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A Liberal Account of Addiction

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Abstract

Philosophers and psychologists have been attracted to two differing accounts of addictive motivation. In this paper, we investigate these two accounts and challenge their mutual claim that addictions compromise a person's self-control. First, we identify some incompatibilities between this claim of reduced self-control and the available evidence from various disciplines. A critical assessment of the evidence weakens the empirical argument for reduced autonomy. Second, we identify sources of unwarranted normative bias in the popular theories of addiction that introduce systematic errors in interpreting the evidence. By eliminating these errors, we are able to generate a minimal, but correct account, of addiction that presumes addicts to be autonomous in their addictive behavior, absent further evidence to the contrary. Finally, we explore some of the implications of this minimal, correct view.

Keywords

addiction; autonomy; self-control; neuroethics; dependence; liberty

What Is Addiction? The Two Major Positions

> And above all, we must reduce drug use for one great moral reason: Over time, drugs rob men, women, and children of their dignity, and of their character. Illegal drugs are the enemies of ambition and hope. And when we fight against drugs, we fight for the souls of our fellow Americans. (The White House, 2001)

A great deal of effort and resources have been put into the study of the problem of addiction: The ostensible cause of the drug problem which faces every society in the world to some extent. But drug addiction is not just a problem of public health. It is a source of moral outrage, it is a crime in many places, and it is an entity against which governments feel they must wage "war."

We argue that the generally understood meaning of the term "addiction" is scientifically and philosophically flawed. The concept of "addiction" is built around a range of unsupported prejudices that severely restrict our understanding of drug use, of pleasure-oriented behavior, and of the ways in which we maintain control over those behaviors. Research from the biological and social sciences has tended to characterize addictive behaviors in two different ways: As the symptoms of a disease and as a failure of self-control.

The Disease View

The most popular view among neuroscientists is that an addict's drug-seeking behavior is the direct result of some physiological change in their brain, caused by chronic use of the drug. The Disease View states that there is some "normal" process of motivation in the brain and that this process is somehow changed or perverted by brain damage or adaptation

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caused by chronic drug use. On this theory of addiction, the addict is no longer rational; she uses drugs as a result of a fundamentally non-voluntary process. Alan Leshner is the most famous proponent of this hard version of the Disease view. Leshner has defended the view that an addicted person's actions are the direct result of brain adaptations caused by chronic drug use—that their actions are more like reflexes than normal rational behaviors (Leshner 1997, 1999; Leshner and Koob 1999).

One objection to this kind of argument is that planning and thought are part of the drug-seeking process. A heroin user needs to locate and martial the heroin, needle, spoon, flame, and a tourniquet. As Perring (2002) points out, it is the "reward systems" of the brain that are mostly affected by drugs, and not the planning and motor systems, so it does not make sense to say that drug adaptation actually controls the drug-seeking process. For this reason, a softer, more defensible version of the Disease View is also sometimes advanced. Hyman (2005), for example, claims that it is not the chronic brain changes that alter the process of motivation, but the fact that drugs directly stimulate the pleasure pathways, which he says "hijacks" the normal motivational process.

The Willpower View

Perhaps the oldest view of addiction among psychologists and philosophers has held that some part of an addict wishes to abstain, but their will is not strong enough to overcome an immediate desire toward temptation. On this view, addicts lose "control" over their actions. Most versions of the Willpower View characterize addiction as a battle in which an addict's wish for abstinence seeks to gain control over his behavior. In a sermon given to the American Congress in 1827, Lyman Beecher put it thus:

> Conscience thunders, remorse goads, and as the gulf opens before him, he recoils and trembles, and weeps and prays, and resolves and promises and reforms, and "seeks it yet again"; again resolves and weeps and prays, and "seeks it yet again." Wretched man, he has placed himself in the hands of a giant who never pities and never relaxes his iron gripe. He may struggle, but he is in chains. He may cry for release, but it comes not; and Lost! Lost! May be inscribed upon the door-posts of his dwelling. (1827, 15)

Numerous accounts of self-control exist, and thus there are different versions of the Willpower View. All versions of the Willpower View hold that addicted people are locked in a battle for control of their actions—not necessarily because of some abnormal brain chemistry, but because their capacity to resist temptation can be overwhelmed by desire. Because addicts often express a desire to be free of their addictive cravings, Willpower accounts assume that their failure to abstain from drugs is evidence of a loss of control.

Similarity Between Disease and Willpower Views

The Disease and Willpower accounts of addiction are not fundamentally incompatible. It would be possible to claim that neurological mechanisms underpin an addict's inability to resist temptation. But the motivations behind each view are distinct: The Willpower View is motivated by phenomenology and self-report, whereas the Disease View is based on neurobiological evidence. On both the Willpower and the Disease Views, addictive behaviors are essentially non-voluntary. The addict does not choose to perform their addictive actions; they succumb against their will—to temptation on the Willpower View or to compulsion on the Disease View. The other similarity between the Willpower and the Disease Views is that they suggest that addictive behaviors are caused by a drug-induced change in the behavioral functioning of the addict. Both views assume that the addict is operating with a reduced capacity for autonomous action.

The Lay View

There is a third view, which is held by many laypeople but very few in the field of addiction research. This view states that people use drugs because they are morally corrupt hedonists who value immediate pleasure above all else and who rely on others to handle their ensuing health and survival difficulties. This is the view that is at the root of public outrage over harm-minimization strategies, such as safe injecting rooms, needle exchanges, and methadone clinics. On the Lay View, the best solution to drug addiction is for addicts to choose to accept their responsibilities and stop taking drugs.

In the field of addiction research, the Lay View is the elephant in the corner. It is (extremely) unhelpful in the pursuit of the primary goal of biomedical addiction research, which is essentially to prevent, cure, or minimize harm from drug addiction. If addiction is a disease, or some sort of psychological syndrome, then treatment is possible. But if drug addicts are just wanton hedonists, then there is no solution except perhaps punishment. Thus, it should come as no surprise that the Lay View is not discussed in the addiction literature.

Each of These Positions Is Wrong

The Willpower and Disease Views, we argue, are both false. Ironically, the Lay View is closest to the right view, although the normative component of this view is unjustifiable. We can reconcile good science with good philosophy without giving up on strategies that are designed to reduce the economic and public health burdens of addictive drugs.

To make this reconciliation, we begin by discarding parts of the dominant views that have insufficient support, to produce a liberal account of addiction. This liberal account is lean and lacks some explanatory power, but it makes no false claims.

Why Are These Views Attractive?

There is one basic source of error underpinning the Disease and Willpower Views of addiction. Modern societies hold a number of very strong taboos against wanton pleasure-seeking behavior. These taboos construct our conception of rational, sane behavior, and close our eyes to an honest description of the addictive experience and of the biology that underpins it. They cause us to define addictive behavior as *a priori* aberrant, which in turn colors the scientific study of addictive motivation. Taboo also makes it impossible to obtain honest accounts from addicts themselves.

The three common views on addiction are a product of these taboos. They are the result of an attempt to square the observable behaviors of addicted drug users with normative beliefs about the rationality of pleasure-oriented behaviors. In this section, we identify the ways in which normative beliefs can introduce unjustifiable factual claims into these views.

Science and Framing Bias

The Disease account has been shaped by a number of empirical experiments in neurobiology and neuropharmacology. We do not attempt to evaluate the findings of these experiments; the real problem is a problem of framing, not of scientific method. Patricia Churchland said this about the neurobiological study of the brain's higher functions: "If the psychological (functional) taxonomy is ill-defined, then the search for neural substrates for those functions will be correspondingly ill-defined" (1986, 152). We believe that the neurobiological account of addiction has been ill-defined because the functional taxonomy of addiction is flawed. The source of this flaw lies in an implicit assumption that addictive behaviors are

abnormal; under this assumption, every neural substrate found is assumed to be unique to addictive behavior.

Vegetarians sometimes object to eating meat on the basis that it decomposes in a person's intestines. But this objection ignores the fact that vegetable matter also decomposes by the same mechanism. In a similar way, addiction researchers sometimes claim that drug use changes a person's brain, without recognizing that all pleasure-oriented behaviors change our brains, through the same mechanisms.

How Drugs Work on the Brain

Current neurological evidence gives us no reason to think that addictive desires are formed in a different way to regular desires. When Hyman says that drugs "hijack" the reward pathways in the brain, he is referring to the mesolimbic dopamine receptors, which regulate reward and the reinforcement of behavior (Lyvers 1998). All addictive drugs elicit the excitation of these dopamine receptors. Heroin, for example, binds to the brain's opioid receptors, which leads to a release of endogenous dopamine (Wise 1996). Alcohol makes the dopamine receptors more excitable through its property as a solvent (Weiss and Porrino 2002). Cocaine inhibits the reuptake of dopamine, causing the receptors to become flooded with it. The process is different with every addictive drug, but the end result is the same.

The dopamine and opioid receptors are engaged in the same way when a person eats sugar or has sex. Even complex pleasures like a win in gambling cause the same kind of reaction (Comings and Blum 2000). In fact, any pleasurable experience causes dopamine to be released within the brain, activating these "reward" pathways.

When the brain's reward systems are activated, they strengthen the pathways that were active when the reward was obtained, and a person becomes more likely to repeat the behavior that led to the reward. When Leshner and others observed these brain adaptations in drug users, they concluded that the drug use was "hijacking" a person's brain. Robinson and Berridge (1993) showed that the reward centers of the addicted brain change in such a way as to sensitize them to a particular drug, so that the drug becomes more rewarding.

More recent research has revealed that when drugs are used repeatedly for an extended period, new nerve connections are made within the brain which cause drug-seeking behavior to be associated with different patterns of neural activation. Kalivas and Volkow (2005) highlight the activation of the glutamatergic systems in end-stage addicts; they call the newly grown connections "supraphysiological," implying that addicts have a motivational mechanism which is not present in the brains of non-addicts. Everitt and Robbins (2005) highlight the development of dopamine activation in the striatum of long-term addicts, and take this change to represent a transition from voluntary drug use to compulsive drug use.

What few neuroscientists mention is that these supposedly compulsive adaptations are caused by the regular release of dopamine in the brain's reward pathways, and that this pattern of dopamine activation can be caused not only by drugs, but by pleasurable behaviors with no pharmacological component, as we argue in the next section. Whether or not we take these adaptations to be evidence of compulsion, they are changes elicited by the repeated presence of brain reward, not by the particular chemistry of the drugs. Hence, whether or not we think addictive desires are truly irresistible, we must agree that they are biologically the same as strong desires which are not oriented toward drugs but toward some other rewarding outcome.

Drugs engage in a direct, chemical way with the reward pathways in the brain to produce a pleasurable and motivating effect. We know this because hundreds of millions of dollars

have been spent inserting cannulae into rat brains, wiring electroencephalographs to drug addicts' heads, and so forth. By contrast, our picture of what happens in the brains of non-addicted people pursuing normal pleasurable activities is not as detailed as our picture of the addicted drug user's brain. There is less funding supporting our understanding of normal pleasure-seeking behavior because it is not perceived to be a problem which needs a solution. The taboo against drugs, and the social problems that surround drug addiction create a scientific environment that makes an accurate comparison almost impossible.

We know just enough to conclude that the "hijacking" of the brain by drugs has been overstated, and that the "hijacking" of the brain by regular behavior has been understated. Addictive motivation is not as biologically abnormal as addiction researchers tend to say it is, as we now argue.

Non-Drug Addictions

No scientific study has directly compared the neurological changes of drug users with the neurological changes in those who become habituated to eating a tasty food. Yet every major effect of drug use—pleasure, intoxication, habituation, and even addiction—can be produced for a normal pleasurable behavior such as eating sweet food.

When we eat any palatable food, we experience an unconditioned release of endorphins (Tanda and Di Chiara 1998). These endorphins bind to the same opioid receptors in the brain that heroin binds to. Just like heroin, this process causes an analgesic sensation and a release of dopamine in the reward centers of the brain (Wise 1996). Sugar sensitizes both the opioid and dopamine receptors in the brain in the exact same way as heroin, and hence our brains adapt to sugar in much the same way as they adapt to heroin. One can become addicted to it, and it even has its own withdrawal syndrome, which is identical in kind to heroin withdrawal (Colantuoni et al. 2002). A recent study found that intensely sweet foods such as saccharin could surpass cocaine in eliciting brain reward in rats, even when the rats had an existing cocaine addiction (Lenoir et al. 2007). The only fundamental difference between sugar and heroin is that sugar elicits a release of endogenous opiate chemicals, whereas heroin directly activates the opioid receptors with no intermediary step. But a number of non-drug substances can also directly activate the brain's reward pathways; sure enough, addictions have been observed for these substances as well. For example, when you drink enough water, the electrolytes in your brain are diluted, causing intoxication. Edelstein (1973) reported a case of water addiction caused—at least in part—by this mechanism.

The beta-carotene in carrots also has a direct influence on the reward pathways in the brain, and carrot addiction has been observed (Kaplan 1996). Addictions have also been observed to foods that are not rich in any particularly rewarding or intoxicating chemical: At least one case of milk addiction has been observed, complete with the usual symptoms of withdrawal, adaptation, and social disruption (Tharoor et al. 2006).

Most important, the disorders of generalized overeating are biologically and behaviorally almost identical to addictions. When people overeat, their brain reward pathways become activated and mesolimbic dopamine is released (Joranby et al. 2005). Recent evidence using positron emission tomography and functional magnetic resonance imaging suggests a range of similarities in the neurological adaptations in people with eating disorders and people with addictions (Liu and Gold 2003; Wang et al. 2003, 2004). The brains of sugar bingers are sensitized to addictive drugs, and sugar can act as a "gateway drug" (Avena et al. 2007). People who overeat display a number of addiction-like symptoms. They crave food, especially when associated cues are present. They deny using food. They become obsessed, and they go through cycles of abstinence and relapse (Gold et al. 2003). Eating disorders

such as bulimia have no appreciable dissimilarity from drug addictions. As Mark Gold puts it:

> Food is a powerful mood altering substance that is repetitively and destructively used (or restricted) in eating disorders just as drugs are in substance use disorders. (Gold et al. 2003, 482)

Displaying typical scientific caution, neurobiologists have so far been reluctant to claim that overeating is literally an addiction. Avena, Rada, and Hoebel (2007) published a comprehensive review of the similarities between overeating and drug addiction, but write in their conclusion:

> whether or not it is a good idea to call this a “food addiction” in people is both a scientific and societal question that has yet to be answered. (p. 32)

This caution is echoed in other recent surveys of the overlap between the twin phenomena of food and drug bingeing (Volkow and Wise 2005). But the evidence is overwhelming, and the scientific consensus is slowly warming to the idea that sugar is addictive in literally the same sense as addictive drugs are addictive.

Sex is another “natural” pleasurable behavior that can generate syndromes that are behaviorally and biological similar to addictions. In animals, it has been shown that sexual stimuli trigger the same release of dopamine in the mesolimbic dopamine system as the release which accompanies the use of opiates (Mitchell and Gratton 1991). When we overindulge in sex or drugs, we trigger the same repeated release of mesolimbic dopamine. The neurological adaptations are caused by this dopamine release, not by the originating behavior. So it is reasonable to assume that our brains adapt in the same way, whether we are having too much sex or taking too many drugs. This means sex can be habit forming in the same way that drugs are. In fact, the same neurological mechanisms are evident in people who have sex addictions, kleptomania, pathological gambling, and shopping and Internet overuse (Schmitz 2005). Each of these disorders can be controlled to some extent by the opioid antagonist naltrexone, which is often used in the treatment of heroin addiction.

Some people may wonder, if drug and non-drug addictions share the same neural mechanisms, why we do not see high comorbidity effects? Wouldn’t shared neural substrates mean that people who are addicted to sugar are also, by default, addicted to opiates? In fact, there is emerging evidence that having one addiction is a risk factor for developing other concurrent addictions (Eisenman et al. 2004; Schmitz 2005). In other words, if you are addicted to coffee, your brain has changed as though you were slightly addicted to cocaine. That you are not, in fact, addicted to cocaine is a problem for the Disease View, which seeks to entirely explain addictions through these shared biological adaptations.

The evidence on food and behavioral addictions should give us grave doubts about the Disease View. When we eat any palatable food, a neurological process begins that can end in an identifiable addiction. This process does not change at any point—rather, the level of habituation and adaptation to the food becomes gradually stronger as our intake increases. In other words, everybody who eats becomes somewhat addicted to the chemicals that comprise food.

The bright line we so often draw between drug addiction and habitual behavior is imaginary. Drugs have intoxicating or euphoric effects grounded in unusual pharmacology, and perhaps this has led us to assume that the habituating effects of the drugs are similarly exotic. But these exotic pharmacologies are not required to produce addictions. All that is required is a

high dose of any rewarding behavior, be it eating, sex, or anything else the subject finds attractive.

Normal, Non-Addicted Pleasure-Seeking Behavior

Of course, it can be claimed that a person who is addicted to sugar or water is diseased, and that their brain has changed in such a way as to make their sugar- or water-seeking behavior involuntary. Yet we know how sugar interacts with the brain to form a sensitization effect, and it is identical to how drugs—and sugar—interact with the brain of a non-addicted person. If addictions are formed through a pharmacological process, it is the exact same process that forms a person's likes and dislikes of any pleasurable stimulus. Terms like "addiction" and "dependence" can reasonably be employed when a person's likes become particularly strong, but it should be understood that these terms denote a difference in degree, not a difference in kind.

It is true that long-term addicts (especially alcoholics) sometimes undergo chronic frontal brain damage that impairs their judgment (Robinson and Berridge 1993). But these cases are the exception, and a person can certainly be severely addicted to a drug without suffering brain damage. For the most part, the changes in an addict's brain are the same changes that a normal person undergoes when they engage in any normal rewarding activity.

Living our lives changes our brains. Some of these changes can be labeled "damage" in the sense that they limit the brain's capacities for future change. But this is part of the normal and proper functioning of a brain. In particular, when we indulge in a rewarding activity, the reward mechanisms of our brains reinforce the neural pathways that led us to seek the activity in the first place, making us more likely to repeat that particular activity.

Despite these well-established findings, researchers continue to use the language of brain disease. Roy Wise, in his article entitled "Addiction Becomes a Brain Disease," never explains why we should think of chemically mediated brain adaptations as a disease (2000). Leshner has also repeatedly referred to addiction as a "brain disease" (1997). Our brains adapt when we take drugs or eat sugar or have sex. If these adaptations constitute a "brain disease," then rewarding activity is the pathogen. This disease changes our brains in a way which leads us to repeat those activities over and over. The name for this disease is "learning."

Different neural pathways are associated with the generation of different actions. For an action that has often been repeated or strongly rewarding, these pathways are well-worn and very active. An unusually active pathway might even be visible on an magnetic resonance imaging scan or on a biopsy plate, just as a violinist's calluses are visible on her fingers. But this is not enough to suggest that actions associated with these sensitized pathways are inauthentic or uncontrolled.

The Natural and the Unnatural

Some will likely object that drugs operate directly on the brain—"unnaturally"—whereas sugar does not. It is true that cocaine and alcohol operate directly on the reward centers of the brain. But this direct, exogenous mode of action is not required for an addiction to arise. It has been shown that rats can become addicted to injections of their own endogenous opioid peptides (or endorphins), which indirectly activate the reward systems by binding to the brain's opioid receptors (Clark and Grunstein 2000).

Heroin is one step removed from the reward system; it binds to the opioid receptors in place of the endogenous opioids. Sugar is another step removed, causing an unconditioned release

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of endorphins that bind to the opioid receptors, releasing dopamine. In every case, dopamine is released, and long-term dopamine release results in sensitization and cellular change.

Ultimately, it is irrelevant whether a particular brain activation state was produced by endogenous endorphins, for example, or by exogenous opiate drugs. From a behavioral point of view, the addictive behavior produces the activation of the reward pathways in the brain. The only relevant difference between drugs and sugar is that drugs produce a higher level of brain reward relative to the volume of the dose. It is easier to get addicted to heroin than to sugar, because you can do it by taking a quarter gram at a time. It is very hard to get addicted to water, because you must force down liters of it every day.

The highly concentrated nature of addictive drugs does make them uniquely dangerous, in the sense that they produce high degrees of brain reward in an extremely convenient way. Nonetheless, the end point of the addictive process is, from a biological standpoint, identical whether it is achieved with sugar or with cocaine. You can cut yourself with a scalpel or with a butter knife—the scalpel is much sharper and more dangerous. But we would never claim that a scalpel is the only device that can be used to cut.

Our evidentiary picture is, of course, incomplete. In the future, improved scanning techniques may reveal that some drugs do not stimulate the reward processes of the brain, but that they directly generate addictive actions. However, current evidence does not suggest that addictive behavior is generated by a process which is different in kind than any other pleasure-seeking behaviors.

Normative Bias in the Disease View—The Fiction of Affliction

The health risks of various addictions have been effectively disseminated, to the point where a person who takes heroin once is now assumed to also be choosing malnutrition, HIV infection, vein collapse, and overdose, as well as a complete loss of autonomy. A strong moral opprobrium exists against the seeking of deleterious pleasures. Health, as popular morality would have it, is worth more than a good time, and whenever a person makes the reverse valuation, it is assumed that they are disordered, reckless, or wanton.

Perhaps the single most frequently recurring evidence given in favor of the idea that addiction is not rational, or even voluntary, is that addicted drug users will continue to use drugs even when their health, career, or family is in jeopardy. They steal, use contaminated needles, and act in ways that undermine goods they have previously fought to attain and protect. In the worst cases, they continue to use until overdose, disease, or malnutrition ends their lives. Indeed, these kinds of life problems are the major diagnostic criteria in the clinical definition of addiction, or “drug dependence” as it is now known among psychiatrists. The diagnostic manual of the American Psychiatric Association (APA) states that the following can indicate the presence of an addiction:

> The substance use is continued despite knowledge of having a persistent physical or psychological problem that is likely to have been caused or exacerbated by the substance. (2000, 192)

Various authors have explicitly suggested that a person displays a loss of control over their actions when they choose some unhealthy pursuit. For example, Carl Elliott claims that depressed people cannot be considered autonomous unless they display a “minimal degree of concern for their own well-being” (1997, 113). Even if we believe that addictive choices are always deleterious to one’s health, is this enough to show that a person who chooses drugs over health has some disease or disorder which affects their autonomy?

Different Conceptions of Autonomy and Unhealthy Choices

Conceptions of autonomy can be divided into two groups. Procedural accounts of autonomy claim that our autonomy depends only on our capacity to process information and make choices in accordance with our preferences, whatever those preferences are. Substantive accounts of autonomy claim that, to be autonomous, we must possess certain normatively rational preferences (McKenzie and Stoljar 2000). It is important to distinguish these two types of account here because they make markedly different claims about the autonomy of a person who chooses to pursue some unhealthy desire.

On substantive accounts of autonomy, there can be value-ordering schemes that are fundamentally non-autonomous. Substantive conceptions of autonomy may claim that any person who values something worthless (like pleasure) over something worthwhile (like one's health) evidences a loss of autonomy. But this kind of loss of autonomy is not peculiar to addiction. On any substantive account of autonomy, addictive behavior is only non-autonomous because it represents a failure to desire what we have most reason to. There may be an ideal notion of autonomy, according to which fully autonomous agents desire only what they ought to desire. Clearly, however, few ordinary agents are fully autonomous in that sense, and clearly any view that implies that addiction is a disease because addicts are not ideally autonomous is overly general. Ordinary agents often desire things that they do not have most reason to desire.

Any plausible account that holds that addiction is a disease that undermines autonomy—that is, any plausible version of the Disease View—will have to advance a procedural model of autonomy. On any procedural account of autonomy, we cannot be rendered non-autonomous simply by preferring some desire over another. Procedural accounts by definition should be agnostic as to desire rankings. The most famous procedural account of autonomy is Harry Frankfurt's hierarchical account. Frankfurt points out that we have first-order desires, which are desires toward particular actions, and higher-order desires with regard to first-order desires. On Frankfurt's account, an addict demonstrates a loss of autonomy when he acts upon a desire for drugs, which he does not endorse (1971).

On Frankfurt's view, we autonomously act on any desire, if we endorsed that desire. No desires are ruled out as being incompatible with autonomy. Even a man who desires pleasure over every other good can be considered autonomous on this view, as long as he has a second-order desire that this pleasure-oriented desire should be his will. It seems reasonable to claim that some addicts do not regret their drug use at all—indeed, the APA's diagnostic criteria acknowledge this. Because it is at least possible that some addicts endorse their desires for drugs, it must be possible for addicts to be autonomous on Frankfurt's account.

In fact, on all procedural accounts of autonomy, we must be free to prioritize outcomes which damage our health. Because it seems that the Disease View is committed to procedural accounts of autonomy, it is inconsistent for holders of the Disease View to take unhealthy choices to be evidence of a disease or disorder.

The Regretful Addict

We are not suggesting that nobody who is addicted to a harmful drug regrets the harm resulting from their drug use. Addicts are often observed expressing such regret. But if we say that every addict must regret this loss of health, we make an unwarranted assumption about the addict's personal ordering of the value of different outcomes.

There is no possible justification for this claim other than the cultural norm. Even if we argue, along economic lines, that a person must remain healthy to attain more drugs later, we make the presumption that an addict cannot have authentic time-dependent attitudes

toward harmful drugs. That is, if people are free to choose any desire, we must allow that some people could desire one dose of drugs now over one hundred doses later.

Similarly, in some addicts, the presence of a strong persistent regret might be evidence of some sort of disordered mental state. But it is worth noting that we frequently regret our actions when we act in ordinary weak-willed ways. When I decide to watch television rather than work, I may later regret it. But nobody would characterize my decision as disordered or involuntary. Human beings make choices they regret, sometimes even repeatedly. There may be an ideal conception of autonomy, according to which making choices in the knowledge that one will regret them later, is non-autonomous. But telling us that addiction is non-autonomous in this sense is telling us very little: It is not distinguishing it from ordinary cases of weakness of will.

Whenever there is a strong moral opprobrium against a particular behavior, it is tempting to see that behavior as the product of a diseased or disordered mind. In 1851, Dr. Samuel Cartwright reported his discovery of a new disease in the *New Orleans Medical and Surgical Journal*. Local slaves were suffering from the affliction of ‘drapetomania,’ which Cartwright described as an “addiction” to running away from their owners (1851). In the American South during the mid-nineteenth century, it may have been difficult to believe that a sane slave would wish to escape captivity. Today, it is difficult to believe that a sane person would wish for outcomes that are harmful to their health, simply because normal people prioritize health ahead of pleasure. The case of drapetomania explains why no version of the claim that addiction is a disease should contain substantive normative claims about what a person’s preferences should be.

The Disease View makes a claim about what addicts can and cannot do. It claims that they cannot prefer to abstain from drugs. No matter how abnormal a preference is, it cannot be considered evidence that the holder of that preference lacks the capacity to hold other preferences. Some desires are imprudent, in the sense that it will make our lives worse if we act on them. Imprudence may be irrational, but it is not a disease.

Normative Bias in the Willpower View

Everyone has experienced the difficulty of delaying gratification and the regret that follows when we succumb to temptation. We characterize our limited power to overrule our desires as ‘willpower.’ We do not wish to claim that these struggles of will do not exist as mental phenomena. However, good explanations of willpower are free of the kind of normative bias that weakens the Disease View.

Claimed Wish to Abstain

One important characteristic of drug addicts that shapes how we view addiction is that drug users often say that they want to abstain, but that they are unable to do so. If we take these claims at face value, it seems like the agency of the addict has been somehow compromised. Normally, or so we may imagine, we can resist doing those things that we do not want to do, at least when there is no extrinsic coercive force. So there must be something wrong with a person who cannot resist performing some action. This conclusion motivates the Disease View, and especially the Willpower View. This conclusion depends on the belief that an addict is telling us the truth when she claims that she is unable to abstain. But there is reason to be skeptical.

Veracity of a Claimed Wish to Abstain

As a kind of a moral ‘sin,’ drug use holds an incredible stigma in Western societies, because of its association with mortality, crime, and antisocial behavior. Given that the average

person subscribes to some version of the Lay View, the worst thing an addict could say is that she used drugs because she wanted to or because she enjoyed it. This admission would place responsibility for a socially objectionable behavior entirely on the addict's shoulders. There is enormous social pressure for addicts to provide an alternative explanation for their drug use. This pressure is alleviated when an addict claims that she could not help but use a drug; that she could not control her behavior. When the behavior is characterized as a disease or an altered capacity, some of the social responsibility is shifted to the drug provider, instead of the user. And as Levy has argued, it need not be a deliberate deception; addicts may embrace and internalize this idea that they are somehow incapacitated (2003).

The Three Accounts of Willpower and Self-Control

The fundamental basis of the Willpower View is the idea that our desires can sometimes take control of our actions, leading us to act in an uncontrolled way. On this category of view, addicted people lack self-control, for one reason or another. What does it mean for a person to lack self-control? Holton and Shute (2007) offer a taxonomy of the philosophical and psychological literature on self-control that divides theories of control into three distinct species. First, there are theories that state a self-controlled person acts on the desires he wishes to have. Second, there are theories that state that self-control is the ability to act in accordance with what one thinks one ought to do. And third, that self-control is the ability to act in accordance with one's resolutions. None of these three theories can say that addicts are necessarily lacking in self-control unless they also make unreasonable normative or false factual claims about the nature of drug- or pleasure-oriented choices.

Let us consider first the hierarchical accounts. Harry Frankfurt's structural account of autonomy is a hierarchical account, which states that we act in a self-controlled way when we act on the desires which we desire to have (1971). Correspondingly, hierarchical accounts of addiction claim that there are "unwilling addicts" who have a "first-order" desire to use drugs which they do not endorse; they have a "second-order" desire that their drug-oriented desires should be absent or ineffective. Frankfurt's account might be the correct account of what makes a person autonomous, and correspondingly it might show that the 'unwilling addict,' who does not endorse her addictive desires, lacks control. The stereotypical drug addict is a person who claims to be an unwilling addict. But, as Frankfurt points out, there can also be "willing addicts" who endorse their addictive desires.

It is easy to find willing addicts in everyday life who endorse their addictive desires, yet who are paradigmatically addicted. Perhaps you are addicted to coffee; you drink it every day, you become irritable and slightly unwell if you cannot obtain it, and you will put aside several other goods to make sure you get your dose. As discussed, your brain doubtless contains the same neurological adaptations as a heroin addict's brain, although to some weaker degree. You are obviously addicted. Nevertheless, you endorse your desire for coffee; when you satisfy your cravings each day you do not regret it, and you do not yearn for the power to abstain. You are a willing addict.

The Willpower View is supposed to show that addiction entails a loss of control. But a willing addict, who endorses his addictive desires, has self-control on any hierarchical account. Frankfurt attempts to address this by offering an additional criterion by which we can distinguish the willing addict from the willing non-addict: "The willing addict's … desire to take the drug will be effective regardless of whether or not he wants this desire to constitute his will" (1971, 19). We now know that, as a matter of fact, the willing addict's desire for drugs does not automatically determine his actions. Once we discard Frankfurt's false empirical criterion, his account of addiction no longer distinguishes between willing addicts and non-addicts. If there is no difference between a willing addict and a non-addict, then the central claim of the Willpower View is false. Frankfurt's view—or any hierarchical

view of self-control—cannot support the claim that addictions necessarily constitute a loss of control.

Now we come to the second group in Holton and Shute's taxonomy. Wiggins (1987) claims that the layperson's view of willpower is that weakness of will consists in making choices that one knows or believes to be bad choices. This view has also been echoed in the writings of philosophers. One of us has advanced such a rationalistic account of autonomy (Savulescu 1994, 2007). Pettit and Smith (1993) have argued that we should replace the concept of "self-rule" or autonomy with "right-rule" or orthonomy:

> The good government of desire is a regime under which desire is faithful to the rule of deliberation; being endogenously inspired and maintained is not enough, even if it is necessary. (p. 76)

This could be the correct account. But it is, like the other accounts, incompatible with the claim that addictions are necessarily cases of lost self-control. Again, the biological and behavioral evidence tells us that a person can be thoroughly addicted without having any particular beliefs about whether or not the addictive choice is a bad one. Consider the coffee example once more: Although I am addicted to coffee, I do not consider the choice to drink coffee to be unwise or bad, and it seems reasonable to suggest that my (relevant) desires are "maximally informed and coherent": I know all the ill-effects my addiction has, and my addiction is not inconsistent with my other desires about my life. Yet my desire for coffee accords with "my beliefs about what I would want [myself] to do." But even if my desires diverge from those that would render my behavior orthonomous, this does not suffice to distinguish my desires from those of most normal agents, addicts or not.

The final group of theories is what Holton and Shute claim is the lay view regarding willpower: That strong-willed people are resolute; they follow through with their long-standing intentions (Holton 1999). Weak-willed people, on this view, fail to act on their intentions, even though they never at any point decide that their intentions are flawed. Plainly, even though many drug addicts repeatedly form intentions to quit drugs, you can be addicted to a substance without ever forming some particular intention to abstain. This is as true on the psychiatric definition of drug dependence as it is on the Lay characterizations of addiction. There are drug users who chronically use drugs, perhaps regretting the consequences, but never resolving to abstain.

Thus, this final class of willpower theory has a similar limitation to the hierarchical accounts: It cannot distinguish between addicts who never intend to abstain and non-addicted drug users who likewise never intend to abstain. If no such distinction is possible, it becomes absurd to suggest that willpower, so understood, has anything special to do with addiction.

Holton and Shute's "Lay" understanding of willpower, like Pettit and Smith's and like Frankfurt's, may be correct. But when it is used in conjunction with the claim that addictive behavior is caused by weakness of will, it requires an unsubstantiated and unreasonable claim that addicts have a universal intention to abstain. Addicts may not be ideally autonomous, on any of the three views of autonomy. But few agents are ideally autonomous on these views; that does not render their behavior non-voluntary.

If any of these theories of willpower and self-control is correct, we cannot call addictive behavior a defect of will or a loss of self-control without subscribing to some unwarranted normative or factual claim.

Political Bias

One primary explanation for the dominance of the Willpower, Disease, and Lay Views of addiction is that scientists, policymakers, and laypeople alike are laboring under a misunderstanding of what addiction is like. A number of key research findings characterize addictive behaviors as more normal, and in particular more voluntary, than they seem in these three different dominant views of addiction. These findings are not well known, probably because they do not support the conception of addicts as unwilling, disordered slaves who cannot help their immoral, pleasure-seeking actions. To eliminate this political bias, we can do no more than report these results, to generate a more balanced understanding of addictive behavior.

Withdrawal

The foremost characteristic of the stereotypical addict is withdrawal. A drug addict, we tend to assume, uses his drug because he becomes sick when he fails to use it. When Wikler was producing his research on addiction in the middle of the twentieth century, it was widely believed that the physical symptoms of drug withdrawal, such as nausea and diarrhea, were the primary motivators of addictive drug use. But in the 1980s, cocaine—which has comparatively mild physical withdrawal symptoms—became a bigger social problem than heroin. Thus, it became clear that withdrawal symptoms could not be a source of addictive motivation (Lyvers 1998).

In fact, very few drugs produce the kind of withdrawal syndrome that is so famous among heroin users. Even in the case of heroin, withdrawal seems to be context dependent and subjective—for example, heroin withdrawal symptoms seem to be reduced or entirely eliminated when an addict enters a secured rehabilitation facility that offers no hope of escape or relief (Peele and Brodsky 1976). Objective measures of heroin withdrawal bear no statistical correlation to an addict's subjective feelings of withdrawal (Loimer et al. 1991). Typical addicted heroin users use far more heroin than they need to simply negate their withdrawal symptoms (Lyvers 1998). Although the withdrawal focus has been eliminated from addiction research, it remains at the forefront of the political discourse.

Withdrawal is a kind of biological adaptation, which makes the Disease View very tempting. If it were true that addicts continued to use drugs mainly because of their aversion to withdrawal symptoms, this would support the idea that they use drugs mainly because of a brain adaptation. But it is not true.

Addicts Do Stop Using Drugs

The other classic characteristic of the stereotypical drug user is that they will continue to use drugs, no matter the consequences, until they finally die from drug-related health problems. One of the lesser known facts about drug addiction that has been obscured by the popular stereotypes is that drug addicts mostly just stop using as they get older (Winick 1962). Figure 1 shows the incidence of drug dependence in the United States as a function of age. By the age of fifty-five, drug dependence has all but disappeared, even though in the same year, a million teens aged fifteen to nineteen were dependent on illicit drugs.

One response to the data in Figure 1 is to say that all drug users just die young (from drug overdose or related symptoms), and that this is why there are fewer cases of drug use at older ages. Although this is difficult to verify empirically, drug-related deaths do seem to account for some of the age-related decrease in drug use, especially in the case of heroin. In one study, half of a cohort of heroin users had died after thirty-three years, when their average age was fifty-seven (Hser et al. 2001). Of the survivors, 40% had used heroin in the

past year. But even in this absolute worst case, more than a quarter of the original cohort had just stopped using drugs.

Drug addiction does make a person more likely to die. One study in Italy showed an 18-fold increase in mortality risk among dependent drug users (Goedert et al. 1995). But if even a small number of addicts just stop using as they grow older, then any successful account of addiction needs to explain why this occurs.

This presents a problem for each of the three views. On the Disease View especially, but also on the Willpower and Lay Views, it is hard to understand why drug users would just stop. If their brains have undergone some kind of long-term adaptation, you would expect their addictive behaviors to continue to worsen until they finally died.

The Substance Abuse and Mental Health Services Administration publishes figures on the number of drug users who seek treatment each year. In 2006, of the 21.1 million Americans who were classified as in need of treatment for drug use, only 4.5% said they felt they needed treatment (Substance Abuse and Mental Health Services Administration, 2007). The federal government's policy paper on drugs touts this figure as evidence that "the vast majority of people who need help are unaware or do not feel that they need help" (The White House 2007, 22).

But do these people need help? The Substance Abuse and Mental Health Services Administration study defined a person as "in need of treatment" if they met the diagnostic criteria for drug dependence laid out in the psychiatrists' manual, the DSM-IV. To qualify as "in need of treatment" on this basis, respondents needed to meet at least three out of seven criteria (APA 2000, 192). For example, one person would qualify as "in need of treatment" if he spent a great deal of time obtaining a drug, gave up his job to take the drug, and had developed a heightened tolerance to the drug. A different person might qualify under these criteria if she continued to take a drug despite health problems, persistently desired the drug, and often took more of the drug than she had earlier intended. It seems entirely plausible to us that both of these people could be right when they say that they "feel that they do not need treatment." Even if we accept that these people are addicted, and that the addiction is making their lives objectively worse, most of them will nevertheless stop using drugs after some amount of time has elapsed.

Addicts Do Stop for Reasons

Fischer and Ravizza (1998) have promoted "reasons responsiveness" as the primary yardstick for self-control. A person cannot be considered to be acting in an autonomous way if he is unable to change his behavior in the face of some countervailing reason. The stereotypical, compulsive drug user cannot meet even this minimal criterion for autonomy. For example, Oddie (1993) has claimed that drug-oriented desires are not 'reasons-responsive.' However, this picture is enormously exaggerated. The evidence suggests that drug users do in fact respond to countervailing reasons, which undermines much of our evidential basis for deeming their self-control to be compromised. Stephen Hyman (2007) offers this bleak description of an addict's prospects for recovery:

> Perhaps in a drug-free context, perhaps with a good measure of initial coercion, perhaps with family, friends, and caregivers acting as external "prostheses" to shore up damaged frontal mechanisms of cognitive control, and often despite multiple relapses, people can cease drug use and regain a good measure of control over their drug-taking. (p. 10)

This is in line with the popular, politicized view of addiction described, but it is a false characterization of the behavior of drug addicts. First, and as Hyman (2005) points out,

addictive drug use is context dependent because addictive desires are strongly cue dependent. When the cues disappear, often, so do the addictions. For example, during the Vietnam War, a large number of American soldiers became addicted to heroin. Upon their return home, very few continued to use (Robins and Slobodyan, 2003). But international travel is not required to change the drug-related contexts in one's life. One basic example of this is the alcoholic who crosses the street to avoid walking past a bar. This does not prove the alcoholic has no control over his drinking—rather it shows the reverse; he demonstrates control over his drinking by crossing the street.

Even when the drug-taking contexts remain the same, some addicted drug users stop using drugs when they are given a new strong reason to abstain. Mothers with a dependent child frequently stop using heroin to provide better care (Watson 1999). Drug users stop using just because the price of their drug rises, or just because they sat down and weighed the pros and cons of continued use (Neale 2002).

All kinds of reasons, great and small, can cause an addicted drug user to stop using drugs. It is true that there are many addicts who do not respond to some strong reasons, like the impending loss of a job or a partner. It is true that gamblers sometimes sell their family home to finance their habit. It is also true that an alcoholic might need to cross the street to avoid walking past a bar, whereas an ordinary drinker does not. But these things do not tell us that addicts behave robotically—they only tell us that drug-oriented desires can be very strong.

If not only some addicts, but the majority, just stop using at some point, it presents a problem for the Willpower and the Disease Views. There is no obvious reason why a chronic brain adaptation (i.e., a "brain disease") would suddenly reverse itself, and in fact there is no evidence that these adaptations reverse themselves at all, over long periods of drug use. Of course, the brains of addicts who "just stop" are never scanned. Similarly, there is no obvious reason why an older person would suddenly find themselves with a much higher and more permanent stock of willpower.

It could be argued that strong desires can somewhat limit a person's willpower or even their autonomy, but there is simply no evidence that these limitations are exotic or different in kind from the everyday limitations on a person's ability to choose. If addictions do indeed limit personal freedom and control, some new analytic or empirical evidence must be produced in order to prove it. In the meantime, we should limit our understanding of addiction to what we can prove. This limited account of addiction will be much more modest in scope than the accounts that are popular among experts and laypeople today.

A Liberal View: What's Left Over?

Eliminating all of the errors introduced by normative and political bias does not leave us with a complete theory of addiction. What we get is a skeptical or minimal theory, which has less explanatory power but is factually correct. We call this view the Liberal View of addiction, because it permits people to nominate their own desires and values. The Liberal View contains only three claims about addiction. First, we do not know whether an addict values anything more than the satisfaction of his addictive desires. Second, we do not know whether an addict behaves autonomously when they use drugs. Third, addictive desires are just strong, regular appetitive desires.

Any Given Addict May Value Drugs More Than Abstinence

Once we accept that an addict's self-description is likely to be influenced by social stigma, and once we accept that drug-seeking choices are not usually made under the influence of

drugs, we should accept that many addicts may be choosing to use drugs because they desire drug use more than any other thing. Even though the choice to take drugs can produce extremely deleterious consequences, we cannot infer from this fact that addictive choices are involuntary without making unwarranted assumptions about a person's ordering of values. In particular, it should never be assumed that a person would prefer to preserve their health or life rather than obtain some strongly desired outcome.

Addictive Actions Should Be Assumed Prima Facie Autonomous

It is often claimed that an addict's drug-seeking actions are partially or completely non-autonomous. On substantive accounts of autonomy, this claim has little diagnostic power. Addicts might seem non-autonomous on these accounts, because they prefer a range of imprudent outcomes—but this does not distinguish them from non-addicted, imprudent people. If the claim that addicts are non-autonomous is to have any diagnostic power at all, a procedural account of autonomy is required.

The Liberal View rejects the normative claims that must be assumed to demonstrate that addicts have reduced procedural autonomy. Once we abandon normative bias, we can no longer assume that an addict ignores or reverses her priorities when she decides to use drugs. We must accept that there is a possibility that drug taking is her highest most valued priority, and we must treat with skepticism any claim of a thwarted desire for abstinence. We must accept that drug taking may be a preference she endorsed after reflecting on relevant facts and considering the alternatives.

When a person acts on a desire that is her considered, most valued priority, and when that priority is a long-standing desire that the person has developed in response to pleasurable experiences, there is no procedural theory of autonomy that should hold the person's action to be non-autonomous. Such an action is paradigmatic of autonomy. Once we abandon normative bias, we must accept that there will be addicts who have this complete, paradigmatic autonomy in their behavior.

Some addicts, perhaps, choose to use drugs when the opportunity arises, even though they more often prefer to abstain. These addicts discount distant goods, so that goods that are immediately available have more salience than those that are far away. But this kind of discounting is not enough to show that the addict acts in a way which is non-autonomous in a procedural sense, no matter how powerful the discounting is. Procedural accounts of autonomy cannot insist on any necessary ordering of preferences and this means that they cannot insist that preference ordering remain static over time.

The evidence shows that even those who are strongly addicted sometimes respond to countervailing reasons. This fact alone is enough to show that addictive desires do not "hijack" a person's capacity for self-control in all cases. Still it might turn out that some particular cases of addictive behavior are in fact not autonomous. The Liberal Account does not deny this—instead it claims that addicts cannot be assumed to be acting non-autonomously, on a procedural account of autonomy. On an ideal account of autonomy, which holds that autonomous people desire only what they ought to desire, every addict might have reduced autonomy. But such arguments apply equally to very many non-addicts. Thus, the Liberal Account shows that addiction cannot be defined as a condition that reduces autonomy or self-control.

Addictive Desires Are Just Strong Desires Toward Pleasure

As we have shown, the biological evidence around addictive desires does not support the claim that they are different in kind or in origin than normal desires. In both drug use and in normal behavior, strong rewards create adaptations in the brain, which are called "reward

sensitization" or "incentive sensitization." (Robinson and Berridge 2000) When a given stimulus causes repeated, large releases of dopamine, the brain adapts. These adaptations increase the salience of that stimulus, meaning that it becomes more important and desirable for the agent.

Sometimes, scientific terms such as "salience" and "sensitization" serve to mystify the mundane. In plain English, if we repeatedly obtain some pleasurable experience, we start to want it more. It moves up in the rankings of experiences we would like to repeat. If we regularly engage in an extremely pleasurable experience, it is only natural that we will come to place a higher importance on that experience. The Liberal View is not so minimal that it cannot say what addictions are. They are strong appetities toward pleasure.

Toward a Complete Account of Addiction?

The question that the Liberal Account cannot answer is whether strong pleasure-oriented desires are enough to compromise autonomy. The answer to this depends on which account of autonomy we choose. The Liberal View does not force us to accept a procedural account of autonomy. It might be true that these strong desires reduce a person's autonomy because they are normatively worthless. However, if addictions are nothing more than a species of strong appetite, then even if strong appetitive desires can limit a person's autonomy, this does not tell us that addictions have any distinctive autonomy-reducing property. Anybody can hold a strong desire, whether or not they are addicted. On substantive accounts of autonomy, there is no way to differentiate the autonomy of an addict from the autonomy of a non-addict who has some strong desire.

On procedural accounts of autonomy, a person may be fully autonomous even though he ranks some preference much higher than every other preference. Suppose Joe can either use drugs or receive ten thousand dollars. He chooses drugs. It might be true that Joe is incapable of responding to the monetary incentive, or it may be that he values immediate access to drugs more strongly than this amount of money. Even if we offer Joe ten billion dollars and he still refuses, we cannot be sure that he is unresponsive to countervailing reasons. Hence, Joe's behavior can never in itself show the existence of reduced procedural autonomy. To say that his autonomy is reduced, we need to know what his preference orderings actually are, and how they were formed.

It may be that neuroscience can tell us whether addictive behavior is autonomous. But empirical strategies for answering this question would depend on technology that is not available. We do not have mind-reading equipment that can read the name and power of every desire in a person's mind, so we cannot tell whether individual addicts are, in fact, acting against their own desires or values when they use drugs. Nor can we tell whether a person acts against their desires when they have sex or when they eat food.

A complete theory of addiction would tell us whether, in fact, any addicted people suffer a loss in autonomy, and it would tell us how to distinguish addicts with compromised autonomy (if they exist) from addicts who use drugs autonomously. Such a complete account of addiction is beyond the scope of this article; it may even be that such an account cannot be delivered without further advances in biological and psychological science.

However, the Liberal View tells us what we do not know, and what addiction is not. This information generates a range of conclusions which are not available under the popular, biased conceptions of addiction, which present a 'fiction of affliction.'

How the Liberal View Changes the Status Quo

The Liberal View tells us little about what addiction is, but much about what it is not. Flawed accounts of what addiction is have formed the basis of treatment strategies, drug laws, enforcement policy, and our cultural attitudes toward drugs. Even though the Liberal View is an incomplete account of addiction, it correctly predicts aspects of addicts' behavior that are mischaracterized by the incumbent accounts. For example, if addictions are just strong desires, this explains why sometimes an addict acts on a (stronger) desire that compels them to abstain from their addiction. This view correctly predicts that addicts will behave in a manner that is "reasons-responsive," but that they are likely to respond to different reasons than a non-addicted person.

The Liberal View also accommodates the empirical data that show that addicted drug users often just stop using drugs after a certain amount of time. As we grow older, our desires change. Certain goods—like health, security, and stability—increase in importance, while others become somewhat less important in later life—like novelty, exhilaration, and pleasure seeking. As a person's desires change, it is also natural that some behaviors will go from being on-balance desirable to undesirable.

Changes to Treatment Policy

The Liberal View does not deny that an addict may regret becoming addicted, or that he may regret the pleasure-oriented choices he makes while addicted. Imprudent desires reduce a person's overall enjoyment of life over a long period. Strongly imprudent desires can strongly reduce a person's enjoyment of life. And because drugs are pleasure-oriented appetitive desires, the satisfaction they produce is fleeting. If an addict wants to improve his life through practical measures, such as diminishing the availability of a drug, we should offer him help.

We may also find justifications for "treating" addicts against their will, but the justification for this decision cannot rest on the assumption that that addict has lost her autonomy. It will be a paternalistic intervention aimed at correcting social problems and improving an addict's life in a normative sense (at the cost of their autonomy). The fiction that an addict ought to be treated against her will—because the addiction is proof of lost autonomy—must be abandoned.

The Liberal View also exposes weaknesses in certain methods used to treat addiction. For example, the first step of Narcotics Anonymous, Alcoholics Anonymous, and related twelve-step programs, requires users to admit they are "powerless over drugs" or "powerless over alcohol" (Alcoholics Anonymous World Services 2002). This may sometimes be helpful in producing patients who are (at least temporarily) abstinent, but it also helps to perpetuate in addicts a flawed understanding of why they continue to use drugs. This suggests that encouraging addicts to admit powerlessness may be deeply counterproductive for the majority of drug users.

This Liberal Account of addiction also suggests that treatment clinics, which enforce total abstinence, should be rejected in favor of rehabilitation programs that help an addict to control the stimuli and contexts that exist within their everyday lives. Appetitive desires reflect neurological adaptations, and these adaptations do not appreciably fade even after long periods of abstinence (De Vries et al. 1998). Thus, abstinence will not reduce the likelihood of relapse.

In fact, controlled drinking has been shown to be no less effective than abstinence as a treatment strategy for alcoholics (Sanchez-Craig et al. 1984), but the Liberal View entails

that it is also often a more desirable outcome. Because addictions are just strong desires toward pleasure, the optimal outcomes are those that permit a person to enjoy some of the pleasures he most desires. Good rehabilitation programs will enable an addicted drug user to find appropriate places for pleasure—even drug-related pleasure—within the life that they want to lead.

Another implication of the Liberal View is that we may be able to develop treatments that generate counterincentives for drug use, which an addict will respond to. Imprisonment, social exile, and loss of health are not sufficiently strong reasons to dissuade some addicts, but new treatments could be built around more salient, immediate interests. Current treatment models are very expensive and not very effective; perhaps, we should try paying them to stop.

Changes to Enforcement Policy

Modern drug use is associated with a range of related crimes—burglaries, muggings, murders, and so forth. These crimes are a large component of the ‘drug problem.’ It is also inarguably the case that many of these crimes would never be committed if it were not for the laws and the enforcement policies that make drug supply and use a dangerous illicit activity. Furthermore, if not for these laws and enforcement policies, the deleterious effects addiction has on health would be diminished. The long-held belief that changes in the purity of heroin are to blame for overdose deaths has been shown false (Warner-Smith et al. 2001); however, prohibition of drugs drives up their price, which reduces the availability of health care and nutrition for addicts who have less money left over after they buy drugs (Miron 2003). Chronic drug users are often refused medical care or are mistreated because of the cultural opprobrium against drug use (Dicker 1998; Weiss et al. 2004).

Indeed, much of the negative normative loading in the term “addiction” comes directly from the laws and policies that prohibit drug use. As discussed, some of it comes from a more general opprobrium against pleasure-seeking, and from a widespread bias in favor of activities which preserve a person’s health. There are a number of explanations for the existence of these latter two biases. Self-harm and pleasure-seeking decrease individual goods without producing anything in return. Pleasure-seeking is a fundamentally selfish goal, and societies may run better when only cooperative goals are pursued. Hence, there may be some moral justification for controlling the availability of pleasure in a society, to improve economic output or limit social disruption. It is beyond the scope of this paper to evaluate such justifications, although Mill’s “harm principle” is a good place to start: that is, the law should only be used to prevent people from harming one another (Mill et al. 2003).

Good laws should not create new problems. Good laws should aim at remedying existing problems. The Liberal View encourages the adoption of a drug enforcement policy that addresses the problems (if any) that are intrinsic to the drugs themselves. For example, under the Liberal View it remains justifiable to prohibit the sale of substances that are harmful at any dose but palatable—poisoned donuts, for example. It will also be justifiable to prohibit those substances that are harmful only when overused, but become more palatable at dangerous doses. For example, heroin produces a stronger euphoric effect at dangerous doses, so a holder of the Liberal View might at least argue that it is too hazardous to be made freely available. Water, although also poisonous at a high dose, is not nearly so pleasurable to ingest in dangerous quantities.

However, some drugs, such as mescaline, produce a pleasurable effect that is not dose dependent, and they are not particularly hazardous. The Liberal View suggests that there is no reasonable justification for prohibiting such substances. Furthermore, a full account of addiction might reveal that drug users are often completely autonomous in their drug use. If

such an account is developed, we could no longer endorse the prohibition of any drug, no matter how toxic or pleasurable.

A complete and correct theory of addiction may reveal that we are personally responsible and morally culpable for crimes we commit to obtain drugs. Or, it may reveal that some addicts lose some degree of responsibility. The Liberal View takes no stand on this matter, although it does imply that crimes committed in the course of addiction cannot be assumed involuntary on current evidence.

Apart from the question of personal responsibility, the Liberal View recommends strongly against the imprisonment of addicts as a means to reduce drug use and rehabilitate drug users who are caught. If a person has such a strong desire for a particular drug that they prefer it to most other goods, imprisonment is unlikely to form an effective deterrent, especially because drug use may continue in prison. Furthermore, the Liberal View predicts the high rate of recidivism in those people who are imprisoned for addiction-driven crimes (Spohn and Holleran 2002), because the neurological adaptations that generate appetitive desires do not appreciably fade during periods of abstinence.

The Appropriate Role of Pleasure in a Life

The bias that we removed to generate the Liberal View is largely a bias against the value of pleasure-seeking behavior. To get at the truth about the nature of addiction, we need to allow each person to hold his own set of desires and values. Even though we have argued against normative bias in the questions of addictive function, we do not wish to argue that it is inappropriate or impossible to make normative judgments about the value of pleasure-seeking behaviors.

We must be able to make normative judgments about a person’s actions. Even if we accept that people may hold any desire of any given magnitude, it can be true that these desires are for actions immoral or normatively wrong.

Many modern societies bear a strong norm against privileging pleasurable activity over other activities such as hard work. Some of the reasons for this are historical or religious. Some relate to a person’s ethical duties toward others. And of course, there are philosophical arguments in favor of the claim that pleasure-seeking is not valuable. Kant, for example, felt that pure pleasure-seeking activity entailed treating oneself as a “mere means to satisfy an animal impulse” (Kant and Gregor 1996, 179).

A person who acts imprudently is also open to criticism under normative theories of rationality. But whatever our normative ideals are, we cannot make normative judgments about pleasure-seeking actions unless we first understand how and when pleasure-seeking can be prudent. Can pleasure-oriented choices meet a standard of self-interested rationality?

The Rationality of Addictive Desires

Addictive desires have a degree of normative rationality, which depends on the particular object of addiction and the context in which one is addicted. Being addicted to breathing, for example, will not produce imprudent actions except in extreme cases. If you are jettisoned out of a spacecraft into space, for example, the best thing to do is to exhale so that the pressure differential does not puncture your lungs. But when the subject of addiction is a faintly pleasurable, very dangerous and expensive drug (like cigarettes), nearly every addictive action will be an imprudent one.

It is well known that many of life's pleasures are obtained only indirectly, by focusing on some other activity as an end in itself (such as achievement or friendship), and not by directly seeking pleasures. For example, Parfit says:

> Hedonists have long known that happiness, when aimed at, is harder to achieve. If my strongest desire is that I be happy, I may be less happy than I would be if I had other desires that were stronger. Thus I might be happier if my strongest desire was that someone else be happy. (1984, 6)

So it may be the direct search for pleasure is less rewarding than seeking out other objectively valuable activities. This is not an objection to pleasure seeking, but an instruction on the best means for achieving it. Addicts may be irrational or imprudent, but they may also be no less free than the rest of us. Many of us fail to make choices which are best or even likely to give us the most pleasure.

Pleasure as a Good

Addiction raises the question of whether pleasure can be a good. We have been referring to pleasure as a conscious sensation produced by the brain that has the quality of being pleasant, enjoyable, and satisfying. There is an essential quality to pleasure that all of us have experienced, except the most pathologically depressed, but it is impossible to articulate. It is this irreducible sensation of pleasure that attends eating, sex, exercise, success, and experience of comedy that we have been referring to. However, pleasure has a long philosophical pedigree.

The doctrine of Hedonism as expounded by the father of Hedonistic Utilitarianism, Jeremy Bentham, describes only one valuable mental state—happiness or pleasure—and one negative mental state—unhappiness or pain (Bentham and Lafleur 1948). The Benthamite Hedonist claims that happiness is the only intrinsic good[1] and unhappiness the only intrinsic evil.

Philosophers have argued that this version of hedonism cannot be a full account of well-being. Not all valuable mental states can be subsumed under the single state, happiness. Griffin (1986) cites the example of Freud, who, dying of cancer, refused analgesia because he preferred "to think in torment than not to be able to think clearly." Although Freud was clearly in pain, "thinking in torment" was more valuable to him than its alleviation. The classical Hedonist might reply that although Freud was in great pain, thinking in torment provided him with great "happiness." This use of "happiness" is obscure. It is better to say that there are valuable mental states other than pleasure or happiness. Hedonism needs to be redefined. Sometimes the refinement is called pluralism.[2] Whether this "pluralistic" Hedonism is still Hedonism is a semantic matter.

Which mental states are valuable? There are two ways of answering this question. Sidgwick (1907) argued that valuable mental states are those mental states which would be desired by a person:

> I propose therefore to define Pleasure … as a feeling which, when experienced by intelligent beings, is at least implicitly apprehended as desirable or—in cases of comparison—preferable. (p. 127)

[1]Edwards (1979, 17) defines an intrinsic good as "by definition … something worth having, achieving, choosing, desiring, experiencing, bringing into existence, or sustaining in existence, for its own sake."
[2]Griffin (1986) claims that this is "Sidgwick's compromise."

> [T]he statement that 'Pleasure is the Ultimate Good' will only mean that nothing is ultimately desirable except desirable feeling, apprehended as desirable by the sentient individual at the time of feeling it. (p. 129)
>
> [I]t is therefore this Desirable Consciousness which we might regard as ultimate Good. (p. 397)

Parfit calls this "Preference Hedonism." We call it Subjective Hedonism.

The second way in which mental states might be ascribed a value is to posit that some mental states are objectively valuable. Call this "Objective Hedonism." Examples of mental states that might be posited as instances of objectively valuable mental states include satisfaction, fulfillment, calm, peace, hope, the experience of love and friendship, and a sense of control and achievement.

Both subjective and objective hedonism are accounts of what makes a life go well. We have instead focused on a narrow hedonism: The experience of pleasure as a simple sensation. We have not sought to give a full account of what makes a life go well, or how to obtain that. Rather we have argued that pleasure, narrowly construed, is a legitimate human good that people can and do autonomously choose. Addiction is an illiberal term invented to describe those who seek pleasure in a way that expresses our social disapproval.

A full and correct account of addiction would take seriously the claim that pleasure as a sensation can be a part of an autonomous and even rational life plan. A full account of addiction will make it a term we can use in a liberal way.

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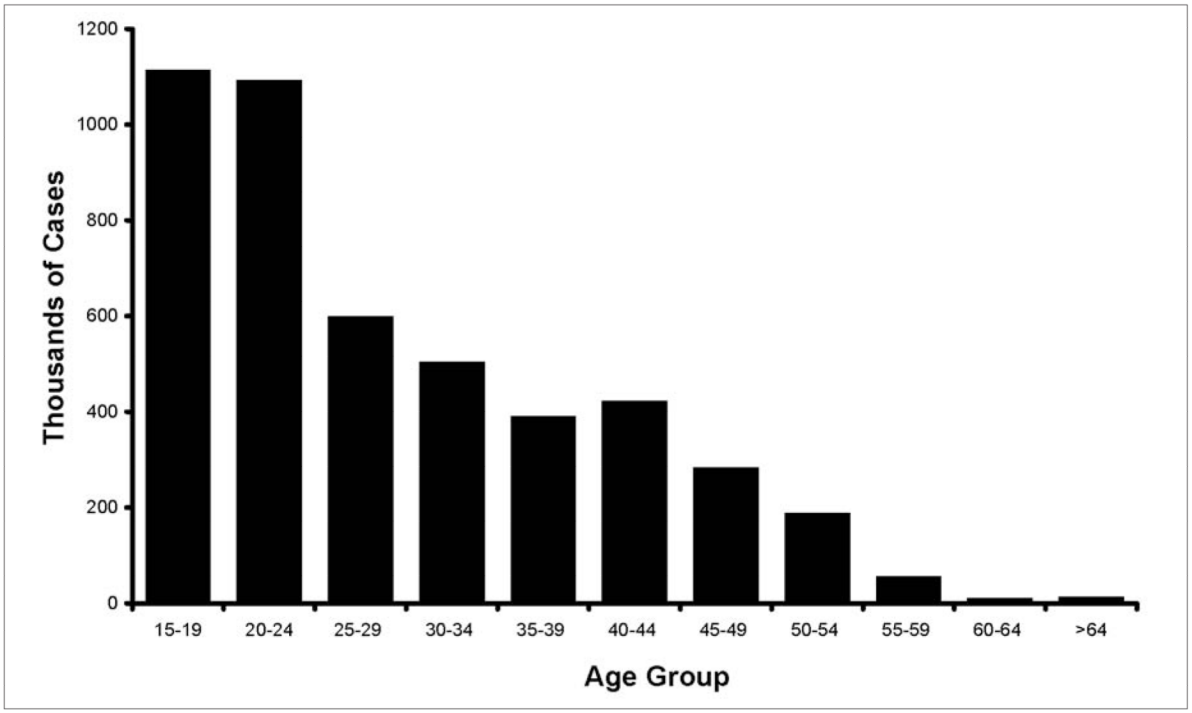

Figure 1. Past year illicit drug dependence, United States, 2004 (Substance Abuse and Mental Health Services Administration, 2004).

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