improve clinical outcomes should reverse social stigma and justify and expanded care delivery system (2005: 1435).

Pharmaceutical strategies, like bup, are seen as targeting specific aspects of addiction neurobiology and, thus, justifying the expansion of the medical treatment of addiction.

Although bup relies on and is framed by the language of contemporary neuroscience, from a scientific perspective it is not a particularly revolutionary medication. It addresses only the fairly narrow physiological issues of blocking pleasure, reducing craving, and preventing withdrawal and has nothing to contribute towards addiction neuroscience's increasing preoccupation with the brain centers for self-control or the corticotropin-releasing factor's impact on stress (discussed below). According to scientists, bup intervenes in the dopamine system by blocking the pleasurable effects of drugs. Bup (a synthetic opioid) works by binding to the mu receptor (the brain receptor that attracts all opioids) so that, when someone uses another opioid, the pleasurable effects are blocked because the receptors are already filled. Because the brain's natural opioid receptors are already occupied, heroin or other opiates are literally blocked from impacting the brain's pleasure system.

Like methadone, bup creates a physical dependence but is said to cause less euphoria and have a lower overdose risk than either methadone or heroin. As Kleber explains:

Bup, as a partial mu agonist, has a number of advantages over methadone: it is longer acting... it has a ceiling effect on its respiratory depressant action, and thus safer as far as potential overdose, and has a very high affinity for the mu receptor so it is hard to displace other mu agonists (2004: 1476).

Despite technical explanations about bup's pharmacokinetics, bup remains at its core a substitution therapy that works very much like methadone; it replaces one opioid with another (Nestler 2002). Because it is slower acting than heroin or methadone, it is said to create less euphoria. In this way, bup does address a central component of neuroscientific theories about addiction, the regulation of pleasure. But bup's fundamental pharmacokinetic property is to mimic the drug action of other opiates (Nestler 2002). As such, although bup can be explained in neuroscientific terms, it is in a long line of medications used to treat opioid addiction by replacing one opioid with another (e.g., morphine to treat opium addiction, heroin to treat morphine addiction, methadone to treat heroin addiction).

In fact, though scientists, politicians, and industry alike portray bup as a revolutionary new medication, the first study about its efficacy as a treatment for opioid dependence was published not long after methadone first became widely available (Jasinski, Pevnick & Griffith 1978). The long delays in bringing bup to market were not about advances in neuroscience or improving its efficacy in blocking the effects of opioids but in addressing concerns about diversion. As Vocci, Director of NIDA's Division of Treatment Research and Development, explains: "People at NIDA knew of the great need to move opiate addiction treatment from the traditional clinic setting to individual physicians' offices. But we had to address concerns about diversion and unprescribed use" (quoted in Mann 2004: 14). In a 2004 NIDA publication heralding bup as a major treatment breakthrough, NIDA emphasizes how bup's pharmacological profile is essential to justifying its particular suitability for office-based treatment:

Buprenorphine's suitability for office-based prescribing is based on its pharmacological profile. Like methadone, buprenorphine activates opiate

receptors, but its effects level off as the patient takes higher and higher doses... The addition of naloxone reduces the potential for abuse by illicit injection. If the combination tablet is crushed and injected by a heroin-addicted individual in an attempt to intensify buprenorphine's euphoric effect, naloxone kicks in to induce the symptoms of withdrawal (Mann 2004: 16)

Here, as elsewhere, specific pharmacological properties of bup are emphasized to make a strategic point. On the one hand, bup causes less pleasure than methadone. On the other, just in case someone tries to take advantage of the euphoric properties of bup, naloxone prevents them from doing so and, in fact, rather than causing pleasure makes someone physically ill. The pharmacological profile that makes bup particularly suitable for office-based prescribing is its low abuse potential.

What is extraordinary about bup is neither its chemical make-up nor its neurological mechanisms. What is extraordinary about bup is that relatively minor pharmacological differences between it and methadone were used to leverage a profound legislative change and a huge discursive victory in the effort to medicalize addiction. Despite its long history at NIDA and its similarity to methadone, bup was taken up by addiction neuroscientists as a key neurochemical solution to opioid addiction. Bup entered directly into the discourse about addiction neuroscience that attempts to recast addiction as a chronic, relapsing brain disease most appropriately treated by mainstream medicine. This discourse has several themes – the regulation of pleasure (which is how bup's pharmacological action is most commonly framed) is one of the most predominant.

Pleasure: Opioid Receptors and the Hijacked Brain

For many researchers, the modern age of addiction neuroscience began with the discovery of brain opioid receptors in the 1970's. This breakthrough eventually led to the

acknowledgement that the brain produces both opioid receptors and endogenous opioids, which “induce similar actions as morphine” (van Ree et al. 1999: 342). Like externally introduced opioids, such as heroin or oxycontin, these naturally produced opioids block pain and cause pleasure by elevating levels of dopamine.

The notion that the brain’s dopamine system is the center of pleasure is relatively recent and potentially expands the reach of neuroscience to explain all manner of behavior, both “pathological” and pleasurable. Indeed, scans of the brain’s pleasure center “have revealed an embarrassment of riches” (Reinarman 2007; see also Vrecko, 2010b). Gambling, food, drugs, beautiful faces, and maternal support all “light up” the pleasure center, and scientists are now suggesting a common pathway theory: pleasurable behaviors stimulate the dopamine system and, therefore, tend to be repeated. Some scientists claim, for example, that substance and nonsubstance “addictions” are similar in “fundamental, mechanistic ways” (Frascella et al. 2010: 2) - both activate the mesolimbic dopamine reward system. However, too much “lighting up,” too much pleasure, is pathological, and the “normal” brain becomes hijacked.¹³ According to neuroscientists, drugs “disrupt the volitional mechanisms by hijacking the brain mechanisms involved in seeking natural reinforcement” (Volkow and Li 2005: 1430); the brain is under the control of the compulsive quest to recreate pleasure.

The control of pleasure is a central tenet of the brain disease model and has shaped much of the understanding about appropriate treatment strategies, like bup, that can either block or modulate the experiences of pleasure that those taking drugs experience and then seek to repeat. As the most researched and best-developed area of

¹³ See Acker 2010 for an interesting analysis of the hijacking metaphor.

study within addiction neuroscience, the dopamine receptor system has become the focus of pharmaceutical treatments and the basis for expanding the dominion of addiction neuroscience over a host of non-substance use behaviors. Volkow, in particular, has used discoveries about the relationship between pleasure and the dopamine system to argue that obesity is a brain disease (Baler and Volkow 2006; Volkow et al. 2008). Given the recent moral panic about the obesity epidemic (Meleo-Erwin 2011), this line of reasoning that links pleasure and addiction at the molecular levels has the potential to greatly enhance the reach and the power of the addiction brain disease model. The modulation of pleasure and euphoria is also important to how those being treated with bup understand and experience their addiction treatment (see Chapter 6).

Rationality & Self Control: The Prefrontal Cortex and Opioid-induced Brain Injury

Finding a neuroscientific basis for the loss of control is essential to the construction of addiction as brain disease. As long as individuals have self-control and *choose* to use drugs, they are not in the grips of a disease that has eroded their impulse control; they are merely exercising poor judgment. The control of pleasure through the modulation of the limbic system has received the most scholarly attention (Keane and Hamill 2010), but addiction neuroscience is increasingly implicating conceptions of rationality and self-control.

The brain has long been seen as the center of rationality, and addiction neuroscience reinforces this view. Dackis and O'Brien, for example, describe the prefrontal cortex as the “seat of executive function in the brain [...] involved in decision-making, risk/reward assessment, impulse control and perseverance” (2005:1432-3). As

such, this is the area of the brain believed to enable individuals to act rationally, according to plan, and to prioritize their actions on the basis of their social and emotional consequences. According to addiction neuroscientists, the repeated activation and dysregulation of the endogenous reward system adversely affects the prefrontal cortex (Koob and Simon 2009; NIDA u.d.). The addict's brain is not just hijacked; drugs literally damage the brain and diminish mental and motor functioning (NIDA u.d.). According to neuroscientists Licata and Renshaw: "current and former opiate abusers tend to display persistent neurocognitive deficits that may result from opiate-induced brain injury" (2010: 7). Ignoring questions about the direction of causality, they suggest that studies showing drug users have impaired cognition are evidence of brain damage caused by drug use. Drug using behavior is somatized and embodied: "the cycle of addiction becomes etched in the midbrain and frontal structures" (Dackis & O'Brien 2005: 1432). Addiction literally marks (and damages) the midbrain and frontal regions that, according to neuroscientists, are the seat of rationality and cognitive thought.

The identification of damage to specific brain structures with addiction is an important turning point in the neuroscientific construction of addiction. Earlier studies that focused on the dopamine system failed to explain why some people use drugs occasionally and others become "addicted" – a failure that some saw as major shortcoming in the science (Koob & Simon 2009). Research now focuses on locating "the neuroadaptive mechanisms [...] that mediate the transition from occasional controlled drug use and the loss of behavioral control over drug-seeking and drug-taking that defines chronic addiction" (Koob & Simon 2009: 116). The loss of self-control has long been a hallmark of addiction, but efforts to explain this in neuroscientific terms are

fairly recent. Volkow, the Director of NIDA, has been one of the leading researchers in this area and explains the neuromechanisms that inhibit self-control and reward the pleasure system in the schematic drawing below (see Figure 16). This diagram depicts a profoundly diminished “control of self-regulation” region in the “dysregulated brain” of the addict (here, the addict of both drugs and food). The role of saliency (which is the rewarding effect of the substance) dominates the addict’s brain while self-control is so small as to barely be legible.

Figure 16: Effects of Addiction on Brain’s System of Self-Control

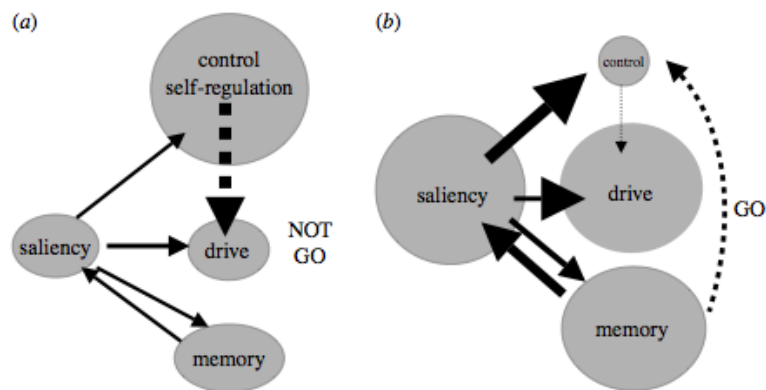


Figure 5. Model of brain circuits involved with addiction and obesity: reward/saliency motivation/drive, memory/conditioning and inhibitory control/emotional regulations. Disrupted activity in brain regions involved with inhibitory control/emotional regulation when coupled with enhanced activation of reward/saliency and memory/conditioning leads to enhanced activation of the motivational/drive circuit and the resultant compulsive behaviour (drug taking or food ingestion) when the individual is exposed to the reinforcer (drug or food), conditioned cues or a stressor. Note that circuits that regulate mood as well as internal awareness (interoception) are also likely to modulate the ability to exert control over incentive drives. (a) Healthy brain, (b) dysregulated brain. Modified from Volkow *et al.* (2003b).

Source: Volkow et al. 2008

Volkow et al. offer a technical explanation of exactly which parts of the brain responsible for self-regulation and control are affected by the chronic use of drugs or over-eating:

A consequence of disruption of the inhibitory control/emotional regulation circuit is the impairment of the individual to exert inhibitory control and emotional regulation (processes mediated in part through the DLPFC, CG

and lateral OFC)... As a result, the person is less likely to succeed in inhibiting the intentional actions and to regulate the emotional reactions associated with the strong desires (either to take the drug or eat the food) (2008: 3197).

With the centers that regulate self-control damaged, the addict literally cannot help him or herself. In article co-authored by Baler and Volkow titled, “Drug addiction: the neurobiology of disrupted self-control,” they offer a less technical explanation saying that because drugs affect the physiological processes that support learning, decision-making and behavioral control, the “addicted person’s ability to exert self-control [becomes] ... disrupted” (2006: 559). In a series of questionable associations, they argue that compulsive drug taking may be linked to lesions in the frontal cortex found in people with behavioral compulsions and to the fact that the frontal cortex has also been implicated in obsessive-compulsive disorder:

Interestingly, the fact that OFC [orbitofrontal cortex] has been previously implicated in the expression of obsessive compulsive disorder (OCD), together with the observation that OFC lesions lead to behavioral compulsion, strengthens in our view the evidence in favour of overlaps between the neurobiology of the compulsive drug-taking observed in drug-addicted individuals and the compulsive ritualistic behaviors characteristic of OCD (Baler and Volkow 2006: 562).

This quote illustrates the way in which the existing neuroscience is stretched to meet the interest in finding a neurobiological explanation for compulsive drug use. This link is critical because, heretofore, addiction neuroscience had little response to claims that it could not explain why many people use drugs but only some become addicted. The rationale offered here is that compulsive drug users share some of the same brain deficiencies as those with obsessive-compulsive disorder.

This strand of research on how drugs erode the self-control centers of the brain is a perfect companion to that on the limbic system and the management of pleasure. On

the one hand, addicts are portrayed as uncontrollably pursuing pleasure; their hijacked brains making them compulsively seek drugs to re-create the pleasurable sensations of early use. On the other, drug use also impacts the regions of rationality and control, diminishing users' ability to reign in impulsive behavior; pleasure-seeking is unchecked due to a lack of capacity to make rational decisions. Thus, behavioral traits are reframed as brain problems:

[F]unctional and structural abnormalities in the prefrontal cortex might therefore contribute to clinical characteristics of addicted patients (such as poor impulse control, lack of resolve, and faulty decision-making) that are viewed prejudicially by the general public (Dackis & O'Brien 2005: 1433).

It is worth noting that in some of the literature, drug use causes damage to the prefrontal cortex, while in other literature damage to the prefrontal cortex leads to compulsive drug use.

The dichotomy between a rational, addiction-free individual who stands in contrast to an irrational, drug-using individual -- false though it might be -- has been around for decades (Gomart 2004; O'Malley & Valverde 2004). Addiction neuroscience holds out the promise that the line between the rational, addiction-free subject and the irrational, addicted subject can at last be materialized and located in the brain, depicted through imagery, and treated pharmacologically. But is not seen as intervening in the centers of rationality and self-control within the neuroscientific literature; however, these theories about the loss of rational thought and self-control are central to how the opioid addict taking bup is treated, understood, and understands him or herself.

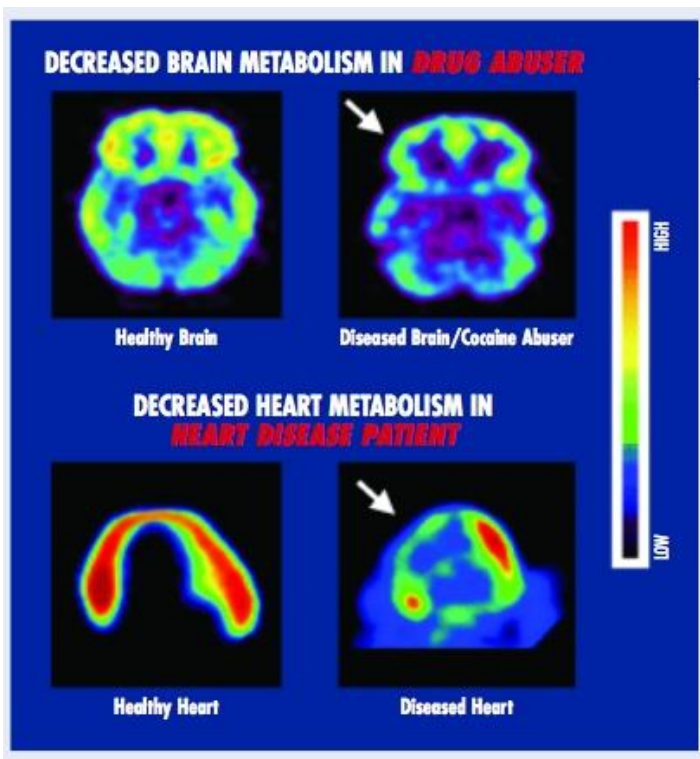
Plasticity: the Neural Consequences of Environmental Risk

Efforts by addiction neuroscientists to locate the line between rational, controlled drug use and addiction in specific regions of the brain suggest a form of biological reductionism in which the complex social problem of addiction is reduced a brain abnormality. However, Pickersgill (2009) warns against portraying neuroscience as simple reductionism, and Pitts-Taylor suggests that the neuroscientific notion of plasticity “appears to challenge biological reductionism by providing room for the environment in brain development and function” (2010: 636). Neuroplasticity refers to the brain’s capacity to reorganize itself in response to experience or injury (Kolb & Wishaw 1991), and some scholars believe that plasticity offers new possibilities for the reintroduction of the social into the biological and erodes the lines between the mind as hard-wired versus socially shaped (Pickersgill 2009; Pitts-Taylor 2011). In the case of addiction neuroscience, however, plasticity is used primarily to justify the brain disease model rather than account for the role of environmental and social factors in causing and resolving addiction, though some researchers do wrestle with these questions.

As suggested above, one the chief victories for proponents of the brain disease model was the ability to point to differences between the “healthy” and the “addicted” brain in ways that provide a biological basis for addiction and locate the disease of addiction in a particular somatic abnormality. Plasticity -- the ways the brain is changed by the use of drugs -- therefore, becomes central to the neuroscientific justification for the brain disease model. As the picture from a NIDA publication below suggests, by being able to depict the diseased state of the brain (plastic changes wrought by drugs), addiction can be compared to and legitimized by other diseases, like heart disease, that have long

been thought to have a “real” biological basis. In Figure 17, PET images of a “healthy” brain and a “diseased” brain of a cocaine user are juxtaposed with images of a “healthy” and “diseased” heart to drive home the point that drug use causes the brain disease of addiction by literally changing how the brain looks and functions.

Figure 17: PET Images of Healthy & Diseased Brains and Hearts



Source: NIDA 2007

Indeed, the ways in which drugs change the brain is at the core of NIDA’s definition of addiction. Authors of the NIDA-published booklet, “Drugs, Brains, and Behavior: the Science of Addiction,” respond to the rhetorical question “What is addiction?” by saying:

Addiction is a disease that is characterized by compulsive drug seeking and use, despite harmful consequences. **It is considered a brain disease because drugs change the brain**—they change its structure and how it works (NIDA 2007). [Emphasis added]

Given the mystical and sophisticated rhetoric of addiction neuroscience, this definition seems simplistic if not tautological. As Foddy argues: “plasticity is a normal and largely beneficial characteristic of the human brains, and thus if we made ‘changes in brain structure and function’ a sufficient criterion for disease, we would define everyone as diseased” (2010: 26). This propensity to argue that “brain changes” are evidence of disease provides endless possibilities for the expansion of medicalization and the pathologizing of any behaviors that affect the brain.

However, brain plasticity also suggests that factors beyond the consumption of drugs can affect the brain’s structure and responses. And some addiction neuroscientists have grappled with the issue of how external factors might affect the brain and addiction. In general, neuroscientific addiction research presents a complicated and sometimes contradictory picture of the interplay between environmental, psychological, and biological factors. For example, in a review article on addiction neurobiology, Chou and Narasimhan (2005) claim that addiction is influenced by the drug, the user’s personality, peers, and the environment; one paragraph later they assert: “exposure to drugs causes plasticity in the neural circuits related to reward and motivation, supporting the idea that addiction is a biological disease. Plasticity results from drug use and drug abuse” (2005: 1427). Addiction has external influences but is fundamentally a biological disease, and the chief way plasticity works is that drugs change the brain.

Ambiguity over the role of environmental factors within addiction neuroscience could offer new opportunities for researchers to address the role of the social world, but not much evidence suggests they have. In fact, scholars have noted the failure of addiction neuroscience to explain either social factors (Campbell 2010) or the variations

in the prevalence of drug use between populations (Acker 2010). In general, neuroscientific literature on addiction seems to construe the role of environmental influences quite narrowly. One important exception is a line of (still largely speculative) research that investigates the role of environmental stress on brain function. Here, Volkow and Li explain the “neural consequences of environmental risk:”

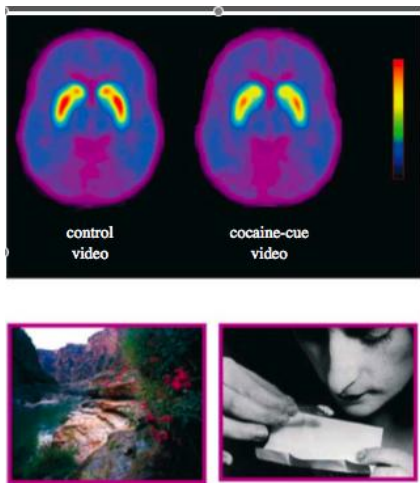
Low socioeconomic class and poor parental support are two other factors [along with drug availability] that are consistently associated with a propensity to self-administer drugs, and stress might be a common feature of these environmental factors [... T]here is evidence that corticotropin-releasing factor (CRF) might play a linking role through its effects on the mesocorticolimbic dopamine system and the hypothalamic pituitary-adrenal axis. [...] If we understand the neurobiological consequences underlying the adverse environmental factors that increase the risk for drug use and addiction, we will be able to develop interventions to counteract these changes (2005: 1436).

Even here, environmental influences are understood only in the context of how the stress they induce impacts the dopamine system. Volkow and Li (2005) go on to suggest that the future addiction interventions may include medications that act synergistically with behavioral therapies to mitigate the impact of stress. And in a later article, Baler and Volkow advocate for the development of medications that “would block the initiation of the stress response in the brain” (2006: 564). The stress of poverty, fear of relapse, or other life challenges that might cause one to take up or relapse to drug use could be managed, not through addressing the fundamental causes of “stress,” but by taking a pill.

The other role of the environment discussed in addiction neuroscience is the way that environmental “cues” trigger the brain in ways that might lead to relapse and how repeated associations between cues and drug use change the brain to make it more susceptible to relapse. Volkow et al. (2008) conducted an experiment in which they took brain images of “cocaine addicted individuals,” showing pictures designed to evoke the

desire to use cocaine to one group and nature scenes to a control group (see Figure 18 below). The “brain changes” between the two groups differ, showing increased dopamine activity in certain regions. Volkow et al. conclude: “It is likely that these conditioned responses involve adaptations in cortico-striatal glutamatergic pathways that regulate DA [dopamine] release” (2008: 3195). That is, environmental cues can lead to changes in the brain that increase susceptibility to relapse. It is not just drugs, but certain environments, that pose a danger to the addict’s brain.

Figure 18: Addicted Brain’s Response to External Cues



Source: Volkow et al. 2008

Issues of plasticity and susceptibility are central to the brain disease model and are worth some exposition. Susceptibility takes a number of forms: 1) some brains are more susceptible to addiction (e.g., adolescent brains; brains affected by stress); 2) brain changes wrought by drug use increase future susceptibility; and 3) genetic predisposition. Some research has looked at how differences in brain structure might explain why some people become addicted and some do not. Volkow et al., for example, did a study which purported to show that subjects with a family history of alcohol that did not become

addicted had “higher D2 receptors in striatum” than those without any family history of alcoholism” (2008: 3194). They conclude that “high levels of D2 receptors could protect against addiction” (2008: 3192). While research, like these studies, on brain-based susceptibility to addiction is still highly speculative, researchers routinely assert that “addicted brains” have been changed by the use of the drugs in ways that make them vulnerable to relapse. For example, according to O’Brien: “A key point for clinicians to realize is that the proneness to relapse is based on changes in the brain function that continue for months or years after the last use of the drug” (1997: 66). Genetic susceptibility to addiction, an old but widely used paradigm (Peele 1986), also complicates the picture of brain plasticity, susceptibility, and addiction. For Volkow and Li, both genetics and environment can cause neurological vulnerability to addiction:

It is estimated that 40-60% of the vulnerability to addiction can be attributed to genetic factors [...] However, addiction-prone or addiction-resistant phenotypes may also reflect sensitivity to reinforcing stressors and alternative reinforcers in an individual’s environment (2005: 1479).

Under this view, no one can really escape being “at risk” for addiction; even if you are not genetically susceptible, environmental factors (through the mediator of stress) can affect your dopamine system and your propensity to use drugs.

Baart (2010) notes a similar trend in psychiatric genomics in which genetic knowledge is linking up to epidemiology on risk and an emphasis on prevention. In the case of addiction neuroscience, plasticity means both that drugs can damage your brain and that anyone and at anytime could have brain changes that make him or her susceptible to slipping from occasional, controlled use to full-blown addiction. Also implicit in the notion of plasticity is the idea that the damage of drugs may be reversible (though the literature is equivocal on this point) and, therefore that addicts have the

opportunity and responsibility to repair their brains. As Rose explains, the fear and promise that we can somehow mitigate or shape our biological vulnerability is powerful:

[I]n many departments of life, we are seeing the emergence of a new ‘human kind:’ the susceptible individual... biology is not destiny... This kind of thinking, therefore, is so powerful because it is imbued with hope as well as anxiety (2010: 96).

As I discuss in more detail in subsequent chapters, these ideas about plasticity and susceptibility shape the experiences and understandings of those being treated under this neuroscientific paradigm with bup.

Brain plasticity has the potential to open up a new (or return to an old) discourse around how to ameliorate the problems of drugs by addressing the political and economic forces drug use: homelessness, lack of education, lack of opportunity, poverty, and so on. However, as Pitts-Taylor points out, recognizing the role of other factors in “brain diseases” does not necessarily undermine the “neoliberal ethic of personal self-care and responsibility” (2011: 639). In fact, the acknowledgement of external factors in fostering drug use or relapse appears to increase the demands on the drug user to manage, not just their consumption of drugs, but also the kinds of environments and stressors to which they expose themselves.

Addiction & Volition: Character Flaw or Bona Fide Brain Disease?

In my discussion of the conceptual framework for this dissertation, I argued that scientific facts are always shaped by the social, cultural and political environment in which they are produced. This process, however, is often occluded by claims of neutrality or objectivity. One interesting feature of addiction neuroscience is that some researchers have made their political project very explicit. A number of prominent

addiction researchers have used the brain disease model to argue for changes in both public perception and policy. Specifically, several declare that they are reframing addiction as a brain disease for the explicit purpose of destigmatizing and decriminalizing drug use and bringing it more fully under the purview of medicine, rather than the criminal justice system. Dackis and O'Brien, for instance, claim that neuro-imaging will:

substantiate the biological basis of addiction and [...] ultimately erode entrenched societal attitudes that prevent addiction from being evaluated, treated, and insured as a medical disorder (2005: 1431)

In their view, neuroscience will eventually end the discrimination based on and criminalization of addiction (ibid). By highlighting and disseminating “select advances in addiction research,” scientists can and should reverse the public’s “misconceptions” and “facilitate changes in policy” (Dackis & O'Brien 2005: 1431). In a review article about the state of addiction neuroscience, Baler and Volkow note the battle is between evidence of the brain disease model on the one hand and proponents of personal responsibility on the other:

As we present the evidence and champion the concept of addiction as a chronic and relapsing brain disease, some quarters are reluctant to embrace a view that in their opinion undermines the robust moral boundaries that the concept of personal responsibility bestows on the individual (2006: 560).

Such researchers believe that promoting a neurological basis for addiction will erode the persistent idea that addiction is “a character flaw rather than a bona fide brain disease” (Chou & Narasimhan 2005: 1427), leading to the end of stigma and criminalization. At stake for the researchers is nothing less than the definition and source of volition and free will. Their argument hinges on the concept that addiction undermines volition because, if

addicts' behavior is involuntary, they cannot be culpable for their "disease." Volkow and Li assert:

[D]espite these advances in understanding the neuroplastic changes to drugs and alcohol, addicted individuals continue to be stigmatized by the pernicious but enduring belief that their affliction stems from voluntary behavior. The loss of behavioral control in the addicted individual should spur a renewed discussion of what constitutes volition (2005: 1436).

Finding a biological basis for the loss of control has become paramount and has led to some of the tortured arguments discussed above about hypothesized relationships between drug use and OCD. It is not enough to simply assert that people use drugs to activate their brain's "pleasure center." What is needed is a neuroscientific rationale for the loss of control. As Baler and Volkow says: "We posit that the time has now come to recognize that the process of addiction erodes the same neural scaffolds that enable self-control and appropriate decision-making" (2006: 559). The erosion of the neural scaffolds also erodes moral paradigms for understanding addiction in this view.

Tension between medical- and moral- or behaviorally-based paradigms of pathology is not new to addiction (Campbell 2010; Courtwright 2010) and seems to be a feature of many medicalized conditions, especially those with a behavioral component. Addiction neuroscience's contribution is its claim to have pinpointed a biological basis for the loss of volition and to have located it in the addict's brain. Historically, there has been confusion whether the pathology is the behavior or whether the pathology causes the behavior (Pickersgill 2009). The neuroscience of addiction purports to have solved that dilemma by isolating the brain mechanisms that cause the undesirable behavior – compulsive use of drugs or alcohol. The direction of causality remains confused, however, since the brain damage that causes the loss of volition still begins with

voluntary behavior. Neuroscientists link questions of volition directly to a political project of reducing blame and destigmatizing addiction, but the effectiveness of these efforts has been questioned by scholars (Campbell 2010; Courtwright 2010; Keane 2010) and, as I will detail later, is also undermined and challenged by the experiences of those being treated with bup.

While the aim of neuroscientists appears to be relieving drug users of the stigma and blame associated with addiction, such rhetoric can also be used to justify the “suspension of their personal autonomy, installing an imperative that they be governed by others” (Brook & Stringer 2005: 319). If they cannot control their behavior – if they have a “defect of the will” (Bull 2008: 154) - they must, it seems, be controlled by someone or something else. These issues of autonomy and control are explored in depth in Chapter 7 and are central to the project of medicalizing addiction.

Conclusion

The neuroscientific discourse about addiction focuses on the control of pleasure, the restoration of rationality, the role of external factors in producing addiction, and the ambivalent status of the addict’s volition. It reinforces an individualization of the problem, structures a particular form of governance, and erases social differences. Vidal (2009) notes that the cerebral subject, such as that born out of addiction neuroscience, makes historical and conceptual sense in a society rife with possessive individualism -- where the individual is “proprietor of his own person and capacities, owing nothing to society for them” (Vidal 2009: 9). Addiction neuroscience is part of the larger neoliberal

trend to individualize problems and downplay both the role of social factors in creating social problems and communitarian responses to resolving them.

Addiction is not a social problem; it is a somatic problem located in the brain. The idea that addiction is defect in the brain (whether caused by genetics, behavior, and/or environment), increases rather than diminishes the responsibilities of individuals. They must first of all prevent addiction and be vigilant about inducing too much pleasure thereby disrupting the brain's delicate neurocircuitry and/or causing brain damage. Second, they must also "treat" any defects that do arise. Last, they must achieve and maintain a "normal" and "healthy" brain. Neuroscientists have a clear treatment goal: the constitution of a rational, responsible, normal and productive citizen. Meeting this ideal, however, remains largely the responsibility of the individual addict; they are expected to overcome their brain disease - not with the help of the state, their family or community, but with the aid of the biomedical industrial complex (Clarke et al. 2003; Vrecko 2009). Today, the hope is to replace the *drug-using* subject (characterized by irrationality and uncontrolled pleasure) with a *medicine-taking* subject (characterized by rationality and productivity). Will power, with the support of a psychopharmaceutical, is the new road to recovery.

In individualizing a problem that was earlier understood be social, the neuroscientific model of addiction also erases and obscures the role of race and other social differences. In making a larger argument about the ways in which current regimes of public health divert attention from structural inequity, Metzl says:

Calling this approach *racism* or *capitalism* or any number of other *-isms* would mobilize a particular critique. But calling it *health* allows for a language of betterment that skillfully glosses over the structural violence

done to minority and lower-income Americans (2010a:4). [emphasis in original]

Addiction neuroscience reduces any discussion about poverty, exposure to drugs, racism and other environmental factors to problems of the brain and its response to “stress.”

Issues, such as the mass incarceration of African Americans under harsh drug laws or the lack of viable economic opportunities beyond the drug trade in some neighborhoods,

have no place in neuroscientific discourse. As Campbell notes:

As an ideological code, however, CRBD [chronic relapsing brain disease] does not focus attention on social differences, including the differential histories and cultural geographies within which their subjects encounter drugs (2010: 101).

In its erasing of social difference, reinforcing of individualism, and increasing personal responsibility, the brain disease model of addiction is consistent with the “new public health” (Lupton 1995). A focus on the health of the public becomes a way to enforce particular norms that privilege a middle-class rational actor who is invested in working on his or her own health. Neuroscientific addiction discourse is not just about addicts. It also frames the governance of “healthy” populations. Illness is defined in relation to a norm, and, in the case of addiction, one which is explicitly tied to “good” behavior. Health becomes infused with a particular kind of morality – one that favors self-control and discipline. Indeed, despite its claims to scientific objectivism, the brain disease model of addiction is not free from promoting a particular kind of morality. As the discussion above suggests, within the neuroscientific paradigm the drug user is permanently marked as a disordered individual with chronic disease (and often a damaged brain). They are explicitly contrasted with the “normal” or “healthy” individual in ways that seem to do little to lessen the stigma that scientists claim they want to

alleviate. Moreover, the existing neuroscience has not succeeded in its project to eliminate the role of will power or choice from addiction theories. As Keane and Hamill explain:

Because the brain disease of addiction is caused by the initially voluntary consumption of illicit drugs (a far from morally neutral category) the construction of the addict as a physically and morally pathological subject coexists with the molecular discourse of neural anomaly (2010: 54).

It is not, however, just the initial voluntary consumption of drugs that troubles the neuroscientific model of addiction. It suffers both from evidentiary and logical fallacies and from competing paradigms and explanations for “addictive” behavior. Several scholars have written extensive critiques of addiction science and pointed out a number of methodological flaws (see for example, Granfield and McCloud 1999; Peele 1999). They assert that most studies focus on people seeking treatment and are therefore biased towards the most severely affected individuals. They also note the failure of biological model to account for: 1) the numerous people who quit using drugs on their own; 2) the variation in rates of addiction between cultures, over the life span, by substance, and by context (e.g., Vietnam vets using heroin at higher rates in Vietnam than when they returned to the U.S.); and 3) the majority of people who use addictive substances in moderation. Even addiction neuroscientists admit that there are huge gaps in their knowledge. Barr et al. say, “use of illicit drugs and alcohol affects the CNS [central nervous system]... their exact mode of action on the brain are not completely understood” (2008: 328). And Koob and Simon note:

The biggest disappointment to scientists in this field is that 34 years into the modern era of drug abuse research, we still do not have a clear understanding of the cellular or molecular bases of the development and maintenance of the phenomenon of addiction, such as tolerance, physical dependence and psychic activity (2009: 128).

Nor has addiction neuroscience been able to completely reduce the social to the biological. As Pickersgill asserts: “even the most ‘biological’ psychiatric research apportioned at least some kind of causal role in the development of psychopathology to ‘factors’ that lie outside the limits of the body” (2009: 46). Moreover, as was discussed above, neuroscience has largely failed to deliver on its promise biomedical solutions for addiction notwithstanding the enormous investment of resources. And despite Volkow’s assertions that substances change the centers of self-control and somehow trigger compulsive behavior, these arguments have not been scientifically substantiated (Foddy 2010). Perhaps one of the biggest weaknesses in the brain disease model is its simple equation that because drugs impact the brain, addiction is a brain disease. As Morse points out: “All human behavior has a biological substrate and if this were the criterion, all human activity would be the symptom of disease” (2000: 16).

Despite the limitations of addiction neuroscience, some social scientists (see for example, Vrecko 2010a) highlight the ascendancy of the brain disease model of addiction and suggest that it does, in fact, represent “a textbook account of beneficent medicalization” (Courtwright 2010: 138). Others have noted that this model seems to have had little impact on either clinical or policy responses to addiction (Pickersgill 2010b). I argue that addiction neuroscience is one powerful force for determining the meaning of addiction; one that is made more powerful by having a psychopharmaceutical that legitimizes it. I will also argue, however, that there are a number of forces that challenge, limit and rupture this model. These include the failure of addiction neuroscience to account for social factors; the fairly narrow biomedical impact of bup;

the ambiguity between medications, like bup, and illicit drugs; and the lived experiences of those being treated under a neuroscientific paradigm with bup.

In critiquing addiction neuroscience, my goal is not simply to discredit it but to complicate it. The neuroscientific paradigm raises but does not resolve important questions about pleasure, rationality, and the role of external factors in influencing the etiology and treatment of addiction. The fundamental questions about addiction that researchers grapple with are equally important to “addicted” individuals being treated neurochemically with bup. As my analysis of interviews with people taking bup will suggest, the medication and the discourse surrounding it have a very real impact on how they understand core issues raised by addiction, such as pleasure, rationality, social versus biological causes of addiction, volition, and agency. These understandings also shape and are shaped by their subjective and embodied experiences. These subjective and embodied experiences are the subject of the next three chapters.

Chapter 6

Lived Experiences of People Taking Bup: Perceptions of Addiction and Its Treatment

Introduction

In this chapter, I explore the ways in which bodies being treated with bup materialize and enfold as well as resist and reshape the medical discourse of addiction being promoted by neuroscience, government, and industry. I also examine to what extent the innovative features of bup -- a medication prescribed by doctors in a medical setting -- influence their experiences and understandings of bup as a medication and addiction as a disease. I argue that, for the participants in my sample, addiction is hybrid entity and that bup remains in a liminal state somewhere between a drug and a medicine.

As the previous chapters suggest, neuroscientific researchers led by the National Institute on Drug Abuse (NIDA) used bup in a deliberate and concerted effort to destigmatize and medicalize addiction. Relying on the chronic, relapsing brain disease model, they worked with Reckitt Benckiser (RB) to place addiction treatment in the hands of physicians and to wrest it from the punitive methadone clinic system – at least for some drug users. Haraway points out that: “The language of biomedicine is never alone in the field of empowering meanings... Scientific discourses are ‘lumpy;’ they contain and enact condensed contestations for meaning and practice” (1989: 203). In the small but growing literature on the sociology of neuroscience, scholars are debating just how influential neuroscientific discourse is in shaping notions of personhood. Vrecko (2006), for instance, has argued that individuals increasingly use “folk neurology” to

understand themselves. Pickersgill, Cunningham-Burley and Martin (Subjectivity, forthcoming), in contrast, argue that neuroscientific concepts compete with and rarely supplant other culturally resonant discourse about the self.

It is not, however, just at the level of discourse that meanings are contested and lumpy. In this chapter, I argue that the embodied and lived experiences of those being treated for addiction add further nuance to our notions of “bup,” “addiction” and “addiction treatment.” Weinberg, one of the only scholars to write about the embodiment of addiction, argues that the predominance of the social constructionist view in medical sociology generally has led to “profound limitations” in the study of mental illness and addiction (2005: 2). He says: “One searches in vain for analyses that in any way provide for the terrible reality that mental illnesses and addiction seem to possess for those who claim to suffer from them” (2005: 2). Others have suggested that social constructionist views of illness do a good job of elucidating the social and cultural meanings of disorders but a poor job of explaining the subjective experience of suffering that those who have a “disease” or who have been labeled as having a “disease” describe (see for example, Berg & Akrich 2004; Lewis 2003; Shilling 1993/2003).

Sociologists of the body have referred to this neglect of embodied experience in sociological literature as an “absent presence” – that is, sociology has largely failed to address the body directly, even though the body is central to sociological interests, like issues of structure and agency (Shilling 1993/2003). Understanding the embodied experiences of those labeled as “ill” is important, not only to acknowledge the subjective experiences of individuals, but also because social and cultural meanings are transformed through these lived experiences (Berg & Akrich 2004; Budgeon 2003; Butler 2004).

Bodies are shaped by and largely understood in terms of preexisting categories and discourse, but they also transform and resist those discourses. As Berg and Akrich explain: “the ‘lived body’ is not reduced by its encounters with things and technologies – rather, these encounters are what bring it to specific life” (2004: 9). In the case of medications, like bup, bodies enter into “global, industrial and technological flows” (Vrecko 2010b) through consumption and as commodities within the medical treatment system.

However, bodies are not merely passive commodities; they are also the location of agency. If the body of the addict is contoured by a complex world of medical, social and cultural discourses about addiction, then these discourses in turn are transformed by experiences of taking drugs, being addicted, and being treated. Malins points out that even bodies that are profoundly shaped by existing categories and labels find ways of resisting and reassembling the very discourses that define them:

A body does not inject drugs in a social vacuum: it may become subject to the physical intervention of the law, the coercive force of medicine, the reductive classification of psychiatry, the intervening categorizations of public health... It may suddenly find itself a ‘risky’ body; a ‘dirty; or ‘polluted’ or ‘criminal’ body. It may also play its own part, enfolding into its drug assemblages the representational languages and images circulating through film, media, advertising, and government rhetoric. (2004: 90)

This chapter starts by examining how participants frame addiction generally. I then explore the ways in which participants talk about methadone both in terms of their embodied experiences on methadone and in terms of methadone’s setting and social context. Much like bup, when methadone was first introduced, it was seen as the innovation that would medicalize addiction. As such, and because almost all of the people in my sample contrast their experiences on bup with methadone, it warrants some

exposition. Finally, I conclude this chapter with an examination of how participants describe their experiences on bup and what parts of their experience reflect and reshape medical versus other understandings of addiction.

General Conceptualizations of Addiction: “It’s much vaster and deeper”

Like neuroscientists, government regulators, and Reckitt Benckiser, those taking bup have hybrid conceptualizations of addiction. In subsequent chapters, I will explore in more detail the important role of responsibility, blame and will power in individuals’ conception of addiction. In this chapter, I focus on how individuals understand addiction and medications (i.e., methadone and bup) used to treat it. Participants in my sample as a group and as individuals have complicated and imbricated conceptions of addiction as a phenomenon that encompassed physical, mental, environmental, and moral elements.

Addiction as a Brain Disease

Very few participants articulated addiction as brain disease or used neuroscientific language to describe either their addiction or its treatment. To the extent that people expressed an understanding of the neuroscience behind the brain disease model it was limited to the idea that the opioid receptor system played some role and that bup works to block the pleasurable effects of heroin and other opioids. One participant said: “It [buprenorphine] solves the problem, man. It fills the receptors and all is good” (Terry).¹⁴ Another put it this way: “Bup is like a condom on the brain. You know, you don’t feel the heroin” (Sylvester). Both Terry and Sylvester have some understanding of the neuroscientific notion that bup blocks their opioid receptors preventing the effects of

¹⁴ I use pseudonyms throughout to protect the confidentiality of participants.

heroin. Another participant, Jose, had a vague notion that heroin affected his brain in ways that impaired his judgment:

Miguel [a drug counselor] gave me this, ah, book, you know-- The Science of Addiction... And that opened my eyes more, you know, to understand why I was destroying myself. ...My house and home and everything. Because, um, it is the part of the brain that makes me, ah, lose good judgment.

Jose alludes to science suggesting that drugs damage one's "good judgment" to explain to himself why he continued to use heroin even when he was "destroying" himself. Aside from these few mentions of drugs impact on the brain and the opioid receptor system, there were no other explicit discussions of the brain disease model.

Physiological Elements of Addiction

While neuroscientific understandings of addiction were rare, most people felt that their addiction had physiological components, which some framed it in terms of a disease or illness. Carl, for instance, draws an analogy between his HIV and drug addiction: "Well, I got sick and was admitted to the county hospital and a counselor came over and talked to me. ... You know, I knew I needed some help. [I had] the illness [HIV], and then I had the other illness of drug addiction." More common than describing addiction explicitly as a disease, people talked about a physiological need or overwhelming urge to use drugs. Jose says: "If I use drugs, ...the only thing in my brain is to get that drug." This single-minded focus on getting the drug was common and was sometimes described as craving.

Darlene attributes addiction to the physical dependence that is caused by properties inherent in the substances themselves. She says:

I had a bad back. Over the years, your tolerance gets stronger and stronger. So I was like on 600 milligrams of morphine... But I don't think I was mentally addicted. I think I was physically addicted.

Q: So it was a different type of addiction for you?

A: Right. I mean you can't help the physical addiction. It's going to happen when you are on painkillers, narcotics, whatever you call them.

Darlene seems to understand both the scientific notion of tolerance (needing an increasing amount of a drug for the same effect) and that there is a purely physiological part of addiction that “you can't help” -- it is neither “mental” nor within her ability to control. Also notable is that Darlene views morphine, prescribed for her in a medical setting, as a physically addicting drug.

Even more common than craving or physical dependence, however, participants spoke of the physiological aspects of addiction in terms of avoiding withdrawal or “dope-sicknesses.” While some people acknowledged that they still enjoyed getting high, most people explained their continued use of drugs as a physical necessity. Dolly describes how she learned about dope-sickness after her boyfriend introduced her to heroin:

This [shooting heroin] is a great feeling. So the next day I did it again. And the next day I did it again, and again. Then I thought, 'I'm coming down with the flu. Something's wrong with me. I'm feeling sick.' [My boyfriend] said 'Honey, you're not sick. You're dope sick.' And I said, 'What? What's dope sick?' ... And that's the only reason why I am on it [heroin]. So I don't get sick.

After just a few days of use, Dolly becomes physically dependent on heroin and quickly moves from taking it for a “great feeling” to taking it to avoid getting sick. Darnel describes the physical price he pays if he stops using heroin: “if I don't have no bag of dope, running nose, chills and diarrhea, cramps -- lower back and abdomen -- all the time.” So compelling is the need to avoid becoming dope sick, some individuals like Pat structure their entire day, indeed much of their lives, around obtaining and using drugs:

It's like when I wake up in the morning, I'm weak and stuff, and [I] either use or it just gets worse. So I basically have to use... and that's just like the physical part. ... I feel like I don't have time for anything else. It's hard, I mean it, being a drug addict; it's like a 24-hour-a-day job, you know. ... The reality is that I'm not gonna be able to accomplish anything if I'm spending all my time trying to maintain, you know, by doing drugs and stuff like that.

Notable here is the embodied experience that she “has to use” and the absence of any sense of pleasure she derives from using drugs. This absence of pleasure stands in contrast to the neuroscientific literature, which is largely based on theory that people use drugs to stimulate their dopamine systems or “pleasure center” of the brain. Also, notable are the ways in which the need to acquire drugs disrupts the ability to engage in other activities. This description of the ways in which seeking, paying for, and using illicit drugs structures one’s days was typical of many people and became an important point of contrast for their experiences taking bup.

Psychological Elements of Addiction

While most people articulated a physical aspect to addiction, many also held that addiction had a psychological component. For example, Terry attributes most of addiction to “being mental” and also hints at how her conceptions of addiction have been shaped by her experiences with different forms of treatment. She says:

Seventy-five percent of addiction is mental, I believe. I’ve been on both sides of the coin [an “addict” and a counselor]. I was a senior client advocate in a 149 bed treatment facility. So, I’ve been on both side of coin. I’ve done the NA [Narcotics Anonymous] shuffle. I’ve been programmed.

Here, Terry directly acknowledges that her exposure to Narcotics Anonymous “programmed” her and influences the ways she understands her own experiences of addiction and treatment. The Narcotics Anonymous approach is consistent with a view

that addiction is a both a psychological and behavioral problem. Within the NA framework, it is will power and changes in behavior -- not typically a medication – that overcome addiction.

Pat, in contrast, draws on a different psychological addiction discourse and attributes drug use to having an “addictive personality.” The following quote from Robert is illustrative of the hybrid notions of addiction as both physical and psychological held by many:

[T]he medication itself solves the physiological and psychological aspects of opiate addiction, whatever it is that you're addicted to, because withdrawing from opiates is a miserable. You wish you would die. It's just - it's awful. So like I said, it removes that. It just - it just literally puts the physical and psychological aspects of the addiction away, so all that's left basically is how you fix the reasons that you use.

In this, Robert’s conception of addiction is similar to the one espoused by Reckitt Benckiser that medication can help with the physical symptoms so that individuals can engage in dealing with the psychological or personal issues that caused them to use. Interestingly, Robert acknowledges a third component of addiction, “the reasons you use” that are beyond either the physical or the psychological aspects. Like Robert, many people shared a sense that something beyond either the physical or psychological components of addiction caused them to use drugs in the first place and made it hard for them to stop using. These included external factors, like one’s social and economic context on the one hand, and a failure of spirituality, morality or will power on the other.

External & Environmental Influences

As my analysis of the neuroscientific, regulatory and marketing literature suggested, theories of addiction that include a role for external or environmental factors were limited. With the exception of limited acknowledgement that the environment

might affect the brain's plasticity, most of the other sources I examined failed to explain addiction in terms of individuals' social and economic context. The narrative of those living with and being treated for addiction differed significantly from these other sources in that most people felt that their families, peer groups, living situations, and economic standing either contributed to their drug use and/or affected their ability to stop using drugs. Doug describes a fairly common scenario where the drug use of a partner eventually leads Doug himself to start using drugs:

So I was in a strange town running out of money in a motel room and my partner is now back on heroin, so I feel like, you know, what did I do all this for? Bob has obviously torn my life apart, destroyed it, and I'm sitting in Portland, and I'm going to be homeless. Well, might as well go down the tubes with him.

This idea that one's life situation – whether an abusive relationship, poverty, or illness – contributes to drug use occurred frequently and was often linked to experiences of living with HIV/AIDS. Several people described how their feelings of hopelessness about their life circumstances generally or their HIV status specifically were connected to their drug use. Portia explains that her identity as a “dope fiend” and her expectation that she would die of AIDS led her to a hopelessness where death seemed the only logical solution:

I thought for sure forever until the day I died of AIDS that I was going to be a dope fiend, a nothing. I had nothing to offer any, anyone. I had, I had no hope. I wasn't ready to die. But I was surely going to kill myself. In my mind I wasn't -- subconsciously I didn't want to die, but consciously I thought it was the right thing to do and then I was wondering, why the hell is it taking so long? I'm running out of money here.

Walker felt that, since his death was inevitable and perhaps imminent, he did not need to be concerned about the consequences of using drugs:

So every time I watched a football game I used to always think that was going to be my last one. Or any time, you know, I caught a cold, this is going to be my last one until I start getting to be depressed and I would

start letting myself go like that. ... Then I start getting into drugs and doing some stuff that I really didn't have no business doing because I didn't think I was going to live long enough anyway. What difference do it make?

Walker expresses a sentiment shared by others in the sample that their drug use was caused, not by changes to their brain structure or a misguided opioid receptor system, but by a hopelessness rooted in the reality of their lives and circumstances.

People also understood that their ability to stop using drugs was linked not only to their physical health but also to their social and economic standing. Participants repeatedly referenced poverty, lack of education, homelessness, and limited economic opportunity as affecting their drug use. For instance, they spoke about the need for help with their employment, housing, mental health, and family problems in order to overcome their addiction. Even those who felt that bup was effective made clear that their problems with addiction could not be separated from their social circumstances. As one participant, Robert, put it:

I don't believe that sobering somebody up solves the problem. It's much, much vaster and deeper than that. ... You can't just give somebody Suboxone and then leave them alone.

Pat explains how lack of social support combined with her proximity to neighborhoods where heroin is sold affect her likelihood of using drugs:

I don't have really much support system right now... it's just too many ways for me to slip up. ... where I live right now, it's like, it's right there. The people that sell heroin live in my building so it's really hard where I'm at. ... [P]hysically and stuff, [bup] is keeping me from drugs but I have other problems besides heroin too that I don't think they're [physicians] really equipped to address there and stuff, so. So, it's harder than heroin.

Pat is clear that her problems with addiction go beyond a medical condition. For her and many others, the physical aspects of addiction are only one part of much more complex

and varied phenomenon. These multifaceted notions of addiction encompassed physical, psychological, and external factors. In addition, for many people, their understandings of addiction were also informed by their spirituality or sense of morality.

Addiction as a Spiritual or Moral Failing

Even among those who held that addiction had a physical or psychological hold on them beyond their control were people who also believed that spirituality, morality, and will power play a fundamental role in addiction and “recovery.” Some people, like Richard, seem to reject the medical model of addiction explicitly: “[I]nstead of looking at it as being a medical issue, a mental illness, to me it’s a weakness. It’s a moral weakness, you know, that I can’t handle it.” Others combine a medical and moral understanding. For instance, Calvin believes God saw him through a host of physical ailments and now his addiction. He explains:

I'm a firm believer. ... He [God] blessed me. Blessed me through heart surgery, blessed me through this Hepatitis; he blessed me through the -- my appendix, blessed me through a hernia operation; he blessed me. ... [H]e said he'll protect me from all evil so I put it in his hands.

Q: Has it helped when you're in treatment this time?

A: Oh yes, yes. My higher power, oh yes, yes. Yes, I ask him everyday to keep me from using, everyday. ... I'm a very spiritual person, and I believe something spiritual happened to me last June and - and that was when I woke up one day and it was like no longer tug-of-war within me like it'd always been all my life. ... I don't give Suboxone the credit.

Calvin does not eschew medical treatments or rely solely on God to cure, but clearly, for him there is more to overcoming addiction than treating its physical symptoms through a medication. It is also worth noting that both Calvin’s addiction and other medical conditions fall into the category of “evil” suggesting an overt moral framework. In addition, the reference to a “higher power” invokes language used in Narcotics and

Alcoholics Anonymous treatment programs, where surrendering to a “higher power” and admitting one is powerless over addiction is an essential step towards stopping use.

Several others relied, not on God’s power in overcoming addiction, but their own will power. For example, Diane says bup helps, but a “strong constitution” is also needed: “You know, probably the pill would have been enough, but some people don’t have a strong constitution.” Similarly, Derrick notes the importance of having inner strength: “I’m scared I might get weak and, you know, want to try [using drugs], you know what I’m saying?” Several others, like Lesley, emphasized that bup only works for those “who really want to change.” Indeed a common theme throughout the interviews was the medication only works in combination with a deeply rooted desire for transformation. Terry’s comment is typical of many:

If it’s in their heart and if they really wanna be clean, and they want a life, it’s gonna work. If in their heart they wanna be a down and dirty junkie, it ain’t gonna work, period.

Terry’s sense that being a “down and dirty junkie” is a choice and that being “clean” requires a change of heart shows the persistent role of will power in narratives about addiction and “recovery.” Medication only works when combined with the desire and the will to both stop using drugs and have a different kind of life. Not coincidentally, the language of “clean” and “dirty” with its clear moral overtones was used almost universally by individuals in this sample to describe their experiences of being addicted and being “free” from drugs.

For many of these individuals, a brain disease model is insufficient to explain their embodied experiences of addiction and trying to quite drugs. Physiological experiences of craving and withdrawal are central to their experiences and their

understanding, but so are ideas about psychology and mental health, the role of external circumstances, and beliefs about God, morality and will power. Individuals combined their lived experiences with a range of discourses that draw on medicine, psychology, 12-Step programs, and a host of other popular ideas about addiction and recovery. Medications, like methadone and bup, enter into this amalgamated web of understandings about addiction and shape them in particular ways.

Methadone: “The dope man was the government”

First introduced for heroin treatment in the 1960’s, for decades methadone remained the only medication for the treatment of addiction. Like bup, methadone was developed within the context of a medical model of addiction. Originally tested for treating heroin addiction by Dole and Nyswander, scientists at Rockefeller University, methadone was based on the understanding that “heroin addiction is a metabolic disease” (Dole and Nyswander 1967: 20). Similar to bup, methadone was used to argue against the idea that addiction was due to a failure of will. Rather, it should be seen as a medical problem that should be freed from stigma and treated by medical professionals (Nelkin 1973). Dole and Nyswander argued:

If, as is generally assumed, our patients’ longstanding addiction to heroin had been based on weaknesses of character... it was difficult to understand why they so consistently accepted a program that blocked the euphoric action of heroin (1967: 21).

The same focus on blocking pleasure that is central to neuroscientific theories of bup was at the heart rhetorical arguments about methadone almost 5 decades ago. Early methadone trials were heralded as a huge success both because participants reduce their use of heroin and because they were able to return to work and lead “normal” lives (Dole

and Nyswander 1967; Nelkin 1973). Despite Dole and Nyswander's fierce advocacy to treat methadone as a medication for medical problem, methadone never entered the medical mainstream. Instead, it remained under the control of complex and highly regulated system of clinics that became the foil for advocates lobbying for the passage of DATA 2000 and for a less restrictive scheduling of bup by the Drug Enforcement Agency.

Proponents of bup sought to overcome many of the failures of methadone through the way bup is formulated, regulated, marketed, and dispensed. This makes comparisons between bup and methadone from the perspectives of individuals who have tried both a useful way to explore whether or not and how bup succeeds in differentiating itself from methadone. Many people in the BHIVES sample had been exposed to and deliberately rejected methadone in favor of bup. Therefore, when describing their embodied experiences of bup, most compared it to methadone. It is in relation to methadone that bup is constructed, and it is bup's perceived similarities to and differences from methadone that in part shape individual's notions of addiction and addiction treatment. The degree to which bup is different from heroin and/or methadone in how it is experienced bodily, the setting in which it is dispensed, the social context that surrounds it, and the impact it has on the daily lives of those taking it are all central to whether people experience bup as a medication or a drug and how they conceptualize addiction and its treatment more broadly.

Embodied Experiences of Methadone

My analysis of interviews with people being treated for addiction suggests that methadone has failed to effectively differentiate itself from the drugs of abuse it is meant

to treat. With few exceptions, participants in the BHIVES sample described their experiences with methadone as having many of the same properties as illicit drugs -- it made them high and/or sedated, it was addicting, and it caused horrible withdrawal. Several people described being on methadone as having a “double habit” because it only increased their desire to use illicit drugs and because they felt that methadone itself was an addicting drug. As Carl explains:

The methadone just seemed like it made you crave even more for drugs because the methadone gave you something like a high, you know. And if you add more [illicit drugs] to it, the higher you get. ... I don't see the logic in that. You're going to drink the methadone and snort the dope... Now, instead of having just one habit, you got two.

Carl goes on to say, “Methadone gives you a substitute high. Methadone gets you high, you know. ... If I wanted to get high, I'd stay with the heroin, you know.” The “substitute high” that Carl gets from methadone causes him to classify it as another habit, akin to his heroin addiction.

Several people besides Carl noted that are few differences between methadone and heroin, other than their legal status. According to George, “methadone is just like shootin' drugs.” Habierito concurs: “The methadone, if I do methadone, it's like I'm doing heroin... They give it to you and you drink it, but its like heroin.” Habierito implies that, even though it is “given to you” by a professional and it is drunk, rather than snorted or injected, these differences in formulation and setting are not enough to make methadone significantly different from heroin. Similarly, another participant, Clarence, refers to methadone as “legal way alter consciousness,” and Portia went so far as to equate the government-run methadone system with drug dealers. She claims: “When I was on methadone, I felt like I was being -- the dope man was the government. ... They

were my dope dealers.” For Portia and others, the cravings and high caused by methadone placed it in the category of a drug, and its legality was not enough to accomplish methadone’s status as a legitimate medication.

Participants in the BHIVES study rejected methadone as a medication not only because it made them high but also because it caused physical dependence, another key marker of illicit opioids. Several people described methadone as being worse to detox from than heroin. After claiming she would rather have cancer than go through methadone withdrawal, Terry says:

Because the methadone doesn’t just get in your blood and in your system; it gets in your bones... I’ve seen people that wanted to throw themselves out the window just to make it [methadone withdrawal] stop. I’ve seen people begging to die because it hurt so bad. I’ve gone through heroin withdrawal; I’ve gone through cocaine withdrawal -- I’ve done both, and I’ve seen methadone withdrawal, and that’s something I would never wanna experience in a million, million years.

Jesse was so fearful of coming off methadone that he felt that he was imprisoned by it: “Methadone made me feel like, I was still a prisoner, you know, of the drug.”

The perception that those on methadone are still on drugs was one shared not just by those being treated but in some cases by those providing drug treatment. Jane describes being in a Narcotics Anonymous program where her sponsor refused to see her and another woman “because we weren’t clean because we were on methadone, and that’s just like to them we were still getting loaded.” Another participant, Alan, noted that he could not be on methadone when he entered a residential treatment program because it was “drug-free.” In their study of methadone clinics, Fraser and Valentine, observe that because those on methadone are not considered “drug-free,” methadone maintenance “offers a uniquely marginal social location for its consumers” (2008: 2).

Even Dole and Nyswander, the researchers who first used methadone for the treatment of heroin addiction, noted decades ago that, because it is perceived as substituting one drug for another, methadone has failed to achieve the status of other medications:

What was not anticipated...was the nearly universal reaction against the concept of substituting one drug for another... The analogous long-term use of other medications such as insulin and digitalis in medical practice has not been considered relevant (1980: 261).

The idea that methadone is a “substitute drug” did not go unnoticed by bup advocates. They seldom, if ever, refer to bup as a “substitute.” And, as the earlier discussion suggests, they went out of their way to try and differentiate the pharmacological properties of bup from both heroin and methadone.

Setting, Regulation and Diversion

Another aspect of methadone that participants suggested contribute to its ambiguous drug/medicine status and fostered a marginal standing for those being treated with it was the setting in which it was delivered. Many described how the drug use and drug trade that surrounded many methadone clinics shaped their perceptions of it. Several people described an active black market for methadone and other drugs that often took place at or nearby the clinics, contributing to feelings of stigma and reinforcing perceptions that methadone is a drug, not a medicine. Portia says, “They sell methadone on the street... There’s some people just getting high off methadone.” As Jane explains: “that methadone, it just puts you into that lifestyle. It really does because that’s what is at that clinic -- drug addicts. So you become a drug addict.” Methadone is tainted because it is sold on the street like other drugs and because it is sold by “drug dealers.” In addition for Jane, just being around other “drug addicts” at the clinic fosters a lifestyle

that, even apart from methadone itself, makes one “become a drug addict.” These claims echo those in the congressional record, where advocates noted that the stigma surrounding methadone clinics was one important reason why bup should be regulated differently.

Participants in the BHIVES study also make clear that methadone is a failure as medication because the way in which it is regulated and dispensed makes it impossible for them be “normal.” As several participants explain, rather than fostering a sense of being in a medical treatment that restores one’s “normal” functioning, the rules governing methadone disrupt daily life and reinforce the idea that those in methadone treatment are addicts that need to be governed and controlled through punitive measures. Most methadone clinics have a medical director who is a physician, but the vast majority of methadone treatment is delivered by counselors, and the dosing amounts, schedules, and rules about “take home” doses are often determined by a set of administrative procedures and rules that vary from clinic to clinic. According to the CSAT National Advisory Committee’s Subcommittee on Buprenorphine: “In some clinics, the medical decision-making is really being done program administrators, with physicians being used to rubber stamp those decisions or forced to follow dosing policies that are not consistent with well-accepted medical standards” (1999: 27). Clinics vary across the country but most share a requirement of daily attendance, directly observed dosing, and sanctions for failure to show up, having a “dirty” urine (a sign that someone has used drugs other than methadone), or refusing to participate in different aspects of the program, like counseling. Figure 19 shows a typical dispensing window at a methadone clinic, where clients are referred to by numbers and staff are protected by a sheet of Plexiglas. These kinds of

requirements set methadone apart from other kinds of medical treatment and, according to some of those who have participated, hinder rather than help their “recovery.”

Figure 19: Dispensing Window at a Methadone Clinic



Source: Farley 2011

Jane describes in detail how the restrictive methadone clinic hours and regulations, which require daily attendance at a specific time, combined with the fear of methadone withdrawal, contribute to relapse:

It would be the worst feeling in the world to get up and know I had to come to this fucking clinic and drink that methadone. ... So you're coming this way, and you keep looking at your watch and it, it's getting close to that time and you got 30 minutes ... and then when you get off the bus you got five minutes. You're running up the stairs, you waiting for the elevator, it doesn't come, so you run up the stairs, you're breathing and you step up to the window and they closed. They won't give it to you. ... They say, 'well, I'll bet you'll be on time tomorrow morning.' You know, and then you have to wait until seven o'clock the next morning and ... so you either ran out of methadone, and you're actually sick. So you go do something and you get you some money to get you some dope and especially if you don't have any money you gonna go and do something to

get you some money to buy some heroin. Then you have to go into that rat race.

Dana also found it difficult to get to the methadone clinic everyday, and when she missed her appointment, she used heroin to avoid withdrawal. This only compounded her problems at the clinic because at her clinic, “if you have dirty urine, you either start rapid detox, or you go up 15 milligrams.” She described how every time she “slipped up,” her methadone dose was increased to the point where she was terrified of ever being able to get off it.¹⁵ These kinds of struggles led Dana to conclude that she wanted to get out of methadone treatment both because of her concerns about physical dependence and because she was tired of “lying and trying to beat urines.” Mindy also ran afoul of another rule at her clinic. She was kicked out of her methadone program for drinking alcohol and avoiding mandatory groups. Her withdrawal from methadone became so severe that she too returned to using heroin. In each instance, participants felt that rather than helping them treat their addiction, methadone actually contributed to it in large part because of the restrictive regulations that govern methadone treatment.

In addition to being almost universally loathed by participants, the kinds of restrictions and regulations they describe undermine methadone’s would be status as a medical model. Members of the NIH consensus panel concluded: “We know of no other area where the Federal Government intrudes so deeply or coercively into the practice of medicine” (NIH 1997: 19). It is not, however, just that the rules and regulations abridge the authority of physicians; they are perceived by some people as making the “normal” functioning the clinics purport to be fostering impossible. Carl was one among many

¹⁵ Clinics often increase doses when someone relapses on the theory that the individual must not be receiving enough methadone to effectively block the craving for heroin (see for example, Caplehorn et al. 1993).

who noted that the methadone regulations, especially the requirement of daily attendance, prevent people from “having a life.” He says:

With the methadone program, you have to go down there each and every day and that could be a hassle if you are trying to have a life. You know, if you got a job or something, you have to work your schedule around going to pick up your methadone.

Other people talked about how methadone prevented them from traveling or visiting family out of town. These kinds of experiences are consistent with Bull’s study of methadone clinics in which she concluded that the regulations governing methadone impede clients “from making certain types of decisions about their daily lives, even when such decisions are considered to be of positive therapeutic value – such as working or visiting family” (2008: 163). To use Becker’s words, “the treatment of deviance denies them the ordinary means of carrying on the routines of daily life” (1963/1997: 35). Fraser and Valentine concluded that methadone produces the very kinds of people it purports to cure:

In short, rendering the maintenance of paid work difficult, in providing few protections and comforts, and in making clients available to black market purchasers and sellers in a public space for long periods of time... regularly runs the risk of intra-actively producing the very clients it seeks to ‘cure,’ the very clients that methadone maintenance therapy has been introduced to manage within liberal societies: unproductive, disorderly clients involved in illicit drug markets (2008:109-110).

In this group of individuals, many of whom have explicitly rejected methadone in order to try bup, methadone is experienced and perceived largely as a drug. Its effects on the embodied lives of those who take it, the regulations that govern it, the setting that surrounds it, and its popularity on the black market sale construct methadone as an ambiguous substance that is more drug than medicine. Moreover, many people saw the

system of methadone dispensing as hindering their ability to leave the “drug world” behind and to participate in the routines of daily life that signal “being normal.”

Buprenorphine: “Suboxone’s a wonder drug”

Bup was meant to address many of the problems inherent methadone in part through its formulation and physical effects but also through its regulation and how it is prescribed. The following section explores how those taking bup experience the substance and the effect this has on how they perceive it as a treatment for addiction. I look at how the ways in which bup is regulated and dispensed effects the experiences and perceptions of those taking it. I also examine the degree to which its placement in a medical setting and in the hands of physicians influences how patients understand bup specifically and addiction more generally.

Embodiment of Bup

Addiction researchers and Reckitt Benckiser highlight bup’s safety (it is harder to overdose on bup) and its lower abuse potential (by adding naloxone, bup is seen as harder misuse and divert) as the important biochemical features that differentiated it from heroin or methadone. Individuals taking bup, in contrast, rarely mentioned bup’s safety or abuse potential but focused instead on its pharmaceutical effects (how it made them feel) – especially as it compared to methadone. With few exceptions, people described bup as creating less of a high and significantly less sedation or “nodding” than methadone. More importantly, bup seemed to succeed in both reducing cravings and preventing symptoms of withdrawal. Julian’s comment is typical of many: “[W]ith buprenorphine, there’s no feeling; you know, it’s just like you wake up normal. ... There is no, I don’t

think about getting high, you know, I just don't." According to Derrick, "I've had no symptoms of withdrawals. ... My mind is in a total different state. I'm not having the urge to having to run out and think about where I'm going to get a blow from." People widely commented that bup freed them from the need to prevent withdrawal or respond to cravings by using illicit drugs.

A striking number of people, almost two-thirds of the sample, described bup as making them feel "normal." The interview guide did not ask any direct questions about acting or feeling "normal." Rather, these comments were volunteered in response to an open-ended question about how buprenorphine made the participant feel or what s/he liked about bup. Links between medicalization and normalization have been noted before (see for example, Conrad and Schneider 2002; Lewis 2003; Sanderson et al. 2011). In a review of literature about how people repair "biographical disruptions" associated with illness, Sanderson et al. note most people focus on "behavioral attempts to maintain a normal life" and "demonstrate normalcy to others" (2011: 620). They also note that responsibility for normalization generally rests on the ill individual -- an observation certainly true of my analysis and to which I return later. Here, I want to extend the work on normalization to suggest that "normal" is achieved both by "acting normal" (the restoration of typical behavior that Sanderson describes) and by "feeling normal" (an embodied state).

For several people, "normal" referred to their embodied feelings of not being "on a drug," which can mean not having cravings, not feeling sedated, not feeling high, and being able to think clearly. For example, for William, "just normal" means "I don't have

any cravings.” For Nancy, “normal” is the absence of feeling either excessively speedy or sedated:

I think Suboxone’s a wonder drug actually, because I’m just normal. Like I’m not speedy. I’m not sleeping all day long. ... And I think it’s good actually because I don’t feel like I’m on any drug. It just makes me feel normal.

Lesley also equates the normal caused by bup as feeling “like I’m not taking anything.”

Doug credits bup with making him feel “extra normal,” which for him was the absence of withdrawal symptoms and not feeling high. He says:

That’s what I’m getting at. It’s not high. It’s just almost like a drug that would make you feel normal. A drug that makes you feel extra normal. Extra normal. ... Just a touch, a bit of an opiate should make you feel like that. If I go and take my dose, I feel it, but I don’t feel an overwhelming sense of well-being other than feeling normal. Suboxone is nothing like methadone. Suboxone got me back to normal.

A few people also noted a change in their thinking. For example, Gwen contrasts her mental state on bup with her mental state on illicit opiates:

It [bup] works good, you know? ... I mean, it’s good a clear head. You know what I mean? I’m never cloudy no more – a different way of thinking... [No more] of that junkie mentality thinking.

For others, bup seemed to offer a physical, mental and emotional state that was seen as return to an authentic self – a self that existed before they became addicted to drugs.

According to Pat:

[I]t just really felt like it kind of took me back to like before I had ever done opiates.... You know, I wake up, I feel normal... It doesn’t make you feel like you were on methadone. With buprenorphine you just feel like you’re just normal. That’s why I say it’s kind of like it takes me back to before I had ever done opiates.

According to Habierito, “The difference with Suboxone is acting normal... You know, it’s me, it’s me, it’s the real me.” Other scholars have noted the seeming contradiction of

using a mind-altering medication to reclaim an authentic self (see for example, Stevenson and Knudsen 2008).

In addition to reducing cravings and not causing a high, bup was seen as less addicting and as causing fewer withdrawal symptoms than methadone. Doug notes that bup restored normality by getting rid of feelings of sickness and euphoria: “I felt normal. I didn’t feel high. I didn’t feel sick.” Several people described going a day or two before realizing that they had forgotten to take their bup – something that was inconceivable with heroin or methadone. As Pat explains:

Even though I get off the bup, I don’t get sick from that really. I just ... feel like a little bit weak. But I know if that if I were on methadone,... no matter what, then I’m sick from the heroin or from the methadone ... But if I were to stop bup cold turkey, it’s easy... There’s not really much of what I would consider like I was kicking anything.

While there was widespread agreement that bup addressed craving and withdrawal symptoms while creating fewer feelings of being high, sedated or sick, many participants seemed to struggle with whether bup was a drug or a medicine primarily because it caused physical dependence. At times people described it as a medicine, but many (including some of the same people who referred to it as a medicine) also seemed to view it as another substitute drug like methadone. This ambivalence was in part grounded in their embodied experiences of bup. It may have made them “feel normal,” but it also caused a physical dependence and was experienced by many as a substance that was merely replacing the drug to which they had been addicted.

Some people seemed to be trying to convince themselves that bup was like other medications. Stephen, for example, says: “I’ve slowly gotten away from even thinking about it [taking bup]. You know, for what it does. I just have my medicine case, and I

have all meds in it, and I have my suboxone meds, and I take my meds, and that's it.”

This suggests that there was time when Stephen did think about it as being different from the other medications he takes. Jesse asserts that bup is just like other medications but then feels the need to assure the interviewer that he does not abuse it but takes it as prescribed:

I mean it's [bup] just like anything else. To me it is a medicine. ... I take it in the morning along with my other medicine; I take it with my HIV meds. ... Like I take a pill for high blood pressure. ... Okay. No difference... And I just take it. I don't abuse it. I take it as prescribed.

On the one hand, Jesse equates bup with his HIV and hypertension medications. But he also acknowledges that bup can be a drug of abuse; only by taking it “as prescribed” does the substance become like other medications. Richard directly acknowledges that he has to mentally construct bup as a medication because he is prone to viewing it as a crutch. He explains how understanding bup as a medication is linked to understanding addiction as “medical situation:”

I think the Bup for somebody that's struggling and deciding that they want to try something, they would also have to be open to the fact that -- or not have that mental image that I have sometimes of it being a crutch. You know, they would have to look at it as a medical situation. And if they have that ability or if that can be conveyed to them that this is something that you can take to help you deal with your substance abuse and stuff like that and, and eventually get off of it, I think it'll work.

This passage from Richard reveals how bup as a medication is a discursive achievement but a tenuous one. Not only does bup need to be framed “as a medical situation,” people need to reject Richard's view that bup is crutch. The language of “crutch” discloses Richard's understanding that bup itself is an addictive substance and that ideally his addiction is something that he should master by himself, presumably through an assertion of will power. The last line reveals a common theme that undermines the construction of

bup as a medication for a chronic condition, which is that many of the participants feel that the goal of bup treatment is to “eventually get off it.”

This desire to “get off bup” stems from a widely shared belief among participants that recovery without a “crutch” is somehow more meaningful or authentic than overcoming addiction through bup. An analogy can be made to diabetes where insulin offers a medical solution, but controlling the illness through diet and exercise is seen as somehow better or more moral (Broom & Whitaker 2004). In addition to the idea that is better to overcome the illness without a “crutch,” is the understanding by participants in my study that bup is an opioid that cause physical dependence. As such, bup occupies an ambivalent location somewhere between an addictive drug that makes one “dirty” and a legitimate medication that makes one well. Wendell’s comment below is emblematic of this ambivalence about bup. He struggles to articulate whether or not taking bup makes his body “clean” (i.e., free from drugs) or “dirty” (i.e., polluted by drugs):

I mean my body is clean. I’d say it’s clean from illicit drugs. I got a drug in my body now that’s given to me my doctor, and that’s the only thing I’m going to use, ‘cause it’s going to keep me straight.

Like Jesse quoted above, Wendell turns to the role of the doctor as legitimizing bup as a medication. Diane also struggles with the idea that bup makes her “dirty,” and her doctor offers a medical explanation to persuade her that bup is a necessary medication. But even so, she resists the idea of having to take it forever. She says:

You’re not totally clean [on bup]. But Dr. N said something. I said, ‘do you ever get off buprenorphine?’ And he said, ‘Well, would you ever get off your diabetic medicine?’ You know I was like some people do and some people don’t.

Q: So how would you feel about being on bup for the rest of your life?

A: It’s okay. Yeah, it would be okay because you don’t have to take it everyday if you have a strong constitution.

Diane, like Richard above, understands how bup can be viewed as a medication but is unwilling to let go of the idea that it is some internal resource, “a strong constitution,” that is the preferred source of overcoming addiction, especially since the alternative means “you’re not totally clean.”

Diane’s resistance to having take bup indefinitely was widely shared, and, Dana, like several others, talks about how she wants to slowly take lower and lower doses of bup until she can stop taking it altogether. She says:

I wanna break it down, maybe eight or four [milligrams] a day. I don’t want to be addicted to nothing any more. ... I’m tired of being a fucking slave to something all my life.

Dana, like many others, understands that bup creates an addiction like other opioids and here uses the language of slavery -- a metaphor that was also widely used to describe people’s relationships with methadone and heroin. Clarence shared Diane’s dislike of being reliant on a “drug” and succeeded in reducing his dose “down to practically nothing...because I don’t want to be dependent on anything.” Darnel describes his cycle of illicit and prescribed medication use and suggests how and why it might be difficult for people to make clear distinctions between opioids that cause addiction and opioids that treat addiction. He says:

So I have used buprenorphine to get off heroin and to get off morphine. Now because she [the doctor] cut my Percocets... I went and picked up heroin again, so I ended up having to go in and do the buprenorphine again to get off the heroin. I only take buprenorphine for maybe 14 days at most.

Q: Why?

A: Because I don’t want to replace it with another drug. ... I don’t need where you are going to give me another pill or take one pill and replace it with another one.

This quote from Darnel reveals how individuals struggle understanding on a personal level the kinds of distinctions between drugs and medicines government actors and Reckitt Benckiser tried to reinforce in earlier chapters. It is precisely this kind of ambiguity that their constructions of bup sought to address.

From the perspective of people in this study, bup has some clear advantages over methadone and heroin in terms of its impact on their bodily experiences. It creates less euphoria, addresses cravings and withdrawal symptoms, and is easier to withdraw from than methadone -- all features which make it more like a medication than a drug and which help those taking it to feel “normal.” However, bup also creates a physical dependence and is generally prescribed for a long or indefinite length of time -- features which make it like a substitution for the drugs it is meant to treat. These embodied experiences of bup suggest that it remains in a liminal and ambiguous state somewhere between a drug and a medicine.

Role of the Medical Setting

As we saw in the case of methadone, it is not just the embodied experience of a medication that influences how it is perceived and constructed. The setting and context as well as the rules and regulations surrounding a medication also shape its meaning. Indeed, as earlier chapters suggest, government regulators and RB wanted to change the context on which bup was delivered precisely as a strategy to medicalize addiction treatment. In his landmark essay, “Becoming a Marijuana User,” Becker (1953) argues that enjoying marijuana is a learned behavior, and Zinberg (1984), in his classic work, Drug, Set, Setting, argues that one of the key factors shaping subjective experiences of drug effects is setting. That is, one’s physical and social setting influences how illicit

drugs are experienced. I would suggest that the same is true for prescribed medications. In addition to a change in who is delivering the treatment (i.e., physicians instead of addiction counselors), buprenorphine marks a significant change in the setting where drug treatment is delivered. For the first time in decades, individuals with opioid addiction can obtain treatment in the privacy of one's home, rather than having to go to the highly stigmatized methadone clinics or drug treatment facility. Regulators emphasized the doctor's office, but the doctor's office is where the prescription is written. With a few exceptions (generally when people first start bup treatment), bup is consumed in the privacy of one's own home or wherever the "patient" chooses.

In In Labor (1982), Katz Rothman details the importance of setting in processes of medicalization, describing how the move from home to hospital births changes both the experience of birth and the dynamics of power and control between doctors and midwives. Here, I am interested in understanding what the change of setting heralded by buprenorphine means for the medicalization of addiction as well as the experiences and perceptions of those being treated. In this section, I examine how the setting and context in which bup is taken and the rules and regulations that surround it shape individuals' experience of bup.

The biggest change made possible by DATA 2000 was to place addiction treatment in the hands of physicians in an "office-based" setting. As described in Chapter 3, this law deliberately sought to distance bup treatment from methadone, which has become a highly stigmatized medicine/drug delivered within a highly stigmatized and disruptive setting. Reckitt Benckiser also focused on bup as advantageous because of the "private and confidential" setting in which is prescribed. Setting was seen by bup

addiction medicine specialists, advocates for DATA 2000, and Reckitt Benckiser as a central factor in achieving the medicalization of addiction. However, as the analysis below suggests, the role of doctors and the medical setting seemed to have relatively little impact on how individuals understood either bup or addiction, though being able to take their bup prescriptions home had enormous significance.

A few participants already quoted above felt the fact that it was being prescribed by a doctor helped legitimize bup as a medication, but Richard, who was quoted earlier describing bup as a crutch, was among the only people who expressed how the medical setting could and should shape perceptions. When asked if he liked receiving addiction treatment in the same place he got his HIV care, he says:

It's okay. Part of what it gave me was the opportunity to not only talk about my HIV stuff, but the chance to talk about recovery some. ... For me, it set up a situation where I didn't feel like my doctor was judging me around my recovery either. We're talking about a medical piece that I was able at times to look at bup as being a medical thing like I was treating my diabetes or AIDS.

For Richard talking about his "recovery" in a medical context where other medical issues were being addressed helped him understand "bup as being a medical thing."

However, this kind of articulation of how a medical setting shaped perceptions of bup or addiction more generally was extremely rare. More typically, when individuals discussed the significance of receiving drug treatment in a medical setting, they focused on convenience, the benefits of being able to disclose both their drug use and their HIV status to their medical providers, and the belief that such disclosures might improve their medical care. For instance, Walker liked being able to find out if and how his HIV medications might interact with the bup. But the thing he liked most was not having to go to more one than one facility:

Instead of me having to go here to see about this and then go cross-town to check with somebody else to see about something else. You know what I'm saying, it's convenient and everything by it being in the same place.

Mindy agrees: "It's like killing two birds with one stone."

While people liked the convenience of getting their medical and addiction treatment in the same place, they seemed ambivalent about the role of doctors in addiction treatment and about whether doctors could in fact treat addiction like other medical conditions. The National Advisory Committee's Subcommittee on Buprenorphine asked the rhetorical question: "Doctors treat all kinds of illness; what is addiction different" (1999: 12)? For participants in the BHIVES sample, addiction **was** different, and many doctors treated it differently. Some people felt that their doctors either did not want to hear about their addiction, lacked the expertise to do so, or that it was simply outside the scope of their physician's job.

In response to a question about what role her HIV doctor played in her bup treatment, Lesley explained:

He really don't want to hear about drugs; that's not really his thing. He wants to focus on the HIV. But if we talk about buprenorphine and drugs, that's not... Doesn't want to hear that, you know. So I don't point it out to him; I strictly stay on the health spot with him.

This quote illustrates how both Lesley and her doctor make a distinction between HIV (or the "health spot") and addiction, even though her addiction is supposedly being treated as a medical disorder in a medical setting. In some cases, the focus on traditional medical issues and the exclusion of addiction were the decision of the "patient" not the doctor.

Portia says, "I'm not trying to talk to the man about too many things. I want him to concentrate on my t-cell counts and listen to me when I am talking about neuropathy. I don't want to get his mind on anything else." Keeping the doctor focused on her health

status means not distracting him with her addiction treatment. Pat shares Portia's sense that maybe physicians are just not equipped to handle dealing with both traditional medicine and addiction treatment: "With the addictions, I can see how it's different. In some cases, doctors just aren't, aren't willing or aren't equipped to deal with stuff like that." Robert is more direct in condemning his doctors for not being adequately educated about bup:

The doctors half the time somebody will say, 'Okay what meds are you on?' And I'll say, 'I'm on, duh, Suboxone.' And they're like, 'well, back up. What's Suboxone?' And then I've got to explain it to them. They don't know what the hell it is, and I feel like telling them, 'well, you know what? Go get online and educate yourself. Call the pharmacist. Ask him. You know, get out a PDR [Physician's Desk Reference].'

Medical providers have long played a central role in the medicalization of social problems, acting as key mediators between the scientific literature, the pharmaceutical industry, and the individuals they treat (see for example, Healy 2004). However, the relationship between medicine and addiction has historically been filled with tension and ambiguity. Doctors' lack of expertise about addiction generally and bup specifically undermines their credibility as an effective source of addiction treatment in the eyes of these individuals being treated by them. Doctors' seeming unwillingness to know about and treat addiction is perhaps easier to understand when one remembers that doctors have been largely prevented from medically treating addiction for more than 80 years. In addition, because most treatments for addiction are behavioral, many physicians do not believe that addiction is a condition that they can or should treat (Roche, Guray & Saunders 1991). In fact, the average four-year medical school curriculum devotes less than 12 hours to addiction issues (Miller, et al. 2001), only 8% of medical schools require any substance abuse education in their curriculum (Physician Leadership on National

Drug Policy 2000), and there is remains no board certification in addiction medicine. Research supports what people in this sample reported: many physicians have a poor understanding of opioid agonist treatment and struggle with prejudices and negative attitudes about addiction and drug users (Gerbert et al. 1991; Merrill et al. 2001).

Some scholars have suggested that doctors have also deliberately shunned treating mental illnesses, like addiction, because of its association with the custodial administration of deviance (Lakoff 2005). Lakoff further suggests that the intangibility of psychiatric objects (which emerge out of the encounter between patient's subjective reports and clinicians' interpretative schemes) give those addressing mental disorders a marginal place within medicine that makes the treatment of those disorders undesirable (2005: 2).

Dinglestad et al. (1996) argue that debates about drugs reflect the "influence of groups with the greatest power over the perception and the deployment of the drug in question" (1830). In the case of bup and medical treatments for addiction, the influence of the medical community does not seem to hold particular authority for the people in the BHIVES sample. Their minimal influence is due in part to doctors' perceived lack of knowledge and interest but also to what kinds of knowledge are valued by those seeking addiction treatment. One participant, Lesley, expresses a sentiment held by many that, when it comes to addiction, it is experiential, not "book," knowledge that has the most meaning:

A person who strictly come out of school, you know, and don't have any experience at all. How could you tell somebody something? I mean, the books are good, I don't knock it. ... But for someone who has never experienced the streets or being homeless; I mean, how could you tell somebody something, how?

The value placed on experiential knowledge is drawn in part from traditional drug treatment programs, like therapeutic communities and Narcotics Anonymous, where it is the knowledge and experience of those “who have been there” that supports the treatment of others (Borkman et al. 1998; Freed 2008). Related to this belief and noted in the earlier section about how people conceptualize addiction is the conviction that medicine alone cannot address the problem. If addiction is a hybrid construction that includes both medical and behavioral elements, then no doctor -- however, knowledgeable and willing -- can effectively treat addiction. This line of reasoning led Derrick to conclude that counselors not doctors should prescribe bup because it is they who can handle the multiple facets of addiction. He says: “because I feel that actually chemical dependency counselors should prescribe it because part of your recovery is not only ‘here’s the medicine.’”

The role of doctors is further complicated by the part they have played in the epidemic of addiction to opioid painkillers and other prescription medication and the ambiguity between prescription and illicit drugs. Bup is not alone in occupying the ambiguous space between drugs and medicines. There is an active and rich street economy centered on the sale of the prescribed drugs, and doctors’ role in both providing and preventing access to these substances was a common theme among participants in the BHIVES study. But the clearest message from the interviews was how much confusion there is about what constitutes a medicine and what constitutes a drug. On the one hand, some people, like William, felt their doctors were supporting their addiction: “I’m trying to avoid pain medications because being in recovery, which I’ve explained to all my doctors. I don’t want none of them Tylenol 3’s with codeine [an opiate].” Darlene

struggles with the notion that any opiate, even one that is prescribed, is a drug: “I have so much pain, but if I take a pill, I’m -- you’re not relapsing. That’s not a relapse; it’s from a doctor; you’re in pain.” Darnel describes how he realized that he didn’t need to shoplift to support his habit because “you can go to your doctor to write these prescriptions and then you can take it over here to this man and he’ll give you a couple hundred dollars.” For him, bup’s greatest utility is as a free medication that can easily transform into a profitable drug. Clarence says “I went through a period when my main drug of choice was some opiate cough syrup. ... I detoxed off heroin by using the cough syrup.” People in this sample understood that doctors could be complicit in providing medications/drugs that cause addiction or foster relapse.

This confusion between medications and drugs and the crossover between treating addiction by using drugs found on the street and getting high from drugs legally obtained from a doctor further undermines the role of doctors as an authoritative voice for understanding addiction. As Moore (2004) explains, they are but one in range of voices:

There is no one voice which says, ‘this is a drug and this is what it does and this is how we shall respond it.’ The realm of drug control lacks that kind of coherent sovereignty. Rather we are faced with a cacophony of voices, all of which work to constitute characteristics of substances to which we must respond (426).

Doctors are not alone in constructing medications and our responses to them. Many people in the sample had substantial experiences using medications obtained on the street, not only to get high, but also to manage their own addiction and withdrawal. As Fraser and Valentine point out: “grouping all diversion under the rubric of reckless and dangerous diversion misreads those instances of diversion as informal care” (2008: 137). These experiences of informal care were as meaningful to participants as those they had

in a medical setting. A number of people had, in fact, first tried and successfully treated themselves with bup purchased illegally -- another sign that the medical setting alone does not shape perceptions of bup as a medical treatment.

Terry's story is typical:

Because of this person, I knew of Suboxone. ... It was prescribed to her by her doctor. But I don't know where, why, what, how or whatever. All I know is she gave it to me and it made me feel better. And when I decided that I was done getting high, I came in and, and Dr. O got me hooked up.

Terry's focus here is not on medical expertise or the setting but on how the bup made her feel. Similarly, Dana was introduced to bup on the street and seemed to have no trouble using it to treat her symptoms of withdrawal:

I wasn't on the program. I'm buying 'em [bup pills] on the street; \$10 a piece. ... I would wake and not feel well, take the Suboxone, and within an hour I felt fine. So, there was really a total of a few hours that I didn't feel well. Way better than meth[adone].

Bup's usefulness in treating addiction extends beyond the doctor's office to the street.

Feeling better with bup does not necessarily require medical expertise or medical intervention. Bup, even though relatively new, has already entered informal street markets where medications and drugs are largely interchangeable.

I have argued that neither the embodied experiences of bup nor the role of doctors and the medical setting are determinative. Bup, while experienced as less of a drug than heroin and methadone, still has some of the embodied properties of a drug. The medical setting and the role of physicians, which were seen as critically important and determinative to regulators and to the pharmaceutical manufacturers, seem to have limited effect for this sample of drug users who have long crossed back and forth over the lines of prescription and illicit medications.

Regulations and Enacting “Normal”

Unlike the medical setting and role of doctors, which had limited impact, bup’s exemption from the regulations governing methadone turned out to be very important in shaping the experiences, perceptions and lives of those taking it. Specifically, bup’s availability and ease of use helped people to “act normal.” Whereas in the earlier section I focused how embodied experiences of bup made people *feel* normal, in this section I focus on how the availability of bup and the way it was taken by people in the study helped people *enact* “normal.” That is, features of bup regulation -- its ability to be taken at home and its legality – allowed people to engage in activities that they perceived as helping the reenter the mainstream of society and make them “normal.”

Acting normal was fundamentally linked to *feeling* normal for many.

Specifically, several people explain that because they felt physically better when they took bup, they were able to behave differently in ways that allowed them to improve their lives. As Jose describes:

[Bup] keep me out of the street. ... Because I knew I would never feel normal, you know, because I had abused so much drugs... It’s not like I feel with methadone, you know, all sleepy. It just gives me energy, keep me going.

Sylvester describes how his physical need for methadone made him wake up and leave the house first thing, something he does not feel he has to do on bup:

I be feeling normal from Suboxone... I have the time to get up in the morning and brush my teeth and wash my face, and I didn’t even have that time even on methadone. You know, I’d get up in the morning trying to get out of bed and make sure I get the methadone in me. And it was an every day thing.

The physical need for a drug disrupted the daily lives of many, like Sylvester. And one of the most favored features of bup was the convenience of being able to take it home and not be forced out of the house by either the need for heroin or methadone. Bup succeeded by simply being available to people and minimizing the disruption to their lives. Tracy explains: “I like being at home, and that’s the thing I like best about the pill is that I am able to stay home and take care of the things I need to do.”

The idea of being able to “take care of things” was a constant refrain, and many people linked this ability to their ability to lead a normal life. Whereas the earlier emphasis on feeling “normal” meant not being high, having cravings or being sick, “normal” here refers to the ways in which bup restored the ability to people to engage in the quotidian pleasures and responsibilities of every day life. These were made possible, not just because people did not feel sick, but because bup was provided to them legally (and free of charge during the study) so they did not have to “hustle” or figure out ways to “score” heroin. Nor did they have to endure the rigors of daily attendance and the restrictive regulations of the methadone clinic.

Jesse explained that, now free from the burden of going to the methadone clinic everyday, he returned to work:

I went back to work, ‘cause I’m a carpenter. ... That’s another reason why I wanted to get on buprenorphine, because I couldn’t be going to the clinic and go to work too. So it worked out perfect for that. I just take my medication and go to work. No problem, just free.

For many people not having to spend money on drugs was a key element of how bup helped them to become “normal.” As Pat explains: “[Bup] just kind of gave me permission to start doing everything again. Just normal things, like going out to the

movies. I mean using my money on clothes and music, instead of on that, you know.”

For Walker, access to housing and money that was made possible by overcoming his addiction to heroin using bup transformed his life in concrete and material ways:

I'm more at peace with myself. ... I'm more comfortable because I have a roof over my head... I haven't been homeless. I'm more comfortable because I can change clean clothes every day. I got food in my refrigerator. I got people that respect me, that talk to me. I don't know how many times I used to not be able to get 15 cents, but I can get 15 dollars if I need it today. So it changed my life a whole lot.

Walker notes that the changes in his material circumstances led to more respect and social engagement, but he, like many others, also focuses on the everyday things that signal security and comfort -- having food in the refrigerator and clean clothes. Another participant, describing his first experience on bup, notes how he was able to what “normal people do:”

I woke up the next morning feeling like a, a normal human being, instead of getting up, running out the door, looking for a bag [of heroin], I got up and, and, and took my time, get up and do like normal people do in the morning, shower, eat breakfast, and sit around and watch the news (Carl).

Buprenorphine allowed this man to take care of himself and, rather than being forced out of the house by the urge (and likely the physical need) for heroin, he was able to do everyday things that suggest rationality, order, and normalcy.

Conclusion

Among the people in my sample, neuroscientific concepts competed and merged with other ideas about addiction, suggesting individuals draw upon an array of culturally resonant frameworks – neuroscience being just one and not a particularly common one --

to understand themselves (Pickersgill, forthcoming). Typically, participants had a blended view of addiction, sometimes talking about it as a disease and other times talking about it as problem of will power or a failure of character. Meleo-Erwin (2010), in her work on weight loss surgery, notes that even when people have accepted biomedical labels and interventions, they often remain ambivalent and interpret biomedical discourse through their own (albeit largely normative) frameworks. In the case of people being treated with bup, psychological, moral, and environmental explanations of addiction mixed with medical constructs.

In my sample, patient experiences (both material and social) led them to reshape and reinterpret neuroscientific and medical concepts. Their constructions of bup were not straightforward but were imbued with ambivalence about the differences between medications to treat addiction and drugs that cause addiction. Some of the perceived physiological effects of bup (not causing euphoria or sedation and preventing withdrawal symptoms) led people to view it as a legitimate medication, especially in relation to methadone. However, the idea that bup created a physical dependence or that it would need to be taken indefinitely caused many people to assert a desire to get off of the medication and to reassert the importance of will power or conviction in doing so. Surprisingly given the central role it played in the regulatory, marketing and neuroscientific discourse surrounding bup, the role of doctors in prescribing bup and the medical setting as the place where it was prescribed seemed to have little effect on whether or not individuals understood bup as a medication and their addiction as a disease. Doctors' expertise in treating addiction was seen as limited, and many people easily treated themselves without any medical intervention by using bup obtained on the

street. Overall, individuals went back and forth about whether bup was a medication or another substitute drug. Most people valued bup because it both made them feel normal and allowed them to act normal and because they no longer had to maintain a heroin habit or attend a methadone clinic. Bup did not necessarily transform addiction into a medical condition, but it did allow those taking it new possibilities for agency and action.

Chapter 7: **"It Makes Me Feel Free:" Buprenorphine's Constraints and Opportunities for Agency**

Introduction

Issues of structure and agency are at the heart of sociological thought and theory. Addiction enters directly into these questions because it is defined as the loss of control -- being powerless before the uncontrollable urge to use drugs (Valverde 1998). However, I found, as Valverde found in an previous study, that: "the discourse...was constantly undermining itself by falling into the older language of 'vice' and 'habit' ... even the medicalizing project was not internally consistent" (1997: 257). As the previous chapter indicated, people taking bup held onto ideas that behavior, will power and/or morality all play a part in both causing and overcoming addiction. Importantly, such amalgamated conceptions also meant that they refused to relinquish their sense of responsibility, blame, or agency over their addiction. By refusing to reduce their addiction to a neurological disease and its cure to taking a medication, individuals taking bup retain a measure of both responsibility and agency. The exercise of agency is not simply a function of how individuals understand "addiction," though that plays some part. Rather, as this chapter explores in more detail, how and when people taking bup were able to exercise control depends on a complex system of internal understandings and external constraints (and the interplay between these) that governed both their drug and medical treatment.

Holding onto Will Power & Choice: “Mind over matter”

In striking contrast to the neuroscientists who focused on locating the loss of volition in the brain and thereby de-emphasized the role of choice, the BHIVES participants held on tenaciously to their agency and volition. Even those who credited buprenorphine with blocking their cravings for heroin felt that will power still played an important role in not using:

I didn't even get cravings, you know. I guess it was also mind over matter thing because I was determined not to go back to this stuff [...] so I was just determined to stop using the drugs (Wendall).

Buprenorphine blocked the cravings, but sheer determination stopped the drug use.

Many participants had a persistent hold on the idea that they bore some responsibility for overcoming their addiction. Nancy expressed a sentiment shared by many that the ultimate decision to quit or use drugs was not a matter of biology but a matter of choice: “because when it comes down to it, it’s my decision whether I can quit or use... It all depends on the person whether they want to change or not.” Similarly, Walker says: “‘cause in the end, whatever I tell you or I give you, if you don’t want to do it for yourself, there ain't nothing I can prescribe to give you that can make you change until you going to do it for your own self.” Here, we see how much individuals value the idea that they alone are making decisions about their addiction. They ascribe incredible power to the idea that, even if a medication helps address the physiological components of their addiction, it is sheer determination or will power that ultimately overcomes the compulsion to use drugs.

The exercise of will power, however, is not unfettered but takes place within certain confines. The choice to use or not use drugs is shaped by social and economic contexts and by the medical and drug treatment systems that both surround and contain them. Will power is of central importance, but threats of incarceration, drug treatment programs (including bup programs), and medical providers all restrict and shape the decisions of those in this sample.

Systems of Constraint: “They have total control”

One consequence of the mixed notions of addiction as containing both medical and moral elements have been hybrid “treatment” responses that include both therapeutic and punitive approaches. Tiger (2011) holds out drug courts as a paradigmatic example of this approach, which she calls “enlightened coercion.” She outlines the ways in which drug court professionals draw on both medical and behavioral theories in their attempts to “cure” addiction. Addiction may be a disease of the will but, within the logic of enlightened coercion, the threat of incarceration or other sanctions can aid the will in achieving abstinence. External constraints and punishment are brought to bear on the internal work of rebuilding willpower.

Many of the participants in the BHIVES study had been involved in forms of coercive treatment, generally mandated by a court and/or required by a parole or probation officer to attend behavioral drug treatment programs. The criminal justice system - the single largest source of referrals to drug treatment in the U.S. - favors behavioral therapies over psychopharmaceutical approaches in its mandated drug treatment programs for a variety of reasons, ranging from the relative scarcity of

medication-assisted treatment programs to beliefs that such medications are, in fact, another kind of “drug.” For example, of the hundreds of courts addressing driving under the influence, only a handful use medications, like naltrexone, purported to reduce alcohol consumption (Vrecko 2009).

None of the people in the BHIVES study were or could be mandated to participate in bup treatment, though as I will discuss below, the bup programs in the study were not without their coercive elements. Most, however, had experience with methadone that they described as constraining and coercive, and many had experiences with other drug treatment or social service programs that also held tremendous power over them. For those operating under these kinds of constraints, the exercise of autonomy often came at a very high price.

One participant, Habierto describes a common scenario where he cycled between mandated treatment programs and prison:

I did four and half to nine [years in prison]. ... I did 54 months. For a year and half straight I stayed home, and I give dirty urine to my parole officer and I went upstate again. After that, I went upstate three times so now I am finished [with my prison sentence].

Q: Were you getting any kind of treatment at that point?

A: At that point, you know if I went to the program or to detox, it was because my parole officer told me to go. I wasn't doing it for me; I was doing it for my parole officer.

Habierto did not freely choose to enter drug treatment; rather he went to treatment as a condition of his parole, and his “failure” at treatment resulted in his re-incarceration.

This quote shows the seamless relationship between carceral and “therapeutic” regimes.

It also highlights the centrality of urine toxicology tests, which are widely used throughout both criminal justice and drug treatment systems to monitor relapse and mete

out consequences for “being dirty.” Incarceration can be a consequence not only of using drugs but also of not adhering to specific treatment requirements. Jesse describes a situation where he had been sent to a clinic as part of a prison diversion program. Similar to what was described in an earlier chapter about the restrictions of methadone being untenable for many, Jesse had difficulty showing up for both his daily mandated treatment and his court appearances. He said:

I had to go to a drug treatment thing for an hour a day, five days a week -- court mandated. I couldn't even do that... 'cause it was getting in the way of what I was doing. And I missed showing up for an evaluation in court. ... And the next day, they came out and actually got me, and handcuffed me, and put me in jail.

Sometimes it was not the threat of incarceration but the loss of income that acted as lever of control. Both government agencies and drug treatment programs sometimes link access to individuals' benefits and finances to their drug treatment, forcing people to make difficult choices about whether to submit to treatment or lose their only source of income. For example, Tracy's probation requirements included a mandate to provide routine urine tox screens. When she “gave a dirty urine,” her parole officer filed a technical parole violation, resulting her losing access to her benefits: “They stopped my checks... January, February and March with no income.” Her parole status combined with her economic status made her particularly vulnerable to control by others.

Another form of external control described by many was the threat of being kicked out of a drug treatment or social service programs. For those on methadone, this could mean painful withdrawal or the need to go back to using heroin to avoid withdrawal. Mindy, for example, was required by her methadone program to adhere to a rigorous schedule of counseling groups and get a card signed proving she had attended.

She noted: “if you don’t have that card, you ain’t getting your stuff [methadone].” For others, especially those living in residential programs, challenging the rules could mean becoming homeless. George describes how the requirement of a shelter that residents return at a specific time creates a system of forced choices:

I don’t wanna go to a shelter. So you’d rather sleep on the ground, down there, than go to a shelter. ... You gotta be in by 5 or 8. But I wanna go out and hang with my friends. Come on, she [social service worker] said, ‘you gotta want this thing [sobriety].’ But they not gonna control me. The way I see it, no, they’re not controlling, but.... Now to get these things, you gotta want these things.

For George, the shelter staff tell him what he “has to want” in order to get a very concrete and material benefit - a place to sleep. He clearly understands that this is a strategy for trying to control his desire and his behavior -- one that he rejects even though it means sleeping on the street. Doug, a man who was living in his car with his male partner, described how they became increasingly vulnerable as their methadone and heroin addictions left them destitute and desperate. They turned to a church group for help; the group offered them food and shelter, but at a heavy price – being separated from one another. The group, perhaps motivated by homophobia, decided that he and his lover were bad for one another and needed to be separated. According to Doug:

They took over and took control. ... They found a way of shipping him off to Alabama to one of his friends who might take care of him while he detoxes off of methadone. Poor Bob got on the bus and said goodbye and went down to Alabama.

What George and Doug describe here is the series of trade offs that people in the study made everyday between the exercise of autonomy and their physical and material wellbeing. The choices available to them were often within very constrained systems, and going outside of those systems generally carried high penalties. For the most part

people, people were impoverished, often quite sick, and at the mercy of those with more power and money. The decision to use or not use drugs, even though it was often seen as a matter of individual will power or choice, was also profoundly shaped by the circumstances and systems within which people operated.

It is also worth noting that many of the people in this sample, because of their HIV status, had been inculcated into systems of medical control for years. While many viewed medical systems as helpful and their healthcare as something over which they had influence, some people described experiences with medicine that were seen as controlling and punitive. Several, like Lesley, had received medical care in prison where they were literally forced to take medications during a “pill call” where a correctional officer would observe them taking their medication: “They would prescribe it to me every morning. During pill call. I would take it right there in their face.” Darnel described his experience in a program where, if he didn’t take his HIV medicine (verified through pill counts), those running his program “would call Medicaid, and let Medicaid know that I am on restriction.” Far from being free of coercion, the medical systems some people encountered gave them little opportunity for autonomy.

The idea that doctors and medical systems were controlling was compounded for some by their status as drug addicts; several people described how difficult it was for them to get doctors to listen to their medical complaints and/or prescribe them medications. As Darlene notes: “‘cause I’m a drug addict, sometimes it’s hard to get medication. I have suffered bad anxiety and wanted to die. They put me in the hospital. I know they have Valium, but they wouldn’t even think of giving it to me. ... I meant they have total control.” Some people, like Carl, chafed against the control of doctors so

much that he says he used heroin just to spite his doctor: “[E]veryday I was putting the needle in my arm. That’s what I was doing because my doctor told me not to. I say, ‘fuck you doc.’” George put it very succinctly when he said, “the doctors are like the police.” Rather than a benevolent alternative to more authoritarian systems of control, medicine was seen as more of the same.

As Pitts (2003) points out: “certain groups are more closely scrutinized under the medical gaze, and pathologized more readily than others... pathologization is never politically neutral” (18). This group (81% of whom were unemployed and 25% of whom were homeless) was already living at the margins of society with relatively few options at their disposal. Participants in this study were very aware that they had few real choices and were operating within different systems of constraint that limited their autonomy. Many felt controlled by the courts, by drug treatment programs, and by the medical system. These experiences doubtlessly shaped their perceptions of receiving bup within a medical setting, and as we shall see, the bup programs in this study were not without some of the punitive characteristics that participants described in other drug treatment programs.

Constraints within Bup Programs: “It’s just too much like prison”

The BHIVES study consisted of 10 different sites across the country. Each site was allowed to develop its program independently, and as a result, the programs varied tremendously, especially in terms of how restrictive or flexible they were (see Weiss et al. 2011 for a full description of the program models). In some programs, there were few, if any, penalties for continuing to use heroin or other drugs. These programs adopted a

harm reduction approach that embraced the idea that keeping people engaged in their medical care was their primary aim and any reduction in drug use, however limited, was beneficial. Other programs modeled themselves on methadone programs and required daily attendance, mandated counseling, and penalized people for continuing to use drugs or not complying with treatment requirements. Like drug courts that appropriate medical language (Tiger 2011), bup programs framed these punitive measures as therapeutic.

Like many methadone programs, some bup programs allowed individuals a certain number of “slips” (i.e., return to using) before they would kick them out of the program. Jose explains the seemingly contradictory approach of one bup program that encouraged him to call for help when he is using heroin but threatened to expel him from the program if he used too many times:

[The bup counselor] says, ‘call me any time if you’re weak or dirty.’

Q: Have you ever called him?

A: No. ... He called me before I started to get clean, and he said ‘I’m gonna test you ever week. You come up four times dirty, you’re out of the program.’

In the above example, the moralistic language of “weak” and “dirty” combined with the threat of expulsion make it difficult to distinguish how this “medical” intervention differs substantially from either a methadone or behavioral drug treatment program.

All of the bup programs used urine toxicology screens, which are also commonly used by parole and probation offices to ensure that someone is not using illicit drugs. Some bup programs, like the program described by Jose above, used the tox screens as a way of documenting “failure.” Others conducted lab tests to detect the presence of both illicit drugs and bup, which allowed them to discover relapse to illicit drugs, monitor treatment compliance (i.e., was the individual taking the bup as prescribed), and guard

against diversion (i.e., if someone were not taking their bup, they would be suspected of selling it). Most patients understood the screens as a way to enforce their compliance with treatment and to prevent them from selling bup on the street. As Diane explains: “[To] find out if they still getting high, they give us drops [urine tox screens]. [The counselor] gives us drops every month to find out if they selling them or using them [bup pills], you know?” Derrick describes a common practice of random urine tox screens, which were used to catch people off guard so that they could not purchase clean urine in advance. He says: “You only hurting yourself [if you use] ‘cause... you only get three dirty drops in this program, and if you want to gamble, she [the counselor] can drop you at any time.” The “gamble” he describes is continuing to use drugs and risk a random drug screen that would get one kicked out of the program. In addition the humiliation described in getting a “urine drop” (staff observed people urinating to ensure they did not “cheat”), participants like Derrick understood tox screens, not as tool for medically monitoring their progress, but as a way to enforce compliance with the requirement to abstain from using illicit drugs. Although bup is only meant to treat addiction to opiates, all of the programs also screened people for the use of other illicit drugs, like cocaine, and some used relapse to other drugs as cause for expulsion. People were essentially held responsible for overcoming addiction to a drug, like cocaine, for which they were not being treated.

Programs had other systems for addressing their concerns that “patients” would divert their bup and sell it on the street. Sometimes patients were required to take the bup in front of medical staff (a requirement of most methadone programs) or to bring in their

pill bottles for pill counts.¹⁶ Robert describes how he had to stay in the “med room” the first time he took bup so that his providers could be sure that he had taken it as prescribed: “I sat there for 20 minutes because you have to sit there and wait for it [bup sublingual tablet] to dissolve. They don’t want to let you out of the room because you might spit it out and give it to anybody.” Robert clearly understands that he is being monitored, not for medical complications, but because his doctors suspect he will try and divert the drug.

Tox screens and the threat of expulsion were not only ways that the bup programs exercised control over the participants. Several programs required frequent attendance at counseling programs or return visits to the bup program to meet with a counselor there.

Julian says:

They were seeing me three, four times a week, just in the beginning, and then it went to once a week.

Q: And did you find that helpful?

A: I mean, you want something bad enough, you’ll, you know, stick to it.

Here, Julian is complying with frequent visits, not because he found them helpful, but because he wanted to stay in the bup program. He understands complying with the visit schedule is the only way to get the medication. Dana notes that she is willing to put up with the weekly visits her program requires but would refuse a mandate to attend daily: “Weekly’s alright. Of course, I mean the less you have to come the better. Daily would be unacceptable for me; it’s just too much like prison, having to, every single day, get here.” Absent in Dana’s comments are any indication that she attending the clinic for a reason other than it is required. She is willing to submit to some control, but she has a

¹⁶ Staff count the number of pills left in a bottle and compare it to the number of days the individual has the prescription to determine if s/he has used the medication at rate faster than the prescription would suggest.

limit. Later in the interview, Dana explains how the counseling requirements at her bup program became untenable for her:

You know, so they're telling me that I'm gonna come in there and take the suboxone, and that's probably not gonna, you know make me well. ... And then they wanted me to stay there all day long for groups. I said, you think I'm gonna sit here all day long in group, sick. I mean I would give it try if I could of come in, got dosed, and then went home ... No. They wanted to me stay there all day for groups. So I said, well forget it, and I went and got high.

These forms of control within bup programs – constant monitoring of urine, threats of expulsion, guarding against diversion, requirements to show up for counseling or other visits -- reflect the mixed notions of addiction as both a problem of medicine and of behavior. Proponents of a medical model of addiction may claim they want to restore the autonomy of individuals and move away from punitive systems of control, but in practice, (at least among my sample) this model continues to abridge the agency and control of individuals. While participants generally felt that bup afforded them more autonomy than methadone, many were still required to adhere to a set of rules and interventions that were sometimes constraining and often treated them more like drug addicts who could not be trusted than medical patients being given control over their own treatment. The idea that the medical system acts as a form of social control is not new. However, in the case of bup treatment, traditional systems of medical control were joined by strategies from more traditionally punitive systems of controlling addiction, like criminal justice and methadone programs. Toxicology screens, onerous counseling or visit requirements, threats of expulsion, observed dosing, and safeguards against diversion are tactics used in the kinds of stigmatized programs bup treatment was meant

to replace. Stringent and prevalent as these kinds of controls were, they did not prevent people taking bup from subverting them and finding creative ways to exercise autonomy.

Buprenorphine and Agency: “I know my body better than anybody”

Whether participating in a very restrictive or a very permissive program, individuals in the BHIVES study exercised agency in the ways they used buprenorphine. In doing so, they produced and enacted meanings of and uses for the medication that exceeded those promoted by researchers, government regulators, and the manufacturer. With few exceptions, people in the study admitted that for one reason or another they had experimented with not taking or taking their bup in ways other than prescribed. Almost half the sample volunteered that they used heroin while taking bup. Most individuals tested the dictum of their doctors that they could not get high from the bup itself or by using heroin in addition to bup. Richard admits, “You don’t get high off it [bup]. ... At one point I did take damn near my whole bottle and didn’t get high.” George tested bup even though his medical provider told him “you could die.” He says, “I decided to try it anyway. I was doing the bup and I decide I’m gonna shoot some heroin.” Either George did not believe his doctor or decided that experimenting was worth the risk.

People also tested bup by stopping its use to see what kind of withdrawal symptoms would ensue. When many of them learned that bup was easier to withdraw from than methadone or heroin, they resumed using it to manage their own experiences of withdrawal. Darnel, for example, explains that he uses the bup specifically to detox from heroin in order to prevent his withdrawal symptoms: “I take bup to get off the dope. ... If I take the bup, it will take the place of the dope for a couple of days, and then I can

stop taking the bup, and I won't, my body won't go through no withdrawals." Clearly, Darnel is using the bup to meet his own objectives, which do not include giving up heroin altogether. In doing so, he has reconfigured bup from an ongoing treatment for a chronic condition to a medication to be used intermittently to control withdrawal symptoms. Similarly, Habierito uses bup off and on depending on whether or not he wanted to get high from heroin:

I was taking it [bup], like, sometimes I was taking it, and sometimes I wouldn't take it. You know, sometimes I got to party, if I get off the medication.... I told you I was taking holidays [from the bup], you know what I mean?

Habierito did not want to be completely abstinent from heroin, nor did he always want to be taking bup. He learned to manage his bup dose so that he could use heroin intermittently, a drug use pattern that belies the stereotype that any heroin use leads to uncontrolled, compulsive use. In Habierito's case, he would use heroin when he wanted "to party" and bup rest of the time.

Robert managed his dose of bup to handle changes in his schedule that were beyond his control. He took a double dose of bup to avoid withdrawal because he knew he was going to be incarcerated for up to 15 hours:

When I turned myself in on warrants, I knew I was going to be sitting in this god-awful steel box for like 12 or 15 hours, however long it was going to take before they released me. ... So I took two pills that morning. Made damn sure I was covered.

By increasing his dose, Robert uses bup to avoid withdrawal in a situation where he knew he would be denied access to both prescription and illicit opioids.

As noted in an earlier chapter, one of the most common ways that people resisted and reconfigured bup was through their refusal to accept it as a medication that they had

to be dependent on for life. Rather, many participants used it sporadically, took less than was prescribed, or planned to “wean themselves off it” completely. Many people understood being on bup as another form dependence, one that undermined their sense of being a moral, strong and autonomous agent. In addition to not wanting to be dependent on a medication, many participants did not like being dependent on medical authorities. When asked why he was detoxing himself from bup instead of returning to his medical provider, Darnel says, “I’m used to doing things for myself; I’m used to having control over my life. I’m 45 years old.” He rejects the control and infantilization that he feels submitting to his doctor’s authority causes. Similarly, Clarence said that he was weaning himself off bup after he and his doctor had disagreed about how much and how long he should take bup. He ultimately rejected his doctor’s advice because, “I know my body better than anybody.” Far from being passive recipients or submitting fully to the authority of medicine, many participants creatively used bup in ways that gave them some measure of agency over their own drug use and treatment. Whether trying heroin while taking bup, experimenting with their bup dose, or going on and off bup to suit their own needs, many individuals deliberately choose not to “take their medicine as prescribed” but rather as a tool to manage their own physical and social needs.

Bup as Productive Constraint: “It helped me a lot”

Drug treatment in general and bup treatment in particular are systems of constraints that shape the beliefs and behaviors of individuals. The control they exercise, however, is not absolute, and individuals find ways to exercise autonomy within these systems. Just as they interpret, adapt, and resist neuroscientific discourse about

addiction, so too they interpret, adapt and resist the systems of authority and control they enter into to receive treatment.

It is tempting, and indeed common, for scholars of addiction to adopt a critical stance towards drug treatment that critiques it as a coercive system that subjugates the individual subject. The individual leaves the enslavement or freedom (depending on the scholar) of a life of drug use and enters the unfree world of drug treatment, which may involve enslavement to another drug/medicine (e.g., methadone or bup). Bourgois, Bergschmidt, Fraser and Valentine are just a few examples of addiction scholars who have made these kinds of arguments. This kind of scholarship implies a certain theory of human agency. Fraser and Valentine (2008), for instance, suggest that all acts of “agency” within the structure of a methadone program can be construed as acts of disobedience:

For the methadone client, however, this surveillance and regulation results in a choice of submission or rebellion... Alternative choices and courses of action, of which methadone clients are demonstrably capable, are not recognized as agency here, but can only be constituted as disobedience (86-7).

However, the paradigm of the unrestrained addict and the constrained or disobedient drug treatment patient falls short in several ways. First, it set up a false dichotomy that refuses to acknowledge that all of us -- including both drug users and drug treatment “patients” - - are always operating within systems of constraints. Second, it fails to recognize subjects as more than slaves of the drug/medicine or slaves of drug treatment, neglecting instances where individuals use drugs/medicines to create new possibilities for action and agency. Third, it has no way to explain what Gomart (2004) calls the “enthusiasm” with which many people enter into such systems of repression. Finally, it overlooks the

productive capacity of such regimes, that is the opportunities they create for new expressions of agency.

In her ethnography of a French methadone clinic, Gomart admits that she first set out to critique the ways the clinic constrained the freedom and agency of those being treated. She notes:

It was clear that a rapid and deadly critique of their practice was possible: the rhetoric of medical sociology could immediately be used to describe a conflict of interest between authoritative doctors and vulnerable individuals who seemed to have lost in advance (2004: 86).

As the above discussion on the punitive aspects of bup treatment suggests, a similar critique of bup is certainly possible and probably warranted. However necessary, it is also insufficient; for as Foucault reminds us, power is both repressive and productive:

We must cease always describing the effects of power in negative terms: it 'excludes,' it 'represses,' it 'buries,' it 'censors,' it 'abstracts,' it 'masks,' it 'hides.' In fact, power produces; it produces the real; it produces domains of objects and rituals of truth. The individual and our knowledge of this individual come from this production (Foucault 1975/1994: 196).

The issue is not one of freedom versus constraint but rather an issue of what kind of freedom is possible and what kind of constraint is tolerable.

Many people use drugs without great harm to themselves or others and may never seek treatment. Others may enter drug treatment only if coerced through drug courts and other government agencies. But many people willingly seek treatment on their own because they are troubled by the way their drug use (or society's response to it) affects their lives and relationships, and they want to regain a sense of normalcy, repair relationships, and rebuild their lives. In fact, the number of people seeking treatment far exceeds the capacity of our current treatment system (SAMHSA 2010).

People in the BHIVES study, like many other drug users, were not living lives of unfettered freedom before they subjected themselves to the constraints of bup or the biomedical paradigm. Imbued with stigma, denied access to jobs and government benefits, separated from their children and other family members, and often imprisoned – many drug users, including those in this study, are denied the resources needed for the exercise of most “freedoms” available in a modern consumer society. Moreover, to the extent that addiction (whether conceived as biologically, psychologically, or socially produced) leads to compulsive or uncontrollable behavior, it also limits real autonomy.

Rose notes with important exceptions “doctors do not force diagnostic labels onto resistant individuals” (Rose 2007: 702). Interviews with those taking buprenorphine suggest that many individuals have willingly taken on the label of “addict,” the constraints of an addictive psychopharmaceutical, and the control and monitoring of the medical system. They do so, not because they have been duped, but because it offers new possibilities for the exercise of agency. As Gomart notes of those who submitted themselves to the constraints of methadone:

[I]t became possible to hold that constraints – not just intersubjective but also chemical – might become resources for care, building blocks in the construction of the subject (2004: 94).

Interviews with people taking bup reveal the complicated ways in which the very things that are constraining also offer new possibilities for autonomy. There is no doubt that many resisted and disliked the idea that bup was another substance on which they were dependent. Moreover, some felt that it undermined the importance of will power, constitution, choice, or morality in overcoming addiction. Others resisted the way it was dispensed or the requirements attached to it by their medical providers. And many

choose to use it in ways other than their doctors prescribed. Despite or perhaps because of these contradictory notions about bup and agency, many also embraced the constraints of bup and medical control and in doing so found new possibilities for action.

Jesse, for instance, remarked that, once he realized he could control his addiction through bup without having to endure the rigors of methadone, he felt like “it was like a big yoke being lifted off a my shoulders. It means freedom to me, you know.” For Robert, bup gave him the ability to focus on why he used drugs in the first place. He said:

I started the Suboxone and that literally solved the addiction problem. Didn't solve my problems but it solved the addiction problem. ... I could just focus on why I use. That's been the biggest blessing. I never focused on why I used.

Several others attributed bup with helping them in concrete, material ways or to rebuild their families and relationships and restore their health. According to Portia, “it was just a miracle. ... Ever since I took that pill, my whole life has changed. ... I put it this way, if it wasn't for Buprofen, or whatever it's called, I think I'd be dead.”

At the same time he expresses ambivalence about needing a drug/pill [bup] to feel good, Alan credits bup with making him feel free:

I need the pill [bup] though you know, like I said, I need a drug or something, I'm going to have to take it to make myself feel that, feel that good. You know, to feel that goodness that I need. You know, that's, that's, that's what I wish to do. But the Savoxin [sic], it's helped me a lotI don't want to go back to the life I had when I was using heroin. And I don't, but it just make me feel free, so to speak you know, from drugs, from the drugs, you know.

When drug users, like Alan, come under the constraints of a neuroscientific treatment, like buprenorphine, they trade one drug/medication for another and one set of restrictions and freedoms for another. In Butler's words, “one purchases one sort of freedom only by

giving up another” (2004: 91). In the case of bup, individuals enter into a new but familiar system of medical constraint; they are literally dependent on a medication and the medical system that dispenses it. However, people found ways both to subvert and resist those constraints and to use them in productive ways that offered new possibilities for action and for reentering “legitimate” society.

Conclusion

I have argued that the constraints of bup are productive in that they allow for new forms of action and new forms of subjectivity. This is not to say, however, that these freedoms are not contained within larger regimes of knowledge and power. And just as the lives of the individuals in my sample were constrained in certain ways before entering treatment, so too their lives in treatment are constrained. The kinds of agency enacted and the kind of subjectivity performed shape and are shaped by discursive and embodied experiences with bup as well as the larger sociopolitical context that enfolds contemporary society. In the next chapter, I will explore what kind of subject is being produced within these newly configured systems of agency and constraint.

Chapter 8: Becoming Normal: Buprenorphine and the Production of the Neoliberal Subject

Introduction

In this chapter, I examine how the discourses about and embodied experiences with bup reflect and/or challenge the larger sociopolitical context in which they are contained. I argue that -- through the control of pleasure, the restoration of rationality, and a redirection of consumption -- bup provides the conditions for neoliberal personhood. I also suggest that neuroscientific rhetoric, which locates addiction in the brain, provides a scientific rationale for understanding addiction as highly individualized and placing the responsibility for overcoming addiction in the hands of the individual "addict." Moreover, the commonly and deeply held desire to be "normal" expressed by people taking bup and reinforced by its manufacturer is one that is imbued with notions of responsible, productive citizenship consistent with neoliberalism. Neoliberal personhood is not just about feeling normal, but also acting normal. Finally, while bup is generally constructed in ways consistent with neoliberalism, I also suggest that the persistence of hybrid notions of addiction (as a disease, a moral failing and a crime) and ambiguity about bup's status (as a medicine and a drug) allow for ruptures in neoliberal form of governance. This opens the door for more a traditionally repressive exercise of power in ways that are likely to be racially and socially stratified.

Rose (2003), in the "Neurochemical Self & Its Anomalies," argues that we are amidst a shift in how we understand and regulate pathological conduct. Both genomic

and neuroscientific frameworks suggest that all people need to be scrutinized for their susceptibility to pathology and that one can be “sick” or pathological without any outward signs or symptoms (Katz Rothman 1998; Rose 2003). Rose suggests that these new forms of knowledge may lead to targeted governance where individuals with “correctable errors” (e.g., neurochemical deficiencies or genetic abnormalities) can be identified and treated. He also notes that neurochemical approaches result in a re-spatialization of disease, creating a somatic individual whose illness lies in the brain. Although these new forms of knowledge have a deterministic and essentialist bent, they also allow for individuality, autonomy, and choice (Rose 2003).

Public health and medicine, drawing on the memes of individuality, autonomy and choice, are increasingly being used to enlist individuals in efforts to govern and regulate themselves in the name of better health (Lupton 1995; McNaughton, Salmon and Bell 2011). McNaughton, Salmon and Bell argue:

Most chronic diseases are now viewed as a failure to take appropriate precautions against publicly identified risks - a failure of individual control, a lack of self-discipline, an intrinsic moral failing. Present notions of health and disease have therefore reinforced the privatisation of the struggle for generalised wellbeing. Indeed, privatised risk management is a fundamental expectation of citizens under the conditions of contemporary forms of neoliberal governance (2011: 1).

In a neoliberal society where the “risks” to health are known, those who fail to protect themselves from those risks clash “too uncomfortably with the image of the ‘good citizen’ as someone who actively participates in social and economic life, makes rational choices, and is independent, self-reliant and responsible” (Galvin 2002: 108). Diseases, especially those like diabetes or addiction that are thought to have a behavioral component, remain marks of moral failures. Blame and shame for the individual’s failure

becomes another tool to enlist him or her in reclaiming responsibility and restoring health.

Several scholars have suggested that these new, less repressive forms of governance can be used to understand methadone (see Bergschmidt 2004; Bjerg 2008; Bourgois 2000; Gomart 2002, 2004; O'Malley and Valverde 2004) though to date none have explored it in relation to buprenorphine. In her review of addiction studies, Keane (2009) concludes that there are two trends in the literature, one which sees methadone as a disciplinary, oppressive power attempting to produce docile bodies and one that has more complex understandings of power. Both Bourgois (2000) and Bergschmidt (2004) examine methadone maintenance as an exemplar of how biopower operates to govern subjects and have subjects govern themselves. Bourgois points out that, despite the relatively minor pharmacological differences between heroin and methadone, the heroin user is constructed as a self-destructive criminal, while the methadone user is constructed as a well-disciplined patient. By carefully analyzing the ways in which methadone clinics operate, Bourgois concludes the methadone is "the state's attempt to inculcate moral discipline into the hearts, minds, and bodies of deviants who reject sobriety and economic productivity" (2000: 167). Bergschmidt (2004) focuses more explicitly on the ways in which methadone encourages patients to quest for normalcy and participate in their own self-disciplining, while O'Malley and Valverde (2004) suggests that methadone is aimed, not at the direct governance of drug users, but at governance through "freedom" that encourages the autonomous choices of individuals.

As the chapters on both the neuroscientific and regulatory discourse suggest, bup was in many ways conceived explicitly as a way to re-construct addiction treatment to be

compatible with notions of autonomy, freedom and self-improvement. Framed as a medication, like insulin or hypertension medications, bup was intended to circumvent the need for overtly punitive strategies to manage addiction (i.e., incarceration) and the highly stigmatized and still coercive methadone system. Addiction, however, represents very real threats to neoliberal ideals, and for bup to succeed it must address these threats. Under the control of a substance that by definition erodes the will, those addicted to illicit drugs are seen as unable to make the free, responsible choices required by neoliberalism. Moreover, addicts are seen as dropping out of or threatening consumer capitalism as they are perceived to not work, foster a black market economy, engage in criminal activity to support their “habit,” and generally prioritize the consumption of drugs to the exclusion of consumer goods. Bup has been constructed by neuroscience, regulators, the pharmaceutical industry and patients alike as the technological fix that can disrupt this cycle and restore autonomy. Bup does this both through the ways in which it is embodied and the ways in which it operates discursively to shape conduct.

Embodied Experience

Both the neuroscientific literature and the embodied experiences of those taking bup highlight the important role of bup in controlling pleasure and restoring rationality. In addition, the control of cravings and/or the prevention of withdrawal symptoms are central to making people “feel normal.” These perceived physiological effects, especially the blocking of pleasure, help shape a particular kind of subject and a particular kind of governance that is compatible with neoliberal ideals.

Mackenzie (2006) has argued that pleasure is read as risk in public health today. On the one hand, pleasure is at the core of consumer capitalism. On the other hand, an expanding array of “diseases” are seen as the result of excess pleasure. In addition, the propensity to overindulge in pleasurable substances or activities is increasingly framed as an addiction (i.e., gambling addiction, food addiction, sex addiction). The neoliberal subject in his or her quest for health, then, must be on constant guard against the risk of excess pleasure and addiction to it. O’Malley and Valverde (2004) argue:

The emphasis on freedom of choice in neo-liberal politics has generated new approaches to the government of drug and alcohol consumption that brings the felicity calculus -- and thus ‘pleasure’ -- almost to the surface of regulatory politics (35).

Of course, not all pleasure caused by substances is bad. The responsible consumption of a substance, like a drink after work, is permitted and, in fact, encouraged through advertising, social norms, and cultural depictions (O’Malley & Valverde 2004). As Moore argues, this kind of substance use “allows a ‘time-out’ release from work and other responsibilities without necessarily interfering with them... [It is] both a reaction to and an expression of capitalist consumer society” (2008: 357). More and more, certain mood-altering medications (even those that cause physical dependence), like Prozac or Ritalin, enter into this class of substances. Rather than threatening neoliberal consumer capitalism, they support it (Kushner 2006).

Drug users, especially heroin addicts, in contrast, are seen as exceeding this controlled pleasure. Rather than moderating pleasure, they are seen as relishing in its excess. In the language of neuroscience, their brains have become hijacked by the desire to recreate euphorogenic experiences of flooding their dopamine systems. Drug users describe it as not being able to think about anything other than getting the drug.

However, in general, people in this sample reported using drugs, not to get high, but to avoid withdrawal. Nonetheless, the relationship between drug use and excess pleasure has taken on cultural significance and becomes important, not just for controlling the behavior of individual drug users, but for controlling the behavior of the population as a whole. As Lenson describes: “The drug user is assumed to be someone who has seen these things – who has seen ecstasy and excess...the candid and undisguised hunger for the kinds of pleasure that drugs offer” (1995: 20). Drug users represent uncurtailed *jouissance* and as such are the source of moral panic (Loose 2002: 236). According to Loose (2002), we view the addict as one who rejects all but the pursuit of pleasure and one who abandons all convention and restraint in that pursuit.

The control of pleasure through bup, therefore, has the potential to restore the individual drug user and to quell the moral panic surrounding illicit drug use. Bup helps rebuild the capacity of the subject to meet norms of neoliberal society at the physiological level because purportedly: 1) it blocks the pleasurable effects of heroin and 2) it does not itself cause pleasure. Through bup, individuals can curtail experiences of pleasure and “feel normal” -- that is, not high.

In addition to controlling pleasure, both the neuroscientific literature and people taking bup saw drugs as disrupting rationality. For the neuroscientists this was conceived of as damage to the prefrontal cortex or changes in key brain structures. But for people taking bup it was understood as the restoration of “clear mindedness” when they started taking bup. Like controlling pleasure, rationality is prerequisite for the exercise of liberal autonomy (Valverde 1997). Mackenzie argues that, given our emphasis on self-improvement through the use of pharmaceuticals, the *rational* consumer is one that

“aspires both to maintain neurochemical mood control and to apply the aesthetic of moderation” (2006: 95). That is, by taking bup, people are restoring their rationality through neurochemically rebalancing their brains and expressing that rationality through the desire to achieve a mood state that is marked by moderation and control.

Acting Normal: “I am John Q. Citizen”

The embodied states that bup appears to make possible – the control of pleasure and the restoration of rational thinking – are necessary but not sufficient to meet the requirements of neoliberal personhood. As Chapter 6 made clear, for people taking bup, “normal” was not just about how they felt; it was also about how they acted. Rose has argued that the neurochemical age marks a shift “from strategies of normalization of the deviant to measures seeking the correction of specific anomalies” (2003: 34). Similarly, Vrecko (2010b) suggests that: “[T]he contemporary brain sciences have not taken as their project the governing of wills, but rather, the civilizing of problematic cravings and desires” (48). For both Rose and Vrecko, neuroscience makes possible a biochemical correction that is sufficient to restore the subject because the deficiency is believed to be rooted in faulty neurochemistry.

But addressing a neurochemical anomaly or civilizing problematic cravings and desires does not alone assure that an “addict” can meet the demands of neoliberal personhood. The continued presence of will power and behavior change in the ways that bup is being constructed by the manufacturer, government agencies, and individuals suggests that certain kinds of conduct are also required. As one participant, Habierito says, “the difference with Suboxone is *acting* normal.” Acting normal among those in

this study required more than controlling cravings or correcting a neurochemical deficiency by taking a pill; it encompassed a way of life and set of activities characterized by autonomous, responsible citizenship achieved through medication **and** will power.

The regulatory changes that govern bup (e.g., take home prescriptions; generally no requirement for daily attendance; less exposure to other drug users) in addition to its physiological effects were widely perceived as letting people get on with their daily lives without burdensome interruptions and tasks. Likewise, the legal status of bup meant that people no longer had engage in criminal activity (i.e., possession of illegal drugs), and its availability at no cost meant that most people did not need to engage in criminal activity to support their drug habits. The embodied experience of the pill itself, the changes in how bup is delivered and regulated, and the desire or will to stop using drugs made possible certain kinds of conduct – all helped make people become “extra normal.”

When describing what they meant by bup making them “normal,” many people said that they were able to be responsible for themselves and/or their families. As Mindy puts it, “[Bup] helped me to get up and do what I was supposed to do every day.” Several people talked about how bup allowed them to routinize their lives and participate in conventional activities. Others describe engaging in activities of self-improvement, such as going back to school, focusing on their health care, or volunteering in the community. Wendall notes that beyond its physiological and embodied effects, bup allows for a “lifestyle” change:

[T]he majority of the people, who I know, that's on the program, that's taken the bup, is just doing a 100 percent better you know. They lifestyle done changed. You know, uh, they got better rapport with their kids you know, paying their bills, buying groceries you know, clothes...

Overcoming addiction for these participants means changing their whole lives in ways that most connected to productive, responsible citizenship. As Jesse noted, “on [buprenorphine], I am John Q. Citizen.” Similarly Mindy notes that:

My life is not different. It’s normal. I mean I could have had a life without drugs, but it’s like I haven’t even used drugs. And it ain’t like I’m on no drug, ‘cause like I said, it’s just maintenance. And my life ain’t never been this normal. I’m able to pay bills and do the right thing. ... And on my hygiene, I take care of myself.

Interestingly, Mindy struggles here to explain how being on bup is different than being on other drugs. For her being on bup is contrasted with “a life without drugs” because her life is now “normal” by which she means paying her bills and taking care of her personal hygiene -- markers of responsible citizenship.

There are noteworthy parallels here with Fullagar’s (2009) study of women taking anti-depressants. Fullagar (2009) found that medication helped many women feel that they were redressing a neurochemical deficiency in order to reach a functional norm. The medication does not itself restore normalcy; it fosters the ability to work on oneself to achieve or enact “normal.” Similarly, Sanderson in a study of rheumatoid arthritis patients founds that:

...struggling to maintain normality, self-value is focused on... the notion that citizenship can only be maintained through participation in normal activities and roles... this self is only made possible through expensive drugs... it is a biological citizenship, dependent on a specified response to the medication (2011: 630).

Normality becomes a project, part of the work of continually monitoring and managing one’s self both through adherence to a medical regime and through participation in “normal activities” (Rose 2009).

Becoming “Normal,” Buprenorphine and Neoliberalism

Several features of how bup is being constructed, embodied and enacted are consistent with neoliberal self-governance. This includes a focus on individualism and self-management and the redirection of consumption. Vidal argues that “the neuroscience hype highlights the ascendancy... of a certain view of the human being” -- one which he calls the “cerebral subject” (2009: 6). This subject is consistent with the contemporary insistence on individualism and the propensity to locate the causes of pathology within the individual. Individualism and self-control go hand in hand:

Modern western cultures seem to have a fascination with issue of self-control. Perhaps this is not surprising in cultures that have come to value individualism so highly. Not being in control of oneself is regarded as a serious problem (Hammersley & Reid 2002: 20).

The brain disease model of addiction locates the loss of self-control within the individual brain. Simply put, the danger lies within the person. First, the individual must prevent addiction and be vigilant about inducing too much pleasure thereby disrupting the brain’s delicate neurocircuitry and/or causing brain damage. Second, s/he must also “treat” any defects that do arise. Last, s/he must achieve and maintain a “normal” and “healthy” brain.

This emphasis on the role of the individual in both causing and curing their illness is a classic feature of neoliberalism, where responsibility is shifted from the state to the individual. As Galvin (2002) explains:

With the collapse or... shrinking of the welfare state and emergence of neoliberalism and economic rationalism as the guiding principles of government in contemporary western culture, the concept of social engineering and tutelage have been swept aside by the belief that individuals should be empowered to take control of their lives... As a result, circumstances which were once viewed as either resulting from the failure of the modern state or simple a matter of social responsibility such

as sickness, poverty, unemployment, homelessness, racism and exposure to crime, are now being redefined as matters as personal responsibility (117).

The responsibility of the individual for his or her own illness is not unique to addiction but rather a marker of the ways that addiction has entered into the rhetoric of the new public health. With the rise of pharmaceuticals for both health and self-enhancement, medications play a key role in promoting these ideas of self-management and responsibility (Lakoff 2005). Bup can be seen and is largely constructed as a technology of the self that confers both new responsibilities and new freedoms in ways that are radically individualistic. For example, one BHIVES participant, Walker, describes the loneliness he felt as a “clean,” responsible and autonomous bup self: “I don’t have no friends, got nothing to do, know what I’m saying.... [It’s] like I’m in a -- on an island by myself.” For Walker and others, bup offered the advantage of a treatment that could be controlled and taken in the privacy of one’s own home, but this advantage also reinforced that the individual alone must take responsibility for and overcome his or her addiction by him or herself.

When pathology and its treatment become individualized, it not only creates a sense of isolation but also perpetuates the idea that the individual is alone responsible for both the cause and the cure (Wilkerson 1998). In the case of addiction, this sense of blame and responsibility is compounded by the persistent belief (co-existing with the interiorizing neuroscientific ideas) that one’s moral character or will power is also to blame for addiction. As we saw in the earlier chapters, addiction scientists, government regulators, nor individuals taking bup could let go of a construction of addiction that included both a biochemical and a behavioral component. As Galvin says: “if we can

choose to be healthy by acting in accordance with the lesson given to us by epidemiology and behavioral research, then surely we are culpable if we do become ill” (2002: 119).

Ironically, proponents of bup often use an analogy to diabetes in their efforts to medicalize addiction and reduce blame and stigma. But medicalization seems to have done little reduce the blame or the responsibility focused on people with diabetes. Even though public health increasingly recognizes the role of environmental factors in causing “risk factors” for chronic illness, like obesity (e.g., lack of access to healthy foods), the cure for these conditions still rests on changes in individual choices and behavior (see LeBesco 2010; McNaughton, Salmon & Bell 2011). Similarly, far from removing the responsibility and blame for addiction from drug users, bup seems to add a layer of new responsibility on top of the old one, while further embedding the cause of addiction within the individual.

As suggested above, this project of individualism and holding individuals responsible for their own health and the health of the public ties “the scientific project... to a specific societal project” (Marcuse 1964/2002: 159). It turns general unhappiness, systemic injustice, and social problems into personal discontent. Lewis writing about Prozac explains how such biomedical models fundamentally undermine projects to transform the external environment:

If we plug human suffering, misery and sadness into the calculus of bioscience, there is no need to make changes in the social order, instead, we only need to jump start some neurotransmitters (2003: 56)

Given this framework, it is perhaps not surprising that the role of environmental factors in causing or helping cure drug use are infrequent in the scientific, regulatory and marketing materials that construct our understandings of bup. At best, there is some

limited acknowledgment that peers and family play an important role. At worst, environmental stress is reduced to its impact on the mesocorticolimbic dopamine system. For those taking bup, there is a much broader understanding of the importance of external factors (like housing, poverty, and exposure to crimes and drugs) and an acknowledgement that there are problems “besides heroin” that the medical system cannot address. And although they do turn to family, friends and the tattered remains of the welfare state for help, they also hold themselves responsible for changing their lives and for “acting normal” regardless of their social circumstances. Walker says:

[I]f people serious, they going to always be there when they supposed to be. Ain't going to be no excuses.... I don't care if you're 10-years old or 10 hundred years old, if you ain't trying to improve yourself, then you ain't doing nothing.

This “no excuses,” self-improvement dictum is emblematic of the neoliberal subject who, with or without pharmaceutical help, needs to take care of him or herself regardless of the obstacles.

Consumption

In addition to individualism and a self-reliance that undermines communitarian responses to social problems, neoliberal capitalism is marked by an emphasis on consumption and consumer choice. Bup, as it has been socially constructed, fosters consumption in two ways. First, by returning drug users to the world of legitimate work and normal conduct, it helps reinsert them into the capitalist economy. Part of “being normal” in a capitalist society is earning, spending and consuming. Second, bup is itself a commodity, one that replaces reliance on illegal drugs obtained through the black market economy with a legitimate medication obtained through the biomedical industrial

complex. In this way, bup also generates “biovalue,” that is, it creates surplus value and profit from the imperative of health (Rose 2003). To the extent that those taking bup are transformed from addicts to patients, they become both consumers and commodities of the biomedical industrial complex (Clarke et al. 2003).

Marcuse (1964/2002) argues that the way social control operates in modern society is through the creation and fulfillment of needs. By convincing us that pleasure and fulfillment are ours to be had through consumption, capitalism leads us away from critical thinking and understandings of social inequity; to use Marcuse words, “the Pleasure Principle absorbs the Reality Principle” (1964/2002: 72). He goes on to say:

[I]f individuals are pre-conditioned so that the satisfying goods also include thoughts, feelings, aspirations, why should they wish to think, feel and imagine for themselves (1964/2002: 51).

By undermining critical thinking and sapping us of our impetus for reform, consumption works in concert with the degradation of welfare state described above. Freedom is exercised through consumption (Reith 2004: 285). We are free to choose among the options presented to us in the marketplace, and the marketplace is where we are also to find the solutions to problems -- once understood as social – that are now our responsibility to resolve.

Lakoff argues that neoliberalism “substitutes ‘consumer’ for ‘citizen’” (2005: 70). However, drug users, like many of those in the BHIVES study, whose lives revolve around acquiring and using illicit drugs are only partially fulfilling their roles as consumer-citizens. Lenson (1995) suggests that drug users disrupt consumer capitalism because “the desire for the drug itself supersedes all other desires, including the desire for acquiring materials objects other than the drug itself” (28). Drug users are not only

failing to meet the requirements of being controlled, rational and responsible; they are failing to be appropriately consumptive.

Only 25% of participants in my sample were employed. The lives they describe are not ones of earning and spending in the formal economy. Rather they describe acquiring cash off-the-books (generally through piecework, borrowing, pan-handling, petty theft, dealing drugs and/or prostitution) and spending the bulk on that money on illicit or prescribed drugs purchased on the street. Responding to a question about what he did to pay for his illicit drugs, Walker says:

Pretty much damn near anything I can do to get my hands on a couple dollars, when I was in the street. Selling drugs, stealing, doing everything, if I'm going to be honest about it, yeah. No, but now, I don't do none of that.

Walker, like several others in the study, goes on to describe how bup allowed him to leave the informal economy and become a consumer in the formal economy by both removing the desire for drugs and obviating the need to engage in criminal activity to pay for drugs. As Terry explains: “I know now I'm on that Suboxone, that Suboxone's in my system, and I'm not gonna waste the money on a bag of dope, 'cause I'm not gonna get high.” Without having to spend money on drugs, several people described having cash in their pockets for the time in years.

Most people in the study also had experiences transforming their drug use into a commodity by entering the service economy of drug treatment programs. Carl notes how methadone providers want to keep people coming back to their program for profit: “You know, they still want to make their money off their methadone.” Several other people in the BHIVES study reflected on themselves as service consumers and clearly understood that they were playing a key role in the drug treatment industry. Speaking about her

methadone program, Nancy notes that the counselors there treat the clients like objects: “Yeah, they check the boxes. They just didn't care; they're there for their paycheck, you know?” Bup is clearly the latest entrant into the drug treatment economy.

Bup treatment provides a smooth redirection of profit as it transforms illicit drug use into “medication-assisted treatment.” Simply put, as individuals enter bup treatment, they replace an illicit opioid purchased on the street with legal opioid purchased through a pharmacy. Both cause physical dependence, but in the latter case, profit is produced and benefits Reckitt Benckiser as well as the physicians involved in the bup treatment. Physically reliant on medication, the buprenorphine “patient” consumes and becomes part of the multi-national corporation that produces it. The prescribing doctor can be seen benignly in the role of salesman/distributor (Lewis 2003) or as playing a more nefarious role as medical colonizer (Sharp 2000). This form of consumption, as the earlier chapters suggest, bring individuals into contact with new “expert knowledges and political rationalities” (Galvin 2002: 128). The message is clear -- through consumption (albeit to a physically addictive opioid), you can reenter the legitimate world, take responsibility for yourself, and better manage your neurochemically risky self.

Scholars have noted the role of the pharmaceutical industry in “selling sickness” to produce a market for their products (Moynihan et al. 2002). Through expanding the definitions of “illness,” encouraging the desire for self-enhancement through medication, and fostering anxieties about the body and the self, the pharmaceutical industry has been able to harness the ethos of self-care and consumerism into tremendous profits. Moncrief (2008) points out the synergy between medicalization, pharmaceutical logic, and neoliberal thought:

As well as medicalizing discontent, the pathological self-dissatisfaction suggested by the idea that our behavior and problems are due to a brain disorder helps produce a state of mind that accepts the changing nature of work [and] life wrought by neoliberal policies ... people are more likely to locate the source of their troubles in themselves, and see their doctors, than look to their ... environment (249).

In some ways, however, bup troubles this narrative of transforming a problem previously understood as a social into one that is treated through and generates profits for the pharmaceutical industry. Specifically, the ambiguity between the world of legal medications and illicit drugs confounds this linear logic. As the data presented earlier make clear, there is an active street market for bup. Many people are using bup in creative ways that profit themselves – rather than profit doctors or Reckitt Benckiser. In addition, many individuals continued to participate in the illicit drug market. The preoccupation by researchers, government regulators and the manufacturer over the diversion of bup make clear its ambivalent status as both a medication and an illicit drug. Moreover, much of the problem that bup purports to solve stem not from heroin or the criminal world that supposedly surrounds it, but from the over-prescription of pain medications.

The real profit to be made from bup is from iatrogenic medicine, not heroin addiction. In 2002, people in the U.S. consumed more than 200 tons of opium-derived and synthetic opioids (Fischer, Gittens & Rhem 2008). According to the Drug Enforcement Agency, the primary source of pharmaceuticals sold on the street are physicians and pharmacists (Fischer, Gittens & Rhem 2008). And as we saw from the analysis of Reckitt Benckiser's materials, the market they are truly going after is the white, affluent abuser of pain medications. In a nice circle of profit that benefits doctors

and the pharmaceutical industry, medicine is causing a problem that medicine can now treat. Whether one is overcoming addiction to heroin or Oxycodone, bup stills provides a neoliberal response -- through the right kind of kind of consumption (i.e., one that does not disrupt your capacity to be a responsible, consuming citizen and that generates profit for industry), you can manage your own health. The persistence of will power and morality in constructions of addiction does little to disrupt this. You may need to exert your will (to “really want to change”), you may need to reform your conduct, you may even need Reckitt Benckiser’s *Here to Help* program, or some counseling. Whatever you need, it is still up to **you** to overcome your addiction and reenter legitimate society.

Segmented Governance and Race

I have argued the buprenorphine offers new forms of regulation and helps shape a neoliberal subject. But bup is not alone in making meaning of addiction. Rather, it continues to co-exist with a host of other paradigms and strategies for overcoming addiction. New forms of self-regulation that psychopharmaceuticals like bup make possible do not necessarily diminish the force of more punitive forms of external control (Tiger 2011), and we should be cautious about assuming that this latest push towards the medicalization of addiction will replace more overtly punitive responses. In their study of methadone, Fraser and Valentine note that we have established a system with “self-regulation for some, brute repression for others” (2008: 60). Those who fail to govern themselves may be incarcerated or engage with “medicolegal hybrids,” like the use of naltrexone in drunk driving courts (Vrecko 2009).

Rather than making drug users blameless, neuroscience has provided tools (speculative and theoretical though they remain) to identify “addicts” and hold them accountable for correcting their own behavior through the use of neuroscientific interventions. Rose, looking at court decisions, points out that neuroscience makes authorities believe that they can be preemptive in protecting public safety by making it possible to “identify and exclude those who are incorrigibly risky and monstrous - incarceration without reform” (2010: 88). The uncertainty within addiction neuroscience about the role of genetics, biology, environment and personality means that we are all susceptible or at risk, reinforcing the “emerging logic for the conduct of conduct – to screen and intervene” (Rose 2010: 97). While this has not yet happened in the case of addiction, one can imagine neuroscientific arguments that a “predisposition” to addiction or “drug-induced brain damage” requires, not only civilizing and self-governance, but also aggressive intervention and containment. Addiction neuroscience reveals the dilemmas inherent in contemporary regulatory projects: how will we manage those who fail to meet the considerable demands of a liberal society of “free” individuals?

Both more punitive forms of social control and the exercise of autonomy and self-narration are contained within a larger sociopolitical context that is highly stratified, particularly by race and class. Racism, which has played a central role in our responses to drug use, works hand in hand with neoliberalism. Davis (2007) argues that neoliberalism relies on the myths of individualism and meritocracy so that “race is disallowed as a legitimate political grievance” (249). In my data, references to race or racism were few and far between. This absence or “muted racism,” asserts Davis, is also emblematic of neoliberalism:

Muted racism can also exist in the form omission. In this case racism is represented in terms of inequality that is neither acknowledged nor analyzed and racial disparity is frequently explained using almost any other explanation (2007: 351).

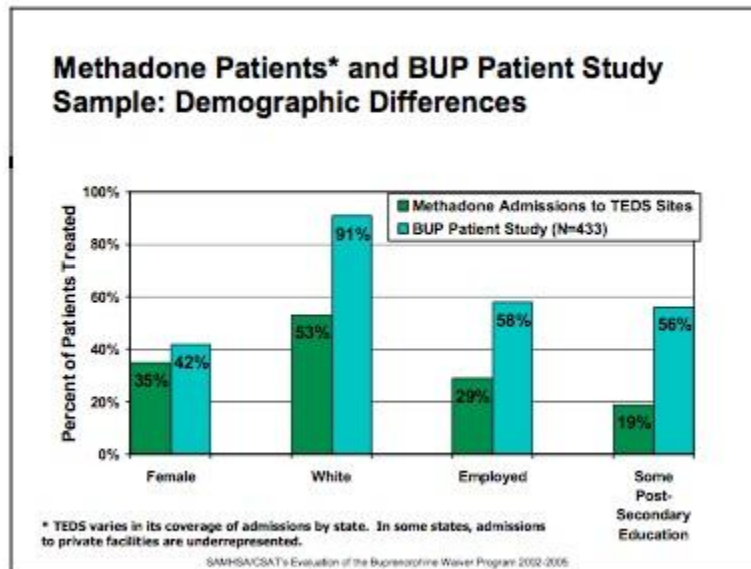
One is reminded here of the addiction neuroscientists suggesting that the association between drug use and poverty had to do with the release cortisone in the brain. Similarly, government regulators failed to mention race, though they did use the code words of “urban” and “suburban” and “hard-core user” and “new user” to suggest it. This too, Davis says is a paradigmatic example of how racism work in neoliberal societies: “When used indexically, code words or phrases are deployed to create racial meaning that generates a sort of pathological profiling of groups without direct reference to race” (2007: 251).

I would suggest that “heroin,” “methadone,” and “prescription drugs” are other code words that signal race. For the government proponents of bup, methadone was reserved for the urban, hard-core user, while bup was for young, suburban users. “Prescription drug abuse” and images of white middle class actors were the codes that Reckitt Benckiser relied on to market to white people and to absent African Americans from any conversation about bup. Taken together, these absences and codes suggest a social construction of bup as a medical treatment for whites, leaving intact the punitive methadone system and prison as the appropriate response for drug use among Blacks. What appears to be developing are “two tiers of treatment” (Hansen 2011a) stratified by race -- bup for white, middle and upper class users of prescription opioids and methadone (or prison) for Black and Latino users of heroin.

Demographic data about who uses bup are extremely scarce. But some preliminary data suggest that, compared to those admitted for methadone treatment,

people taking bup are more likely to be white, employed and better educated (WESTAT 2006; Moore et al. 2007). As Figure 20 shows, in a national sample of those entering bup treatment, 91% were white compared to 53% of those entering methadone treatment (WESTAT 2006).

Figure 20: Demographic Characteristics of Bup & Methadone Patients



Source: WESTAT 2006

The Drug Abuse Warning Network (DAWN), which surveys reports of drugs from emergency room admissions, is believed to provide early data on emerging drug use trends. DAWN reports that 75% of people making emergency room visit involving bup were white and 6% were Black (SAMHSA 2006). The researchers conclude: “These findings seem to suggest that persons who are minorities and/or of lower economic status are not accessing this treatment [bup], at least for the present” (SAMHSA 2006: 3).

There is additional evidence to suggest that those addicted to prescription medications

(who are more likely to be white) are less likely to enter the publicly funded treatment systems, which include methadone and an array of behavioral treatment modalities. An estimated 82% of all people addicted to opioids are addicted to prescription medications, not heroin; and the numbers of people misusing prescription opioids far exceed those misusing heroin. However, prescription opioid users make up less than 10% of public treatment admissions (SAMHSA 2006). Finally, in unpublished data, Hansen (2011b) recently mapped bup prescription rates in New York City against methadone prescription rates. She found that the highest income zip codes with the highest percentage of white residents also had the highest rates of bup use; lower income zip codes with predominantly Black and Latino populations had higher rates of methadone use.

It appears that bup is being deployed in ways that reflect existing racial and class inequities. One BHIVES participant, Clarence, observes what others have wondered -- will bup treatment be reserved for more affluent, presumably white drug users? He says:

I have found that usually the only people that I know that do know and have access to it [bup] have been people who are less hard-core, people in the suburbs. But the hard-core people in the city - the doctors aren't there, the drug isn't there, anything. You know, at least not at home.

Clarence notes that access to the drug for the “hard core people in the city” appears to be limited, especially if they want to take it home. He is referring here to some public drug treatment programs that provide bup but do it using the same restrictions that apply to methadone (i.e., observed treatment through daily attendance at a clinic). Although anecdotal, this comment by Clarence suggests that bup can and will be used differently in different circumstances. As Mackenzie notes: “Jurisdictions exercise governance through these alternative models in varying fashions, which impact on different groups in different ways, often commensurate with social stratification” (2006: 97). In his book

Protest Psychosis, Metzl (2010) details how the diagnosis of schizophrenia (and mental illness more broadly) is function of culture, ideology and politics that reflect deeply embedded systems of institutionalized racism that result in schizophrenia becoming a “Black disease.” He argues persuasively that racism permeates diagnostic criteria, health care policies, and medical and popular accounts of illness. My analysis suggests that over time, bup will remain primarily a treatment for white, middle class prescription medication users who are not seen as warranting the same kind of carceral responses as their Black counterparts.

Some, like Alexander (2010), have suggested that criminal justice responses to drug use are central to shoring up American racism. In an era where racial discrimination is no longer legal, the mass incarceration of African Americans has become the new system of racial control or “the new Jim Crow” (Alexander 2010). Drug use plays a central role in these systems of racial control and oppression. The rapid increase in addiction to prescription medications among whites has propelled new efforts, like bup, to find a medical solution -- at least for some addicts.

Who gets bup and who does not is only part of what is at issue. I have argued that new forms of medical control offers subjects new means for the exercise of autonomy and real material benefits associated with being able to perform the responsibilities of neoliberal personhood. Many of the people interviewed for this study were filled with the hope and the expectation that bup would confer upon them a new life of prosperity, health, and freedom. I am, however, skeptical that bup, even when accompanied by the diligent exertion of the will, desire to be “clean,” and the performance of “normal” can overcome the profound social fissures that characterized our society. The reclamation of

neoliberal personhood through bup may be possible for Jennifer, the woman on the Reckitt Benckiser website. This white middle class suburban mother perhaps can trade her addiction to pain medications for a medical treatment and re-enter the realm of responsible, productive citizenship. But I am less optimistic about the people in the BHIVES study whom by their own admission have “problems besides heroin,” including racism and poverty.

Bup can help create embodied states and encourage the enactment of behavior that are consistent with the neoliberal subject. What it cannot do is overcome the stigma, social circumstances, and systemic racism that many of the people in my study experienced. Long before they were diagnosed as having a chronic, relapsing brain disease, they were labeled as addicts and criminals. Seventy-nine percent of the BHIVES participants had been involved in the criminal justice system, which means they are not only marked with stigma but face legal discrimination that will make it extraordinarily difficult to obtain employment and housing and to meet the obligations of neoliberalism. Bup will allow some to reclaim their status as people, as “responsible members of society;” and it will allow the failure of others to help justify the continuation of more repressive forms of control.

Conclusion and Implications

I have argued throughout this dissertation that buprenorphine, addiction and addicts are constructed in different ways, depending on the actors and the context. Sometimes and in some contexts, bup is a medication, just like insulin; other times it is a dangerous drug that can be abused and diverted. Sometimes addiction is a disease; other times it is a crime. And sometimes drug users are addicts or criminals; other times patients. When and how these different constructions are used is not arbitrary, but strategic.

The social construction of buprenorphine reveals that the differences we have created around different substances are largely artificial, having more to do with political aims, professional turf wars, and social control than pharmacological differences. Bup, before it was even available for use as an addiction treatment, was used by opportunistically government advocates to profoundly change U.S. drug policy in a way meant to bolster a medical model and the role of physicians. Bup was also used to build the legitimacy and funding of the National Institute of Drug Abuse, which had invested heavily in a neuroscientific model and in its medication development program with no real success until it became legal to prescribe bup. Addiction neuroscientists were able to use bup to further their explicit political aim of medicalizing addiction and moving it into medical mainstream. For Reckitt Bencikser, the pharmaceutical manufacturer of bup, bup was the cure for the prescription opioid epidemic and access to a lucrative market of white, middle class addicts. Each of these actors, in employing their own strategic construction of bup, had to wrestle with bup's similarities to heroin, methadone and prescription

opioids. And depending on their interests, each constructed bup in ways to emphasize either its sameness or its difference from these other substances. This struggle to situate bup in relation to other opioids reflects the long and troubled history between medicine and addiction as well as the irrationality of the U.S.'s current drug scheduling scheme.

I have also suggested that bup is constructed and materialized through the bodies of those taking it in ways that enfold, adapt and resist regulatory, marketing and scientific discourses. Individuals taking bup share some interests with these other actors; they want to reenter lives of productive citizenship by leaving illicit drugs behind. However, their understandings of addiction differ in important ways. They widely acknowledge the role that their social circumstances and external factors play in causing their drug use and in supporting their recovery – factors largely absent in the discourse of others. They almost uniformly resist the idea that addiction is a chronic, relapsing disease in whose grips they will be forever. For them, addiction – even though it includes a physiological component -- is their responsibility and can only be overcome through desire to change one's life and the assertion of will power. Those taking bup are also ambivalent about its status as medicine or a drug. Though they experience it as creating less euphoria or sedation than methadone or heroin, they recognize that at its core bup is an opioid that causes physical dependence, and in that way, it remains a drug that most wished to eventually “kick.”

While individuals in my sample wrestled with identifying the line between medicines and drugs, they were less concerned with these distinctions than other actors and moved fluidly between substances prescribed by doctors and substances purchased on the street. Their main interest was not whether a substance was a medicine or a drug but how they could use a given substance to achieve a particular embodied state.

The many different buprenorphines constructed also lend insight into the processes of medicalization. Bup has all the hallmarks of classic medicalization – a biomedical technology that can help transform a social problem into a medical one. Indeed, bup was constructed by and the in the context of what other scholars have identified as drivers of medicalization -- increased role of medical professionals, delivery in a medical setting, the culturally resonant language of neuroscience, the rise of pharmaceuticalization. However, I conclude that bup has not yet and is unlikely to ever achieve the full medicalization of addiction because of several confounding factors.

First is the coexistence of other strong and deeply rooted understandings of addiction as a crime, a behavioral problem, and a moral failing. In every one of the sources I examined, the specter of addiction as a crime or as moral failure remained. While these frameworks are not necessarily incompatible with a medical one, the persistence of other responses to addiction, like methadone and incarceration, undermine the claims of the medical model that addiction is a disease that erodes volition and will power. Not even the addiction neuroscientists could explain away the role of individual behavior and choice in using drugs, and as long as an element of choice remains, so too does individual responsibility, blame, and the possibility of non-medical (criminal justice) responses.

Second, the medicalization of addiction is confounded by the historical and current problematic relationship between medicine and addiction treatment. The Harrison Act of 1914 was meant to end the role of doctors as drug peddlers almost a hundred years ago. The Drug Addiction Treatment Act of 2000 was meant to end the Harrison Act's prohibition on doctors prescribing narcotics for the treatment of addiction.

It was also intended to help medicine reclaim its role as the appropriate purveyors of addiction treatment. But the intervening 100 years seem to have done little to restore the reputation of doctors as the solution to addiction. Instead, they continue to face the stigma associated with addiction treatment, lack credibility as being knowledgeable and effective at treating addiction, confront the persistent notion that addiction is not a “real” disease, and deal with accusations of creating, rather than curing, addiction.

Third and related, the medicalization of addiction through medication treatment is undermined by the continual slippage between medicines and drugs. When addiction to opioids is treated by prescribing another addictive opioid, the discursive lines between addiction and its cure are blurred. As my interviews with people taking bup demonstrated, many “medicines” are used “recreationally,” while many “illicit drugs” are used to treat a host of psychological and physical problems, especially opioid withdrawal. With the rise of prescription drug abuse, the differences between therapeutic and addictive opioids have only become more confounded. The Controlled Substances Act, which structures the scheduling of drugs in the U.S., does little to help clarify the distinctions between drugs and medicines. The slippage between medicines and drugs has important implications beyond the medicalization of addiction. As we continue to become a “pharmaceutical culture,” coming to terms with what is a drug and what is a medicine is increasingly important. Moreover, while the pharmaceuticalization of society supported the development and promotion of bup, big pharma was not the main driver. Intensive government involvement was needed to overcome the many barriers to the market-driven development of an anti-addiction medication.

Finally, the lived experiences of those taking bup challenge the medicalization of addiction. Bup has important material effects, but overall, individuals rejected a purely medical construction of addiction and remained ambivalent about bup's status as a medication. They had little knowledge of or use for neuroscientific theories, and the role of doctors or the medical setting did little to shape their understandings of either bup or addiction. They held tenaciously onto the centrality of their own choice and will power in overcoming addiction and used bup strategically in ways that undermined medical authority and demonstrated their acceptance of the fluidity between drugs and medicines. Holding on to this agency and volition, however, also meant holding on to the responsibility and blame for addiction.

This study also shows that even though individuals did not fully embrace a medical model of addiction, they did use bup in ways that reshaped their identities, allowed new opportunities for agency, and produced new systems of constraint. Bup, both because of its embodied effects and because of the way in which it is regulated, allowed some people to "become normal," resume the activities of daily living and reenter "productive citizenship." Bup did, in fact, help several people leave drugs behind and rebuild their lives - reconnecting with family, returning to school, obtaining jobs. They entered into a system of control marked by physical dependence on a medication and medical monitoring -- but many did so willingly understanding that they were trading one constraint (typically heroin or methadone) for another that they found less burdensome.

The multiple meanings that inhere in bup in particular and addiction more generally mean that there is persistent ambiguity; and it is this ambiguity and multiple

valences that make possible the application of different forms and intensity of intervention into the lives of drug users. Kaye (2006) argues “the hybrid nature of addiction discourse enables a great deal of flexibility for governing authorities; a wide variety of regulatory options... can be variously mobilized” (31). In many ways, the individuals in my sample are at the crossroads of different constructions of and responses to addiction. Largely poor and predominantly people of color, most had been involved in the criminal justice system and in the methadone treatment system. Bup treatment, made available to them through the BHIVES study, allowed them access to a medicalized treatment that many of their peers will never have. As I suggested in the previous chapter, there is mounting evidence that bup will contribute to, not diminish, our system of segmented governance for drug users. The “young suburban heroin users” that the government regulators spoke about and the “suburban young mothers addicted prescription medications” that are Reckitt Benckiser’s primary market are likely to be the ones for whom addiction is a medical condition and buprenorphine its cure. The “hard core urban users” will likely require a different kind of governance, through the punitive methadone system or through incarceration. There is no singular Truth about bup, and because there is not, it can -- and I believe will -- be deployed differentially in ways that reflect existing racial and social stratifications.

Policy Implications

Elizabeth Pisani (2008) in The Wisdom of Whores argues that a substantial portion of the funding devoted to HIV/AIDS is wasted on ineffective programming because science and good public health policy are trumped by politics, ideology, and "morality." The same is true for current U.S. drug policies. As my analysis of the social

construction of bup has illustrated, the current classification of drugs as legal or illicit is at best irrational and at worst driven by racism (Mosher & Yanagaisako 1991). In a culture that is increasingly medicalized and pharmaceuticalized, problematizing all “non-medical” use of substances will further exacerbate our already unjust and ineffective policy responses to drug use.

The use of illicit drugs is spread throughout society fairly evenly, but the harm that results from them and our responses to them are not. Legal drugs, in fact, cause far more social and health problems than illicit ones (Mosher & Yanagaisako 1991), and our response to illicit drugs (arrest and incarceration) causes profound harm to individuals, families and communities (Global Commission on Drug Policy 2011). On the face of it, medical approaches to drug use seem kinder and more benevolent than criminal justice approaches. But, as I have argued, one does not preclude the other; both have and will continue to co-exist. It seems increasingly likely that some drug users will be treated medically, and others will be locked up, escalating rather than diminishing the racial disparities that characterize U.S. drug policy. Moreover, I have also argued that medicalized approaches do not necessarily reduce individual blame or stigma but rather merely cloak moralistic arguments in the language of science. More perniciously, medicalized approaches, especially neuroscientific ones, radically individualize the problem of drugs and erase the effects of social factors, like racism and poverty.

We need a drug policy that recognizes the role that racism, poverty and the lack of opportunity play in fostering drug use and our responses to it and works to resolve them. Medicalization mutes racism and inequality and then blames individuals for not being

able to overcome them. Instead of isolating and blaming those who use drugs, we need to restore communitarian responses that will help all people lead lives of dignity.

In addition to working towards building strong, vibrant communities where everyone has the opportunity to thrive, we need a drug policy that rationalizes our approach to substances, not arbitrarily judging them legal or illicit, but helping individuals understand the real risks and benefits each poses. To the extent that we want to control and limit the use of some substances, we should focus on the real harm they cause, not our irrational and/or racist fears about particular substances. Imagine a drug policy where there are not arbitrary lines between bup, Oxycontin, methadone and heroin -- making some demon drugs that lead to incarceration and some cures to that same addiction. Imagine a drug policy that does not draw a distinction between “medical” marijuana and “illicit” marijuana but simply explains the benefits and risk of marijuana use and trusts that people can make informed decisions about their own embodied experiences and health. We believe that most people can moderately consume alcohol, Oxycontin, and Prozac without the threat of arrest. Why not some opioids? Imagine instead of stigma, fear, ambiguity and confusion, we offered information and support for whichever substance (or no substance at all) helps people.

The features of buprenorphine that helped people in my study the most were its legality and availability, the autonomy it gave it them over their own drug use and treatment, and its relative freedom from stigma. These qualities can and should guide our drug policies. But our drug policies must also include a commitment to understanding and dismantling systemic forms of oppression, racism, and inequality and to challenging neoliberal efforts to undermine communitarian responses to social problems.

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