Against the Drug Cure Model: Addiction, Identity, and Pharmaceuticals

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Addiction affects the person as an embodied agent in the world, not just as a brain on a body's shoulders. Addictive behavior patterns involve not only brain chemistry, but an addict's interpersonal relationships, social and physical environment, and personal identity, all of which contribute to habits that cause or perpetuate addiction. No doubt, drugs may be useful in treating some features of addiction. But unfettered optimism about pharmaceuticals in the treatment of addiction is scientifically unwarranted and therapeutically imprudent.

Introduction

Suppose you are an alcoholic and you walk into an outpatient addiction clinic. Financially, interpersonally, and occupationally, your drinking is having harmful consequences. Your life is becoming undone.

Your physician has recommended the clinic and you have an appointment with the medical director. Here is what the director, a medical doctor, says when she meets you:

> Alcoholism in particular and addiction in general is a disease of the brain reward system. In your case, your substance abuse and heavy drinking have been caused by activation and

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> dysregulation of endogenous midbrain processes, which hijack brain circuits that normally insure more prudent consumption. Mood stabilizers like lithium and Depakote are not drugs for you because you do not suffer from bipolar depression and, besides, mood stabilizers do not act on mesolimbic reward systems. Your consumption behavior often is impulsive, true, but you are not grandiose in your thinking and you do not suffer from comorbid excesses of mania or anxiety. Recent research with Parkinson's disease, a disease that involves the limbic areas of the brain, suggests that a dopamine agonist is likely to be effective with your particular brain reward system pathology. We don't want to induce motivational apathy in you, but certainly some dopaminergic pharmacology, even if not as specific as, say, a D3 reuptake inhibitor, will prove promising.

The doctor talks. You "fog out." You are not opposed to taking medication, but somehow this is not what you had expected to hear at the clinic. The doctor's terms are too technical and esoteric for you. You also don't like to think of yourself as diseased, although you are not sure just what a disease is. You wish for help that looks at your life as a whole, its stresses and circumstances, and not just at choices of medicine that target parts of your brain.

Sitting in her office, you feel lost. You should have known this would happen. A poster on the waiting room wall, which, alas, you had not bothered to read, says:

> Recent advances in brain imaging methods, as well as increased sophistication in modeling the brain's reward systems, have facilitated the study of neural mechanisms associated with addiction, for example, the processes involved in motivation, decision-making, pleasure seeking, and inhibitory control. As a result, scientists now can delineate the neurological causes of addiction. Pharmaceuticals that target and change these neural mechanisms can facilitate early intervention, leading to full and lasting recovery. Effective treatment of an addictive behavior requires some form of pharmaceutical intervention. Speak to your doctor now about which drug or drugs are best suited for you.

You should have read it before you spoke to the director, of course. You failed to do that. You may also have helped yourself by reading more about the roles of drugs in treatment. There are good general audience books on the subject by respected psychiatrists—some quite sobering in their cautions (Frances 2013). But we three philosophers don't blame you for feeling lost or failing to do your homework. We propose that it is misguided to construe addiction as, or just as, a brain chemistry disorder, something which can be adequately treated by pharmaceutical intervention. Addiction affects the whole person in his or her complexity as an embodied agent in a social world, not simply as a brain on a body's shoulders. And while you do, of course, have one of those on your shoulders, your own addictive behavior has, to your mind, a narrative, a story, a self behind it that this particular clinic is not prepared to hear.

The grip of the chemical disease or neurological disorder model within addiction science reflects a kind of scientific myopia blind to the fact that, in the words of Richard Bentall, "recovery involves the development of new meaning and purpose in one's life," as a complex person "grows beyond the catastrophic effects" of illness (Bentall 2009: 266).

Our goals in this paper may be immodest in their boldness, but they are moderate in their exercise or scope. First, we outline a model of addiction that applies to a case like yours. This model construes addiction as person-level phenomenon, as

opposed to a sub-personal brain chemistry phenomenon. The model conceives of the addict as a person and addiction as a comprehensive, destructive way of being. If addicts are persons and addiction is a lifestyle (with all sorts of distinctive phenomenological and behavioral aspects), then addiction is not a brain disease. Addictions are not in the head.

Can we treat parts of the brain to help addicts overcome addiction? Almost certainly. But it would be a big, costly mistake to conceive of addiction as a brain disorder. Let us explain.

Our model of addiction has two parts: first, persons are historical beings whose lives are best understood by the self and others in terms of narrative. A person or a self is a "center of narrative gravity" (Dennett 1991; see also Flanagan 1991; Tekin 2011, 2013a). Especially for people in modern worlds, the narratives have great complexity. Often, individuals are what we call "Person, as multiplex," involving many roles, multiple relations and ways of being, as well as aspirations for being a better or more successful person:

> [Most of us] have for ourselves multifarious projects and plans nested together in various, possibly ever-adjusting, relations of priority and expansiveness. For many, most, perhaps all of us persons, we develop a narrative self-interpretation of ourselves as persons and perpetually evaluate how well we are doing in becoming who we aim to be and in accomplishing what we aim to accomplish. A basic way in which to understand the inter-relationships between our past, present, and future is to conceive of the lives we lead as an unfolding story. (Flanagan 2013a: 2)

In the addict's case, one aspect of her complexity, really of her multiplexity, is that she experiences herself as living out some sort of contradiction. This is the second aspect of our model: normally the sort of person who seeks help for her addiction suffers *twin normative failure*s (see Flanagan 2013a; Graham in press).

Addiction is partly constituted by the addict's recognition that (1) her immoderate use of alcohol is connected to a failure to "live up to the hopes, expectations, standards, and ideals she has for a good life for herself" (Flanagan 2013a: 1, see also Graham 2013: 178–179) and (2) that she can't successfully moderate or quit on her own; she fails to "execute normal powers of effective rational agency" (Flanagan 2013a: 1). The addict comes to understand herself correctly as unable to live up to her standards, ideals, or aspirations, as well as to norms for the multiple roles she occupies and wishes to be successful at—as mother, wife, professor, prelate, pediatrician, or politician—the successful negotiation of which is part of what it will mean for her to be the person she aims to be. The addict realizes that the meaning, worth, and success of her life (possibly her life itself) depend on her not using, but she uses. Given the two failures combined, addiction undermines the goodness and the rationality of the addict's life. The addict is not the person she should be and, in properly reflective moments, wants to be.

Our proposal is that this picture of the addict as a person and historical being, and of addiction as a lifestyle, not a disease of the brain, is true—even obviously so—and that it *should* be used as a scientific treatment tool that helps to understand and intervene in addiction. These are not therapeutically idle concepts. Pharmaceuticals may and sometimes must play a role in the complex causal-explanatory matrix of

treating addiction, but they are not the only helpful instruments. Unfettered optimism about the effectiveness of pharmaceuticals in the treatment of addiction is scientifically unwarranted and therapeutically imprudent. One extremely important reason is that the varieties of neural activity that can be relevant to an addictive behavior pattern are multiform. They are the physical-biochemical substrates of such psychological phenomena as the failure to reflect before acting, rapid onset of boredom, inability to cope with stressful or anxious situations or unforeseen obstacles, habitual preference reversals, fragile self-esteem and self-respect, and a host of other impairments and challenges to an addict's rational and normatively interpreted reason-responsive agency.[1] Our goal is not to resist pharmaceutical assistance altogether in addressing addiction. Selective use of drugs may help with aspects of addiction, but they can't conceivably cure addiction by re-equilibrating damaged parts of the brain. Why? Because addiction is not in the brain nor is it caused by the brain.

We focus on a prototypical addictive pattern where a particular substance, such as alcohol, becomes the object of an individual's attention and periodically repeated activity, despite knowledge of its harmful consequences and repeated attempts to moderate or quit the behavior (Graham 2013: 178–179). This means we focus both on what is sometimes called the "unwilling addict" and on cases of alcohol abuse. These are addicts who may actively seek or at least willingly accept help from other persons in order to alleviate their harmful condition. Not all addicts, of course, are unwilling. Some are resigned. Some are indifferent. Some are sometimes one, then the other. Nor is the unwillingness necessarily easy to define or recognize empirically. But the intuitive idea behind an addict's unwillingness is this: he is addicted; he knows he is addicted, recognizes the harmful consequences of being addicted, wants to avoid the consequences, and appreciates that doing so requires breaking the pattern (quitting, refraining, avoiding relapse). Such addicts may be able to quit on their own; some need help; some know that they need help; some seek it. You ended up in the wrong office. You now want help from a more person-centered source.

The Nature of Addiction

Addictions are heterogeneous. The patterns picked out as addictive are only more or less generalizable, and there may be different aspects of a pattern that help to assign a person to the category of being addicted.

[1] A sound theory of pharmaceuticals for addiction's substrates must resist falling prey to what may be called the pharmaceutical temptation of the one over the many, which is a variety of monocausal thinking. The neural-causal etiology of addiction is not some one single personal subsystem; for example, it is not a dictatorship of the neural reward system. The best hope for an addict may sometimes be to combine psychotherapies with complements of drugs. But treatment, drugs used or not used, is enfeebled without appreciating that addicts are persons and addiction is a way of being in the world.

Consider the example we are using—a case of addiction to alcohol (a drug, a substance). There are many varieties of drug-related addictive behavior, depending on the drug of choice (DoC), the individual person, the social and cultural contexts within which the addiction progresses, and the person and social practices involving the consumption of the DoC. Often personal preoccupation with the "release" and relief that comes after using the DoC or with craving the DoC when the drug is absent are parts of addictive behaviors—parts but not essential or necessary parts. Addiction can occur without craving or felt release from craving (West 2006). But for purposes of this paper, let's assume craving and release/relief to be elements of addiction (again, of the unwilling addict). Based on characteristics such as craving and release and noting the recent advances in understanding the neural correlates of motivation, decision-making, pleasure seeking, and inhibitory control, some theorists argue that addiction is "a disorder of the brain's reward system" (Gastfriend 2005: 1514). That is not our belief.

No addiction bypasses the brain, to be sure, but whether the brain is not functioning as it should or is ill, diseased or disordered is not to be judged by whether it supports personally harmful or unwanted behavior. Nature did not design the human nervous system to guarantee personal prudence. Learning on a variable ratio schedule of reinforcement (as the brain does) is certainly fitness-enhancing. It kept our ancestors pursuing prey, despite numerous failures and attempts to capture them with unpredictable outcomes. But subjecting oneself to the very same ratio of reinforcement at a racetrack or casino can lead to significant imprudent harm. Drinking liquids is also fitness-enhancing to be sure. Without doing so we would shrivel up and die. But no respected evolutionary biologist who thinks that brains were designed, in part, to control hydration also thinks that it was designed to support drinking too much scotch too often in a bar in Brooklyn or the Bronx. Alcoholism comes like a booby prize for drinking the wrong stuff too often. True, eventually alcohol consumption may harm the brain, when, say, damage to the dopaminergic system or akinesia sets in. But the brain of someone with alcoholism is not disordered or diseased just because it is the brain of someone with alcoholism. Neither is it relevant for whether the brain is disordered that an alcoholic may feel that they have lost control over their drinking. The brain also is designed to entrain motor movements and actions that can proceed with minimal deliberate control after learning. Failing to pay full attention to one's heavy bias to drink is often a prelude to relapse on the part of an otherwise unwilling addict, but these behaviors can be explained without assuming that the brain is broken.

Addictive patterns are formed by an inability to resist impulses that lead to significant harm. A fuller account of the "cognitive-motivational dynamics of addiction" requires an explanation of the "impairment in taking evaluative stock of oneself and of exerting reason-responsive control" (Graham 2013: 181). Developing this fuller and normatively infused account requires thinking of persons as reason-responsive, normative, and self-interpreting agents. Neither brains nor genes, for that matter, are the basic, root or sole cause of addiction; it is not brains or genes that become addicted, it is persons who get addicted (Flanagan 2013a, b; Graham 2013; Tekin 2013b).

An addict (of the unwilling sort) fails to execute normal powers of effective rational agency, according to the twin normative failure model of addiction. She decides not to use the DoC but uses anyway. She assesses her addictive behavior as a rational agent and judges that she does not want to continue, yet her self-assessment does not produce the outcome of effectively and permanently ending her use of the DoC. In a normative sense, the individual "fails to live up to the hopes, expectations, standards, and ideals she has for a good life for herself because of her addiction" (Flanagan 2013a: 1). She believes that life without addiction is a better life, a life in which she can flourish. Still she fails to act in accordance with her belief.

The model that asks us to conceive of the person as a narrative being who comes to exhibit, and often to recognize, that she suffers twin normative failures enriches our understanding of the depth, clinical presentation, and phenomenology of addiction. Nonetheless, some might argue that the model is not scientifically useful, as it makes the concept of the self central to understanding addiction by engaging with the reason responsiveness of the self, self-interpretation, self-assessment, and other self-related feelings and attitudes. This self, it may be objected, is neither empirically tractable nor easily describable; thus, it is not a useful scientific focus if we want to understand and address addiction. In fact, the concept of the self was omitted from the Diagnostic and Statistical Manual of Mental Disorders (DSM), the primary manual of mental disorders used for research and clinical purposes, starting with its third edition (1980), precisely because it was considered an unscientific concept reminiscent of Freudian psychoanalytic approaches to mental disorders (for more on this topic, see Tekin 2014a, b, c, 2015; Parnas et al. in press; Schaffner and Tabb in press).

But let's not get entangled in Freudianism. Yes, the word "self" is ambiguous. Sometimes it just refers to each and every person him or herself. I am myself. You are yourself. My self is none other than me. Your self is none other than you. Sometimes it refers to an internal subject of awareness, a homunculus, separate from the body. What follows gives a detailed explanation of what we refer to when we write of the self.

The Multitudinous Self

We need to say more about the concept of the person as a narrative self-interpreting being. The specific narrative conception we advocate is not a simple linear one, but what we call the picture of the self as multiplex (Flanagan 1991), even multitudinous (Tekin 2014b). We'll explain what it means to say that a person, the self, is multiplex and multitudinous, and how this conception is an empirically and philosophically plausible conception of personhood that captures the complexities of "real people," (Wilkes 1988) including those with psychopathologies.[2] Much like

[2]It is worth noting the distinction between multiplex self and multitudinous self. The multiplex self, a concept introduced by Flanagan, explains what the personal identity of those with typical

other scientific models of other sorts of phenomena, the model of the multitudinous self represents a complex real-world system and can be used for many different purposes by scientists and clinicians. Model builders in science use abstractions and idealizations to make a complex real-world system subject to manipulation, so that particular questions about complex phenomena can be answered. For example, in weather forecasting, scientists create models based on their interests, i.e., the weather forecast for tomorrow vs. the weather forecast for next summer. In a similar vein, the multitudinous self-model sorts out various dimensions of selves or persons, which scientists and clinicians can use as abstractions and idealizations as they make the resulting model fit their interests and purposes. So, we can understand, scientifically study, and intervene on addiction through the multitudinous self.

Here briefly is how the model may be described.

Assume that self, the person, is dynamic, complex, relational, and multiaspectual, a more or less integrated configuration of capacities, processes, states, and traits supporting a degree of agential capacity subjected to various psychopathologies (Neisser 1988; Jopling 2000; Tekin 2014a, b, c). The multitudinous self-model is built around Ulric Neisser's (1988) account of the self as a complex configuration specified by various kinds of information originating from the subject and her social and physical environment. Neisser argues that the various forms of information individuating the self are quite different, making it plausible to suggest that each establishes a different "self." He tracks five distinguishable if ultimately inseparable selves:

> The *ecological self*, or the embodied self in the physical world, which perceives, acts, and interacts with the physical environment

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cognition consists in. It refers to persons playing multiple roles simultaneously; i.e., the self is multiplex because the person represents and exhibits different parts of themselves to different audiences in different environments. For instance, "my philosopher self, my baseball-coach self, my religious self, my parental self—are played for different audiences. Different audiences see who we are differently" (Flanagan 1996: 71). Suggesting that the self is multiplex means that identity exists despite chronic transformations and synchronic conflicts between these different facets of a person, since there is a narrative connectedness between them. This narrative connectedness is due to the authorial work of the agent, who tells the story of her life and thus holds different strains together. If this unifying authorship falls apart, we end up with atypical cognition: we no longer deal with a multiplex self, but rather with multiple selves. The concept of multitudinous self, introduced by Tekin, on the other hand, considers the self to be complex matrix, individuated and constituted by five dimensions: ecological, interpersonal, temporal, private, and conceptual (following the Neisserian selves). Unlike the multiplex self, multitudinous self considers psychopathology or atypical cognition to be a possible feature of the self. Multiplex self, in so far as it is a conceptual representation of the self to the self, and others, can be situated within the conceptual dimension of the multitudinous self. The model of multitudinous self aims to (i) get at the complexity of "real people," (ii) provide opportunities for scientists to use abstractions and idealizations and study it scientifically, and (iii) encourage a wholesome approach to psychopathology without sidestepping the complexity of persons. The inspiration for the name of this model is the poem "Song of Myself" by Walt Whitman, in which he proclaims, "Do I contradict myself? Very well, then, I contradict myself; (I am large—I contain multitudes)." Special thanks to Flanagan, who steered Tekin in the direction of these lines, hence the word "multitudinous."

The *interpersonal self*, or the self embedded in the social world, which constitutes and is constituted by intersubjective relationships with others

The *temporally extended self*, or the self in time, which is grounded in memories of the past and anticipation of the future

The *private self* which is exposed to experiences available only to the first person and not to others

The *conceptual self*, which represents the self to that individual by drawing on the properties or characteristics of the person and the social and cultural context to which she belongs

Neisser's individual and collaborative work empirically tracks these five selves or aspects of multiplexity in cognitive sciences, including developmental psychology, social psychology, cognitive psychology, and neuroscience, making it a methodology which we believe to be useful for research on psychopathology.

The multitudinous self represents all five dimensions as features of a single person, instead of construing them as separate aspects. This self-organizing and self-interpreting system or person is a locus of agency that remains more or less integrated through time. Each aspect is experienced from the first-person point of view, but can be empirically traced from the second- and third-person points of view, making them instrumental in connecting the subject to herself and to the physical, social, and cultural environment in which she is situated.

The ecological dimension of the multitudinous self represents embodiment in the physical world: brain mechanisms, genetic makeup, and the body's shape and structure enable an individual to perceive and be shaped by the immediate physical environment, to act on and be acted on by it, and to respond to it. Through the ecological dimension, a person enters the physical world and participates in and manipulates it. In the process, she molds and is molded by the physical world. In this sense, the ecological aspect of the self is specified by the body, the physical conditions of a particular environment, and the active perceptual exploration of and response to these conditions. It is present from birth and continues over time, across varying physical and social conditions (Jopling 1997, 2000).

The ecological aspect of the multitudinous self might help track addictive behavior in a number of ways. For instance, there is something going on in the body—in the brain cells, brain's reward system, hormones, genes, etc.—of an individual when he becomes addicted to a certain DoC. Evidence suggests that addiction involves an impaired psychobiology, for example, imprudent desire for the DoC and "eventually a malfunctioning 'off-switch,' such that once one starts drinking there is no telling when (days, weeks, years) one stops" (Flanagan 2013b). The physical basis for addiction is manifested in a series of engagements observable through the ecological dimension of the self. Consider the following examples. During intense craving in the absence of a DoC, the addict's hands may shake. She may get restless and irritable. She may experience sleep disturbances and anxiety, waking up in the middle of the night with nausea or with a desire to consume the DoC. The focus is such that in some cases, it may be "the only tune or story in the addict's head, and nothing else drives it out" (Graham 2013: 178). At times during craving, individuals

may even experience life-threatening symptoms such as delirium and hallucinations. This continues until the individual gives in and takes the DoC.

The alcoholic is restless, irritable, and discontented if her required and planned behavior is delayed. This mood lifts, or, perhaps, the awfulness settles, with the first drink. The first drink leads normally to other drinks and drunkenness. The next day she hates himself again. The cycle repeats (Flanagan 2013a, b).

The manifestation of addictive behavior in the ecological dimension of the self is not only experienced by the addict herself but observed by her loved ones; scientists who study her brain, hormones, genes, etc.; and her medical practitioners. The addict experiences the craving and her body's transformation. People around her may observe her restlessness, anger, frustration, and perhaps even hostility toward her loved ones. They may see her neglecting her responsibilities. From the third-person perspective, the doctor may notice she is more tense and quieter than normal, while scientists may gather evidence about the level of the DoC in her blood.

Another possible way of individuating addictive behavior in terms of the ecological dimension of the self comes from animal studies. One neural basis for addiction, according to certain animal studies, lies in the mesolimbic dopamine and brain reward system. It may be possible to investigate whether this area is equally compromised in human addicts. Although scientists may find that a compromised mesolimbic reward system is a necessary condition for human addiction, it does not follow that it is the only necessary condition (see Graham 2013: 191–193). Remember, we are self-interpreting normative beings. Nonhuman animals are not, at least not in the way we are.

Both humans and animals harbor short-term brain pleasure centers, but we, full-on multiplex persons, know what life spans are and engage in long-term planning and reason-responsiveness. Nonhuman animals do not. Our impulses can get us into trouble, and we will know it and regret it and wish to do something about it. A rat will lack any such self-interpretative spin.

The intersubjective aspect of the self is individuated by "species-specific signals of emotional rapport and communication" between the self and other people (Neisser 1988: 387). From earliest infancy, a person enters a social world through interaction with her caregivers (See Trevarthen 1980; Neisser 1988; Fogel 1993; Bowlby 1969; Stern 1993). Through the intersubjective dimension of the self, the person begins the "I-Thou" or interpersonal relationships of care and concern, through which her identity is formed, enriched, or (when care and concern is absent) sometimes impoverished and through which she contributes to others' own identity formation, enrichment, and impoverishment.

Most humans have natural desires for companionship, and most of us recognize, even if only inchoately, that we cannot survive, develop ourselves as persons, or live good lives, that is, lives which are happy as well as meaningful and fulfilling, without situating ourselves in complex socio-moral relationships with others. And despite wide cultural variation in the exact norms governing social practices, we all typically engage in normatively governed practices of "lending and borrowing, promising and consenting, buying and selling, making friends, entering into

marriage, establishing a family, offering and accepting aid, and so forth" (Flanagan 2013a: 2 within the single quotes, Deigh 2010: 20).

The intersubjective dimension of the self also tracks or follows addictive behavior patterns in multiple ways. First, forms of addictive behavior and practices in the consumption of DoC progress in a particular kind of social environment. Consider one familiar kind of alcoholic lifestyle, i.e., "the male life of public and gregarious heavy drinking" (Flanagan 2013b: 870). Flanagan writes:

> Because social drinking, especially among males, is widely endorsed, involves a host of well-known social scripts, and because alcoholism takes time to develop, it is uncommon for there to be male alcoholic individuals who become addicted. (Flanagan 2013b: 871)

Here, DoC use becomes the context through which individuals socialize in their professional lives. They go for a drink after a conference and talk about business using DoC. Intoxication seems secondary in these socializations, but for an addict, it eventually becomes the first goal.

Next, addictive behavior not only results in harm to the self, the person, but it also harms others, as the addict engages within a social world (Graham 2013). Recurrent use of the DoC may result in a failure to fulfill major role obligations at work, school, or home. Recurrent social or interpersonal problems may be exacerbated by the effects of the DoC. Typically, significant problems start or get worse in the family. For instance, under the influence of the DoC, the addict may be violent toward her loved ones or give up important social, occupational, or recreational activities.

The temporally extended aspect of the self consists of the person in time and memories of the individual's past and anticipation for the future. It relies on autobiographical memory and other stored information. What the individual recalls depends on what she now believes, as well as what she stored. Addictive behavior is manifest in the temporally extended self in a variety of ways. Consider the common situation of an addict's preoccupation with planning the next DoC intake. In her memoir *Drinking: A Love Story*, Caroline Knapp says while she was doing her job at the office, she would be planning that moment in the afternoon when she could go for a drink with her colleagues (Knapp 1997). That moment of reward would be in the back of her mind, giving structure to the rest of her actions. The minute the clock hits 4, she would ask if anyone wanted a "quick" drink at the bar. It had to be called a "quick" drink, she writes, as she sought to create the illusion of a busy life to which she would shortly return. In reality, her life was planned around changing locations to continue drinking; for example, she might be planning to go home to open a bottle of cognac. If getting to the "happy hour" was delayed, Knapp writes, she would feel restless and uncomfortable overcome with the desire to drink. Addicts often talk about how their perception of the world is tainted by planning the next substance intake or that they cannot focus on anything but the anticipation of the next "high."

The private aspect of the multitudinous self traces the individual's felt experiences that are not phenomenologically available to anyone else (such as feelings of pain or disappointment). This first developmentally appears when children notice

that some of their experiences are unique to them. Addiction is manifest in the private aspect of the self. Caroline Knapp describes drinking alone (addicts increasingly do this to hide their drinking from others) as entering into a room of one's own and closing the blinds, turning inward. The DoC becomes the only company she enjoys.

Finally, let us turn to the conceptual aspect of the multitudinous self. Self-concepts selectively represent the self to the self, to the person. They are the products of the dynamic interaction between the four aspects of the self and the features of the social and cultural environment. In turn, self-concepts inform and shape the aspects of the self, as well as some features of the social and cultural environment. They are thus informed by the features of the four aspects of the multitudinous self and by the individual's embodied experiences in the world, for example, illness (Neisser 1988; Jopling 1997; Tekin 2011). Consider each in turn.

Self-concepts include ideas about and evaluations of our physical bodies (ecological aspect), interpersonal experiences (intersubjective aspect), the kinds of things we have done in the past and are likely to do in the future (temporally extended aspect), and the quality and meaning of our thoughts and feelings (private aspect) (see Jopling 1997, 2000; Neisser 1988). For instance, an individual's self-concept as a "friendly person" is the product of the intersubjective aspect of her selfhood and also of the norms of friendliness in the culture of which she is a part. Self-regarding feelings and attitudes, such as self-confidence, security, self-esteem, self-respect, and social trust, emerge as we develop self-concepts and as the different dimensions of the self interact with the social and cultural world, through an exchange between the self and others.

Self-concepts are also informed by pathologies to which the individual is subjected. This influence is mediated by the changes that occur in the ecological, intersubjective, temporally extended, and private aspects of the self owing to pathology, by the scientifically based or folk-psychological knowledge available to the individual about her illness, and by her self-narratives in making sense of her condition (Tekin 2010, Tekin 2011, 2014a, b, c, 2015). For example, alcohol addiction affects an individual's intersubjective dimension by, say, making it difficult for her to keep promises, such as picking up her son from school at the time she promised or meeting with her client at the specified time. Failing to follow through on promises and breaching others' trust over time may alter her self-image as a reliable person. She may develop feelings of frustration or even hatred toward herself. She may decide to stop making promises or even taking on responsibilities that require keeping promises. In addition, the addict may develop "self-regarding reactive attitudes of bewilderment, disappointment, and shame" about her addiction (Flanagan 2013a: 6).

Consider relapse as another example. The addict refrains from the addictive behavior during certain periods; however, cessation ultimately proves unsuccessful:

> They "fall back" into the detrimental behavior after a period of temporary stoppage. After the relapse, the individual self-interprets himself as a failure, relapse becomes a source of shame, regret, self-blame, and embarrassment or as grounds for diminished self-confidence or self-esteem. (Graham 2013: 179)

These experiences influence one's self-concept: for example, the individual may think he lacks self-discipline. What an addict learns about the course of his condition from various scientific and popular media may also lead him to alter his self-concepts. For example, memoirs may offer sources of better self-understanding and motivation. Or learning more about the scientific research on the link between the anomalies in brain's reward system and addiction may cause the addict to consider himself a victim, inhibiting his motivation to improve his condition.

Self-concepts are not only representations of the self to the self; they are also action-guiding (Tekin 2014a, b, c, 2015). Our ideas about ourselves inform how we behave. Generally speaking, a person's self-concept of her physical strength affects her physical activities. She may or may not try to lift a suitcase, depending on how strong she feels and how heavy she perceives the suitcase to be. Similarly, her concept of her intelligence and ability to learn new philosophical material will influence what she can actually learn or how well she does in a job interview. In the context of addiction, the self-concepts formed or altered in this vein influence future actions. Hopelessness in the face of repeated relapses and self-concepts such as being weak-willed may diminish an addict's ability to quit the addictive behavior. Alternatively, after a few months' success at staying away from the DoC, the individual may be heartened and continue to try hard. In addition, perceiving herself as someone who needs help, an addict may reach out to the communities of other individuals with addiction who have experienced a similar condition. The success of Alcoholics Anonymous programs partially owe to this.

In sum, self-concepts motivate the person to think, act, and behave in certain ways, restricting or expanding his or her possibilities for action (Tekin 2011, 2014a, b, c, 2015; Jopling 1997).

Limitations of Pharmaceutical Remedies for Addiction

The model of addiction and the addict we have proposed is simple. Addicts are multiplex persons, and addiction is a lifestyle or for the addict an integral part of her overall life. The alcoholic pattern normally comes to be experienced as harmful by the addict herself. It is not a way of being that meshes well with the set of goals and aspirations she has for a life well lived. In fact, the alcoholic lifestyle may be killing her physically, psychologically, and spiritually. Most addicts come to experience themselves as suffering from a way of being that can't coexist with the other strands of the dynamic multiplex equilibrium we think makes for a good life. Multiplex persons are used to juggling many roles, commitments, and relations. For the addict, this strand, this part of her being, is intruding on all the rest. She can no longer succeed as a multiplex. The DoC comes to win all competitions among aspects of herself. The alcoholic comes to see that she is not living well, that using is defeating that project, but she cannot regain control of herself.

The concern that addicts viewed as persons suffering twin normative failures is not scientifically grounded or useful is misguided. By comparison, both the brain

reward system failure (or chemical disorder or disease model of addiction) and proposed pharmaceutical solutions are scientifically incomplete because they step around the complexity of the multitudinous self and fail to embrace the multifaceted aspects of and heterogeneous character of addiction. According to the twin normative failure model of addiction, the individual fails to fulfill her promise to herself by not quitting despite resolving to do so. She fails to "execute normal powers of effective rational agency" (Flanagan 2013a). The individual also fails to live up to her own standards of a good life—a life lived in moral-social space; her expectations are not fulfilled because of her addiction (Flanagan 2013a). Both can be mapped onto the five dimensions of the self, which, as shown, are empirically trackable and phenomenologically responsive.

An addict can assess her practices along five dimensions according to her consumption of a particular DoC. For example, an alcoholic can trace her addictive behavior through her ecological dimension. She knows she is drinking too much, too often. She can observe the symptoms of withdrawal when she has not had a drink for a while. During cravings, her hands shake, she gets restless, and she feels nauseated. In addition, she can also trace her drinking behavior through her intersubjective dimension. She does not remember the last time she was intimate with someone without drinking. She becomes aggressive when she drinks, so much so that she has alienated her loved ones. Her relationships with her partner and children have significantly deteriorated. She can also make sense of the shifts in the temporally extended dimension of herself. All she is planning is the next time she will drink; other future commitments are secondary. Her life narrative is impoverished because she no longer imagines her child's graduation or other things that otherwise would matter a great deal. As for her private dimension, she is aware that she is not happy with her life and her only relief is consuming more alcohol. Based on these observed experiences of the five dimensions of the multitudinous self, she resolves to quit drinking. Her assessment is that her experiences in each of these dimensions will improve. She promises herself to quit drinking, start exercising, reinvigorate her relationships, etc. However, she cannot execute her decisions and, thus, fails to deliver on her promises. And she is aware at a conceptual level that her rational executive functions have deteriorated.

The second normative failure is the individual's failure to living up to her personal standards of what constitutes a good life—in social space. The alcoholic woman mentioned above will correctly assess that she would have a good life if the dimensions of her self-experience were different. Ecologically, she knows her quality of life would improve if she did not crave alcohol, waking up in the middle of the night to reach for the next glass. She knows that she wants to improve her intersubjective relationships; she wants to reconnect to her family. She wants to change so that her temporally extended dimension revolves around larger life plans—not preoccupied with alcohol and drinking. At a private level, she does not want to continue hiding her drinking from others or to experience deep feelings of shame and guilt. All these are necessary for the good life she imagines herself having. However, by failing to execute rational control over her drinking, she also fails to meet her own standards of a good life.

The picture of addicts as multiplex persons who suffer twin normative failures is empirically credible. Therapeutic interventions can be developed to target normative failures by conceptualizing them from the different angles recommended by the multitudinous self-model. Furthermore, this model is more powerful than the competition. Consider again the claim that addiction is just (or primarily) a brain chemistry problem, adequately treated by pharmaceutical interventions alone. The brain chemistry failure model of addiction only embraces the ecological dimension of the self by individuating the physical dimension of addictive behavior and encouraging treatments limited to pharmaceuticals. In contrast, by engaging with the complexity of the selves or multiplexity of persons, the twin normative failure model of addiction facilitates effective interventions through multiple methods by focusing on each dimension. The strength of the twin normative failure model is that it accomplishes everything that the brain chemistry failure model would accomplish. The twin normative failure model would embrace, for instance, the invention of a miracle drug that completely and permanently removes the obsession with the DoC, by suggesting that the improvement in the ecological dimension of the self will gradually improve all the other dimensions of the self. The brain chemistry model, on the other hand, would fail to engage with the interpersonal or temporal aspects of addiction, in the absence of a miracle drug.

Following this analysis, one may ask whether it is plausible to imagine a cocktail of drugs to address all the dimensions of the self compromised by addiction. Thus, a drug regimen that treats alcoholism might include components that treat lack of self-esteem and shyness, curb the desire to drink, and help the addict sleep better. Our answer is yes, this is conceptually or imaginatively possible, but only insofar as the person continues to work on addressing her twin failures through her work on herself as well as psychotherapeutic and interpersonal support. In short, we remain unconvinced that drugs can replace the work one does on one's self *qua* self or *qua* others in addressing addiction; they can only support it.

You've left the doctor's office and not committed yourself to treatment at the clinic, not out of disrespect for her or because you feel empowered to do it by yourself or because you dismiss the use of drugs to control your condition. You have the feeling that whatever pharmaceuticals you take, if you can be assisted by them or may even need them, should be highly dependent upon the context of your relationship with the doctor who prescribes them and the psychotherapist who will discuss them with you. You want therapy to connect with you as a person, not as a receptacle. You are a multiplex person. You contain multitudes. Your addiction isn't in your head, or in your brain, or in a subsystem of your brain. You are an addict, specifically an alcoholic. Addiction is a way of describing a certain destructive way you find yourself being in the world. You need to change the way you live. Luckily there are multiple ways of entry to leverage a life and get it back on track. We recommend whole person cures.

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