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CHAPTER 50

WHAT IS ADDICTION?

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Clinicians debate whether addiction is a disease (Heyman 2009; Hyman 2005; Leshner 1997; Pickard and Pearce, in press). Philosophers and lawyers argue about whether addicts are morally or legally responsible (Sinnott-Armstrong, in press). Scientists disagree about which drug users to include in experimental studies of addiction. People wonder whether their friends or they themselves are addicted—and what that means. None of these issues can be settled until we determine what addiction is. That is the task of this chapter.

The Challenge

It is not easy to define addiction. One problem is that addiction takes many forms. There is wide variation in who is addicted, what they are addicted to, and the precise form, health effects, and motivation for the addiction.

Paradigmatic addictive substances are illegal drugs, including heroin, cocaine, morphine, barbiturates, and amphetamines. People can also become addicted to legal drugs, including alcohol, nicotine, caffeine, and prescribed medications, such as benzodiazepines and hypnotics (including Z drugs, as they are commonly known). In addition, popular culture and expert opinion increasingly count forms of behavior as addictions: for instance, gambling, sex, work, food, shopping, and Internet surfing or gaming (cf. Ross 2008). Propensity and rate of drug use leading to addiction varies across population group and kind of substance. Substances also differ with respect to health risks: from lung cancer and sclerosis of the liver, to malnutrition and risk of mental illness. The existence and nature of withdrawal symptoms also vary across kind of substance and, no doubt, individual addict. Physical withdrawal from heroin is comparable to a bad flu. In contrast, cocaine withdrawal is more like depression, with loss of energy and interest. Alcohol withdrawal is the most severe, with risk of hallucinations, delirium tremens, and death.

There is also variation in who gets addicted. Addiction occurs across levels of socioeconomic status (SES), intelligence (IQ), and education. Still, rates of addiction are positively

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correlated with low SES, low IQ, adolescence and early adulthood, childhood abuse, stress, psychiatric disorders (in particular, personality disorders), and religion (unsurprisingly, Mormons don't get addicted as often as others).

In addition, the motivation for drug use varies. Müller and Schumann (2011) identify the following eight goals of non-addictive consumption: (1) improved social interaction, (2) facilitated sexual behavior, (3) improved cognitive performance, (4) coping with stress, (5) alleviating psychiatric symptoms, (6) novel perceptual and sensory experiences, (7) hedonia or euphoria, and (8) improved physical and sexual appearance. Many of these motivations may survive once consumption becomes addiction (Pickard 2011). Further, once addicted, people may use drugs to maintain normal functioning and avoid withdrawal, as when former heroin addicts take up methadone maintenance.

Such variation issues a challenge to define addiction. A definition needs to specify what is common and peculiar to all these cases that make them count as cases of addiction. We need a definition to know what addiction is.

Definitions

Just as there are various kinds of addiction, so too there are various kinds of definition. When a definition is required, especially in philosophy or science, we need to establish the kind needed (Sinnott-Armstrong and Fogelin 2009).

Dictionary definitions report common usage. However, common usage can be very loose and vague, so dictionary definitions are often useless or misleading in philosophy and science. Stipulative definitions are likely to be more precise, but, because they are stipulative, they too may be useless or misleading. When we ask what addiction is, we need a definition that is neither a dictionary definition nor a stipulative definition. Instead, we need what is called a precising (or sometimes theoretical) definition.

A precising definition picks out a relatively precise class of conditions that lies within the limits of common usage (and so is not arbitrarily stipulative) but does not reflect all the vagueness of common usage (and so is not a dictionary definition). The goal of precising definitions is to be useful, either theoretically or practically. This pragmatic element in precising definitions might seem unusual, but it is not. The purpose of the standard definition of water as H_2O is to simplify theories of chemical bonding. For this reason, the definition is neutral with respect to the exact isotopes of hydrogen and oxygen, for isotopes are not relevant to chemical bonding. Similarly, precising definitions of death may be chosen partly for their usefulness in medicine, or, alternatively, moral theories. Precising definitions cannot stray too far from common usage if they are not to mislead. Nor should they conflict with our best scientific or theoretical understanding of the subject matter if they are to be accurate. But they are judged in large part by their usefulness, relative to a particular purpose.

The question we must therefore ask is: Which purposes should a precising definition of addiction serve? The answer is: several. Clinicians need to decide whom to treat. They need a definition of addiction that is relevant to that aim. Health insurance companies need to decide for whom they are willing to pay for treatment. The goals of insurers are, of course, not always consonant with the goals of treatment. Law courts need to decide whether a defendant is criminally responsible and so should be held straightforwardly accountable before the law

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and potentially imprisoned, or whether they should be remanded to a treatment program. These courts will have different purposes than clinicians or insurers. Scientists who study addiction want a definition that allows them to collect data in ways that enable precise scientific generalizations and theories. Finally, individuals need to decide how to think and feel about friends and family members who abuse drugs. Personal relationships can be affected significantly according to whether or not a person is seen as addicted. The definitions resulting from these various purposes can inform one another. They can also potentially, at least to some degree, conflict. But the purposes are all legitimate in their particular context.

As a result, there may be multiple definitions of addiction, each appropriate to different purposes and contexts. Or, if there is a single definition, it will need to include a variable term like "significant" that gets filled in differently in different contexts. (That is the kind of definition that we will propose here.) Either way, it is important to keep this pragmatic issue in mind in assessing various proposed definitions of addiction.

Symptoms

The *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition, Text Revision* (DSM-IV-TR; American Psychiatric Association 2000) defines substance dependence (which is synonymous with addiction) thus:

> A maladaptive pattern of substance use, leading to clinically significant impairment or distress, as manifested by three (or more) of the following, occurring at any time within the same 12-month period:
>
> (1) tolerance
> (2) withdrawal
> (3) using more than was intended
> (4) persistent desire or unsuccessful efforts to control use
> (5) a great deal of time spent obtaining, using, or recovering
> (6) reduction in other important activities because of use
> (7) continued use despite knowledge of its causing a persistent or recurrent physical or psychological problem.

This definition was formulated by a committee of leading experts for use by practicing psychiatrists and clinicians.

This definition is useful for at least one clinical purpose. If a prospective patient has three or more of these symptoms, along with "clinically significant impairment or distress," that could be a reasonable basis for treating the individual for addiction. It could also justify inclusion of addiction as a condition that we expect health insurers to cover and public health providers, such as the UK National Health Service, to treat. After all, people with three or more of these symptoms, leading to clinically significant impairment or distress, need help, which psychiatrists and clinicians may be in a position to provide.

The difficulty is that the polythetic nature of this definition means that very different patterns of substance use and attendant problems will all count as addiction. This limits this definition's capacity to fulfill another core clinical purpose of diagnosis, namely, to establish prognosis and indicate treatment course. For instance, compare (a) a drug user who develops

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tolerance and withdrawal, who spends a great deal of time obtaining drugs and correspondingly reduces other important activities, and whose anxiety about ensuring a regular supply of drugs reaches clinically significant proportions, but who has no other symptoms—no overuse, no unsuccessful efforts to stop, no clear recognition of the connection between use and anxiety; with (b) a drug user who routinely uses more than intended, makes unsuccessful efforts to control use, and continues use despite knowledge of its causing persistent and recurrent physical and psychological problems which together lead to clinically significant impairment and distress, but who has no other symptoms—no increased tolerance, withdrawal, or reduction in other activities, and little time spent obtaining, using, or recovering.

From a clinical perspective, both patients should be treated. But appropriate treatment is symptom dependent. In the first case, treatment (depending on the drug of abuse) is likely to require medically supervised gradual reduction in use and management of withdrawal symptoms, medication and/or cognitive behavioral therapy for anxiety, and life skills coaching for developing replacement activities. In contrast, the treatment for the second case is unlikely to require medical supervision, as opposed to any number of therapeutic interventions designed to improve control, develop strategies for relapse prevention, increase self-esteem and self-worth, and identify and address any underlying reasons for use as well as the attendant physical and psychological problems. In short, because of the polythetic nature of the diagnostic criteria, the DSM-IV-TR does not offer a unified set of diagnostic criteria for addiction. This limits its capacity to establish prognosis and indicate treatment course. Of course, clinicians take case histories, and in that context they can tailor treatment to individual needs. Nonetheless, this disunity suggests that the definition could in principle be improved in order to better serve clinical practice.

It also means that the DSM-IV-TR definition of substance dependence cannot adequately serve scientists who study the neural bases or psychological mechanisms of addiction, or philosophers who are interested in whether addicts are appropriately held responsible for their drug-connected and drug-consequent behavior. There is likely to be too much variety among individual addicts diagnosed with substance dependence according to the DSM-IV-TR for science to discern a unified set of neural bases and psychological mechanisms, or for philosophers to construct any unified, general principles for responsibility ascriptions to addicts. For the purposes of scientists and philosophers, then, we also need a different definition.

Appetites

Philosophical definitions of addiction tend to be pithy. Foddy and Savulescu define it thus: "An addiction is a strong appetite" (2010, p. 35). Of course, we now need to know what an appetite is. They define an appetite as: "a disposition that generates desires that are urgent, oriented toward some rewarding behavior, periodically recurring, often in predictable circumstances, sated temporarily by their fulfillment, and generally provide pleasure" (Foddy and Savulescu 2010, p. 35). So much for pithiness. Note that this definition does not restrict addiction to substances: arguably, as mentioned earlier, the appetite could be for gambling, sex, work, food, shopping, or the Internet (cf. Foddy 2011).

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From a scientific or philosophical point of view, this definition does have some advantage over that in DSM-IV-TR. It enables scientists to seek the neural bases and psychological mechanisms for such strong appetites, and philosophers to ask whether people are responsible for what they do as a result of such strong appetites.

Nonetheless, Foddy and Savulescu's definition is too narrow. To see why, it is useful to import the distinction between liking and wanting as developed by the theory of incentive sensitization (Robinson and Berridge 1993). We engage in some activities because we get pleasure or reward from them. In short, we like them. For example, many people like watching comedies, or eating ice-cream, or physical thrills. But we also engage in some activities because we are motivated to do them regardless of whether we expect to get any pleasure or reward from them. In short, we may want to do them, but not because we like to do them. These motivations may be various, but, in the case of addiction, the theory is that addictive wants are triggered by drug-related cues that have become associated through sustained, heavy use with consumption: they are perhaps not unlike the desires of a salt-deprived rat for salty water. The salty water does not taste good even to the rat: the rat does not like the water. But it nonetheless wants the water very much (Robinson and Berridge 1993).

Foddy and Savulescu's definition of appetite seem to combine liking with wanting. They mention "rewarding behavior" and "pleasure," so liking seems essential to addiction on their account. But then their phrase "a disposition that generates desires that are urgent" sounds more like the wants of a salt-deprived rat. Hence, they seem to require that addicts both (strongly) like and (strongly) want to use drugs.

This double requirement is a problem, because some extreme addicts report no longer liking the drugs that they nonetheless want. Perhaps that is why Foddy and Savulescu add "generally" before "provide pleasure" in their definition, since people in general do get pleasure from drugs. However, Foddy and Savulescu's definition is also too broad, because it fails to distinguish addiction from heavy use based on strong desire. One of us has a disposition that generates urgent desires to play golf, and those desires periodically recur in predictable circumstances: when the sun shines. The desired activity generally provides pleasure: playing golf is rewarding. And the desire can be sated temporarily: playing eighteen holes usually does it. According to Foddy and Savulescu's definition, this desire counts as a strong appetite to play golf and hence as an addiction to golf. However, although golf might be as good a candidate as any for a behavioral addiction, if there is any, this case is not an addiction to golf. The author in question has no difficulty quitting, when it rains or even when it shines (if there is a good reason not to play golf), and playing golf does not cause significant personal harm or risk of harm (unlike skiing). In these ways, the author's relationship to golf is substantially different from a heroin addict's relationship to his needle (for discussion of that relationship, see Pates and McBride 2005).

Thus, Foddy and Savulescu's definition hides important differences and does not capture the core of our common understanding of addiction, for it allows far too much to count. Foddy and Savulescu might be happy to include regular golfers as addicts, but a precising definition needs to distinguish a strong appetite for golf leading to "heavy golf use" from heroin addiction in order to capture common usage, let alone prove theoretically useful to scientists and philosophers.

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Control

What is the difference between heavy use and addiction? A natural answer is: control. The importance of control in understanding addiction is reflected in three of the diagnostic criteria of the DSM-IV-TR definition given earlier: (3) using more than was intended, (4) persistent desire or unsuccessful efforts to control use, and (7) continued use despite knowledge of resulting persistent or recurrent physical or psychological problems. It is equally present in common understanding and testimony. To take one famous example, Burroughs (1959, xxxix) says that "dope fiends" are "not in a position to act in any other way" and "cannot act other than they do." Indeed, the reason why the strong appetite for golf described earlier seems not to count as addiction is that the author can stop playing or can play less.

What exactly does it mean to say that addicts *cannot* stop taking drugs? At one end of the spectrum of possible interpretations lies the "cannot" of hard determinism. Hard determinists often claim that nobody can act in any way other than they do. Here "cannot" means something like: holding fixed the laws of nature and past history, only one future course of events can obtain.

This use of "cannot" does not violate any semantic rules, but it does not shed any light on addiction. It cannot distinguish addicts from non-addicts, since addicts are no more or less determined than anyone else. So, whatever it means to say that addicts lack the ability to stop taking drugs, it cannot mean that their behavior is determined by the laws of nature and past history.

At the opposite end of the spectrum, the term "cannot" is also used in statements like this: "I cannot go out tonight, because I have to work." This use of "cannot" does not deny that one has the physical and psychological ability to go out. All it denies is that one has good enough reason. The point is that it would be irrational or at least irresponsible to go out, given the greater importance of work. No doubt, some addicts might claim that they cannot quit using drugs because it would be irrational or irresponsible for them to quit (perhaps because their gang will kill them or their family if they stop using drugs). However, that is not what addicts normally mean when they claim to lack the ability to stop. They do not seem to mean that they have the physical and psychological ability but lack good enough reason to quit (but see Pickard 2011, 2012 for a dissenting view).

Then what does it mean to say that addicts lack the *ability* to stop or that they *cannot* stop taking drugs? Burroughs exaggerates when he claims that he cannot act "in any other way," but there is a grain of truth beneath his exaggeration. The truth is that his physical and psychological ability to control his use is reduced: he lacks the degree of control that we normally expect people to have over their behavior.

So, what is control? Two accounts are common. One focuses on wants and claims that an agent has control over a type of action if and only if:

1. If they want overall to perform that type of action, then usually they do it; and
2. If they want overall not to perform that type of action, then usually they don't do it.

On this account, golfers have control over playing golf if and only if they usually play golf when they want overall to play golf and usually do not play golf when they want overall not

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to play golf. The qualification "usually" is necessary because they might fail to play golf when they want to because the only golf course is closed or their car breaks down or they miss their starting time. Occasional lapses do not prove lack of control. Similarly, the qualification "overall" is necessary because desires can conflict. If a golfer decides not to play, even though he has some desire to play, because he has a stronger desire to go swimming, then the golfer still has control over whether he golfs or swims. First-order desires (to golf) can also conflict with second-order desires (not to desire to golf). Such conflict and ambivalence can produce significant uncertainty, confusion, oscillation, and, hence, unclarity about what an agent in fact wants overall or how they or we could ever come to know what they want overall. (Holton and Schute (2007) offer a similar account of control that is based on overall judgments rather than wants.)

Such want-based accounts of control contrast with reasons-responsiveness accounts (cf. Duggan and Gert 1979; Fischer and Ravizza, 1998). On this kind of account, an agent has control over a type of action if and only if:

1′. If they have a strong overall reason to perform that type of action, then usually they do it; and
2′. If they have a strong overall reason not to perform that type of action, then usually they don't do it.

On this account, golfers have control over playing golf if and only if they usually play golf when they have strong overall reason to play golf and usually do not play golf when they have strong overall reason not to play golf.

These accounts might seem very close, especially to internalists who assume that all reasons are based on desires (Williams 1979/1981). However, these accounts come apart in various cases that are relevant to addiction. First, if agents have no reason to fulfill some desires, then those agents can act on their desires without being responsive to reasons. For example, some heavy users claim that they want drugs in the sense of having a strong desire even though they no longer like them or get any pleasure from them (and also would not suffer withdrawal if they quit). If so, these users might have control over their drug use on the want-based account because they take drugs when they want to and cease when they want not to. However, such users would lack control on reasons-responsiveness accounts if they continue to use drugs because of their strong wants even when they know that they have little or no reason to use drugs and strong reason not to use drugs.

These accounts of control also come apart in another kind of situation: Imagine that a desire to take drugs causes a user to think only about drugs and then forget about or not notice conflicting considerations, such as detrimental effects on self or loved ones. This user would want not to take drugs if he paid attention to the reasons not to take drugs, but his desires for drugs prevent him from becoming aware of those conflicting considerations (at least at the time when he takes drugs), so he does not actually want not to take drugs. Then it can be true that he takes drugs when he wants and does not take drugs when he wants not to take drugs, so he has control on the want-based account. Nonetheless, he lacks control on the reasons-responsiveness account, because he does not respond to the reasons that he never notices or becomes aware of. (It still might be true that he would respond to reasons that he did notice, so he would have control on a third account that adds "they know" before "they have" in (1′) and (2′).)

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It is not completely clear which of these accounts of control is most appropriate for a definition of addiction. Here we will usually talk in terms of what the agent wants overall, because it is a less philosophically technical and controversial notion than reasons, and one can have control over irrational or less-than-perfectly rational behavior. Nonetheless, fans of reasons-responsiveness may recast our discussion into their favored terms, if they want.

With this rough account of control in place, we can now see how various factors can remove or reduce control. Consider an analogy. Suppose that one wants overall (or has and recognizes a strong reason) to lift a heavy weight off the floor for a substantial period of time. If so, how could one fail to lift the weight for that time? Putting aside extreme situations, such as death, external restraint, or changes in the laws of nature, a number of more ordinary factors can affect one's agency. Most obviously, one might not be strong enough to lift that much weight, either because the weight is too heavy or because one is weakened by disease. In addition, one might get tired of holding up the weight. Or one's attention might lapse or, alternatively, one's attention may become fixed on the relief that would come from putting the weight down. Or one might not try hard enough or exert enough willpower, possibly because of some conflicting desire that persists despite one's overall desire to hold up the weight or because one's self-conception is decidedly not as a weight-lifter. These factors correspond to the kinds of factors that reduce control over drug use (for further discussion of some of these factors, see Pickard 2012; Pickard and Pearce, in press).

First, the desire to use drugs can become strong and habitual. Immoderate long-term drug use can affect neural mechanisms. Many drugs directly increase levels of synaptic dopamine, which, over time, may affect normal processes of associationist learning related to survival and the pursuit of rewards (for a review, see Hyman 2005). Once drug-related pathways are thus established, cues associated with the drug use cause addicts to be motivated to pursue the reward of drugs to an unusually strong extent. Moreover, there is increasing evidence that as drug use escalates, control devolves from the prefrontal cortex to the striatum, in line with a shift from action-outcome to stimulus-response learning (for a review, see Everitt and Robbins 2005). Drug use becomes increasingly habitual: more wanted than liked, more automatic than deliberately chosen. Acting against strong and habitual desire requires willpower: an active attempt to resist the pull of the drug (cf. Levy 2010).

Second, it takes effort and resolve to keep exercising willpower. Exercising willpower depletes its strength in the short term but can increase it in the long term, much like a muscle (Muraven and Baumeister 2000). The longer willpower is exercised, the more depleted resources may become. So, the need for addicts to persevere in resisting the desire to use drugs, especially in the face of strong associations and cues, may weaken their willpower, potentially to depletion. This is one reason why many clinical interventions require addicts to remove themselves from their habitual environment, or at least identify and as much as possible steer clear of drug-related triggers.

Third, attention and cognition affect the capacity for long-term control. In addition to affecting strength of desire and habit, drug associations and cues may cause intrusive, incessant, obsessional drug-related thinking. This in turn may make it very difficult for addicts to recall and attend to non-drug-related desires and values or to the positive consequences of abstinence and the negative consequences of use. This may produce a "judgment-shift" whereby, faced with immediate temptation, prior resolutions are abandoned on the ground that they do not express present desires and values. Addicts overestimate the benefits of using drugs (including the pleasure or relief they will get) and the costs of not using (including the

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likelihood and intensity of cravings and withdrawal pains); and underestimate the harms of using (including health effects) and the benefits of not using (including the value of other activities as well as friends). They also seem to discount the future in extreme ways: hyperbolically (Ainslie 2001). And some addicts fail to take in or use information about fictive losses—losses in what they would have gained if they had acted differently—that is relevant to rational choice (see Chiu et al. 2008 on smokers).

Fourth, an addict who resolves to stop using drugs will still experience some motivational conflict with the appetite that constitutes their addiction. Even if they want overall to stop using, the desire for drugs does not thereby disappear. This is why techniques such as motivational interviewing can be clinically helpful to motivate some addicts to change: the aim is to explore and resolve ambivalence, highlighting the positive consequences of abstinence and the negative consequences of use.

Moreover, abstinence for many addicts requires undergoing withdrawal symptoms, which may be physically unpleasant, or even life threatening in certain cases if they do not seek medical advice and management. In addition, for many addicts, drug use may provide relief from life's various miseries, especially strong negative emotions and other psychopathological symptoms (for discussion, see Pickard 2012; Pickard and Pearce, in press). Until alternative methods of coping have been learned or the underlying distress alleviated, the psychological cost of abstinence is high. There can also be positive consequences associated with addiction, such as the possibility of status, role, and community within an established drug culture and network, and the corresponding construction of a positive self-conception. Many addicts have lost family and friends due to their addiction, so they might have few social and employment opportunities outside of the drug culture and community. The costs of forsaking drugs is then potentially very high, unless and until alternative, comparable goods within a non-drug-using culture and community are on offer.

These factors, in combination, show how or why control can be reduced in addiction. Desires for drugs can be strong and habitual. Willpower can get depleted. Drug-related associations and cues can affect cognition and attention. Drug use may serve psychological, social, and economic functions that produce motivational conflicts and oscillations. For all these reasons, even if heavy users want overall (and recognize strong reasons) to abstain, they still might not usually abstain, and then their control is understandably diminished.

We can now add control to the definition of addiction: Addiction is a strong and habitual want that significantly reduces control. To say that the strong and habitual want causes the reduction in control is not to say that it is the sole cause. As detailed earlier, multiple factors, in combination, often contribute to diminished control. It is important to remember that the strong and habitual want is usually only part of what causes the reduction in control.

Notice that this definition applies equally to the majority of addicts who are ambivalent and, at least on occasion, try unsuccessfully to control their use, and also to those "willing addicts" who endorse their addiction and never try to control their use (Frankfurt 1971). What makes "willing addicts" willing is that they want overall to use drugs; so they do what they want overall to do when they use. Nonetheless, *if ex hypothesis* they became "unwilling" and no longer wanted to use (or if they came to recognize strong overall reasons not to use), then they would still use at least usually. This is what makes "willing addicts" addicts.

Notice also that control comes in degrees, depending on the range of situations in which the agent acts in accordance with wants or reasons. Thus, control can be reduced without being extinguished completely. For addiction, the reduction or loss must be significant.

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This notion of significance cannot be captured in a purely descriptive statistical way. Any measure of standard deviation from the mean level of control in the general population could only be arbitrarily selected as defining significance. Instead of being purely mathematical, the notion of significance at stake is pragmatic. This should not be surprising given the essential pragmatic function of precising definitions (discussed earlier). Within legal contexts, both criminal and civil, degree of control is relevant to legal responsibility; in psychiatric contexts, degree of control is relevant to decisions about diagnosis and treatment; in family and friendship, degree of control may be relevant to the possibility of sustaining relationships despite harm perpetrated toward self and others. More generally, we suggest that it is appropriate to count heavy drug use as a case of addiction if the degree of control falls below the degree of control that captures what is at stake in making a judgment about addiction in that context. Hence the definition of addiction as a strong and habitual want that significantly reduces control must be understood as a precising definition. It is to be judged in large part by its usefulness, relative to a particular purpose, in yielding a verdict on what counts as addiction and who is an addict. No doubt, the verdict may shift from context to context, according to what is at stake. Nonetheless, the general principle on which these various verdicts are based is consistent across contexts: the question in each case is whether the reduction in control is significant in the context.

Harm

This definition of addiction still might seem to lack an essential element. Desire and loss of control are, after all, also often associated with romantic love. Head over heels in love, one can become single-minded, obsessed, and devoted at the expense of many other goods.

Nonetheless, love differs in at least one crucial way from drugs and behaviors that many count as addictions. Only in extreme and unusual circumstances is love genuinely dangerous. Addictions, in contrast, typically cause serious harm to self. This is reflected in the DSM-IV-TR definition, which requires distress or impairment for addiction. In other words, it is only when a condition normally causes harm that it counts as an addiction.

Is the reference to harm essential? A critic might object that some addictions can be harmless. For instance, consider the following cases. Sue has a strong desire for alcohol and would find it extremely difficult to stop or even reduce her drinking if she tried. Nonetheless, her drinking does not seem to affect her life adversely. She works for a company where her colleagues go out for several drinks every day after work. Drinking with them improves Sue's social and professional life in various ways. If she didn't drink with these colleagues, she would not be as professionally successful. Or consider Joe, who is a gambler. He, too, would struggle to stop or reduce the frequency and time spent gambling, so he lacks control over whether or not he gambles. Nonetheless, he successfully controls which games he plays and which bets he places. He plays games of skill, like poker, rather than games of pure chance, like slot machines. Joe is very good at gambling. He plays games that he can win, and he wins a lot. He ends up richer and happier than he would be if he did not gamble so much. Moreover, he probably would not gamble so much were he not addicted to gambling.

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How should we diagnose Sue and Joe? There are three possibilities. One possibility is that Sue and Joe are not addicts because they are not harmed by their behavior. A second possibility is that Sue and Joe are addicts, but, because they are not harmed by their behavior, that shows that addictions are not all harmful. A third possibility is that Sue and Joe are addicts who are harmed by their conditions, despite their happiness and successes in business and gambling.

According to this third possibility, what distinguishes successful addicts, like Sue and Joe, from their counterparts, who are equally successful but not addicted to alcohol or gambling, is simply that Sue's and Joe's control is significantly reduced. Such diminution of control can arguably count as harmful in itself. One reason is that, in nearby possible worlds with only minor differences in circumstances, Sue's and Joe's behavior causes them substantial harm. If Sue's company is bought by teetotalers, then her inability to control her drinking could cost her her job. If Joe fell in love with a woman who disliked gambling, his inability to control his gambling could cost him his happiness. Diminished control thus brings a substantial risk of further harm if it avoids harm only in a very narrow environmental niche. This risk of harm can itself arguably count as a harm. If it is, then Sue and Joe do not present counterexamples to the claims that addictions cause harm.

On this third view, it is not necessary to add any clause about harm to the definition of addiction, because the loss of control will already ensure risk of harm at a minimum. Nonetheless, to be explicit, we will expand our precising definition to say that an addiction is a strong and habitual want that significantly reduces control and leads to significant harm. As before, to say that the want and reduction in control cause harm is not to say that they are the sole causes. Many factors typically contribute to the harms of addiction.

In this definition, harm includes death, pain, distress, and dysfunction, as well as substantial risk of these within a normal environment. Like control, harm comes in degrees, and disagreement may occur as to when the degree of harm or degree of risk of harm counts as significant. Some cases will be clear, as when drug use results in death. Other cases will be unclear, as when Sue's and Joe's reduced control creates or constitutes risk of unhappiness. In unclear cases, verdicts may depend on context and purpose. For instance, Joe's risk of harm may not be significant enough for psychiatric treatment to be compulsorily imposed as opposed to made available should he choose it, but it may be significant enough to the woman he counterfactually loves to cause her not to love him in return.

Many definitions leave scope for disagreement as to how and when they apply to individual cases. This caveat is especially true of precising definitions in general and of our precising definition of addiction in particular. Nonetheless, this definition can still provide a consistent principle for determining what counts as addiction across different contexts and cases.

One final advantage of this definition is that it does not apply to normal romantic love, which does not lead to significant harm. It thus captures the intuitions expressed in common usage of the term, which distinguishes addictions from other extreme forms of behavior in part on the basis of harm. Note that, interestingly, it might apply to the kind of love that sometimes ties an abused woman to her abusive partner. But this kind of love—if love indeed it is, as opposed to fear or coercion—is arguably pathological. In contrast to normal romantic love, it is not obviously wrong to see such love as a form of addiction. In this case, perhaps the exception proves the rule.

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Conclusion

Addiction is a strong and habitual want that significantly reduces control and leads to significant harm. Control and harm come in degrees. Addicts have *some* control over their choices and actions, but they do not have *full or normal* control; and hence they have *less* control than non-addicts (including non-addicted drug users).

This point about degrees of control and harm might seem obvious and innocuous, but it undermines many traditional debates. There is a long-standing debate about whether or not addiction is a form of compulsion (see, e.g., Charland 2002; Foddy and Savulescu 2006; Leshner 1997; Levy 2010; Pickard 2012; Pickard and Pearce, in press). Those who deny that addiction is a form of compulsion and claim that addicts have control seem to require a lot for compulsion and only a little for control. Those who claim that addiction is a form of compulsion and claim that addicts lack control seem to require a lot for control and a little for compulsion. One way to resolve this debate is to recognize that it may be fruitless: the debate is arguably about whether this particular glass is half-full or half-empty, when obviously it is both. The point about control and harm coming in degrees allows us to move forward: addiction is a form of compulsion to the degree that an addict lacks control.

Another long-standing debate is over whether addiction is objective or subjective. This debate can also be resolved by recognizing that, even if degrees of control and harm exist independently of our purposes, our purposes can still determine where we should draw a line between significant and insignificant harms and losses of control and, hence, between addicts and non-addicts. Compare vision. Optometrists can determine whether a person's eyesight is 20–20, 20–30, 20–40, or 20–400; as well as whether a person is colorblind, near-sighted or far-sighted, or has less than usual night vision. Still, optometry by itself cannot define when visual acuity is sufficient to get a license to drive a car or a bus, to pilot a plane, to get disability benefits, or to serve in the military or the police. The lines between adequate and inadequate vision are drawn at different places for different practical purposes, depending on the likelihood and harms of different kinds of mistakes in different circumstances.

The same goes for lines between addicts and non-addicts. As we have emphasized, clinicians, insurers, courts of law, friends and family, and scientists have various purposes. Courts may draw the line relatively high in order to count fewer people as addicts and thereby hold more people responsible for crimes. Insurers also may wish to count as few as possible as addicts, so that they will have to pay for as few claims as possible. Private citizens, in contrast, might draw the line relatively low in order to count more of their friends as addicts so that they can find more ways of maintaining good relations and offering care and support when relationships flounder due to drug use. Clinicians may draw the line in the middle, with regard to who is most likely to benefit from treatment. And scientists might draw the line between addicts and non-addicts so as to discover the highest correlations with neural or psychological mechanisms or genetic or environmental factors.

This variation in where the line between addicts and non-addicts should be drawn may be confusing if the rationale behind it is not explicit. But there is nothing illegitimate about drawing the line at different places for different purposes (compare again visual acuity). We simply need to be explicit about what we are doing and avoid the temptation to ask and answer overly simplistic questions about whether or not a person is *really* an addict. Instead,

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we must ask about the degree of diminished control and harm they suffer and about whether or not, given the particular context and what is at stake, we are justified in counting a person an addict. Such questions are often very difficult to answer, especially in contexts where time is limited and practical consequences are real. Nonetheless, good practice in all contexts where questions of addiction arise—from the courts to the clinic, from the personal to the laboratory—demands that we recognize that control and harm come in degrees and that judgments about where to draw the line between addicts and non-addicts can be made only relative to particular contexts and purposes.

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