Affective Scaffolding in Addiction

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Abstract: Addiction is widely taken to involve a profound loss of self-control. Addictive motivation is extremely forceful, and it is remarkably hard to abstain from addictive behaviours. Theories of addiction have sought to explain how self-control is undermined in addiction. However, an important explanatory factor in addictive motivation and behaviours has so far been underexamined: emotion. This paper examines the link between emotion and loss of control in addiction. I use the concept of affective scaffolding to argue that drug use functions as a form of emotion regulation that, especially in certain psycho-socioeconomic conditions, can escalate into what I term *addictive affective dependence*. Addictive affective dependence is extremely motivating of drug use, and in this way contributes to the agent losing control. An upshot of the paper is that it predicts something that is known to be true about addiction treatment and recovery: strategies that address psycho-socioeconomic conditions are particularly successful in bolstering agency in addiction. Furthermore, my view explains *why* these strategies work. Thus, the view provides a conceptual framework for existing effective methods of addressing addiction.

Keywords: addiction; affective scaffolding; self-control; emotion regulation; agency; motivation

Introduction

Loss of control is widely taken to be a defining feature of addiction. The addictive motivation to use drugs is extremely forceful, and it can be remarkably hard for addicted individuals to manage or abstain from addictive behavior. Addicted people often revert to this behavior repeatedly, despite great efforts not to, and even in the face of serious consequences of ongoing use. Considering this, addiction is taken to involve a profound loss of control over the set of behaviors involved in drug seeking and taking.[1] Most contemporary views on addiction agree that addictive motivation is not literally compulsive, but nor is addictive behavior freely enacted. That is, while agential capacities *per se* are not lost in addiction, when it comes to addictive behavior specifically, control is in some way undermined to varying degrees (Burdman 2022, 23; Sinnott-Armstrong 2013; Henden 2023). And while addiction is not a case of literal compulsion, in extreme cases it can look and feel like it. Loss of control occurs when addictive motivations conflict with judgments, beliefs, values, reasons,

[1] The term 'drugs' is used here as an umbrella label for natural and synthetic substances that can become objects of addiction, but that are also used non-addictively for a range of different reasons.

desires, intentions, resolutions, commitments, or other motivations not to use, and addictive motivations prevail in directing action.

It is true that not all addicted people confront these kinds of motivational conflicts, experience their drug use as being out of control, or want or attempt to stop using. In some cases, especially in precarious life conditions, people may not be attempting to stop or reduce drug use because, as Alexander (2018) suggests, through drug use they are 'living the most meaningful lives they [can] construct' given their circumstances (para. 35). However, many people with addictions, in varying life conditions, do struggle with frequent conflicts between a goal to stop using (in a particular moment, or in general) and their addictive motivations. Continuous unsuccessful attempts at changing one's addictive behaviour comprise a painful aspect of addiction for many people, and it is a component of addiction that people can struggle with for years. It is in consideration of this kind of 'loss of control' characteristic of addiction that the following questions arise: what are the factors that so forcefully and continually undermine attempts at abstaining from addictive behavior? And given the answer to this question, what strategies can be leveraged in treatment and recovery to bolster agency over addictive behavior?

A central but largely unexplored factor in the loss of control over addictive behaviour is emotion.[2] Emotion regulation is a well-known function of drug use, and there is significant evidence that emotional dysregulation is a prevalent driver of addictive behaviour.[3] Yet, the relationship between emotion and agency in addiction has received little attention in the philosophical literature.[4] This calls for redress. Drugs can be used to carry out a range of emotional functions, to achieve important affective goals, for example to quell painful emotions. Using drugs to regulate emotions is not always tied to addiction. However, for some people who use drugs to self-regulate, emotion regulation loops can form that become addictive. This looping occurs when, under certain environmental conditions, drug use becomes so entrenched in an agent's emotional self-regulation habits that it becomes the only available way to carry out a range of emotional functions. This affective dynamic is highly motivating of drug using behaviors, and in this way, it contributes to the agent *losing control* over these behaviors. If this is right, then the kinds of environmental conditions that foster this emotion regulation dynamic are contributors in addiction. Accordingly, strategies that target those broader circumstances can bolster agency over addictive behaviors by reshaping the emotional looping that undermines control.

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[2] Philosophical work on the motivational conflicts that arise in addiction has focused on, for example, addictive desires (e.g., Holton and Berridge 2013, 2017; Schroeder 2004), choice (e.g., Ainslie 2000, 2018; Heyman 2009; Pickard 2013, 2016, 2018, 2020, 2022), reason-responsiveness (e.g., Burdman 2022), habit (e.g., Lewis 2015), and intention, judgment and evaluation (e.g., Heather 2017; Levy 2014; Holton 2009), among other things.

[3] See Garland et al. (2020) for a review of research on the emotional regulatory functions of drug use, and the driving effect of emotional dysregulation on addictive behaviour. See also, for example, Hogarth (2020), Koob et al. (2020), May et al. (2020), Chester et al. (2016), Berking et al. (2011), and Cooper et al. (1995).

[4] A notable exception is Henden's (2023) proposal that emotion dysregulation impairs autonomy in addiction. Henden argues that, in addiction, emotion dysregulation drives decision-making, and that over time, this shapes the agent's value system such that the value of the emotional regulatory role that drugs play comes to crowd out other values, thus becoming central to the addicted agent's conception of the good. Related literature addresses the role of shame and guilt in addiction (e.g., Flanagan 2013; Snoek et al. 2021), and explores the relationship between emotional dysregulation and adolescent decision-making (Weinrabee and Hickie 2021).

Addiction is a complex phenomenon. It is influenced by genetic, social, biological, sociological, pharmacological, cultural, political, and other causally significant factors. Thus, theorizing addiction likely calls for multi-level explanations and interdisciplinary analyses. Extending this perspective, when it comes to questions of control and loss of control in addiction, there is good reason to support what Burdman (2022) calls a 'pluralistic stance' on the control-limiting factors that manifest in addiction (214). It is worth attending to how different causally significant factors influence or make up the motivational conflicts that arise in addiction, as different foci illuminate distinct pieces of the puzzle of control and loss of control. It is in the pluralist spirit that this paper explores emotion as a control-limiting factor in addiction.[5]

Ultimately, I will argue that an externalist approach to emotion regulation is one fruitful way to think about motivation and loss of control in addiction. The paper proceeds as follows. I introduce an externalist view of emotion regulation via the concept of affective scaffolding, and I hypothesize that this concept is well poised to illuminate the link between emotion and loss of control in addiction (§1). Affective scaffolding refers to the ways that people interact with and manipulate their environments to enable, influence, support, dampen, and in other ways regulate affective states. I then substantiate this proposal by explaining how drug use functions as a form of affective scaffolding (§2) that can escalate into what the paper terms *addictive affective dependence* (§3). Addictive affective dependence marks the difference between emotional regulation via drug use in addiction versus non-addiction. I demonstrate how addictive affective dependence is especially primed by certain kinds of psycho-socioeconomic conditions that correlate with addiction, and I conclude that this emotion regulation dynamic should be understood as an important control-compromising factor that can help to explain why addicted agents struggle to control their drug use in the face of competing motivations to abstain (§4). Finally, I outline an upshot of an account of addictive affective dependence for addiction treatment and recovery. My view predicts something that is broadly known to be true about addiction treatment and recovery: externalist strategies that address psycho-socioeconomic conditions to bolster control over addictive behaviors are particularly successful. Not only does my view predict something that is a pillar of what is known about addiction treatment and recovery, but it explains *why* these strategies work. Thus, the view provides a conceptual framework for existing effective methods of addressing addiction (§5).[6]

Two preliminary points are in order. First, the externalist line of thought developed in the paper has profound implications for broader questions concerning the nature of control and self-control, as well as ontological questions about the boundaries of an agent. Adequately attending to

[5] It is worth noting here that craving, or addictive desire, is the motivational state that is most often taken up in the literature to explain how addictive motivation overrides efforts at abstinence. As Kennett (2013) suggests, however, 'while very strong desires may impede the successful carrying out of an intention, other internal factors are equally or more important in addiction and elsewhere'; for example, 'shyness, anxiety, fear, anger, grief' can contribute to a failure to successfully perform intended actions (151). Furthermore, I have argued elsewhere (Lavallee 2020a, 2020b) that addictive desires themselves should be rethought largely because of how they connect to the valuable emotional experiences that drugs provide. This paper does not deny the important motivational role of addictive desires but contends that they are not the only relevant control-undermining factor in addictive psychology, and that emotions ought to be further examined, especially considering that they have received more limited attention in the literature on loss of control.

[6] This paper addresses substance addictions. While the framework I develop could be extended to analyze behavioral addictions separately, I will not make the case for it here.

these bigger questions goes well beyond the scope of this paper. Yet, it is worth noting that a corollary of my argument that lack of control over addictive behaviour can be externally constituted is that control itself is partly externally constituted, rather than being something 'internal' to the agent that is influenced by the external world. Hence this paper invites further development of an externalist account of self-control. Second, there is no uncontroversial definition of addiction in the psychiatric or philosophical literature. In this paper I will not give a precise definition of addiction or attempt to outline necessary or sufficient conditions. Following much of the philosophical literature, however, I take reliance or dependence on drug use that persists in the face of negative consequences to be characteristic of paradigmatic cases of addiction. I leave open the question of what a full account of addiction might look like.

1. Affective scaffolding

The concept of scaffolding emerges from situated approaches to cognition and affectivity.[7] On a situated view, in broad stroke terms, cognitive and affective states are understood as the result of interactions or relationships between embodied agents and their environments. The situated paradigm can be contrasted to more internalist and individualistic accounts of cognition and affectivity that explain the occurrence of these states primarily by reference to brain-body processes 'inside' the individual and treat the external environment as a causal background. The concept of scaffolding has been used in both the situated cognition and affectivity literatures in two ways (that in some descriptions coincide or intertwine). On the one hand, scaffolding describes the ways that we make use of environmental resources, or engineer our environments, to *enhance*, *support* and *amplify* cognitive and affective capacities, to make it easier than it otherwise would have been to complete some cognitive or affective task (e.g., Clark and Chalmers 1998; Sterelny 2010). On the other hand, the concept of scaffolding is applied to describe the ways that cognition and affectivity are *altered* and *transformed* by interactions between agent and environment (e.g., Colombetti and Krueger 2015; Maiese and Hanna 2019; Slaby 2016). While there are overlapping considerations here, in this paper I focus primarily on the transformative feature of affective scaffolding; that is, on how agent-environment interactions jointly regulate affective states.

On a scaffolded view of affectivity, emotions are produced and altered through engagement with and modification of the world around us. Two of the ways affective scaffolding can be achieved is through interactions with material objects and through interactions with other people (Colombetti and Krueger 2015; Coninx and Stephan 2021; Saarinen 2020; Slaby 2016).[8] Material objects and interpersonal relationships are not mere background conditions for emotional experience. We actively engage with objects and other people to modulate our affective lives, and this is a fundamental aspect of affective experience. To say that we actively scaffold affectivity, however, is not to say that this process is always enacted consciously or intentionally. We develop our affective repertoires through affective scaffolding, both deliberately and through more

[7] See, for example, Robbins and Aydede (2009), and Walter (2014) on cognition, and Stephan and Walter (2020) on affect.

[8] I leave open the possibility of additional types of scaffolds, and complex sets of integrated material and interpersonal scaffolds, being incorporated into an extended account of addictive affectivity.

unreflective, habitual interactions with the material and social world (Colombetti and Krueger 2015, 1160; Coninx and Stephan 2021, 43; von Maur 2021). Because on a scaffolded view affect states come about through these dynamic agent-environment interactions, including objects, other persons, and other elements of the world beyond brain-body processes (Coninx and Stephans 2021, 40; Saarinen 2020, 822), the view demonstrates how emotions are situated in one's sociocultural context (Colombetti and Krueger 2015, 1172; Griffiths and Scarantino 2009; Krueger and Osler 2019; von Maur 2021).

We interact with the material world in various ways every day to alter our affective states. Hence material scaffolds can take many forms. People may 'listen to music to relive past emotions, go to the movies to be entertained, indulge in comfort food, move furniture around for novelty' (Colombetti and Krueger 2015, 1162) or 'take a hot shower when they feel lonely, cuddle a teddy bear when they feel afraid, or treat themselves to a nice gift to lift their spirits' (Koole and Veensra 2015, 63). Similarly, as social creatures, we alter our affective condition through diverse social interactions: 'We spend time with partners, family, and friends because we enjoy their company and the pleasant feelings they bring about, and we engage in joint activities that are qualitatively enriched by the presence of others' (Colombetti and Krueger 2015, 1166).

Considering these diverse examples of affective scaffolding, one might be left wondering what distinguishes any element of the environment that induces or impacts our affective condition from an affective scaffold proper. What is the difference, for instance, between listening to music to moderate your mood and feeling a little irritated every time you walk into a noisy subway station? Colombetti and Krueger (2015) make this delineation by adopting the concept of niche construction from Kim Sterelny's (2010) biological theory of environmentally supported cognition. On their view, in loose terms, affective niches are agent-environment pairings – be this agent-object, agent-agent, or something else –that are constructed when an agent makes use of the same material or social resource repeatedly to enable particular affect states (1160). The concept of affective niche construction highlights that the environment does not only act upon us and alter affectivity, and we do not only make use of the environment to regulate affect in arbitrary or spontaneous ways. We build affective niches that we return to and use with varying regularity to enable similar affective responses over time.

I will, however, set aside Colombetti and Krueger's conception of niche construction, as it introduces unnecessary conceptual machinery for the sake of understanding affective scaffolding in addiction. Nonetheless, I will likewise focus on the re-occurring and habitual aspect of affective scaffolding. I will appeal to the dimensions of affective scaffolding that Colombetti and Krueger introduce to develop their account of niche construction, because these dimensions are particularly helpful for pulling apart the idea of drugs as generally useful tools for emotion regulation from the specific agent-environment interaction that becomes entrenched, forming a coupled-system serving an affective function in addiction. Looking ahead, without tying these dimensions of affective scaffolding to the concept of niche construction, I will employ them to identify the conditions of addictive affective dependence.

Colombetti and Krueger focus on three dimensions of affective scaffolding (adopted from Sterelny's scaffolded mind framework), though they concede that these dimensions are not

exhaustive.[9] The three dimensions are trust, individualization or entrenchment, and collectivity. Examining different dimensions of scaffolding reveals why some environmental resources become more influential and central to one's affective life than others. I will focus on trust and individualization/entrenchment, as these are particularly informative for understanding the role of affective scaffolding in addiction.

The dimension of *trust* refers to the perceived reliability, from the agent's perspective, of a specific environmental scaffold or type of scaffold, and how reliably accessible this scaffold is to the agent (Colombetti and Krueger 2015, 1160). That is, trust characterizes how confident an agent is that a particular resource will alter or enable the relevant affective state(s) in the expected way – for example, making them calm or delighted – and how generally accessible they perceive the resource to be in their life. Imagine a hobbyist gardener who also likes to occasionally do a crossword puzzle to relax. This person might find gardening to be a more reliable way to relax than completing crossword puzzles, because crossword puzzles sometimes frustrate them. And perhaps tending to the garden is a daily practice that regulates affect, while once in a while this person goes on a hike for the same affective purpose. Gardening is a more trustworthy scaffold than crosswords or hiking trips; it is a reliable, readily available, and frequently used environmental resource, and it thereby plays a more significant and stable role in this person's affective life (Coninx and Stephan 2021, 61).

Some resources become highly *individualized* as they are used repeatedly to enable specific affective conditions. Individualization refers to the ways that a particular resource is adapted to the person using it, creating unique or idiosyncratic agent-environment dynamics. Colombetti and Krueger give the example of the dynamic between a professional musician and their instrument: 'Learning to play requires years of practice, usually from a very young age, during which one's brain and body gradually adapt to the instrument' and 'musicians use their instruments to express and explore a variety of feelings via daily practice sessions. The instrument thus gradually becomes entrenched not just in the musician's motoric repertoire, but also in the musician's repertoire of expression and feeling' (2015, 1164). In the realm of social scaffolds, we develop highly individualized affective dynamics with different people in our lives. The affective scaffolding dynamics between best friends can be radically different than between coworkers, therapist and client, or parent and child (Coninx and Stephan 2021, 62).

Scaffolds that become individualized are often those that are also readily accessible and highly trusted. And this can produce a sort of affective looping effect that increases the reliance on this scaffolding resource, stabilising and entrenching the agent-environment interaction in the person's habits of emotion regulation. We tend to make more use of resources that are available to us and that we can rely on for consistent results, so trusted resources become more individualized over time. And the more individualized a resource becomes, the more it is relied on and trusted, and thus the more entrenched it becomes in one's emotional life and affective repertoire (Colombetti and Krueger 2015, 1169). Take the example of the musician and their instrument. Through regular practice across time, the musician's instrument becomes a highly trusted, individualized and entrenched environmental resource, and these dimensions are mutually reinforcing.

[9] Coninx and Stephan (2021) develop a more extensive taxonomy of the dimensions of environmentally scaffolded affectivity.

2. Affective scaffolding through drug use

The aim of the paper is not to develop a novel account of affective scaffolding, nor to classify all its dimensions. Rather, this is an initial application that shows the power of affective scaffolding for explaining loss of control in addiction. This is a promising route to developing a more rigorous and comprehensive account of the roles that emotions play in addiction and loss of control.

2.1. Drug use and emotion regulation

The practice of regulating emotions through drug use is not limited to addiction, nor is the practice new. Using drugs to alter subjective experience, including affectivity, is a widespread phenomenon across many societies. Lots of addicted and non-addicted people use psychoactive substances, with lesser or greater frequency, to scaffold affectivity. For instance, caffeine is widely used to boost or enhance moods, and alcohol to dampen or calm them. Or consider the largescale use of benzodiazepines ('benzos'), commonly prescribed for anxiety. A 2015-2016 national survey found that 12.5% of adults in the United States used benzos; however, only 0.2% met the DSM criteria for a benzodiazepine use disorder (NIDA 2018). Depending on one's cultural context, and particular social milieu, different drugs are available and are used in different ways (Müller and Schumann 2011, 293).

Not only are drugs a widely used affective scaffolding resource, but drugs are particularly effective and flexible scaffolds. They can significantly and directly alter emotions, and in many cases, they work quickly to produce relatively consistent affective results, even across vastly different external conditions. Additionally, drug use requires minimal background skills or expertise to be utilized (*cf.* the musician). And different drugs can produce diverse affective conditions. Cocaine can cause euphoric states, like confidence and excitement; ecstasy can induce interpersonal affect states like love and feelings of connection; psychedelics can cause awe, wonder and inspiration; ketamine can enable calm and relaxation; opioids can cause feelings of comfort and safety. Certain drugs are used by the general population to regulate stress, and not only in the context of addiction; for example, alcohol, cannabis and, as mentioned, benzos (Pickard 2013, 149). These examples are generalizations of affective outcomes. The specific outcomes achieved by using these and other drugs can differ significantly person to person. The common thread is that drug use offers self-regulation benefits.

While the drug itself is the most obvious component of this environmental scaffold that the agent interacts with, it is not only the drug that accounts for the affective scaffold. Just as tuning the instrument, applying rosin to the bow, reading sheet music, and using warm up exercises may be incorporated components of a musicians affective scaffolding practice, the agent-environment coupling that emerges from ongoing and habitual drug use can include components of the rituals of use – the contexts, paraphernalia, method of administration, pre and post use routines, and so on. The emotional regulation functions that drug use can carry out are not explained solely by the drug and its effects on the brain-body processes 'inside' the agent. On this externalist picture, various

components of the agent's environment can become implicated in the process of affective scaffolding through drug use.

2.2. Drug use and the dimensions of affective scaffolding

Drug use is often ritualistic: a drink after work to relax, cannabis while enjoying creative activities, stimulants when working on a project with a pressing deadline, ecstasy for nights out with friends to enhance feelings of connection, a cigarette break at social events to sooth anxiety. These substances serve different personal and contextually valuable affective purposes. And the affective scaffolding that occurs through this drug use can come to be regularly relied on for important affective experiences. This is one of the meaningful roles drug use plays.[10]

In cases where drug use is ongoing and habitual, the dimensions of trust, individualization and entrenchment become evident. Drugs are well suited to be trusted tools. As noted, drugs can cause emotional shifts relatively directly and quickly, and in a wide range of contexts. When the scaffolding function a drug provides is more reliable than other environmental scaffolds, it can become a stronger and more stable piece of one's affective life. Because of the mutual reinforcement of individualization and trust, as one relies more on a drug to enable affective conditions, the ritual of drug use and the affective purposes for which it is used can become adapted to the agent, creating highly personalized and idiosyncratic agent-environment dynamics. As this scaffold becomes more individualized, it becomes more highly trusted and relied upon, and this entrenches the scaffold in one's affective life.

It is worth noting that there are relevant differences between individualization in the cases of drug use and playing an instrument. For example, the musician may interact with the same physical instrument(s) across time, whereas drug use involves interactions with different tokens of a type. And a musician can materially personalize their instrument in ways that seem quite different from drug use. However, interaction with the same object, and the ability to materially structure it, are not necessary conditions for individualization. As I have described it, drug use as a scaffolding resource consists of more than the drug itself; hence, individualization in this case can encompass altering dosage, mixing a drug with other substances, selecting and curating the setting of use, administering the drug through a specific method (e.g., one could smoke or inject a substance), taking a drug in company or alone – these and other interactions with the scaffolding resource can function to personalize the affective results of drug use over time.[11]

Thus, as with other kinds of environmental scaffolds, there exists a spectrum of the dimensions of trust, individualization and entrenchment in the case of drug use. Given the spectrum of reliance on drug use, when does the use of this tool for emotion regulation enter the territory of addiction? And how can this difference between non-addictive and addictive scaffolding through

[10] Müller and Schumann (2011) describe drugs as instruments and outline a number of their functional benefits, including: improved social interaction; countering fatigue; improved cognitive performance; facilitated sexual behavior; expanded perception horizon; as well as, coping with psychological stress, mental illness, and producing euphoria or hedonia. Some of these functions are taken up by my analysis.

[11] Thank you to an anonymous reviewer for drawing my attention to this relevant distinction.

drug use be explained? Next, I introduce and characterize the concept of addictive affective dependence to address these questions.

3. Addictive affective dependence and loss of control

Colombetti and Krueger (2015) briefly introduce the idea that a highly trusted scaffold, in the extreme case, can create an 'addictive relationship.' They illustrate this with their example of the dynamic between musician and instrument. They suggest that, over time, being able to play an instrument 'can influence how one chooses to cope with situations,' for instance, 'rather than taking a tranquillizer or talking with others, musicians may rather turn to their instruments to regulate their affective states' and '[k]nowing that they can do so may affect which situations and challenges they choose to face and how they do so' (1164). The agent adapts to and is changed by the trust in and reliance on this scaffold. As a result, for a musician 'losing access to an instrument played from a young age can be a source of deep regret and sadness because one loses the possibility to express, and thus explore, a rich range of affective states' (1164). By Colombetti and Krueger's lights, on the extreme end of the dimension of trust, a person can be 'addicted' to a scaffolding resource, meaning they regard the resource as 'indispensable for the realization of specific affective states' and regularly use it for that purpose (1162). In this scenario, the instrument is used habitually as an affective scaffold and eventually is perceived as essential to the very possibility of having certain affective experiences.[12]

Now consider again reoccurring drug use that becomes highly entrenched in affective scaffolding. In this case – especially when drug use starts at an earlier age – the reliance on this resource can impact how a person chooses to react to and cope with life circumstances that call for emotion regulation. While the musician may reach for the instrument over the tranquilizer, people who use drugs might reach first for the drug (in some cases, the tranquilizer). And as reliance upon and entrenchment of this agent-environment dynamic increases, as one's affective repertoire is shaped more profoundly by the process, giving up or losing this resource can be very destabilizing and can be regarded (consciously or not) as foreclosing the possibility of experiencing a range of rich, important and meaningful affective states. The drug and ritual of use may no longer be experienced as an external resource used to achieve a particular emotional state or limited set of states, but as an essential and integrated part of one's overall affective condition.

In the non-addictive case, a drug can be understood as a tool that is used by the agent to achieve an emotional goal, to outsource some emotion regulation tasks, where other tools could be used for the same purpose. But for some people who use drugs, an addictive dynamic evolves. At one point in time these agents could emotionally regulate with or without a drug, but overtime, the connection between agent and tool becomes so tight that a distinctive dynamic emerges and the ability to regulate affect becomes effectively dependent upon this agent-environment interaction or

[12] Colombetti and Krueger themselves conclude that the boundary between cases of high reliance on a scaffold and cases of actual 'addiction' is 'arguably fuzzy' (2015, 1162). I do not regard their example of the 'addicted' musician as adequately outlining a case of addiction *per se*, but I introduce it because I draw on this example to characterize one component of what I argue is in fact a case of addictive affective scaffolding.

pairing. The agent no longer uses the drug as one tool in their toolbox, so to speak, to approach an emotion regulation goal. They have entered a new space: what I term *addictive affective dependence*.[13]

To take stock, the conditions of addictive affective dependence can be understood as follows. First, it is characterized by especially high reliance on drug use for emotional regulation. High reliance is cashed out in terms of high trust, individualization and entrenchment of the resource in one's affective scaffolding habits. Second, in addictive affective dependence, this high reliance has tightened the dynamic between agent and drug to the extent that the drug is perceived as indispensable to emotion regulation. As a result, third, the agent can no longer emotionally regulate without the drug, and hence this dynamic is highly motivating of drug use: it is a way through which the agent has *lost control* over their drug using behaviors. Note that whether the perceived impossibility of regulating in other ways is accurate or not, perception is sufficient for guiding self-regulating behaviours. That is, even if it is in fact possible for the agent to regulate in other ways (as I explore in §5 in discussing treatment and recovery), if regulation is experienced as only possible through the drug-agent interaction, then the actual possibility does not undermine the motivational force of this affective dynamic. Finally, because the emotion regulation function that the agent-drug interaction carries out has become beyond the capacity of the agent alone (without the drug), the capacity to emotionally regulate is effectively dispersed between the agent and the drug, functioning together as an affective system. The affective regulation is externalized in the interaction.

These features of addictive affective dependence help to explain the addicted agent's continued reliance on drugs, even in the face of conflicting motivations to abstain from continued drug use in light of, for example, escalating consequences of ongoing use. Addictive affective dependence limits control over drug taking by shaping an agent's affective repertoire and habits of affective scaffolding sufficiently to strongly dispose them to emotionally regulate through drug use even in the face of significant opposing motivations to stop using the relevant drugs.[14]

Consider the example of someone who has become affectively dependent on benzos who finds moments that call for emotional regulation to be excessively motivating of drug use, even if they have strong and substantial conflicting motivations to abstain. The action-guiding force of this affective dynamic is intensified when this drug use is regarded (consciously or not) as indispensable to enabling the relevant emotional experience, and the capacity for emotional regulation has become thoroughly dispersed across the agent-resource interaction. Addictive affective dependence plays an important role in action control here, contributing to the prioritization of drug use behaviors over the pursuit of other goals. While there may be various motivational states at play in this scenario, this

[13] I credit Saarinen (2020, 824) for inspiring my use of the term 'dependence' here.

[14] This analysis assumes that people attribute significant value to emotional regulation – we tend to value some emotional states over others (feeling calm rather than anxious, for example), and when we are emotionally dysregulated, we are typically motivated to try to change the way we feel – and that this broader phenomenon is implicated in the process of addiction, wherein emotional regulation needs tend to be disproportionately high and dominate decision-making. Henden (2023) offers an extended account of the value that addicted agents get from the emotional self-regulatory function of drug use.

affective dynamic contributes to pushing the addicted agent to engage in use of benzos, despite their goal or intention to abstain.

However, this example of addictive affective dependence on benzos makes a distinction salient. As noted, only a percentage of people who use benzos to treat anxiety develop an addiction. So, it seems there are plenty of people who use this drug for emotional regulation who, even over an extended period of time, do so without escalating into addictive affective dependence. When competing motivations to abstain are present, such a person will more easily opt to self-regulate by alternative means. In such cases, drug use does not appear to manifest the kinds of loss of control characteristic of addiction. And this is consistent with the use of other drugs as well. Most use of drugs with addictive potential – including heroin and cocaine – does not evolve into addiction (Kalant 2009, 785; SAMHSA 2019; Zinberg and Jacobson 1976; Zinberg et al. 1978). The majority of drug use never meets the criteria for addiction (along various measurements).

This feature of drug use seems to imply that for many people some form of affective scaffolding through drug use is possible that does not play the control-compromising role that I have suggested addictive affective dependence plays. This raises a question. Why do only some people who use drugs (even regularly) undergo this transformation from drug use as a tool to outsource certain affective regulation tasks, to the entrenched drug-agent interaction that delineates addictive affective dependence? Next, I show that this question is best answered by examining how the known psycho-socioeconomic risk factors for addiction prime addictive affective dependence. In doing so, I demonstrate the value of taking an externalist approach to explaining control-undermining factors in addiction.

4. Priming addictive affective dependence

Some people who use drugs to scaffold affectivity do so rarely. Other people use drugs with some regularity, but do not come to heavily rely upon them as a scaffolding resource in their affective lives. Still others come to develop addictive affective dependence. I hypothesize that addictive affective dependence is most likely to emerge from: 1) high emotional dysregulation (and thus high emotional regulation needs) resulting from disproportionate levels of life precarity and psychic distress; and 2) lack of social and material resources that could serve as, or support the availability of, alternative affective scaffolds, or enable one to alter their environment sufficiently to reduce emotional dysregulation.[15] These factors can be considered separately, but they are compounding when they co-occur. This is not a trivial point. This hypothesis offers a novel framing of the emotional dynamics of addictive motivation that can be tested against existing research on the psycho-socioeconomic correlates of severe addiction, where loss of control appears to be most profound, thus advancing externalist and pluralist projects that seek to explain loss of control in addiction.

[15] There certainly may be other risk factors for addictive affective dependence that could be analyzed, be that possible genetic predisposition to stress sensitivity, or the influence of certain brain changes resulting from ongoing drug use. I need not deny additional risk factors to demonstrate the importance of psycho-socioeconomic factors.

4.1. Emotional distress and affective scaffolding

Consider the emotional regulation needs generated by high levels of distress and precarious life conditions. First, take the case of emotional distress in the context of mental illness/madness, or as experienced by psychiatric patients/survivors/service-users.[16] Research has found mental illness to be a major correlate of severe addiction (Regier 1990). Drug use, including use of alcohol, benzos, opioids, and cannabis, is much higher among adults with a 'serious mental illness' (SAMHSA 2019; Jacobsen at al. 2001; Khantzian 1985). Based on this correlation, it has been argued that people experiencing mental illness and addiction use drugs to, as Pickard puts it, 'gain relief from intense negative emotions and other symptoms' and that drugs 'provide a habitual and, in the short-term, effective way of managing the severe psychological distress typically experienced by patients with co-morbid psychiatric disorders' (2013, 149-50). The claim that people use drugs to alter psychiatric symptoms, including painful affect states, has long been defended by the self-medication hypothesis of addiction (introduced by Edward Khantzian 1985). And self-reported drug use for the sake of altering negative affect states has been shown to highly predict addiction severity (Hogarth 2020; Hogarth and Field 2020).

Furthermore, research demonstrates a substantial link between addiction and repeated traumatic events, especially adverse childhood experiences.[17] This also directs attention to the function of addiction as a form of emotion regulation. Maté (2009), for example, develops an account of addiction as resulting from trauma, emotional loss and experiences of abuse, and he explains that '[p]eople are susceptible to the addiction process if they have a constant need to fill their minds or bodies with external sources of comfort, whether physical or emotional' (226). In other words, one purpose for which people who have experienced trauma use drugs is to scaffold affectivity when they have 'an inability to maintain a reasonably stable internal emotional atmosphere' (226) by other means. Experiences of systemic oppression, such as colonial and neocolonial violence (direct and indirect forms) (de Leeuw et al. 2010), transphobia and homophobia (Bränström and Pachankis 2018; Connolly and Gilchrist 2020), and related social disconnection or isolation (Alexander, 2008; 2018) are also correlates of addiction. One interpretation of these data is that experiences of oppression produce or exacerbate painful affect states and emotional distress that, like other trauma related affectivity, is regulated through drug use, and that this helps to explain the correlation.

4.2. Socioeconomic deprivation and affective scaffolding

There is also significant statistical correlation between socioeconomic disenfranchisement and severe addiction (Compton 2007; Hogarth 2022). Research on the socioeconomic determinants of addiction show that, for example, under or unemployment, houselessness or housing instability, and lack of access to physical and mental healthcare correlate with severe addiction (Galea and Vlahov

[16] While the research I cite primarily uses the term 'mental illness,' I offer a range of language options here to acknowledge that 'mental illness' is a not a term endorsed by all people who experience the kinds of psychic/emotional/mental distress discussed in the paper, nor by all researchers addressing the topic.
[17] See Maté (2009) for an extended discussion of research on trauma and addiction.

2002; Spooner and Hetherington 2004). Various inferences can be made from these correlations. Regarding affectivity, first, there is the evident point that socioeconomic deprivation itself produces emotional distress that drug use can be a response to. In addition, this correlation reveals the link between disproportionate distress and the second factor that I have proposed primes addictive affective dependence; namely, limited access to resources that would enable alternative affective scaffolding strategies or enable change of exacerbating environments.

The more limited someone's material and social resources are, the fewer options they will have for 1) using other tools/environmental resources for the emotion regulation function that drug use originally played, and 2) altering their environment to reduce emotional distress (and thus regulation needs) by changing external factors that exacerbate or cause this distress. I will consider in turn how economic precarity and social precarity limit alternative scaffolding options, then illustrate how both factors limit a person's ability to restructure their environment.

The idea that economic precarity disposes people to addiction because it limits alterative means for addressing distress and painful affect is not novel. As Pickard suggests, '[i]f you live in such circumstances, drugs may be the only thing that brings any relief from suffering and despair' (2020, 9). In this way, lack of socioeconomic opportunities compounds the influence of mental illness, trauma, and social oppression on addictive affective dependence insofar as lack of material resources limits one's options for responding to the emotional dysregulation and distress symptomatic of these experiences. This includes lack of tools provided by mental healthcare services, which are largely inaccessible to people in economic precarity or poverty. [18]

In addition to economic precarity, many people experiencing ongoing addiction have limited stable social relationships (though of course these forms of precarity do not always co-occur). Addiction can both be influenced by and result in social disconnection and isolation. Addiction often leads to damaged or unstable relationships with friends, family and community, and, on the flip side, people who use drugs are subjected to stigma, social exclusion and also discrimination in various institutional contexts (for instance, in healthcare and social services). Once a person is addicted, the option of emotionally regulating through social scaffolding may be an unrealistic alternative to relying on drugs for affective scaffolding purposes. The foreclosure of social scaffolding options contributes to ongoing drug use in this way.[19]

It is important to note here that while addiction often disrupts existing social relationships, addiction can also involve important community and mutual care between people who use drugs, providing supportive and identity-affirming relationships, as well as meaningful 'social roles, and other forms of group identification that enduringly scaffold an individual's identity and sense of purpose' (Glackin, Roberts, and Krueger 2021). Drug use can revolve around social relationships in this way. However, in such cases, the social scaffolding involved may be enmeshed with drug use itself. Consequently, while important in various ways, this scaffolding might not be used as an alternative to or substitution for drug use. This coheres with the idea that the agent-environment

[18] While economic precarity can prime addiction, it is also the case that ongoing addiction can depress socioeconomic status.

[19] Lack of social relationships can also influence initial drug use in cases where drugs are an available tool to perform the emotional regulatory functions that might otherwise be fulfilled through social interaction. While this does not give a full account of the pathway into addiction, on this view, it can be a contributing cause.

pairings that emerge through affective scaffolding can consist of not only the drug itself and its physical effects, but the whole situation in which drugs are used.

Not only does a lack of social or economic resources limit options for regulating emotions through other means than drug use, but both factors limit possibilities for altering one's environment to reduce emotional distress. While changing one's environment can be a highly effective external scaffolding tactic for reducing emotional dysregulation, the ability to change one's environment – for instance, moving to a new living situation or new location, changing one's job, taking time off work, receiving support with childcare, having free time and money to participate in social activities, or constructing new social relationships by other means – is not equally accessible to all people living with addiction. These options for changing aspects of one's environment that cause or exacerbate distress are often directly dependent on one's economic and social resources (Burdman, forthcoming, 11).

The psychological, social and economic factors that are general predictors of addiction, considered together with the arguments that this correlation is at least in part explained by the role that drugs play in emotion regulation, offers support for the hypothesis that addictive affective dependence is more likely to evolve for people experiencing disproportionate emotional distress or who have limited social and material resources. And this helps to explain one element of why it is so hard for people in these conditions to get out of addictive patterns of behavior, even in the face of consequences of ongoing drug use and conflicting motivations to abstain. These factors strengthen the motivational pull of drugs by exacerbating the needs that they address and by limiting other scaffolding options, and options for altering distressing features of one's life and environment.

The concept of addictive affective dependence provides an explanation of one of reasons that certain psychological and socioeconomic conditions correlate with severe cases of addiction, where loss of control appears to be most profound, long-term and difficult to recover. It explains one mechanism by which these environmental conditions undermine efforts to abstain from drug use. This advances an externalist position insofar as it shows that the social and material conditions that causally influence addiction do not only set background conditions for choice and action selection. Rather, according to a scaffolded view of affectivity, these conditions are built into the motivational conflicts that drive loss of control in addiction. This suggests that one ought to take an externalist view of psychological states generally, and of motivational states specifically.

An important remaining question is whether addictive affective dependence is a relevant control-undermining factor in cases of addiction that apparently do not involve the kinds of psycho-socioeconomic conditions highlighted here. It may be the case that some instances of addiction do not involve this emotional dynamic. Another possibility is that addictive affective dependence is relevant in other cases of addiction, but in such cases, it is primed by a different set of factors than those that I have discussed. I leave this as an open question. Given the pluralist stance of the paper, my aim is not to show that addictive affective dependence is a control-undermining factor in all cases of addiction. The paper does not set out to give a reductive or unifying analysis of addictive motivation. Nevertheless, if I have correctly identified a significant control-undermining factor in at least some cases of addiction, this at minimum supports the claim that the role of emotion in the

addictive motivation deserves more attention, and that externalist approaches may be especially fruitful.

5. Upshots for addiction treatment and recovery

Given that ongoing attempts and struggles to gain control over addictive behavior are a crucial feature of addiction for many people, developing diverse strategies to bolster agency over these behaviors is a key element of addiction treatment and recovery. Depending on how agency, addictive motivation and control-limiting factors are cashed out, different possibilities become salient. I have described loss of control in addiction in terms of conflicting motivations where motivations to use drugs continually override motivations to abstain, and I have endorsed a pluralist approach to control-undermining factors. I then proposed that addictive affective dependence can contribute to loss of control over addictive behavior, especially in certain agent-environment conditions. Considering the nature of this control-undermining factor in addiction, what strategies can be leveraged in treatment and recovery to bolster agency over addictive behavior?

In the remainder of the paper, I will show how affective scaffolding, and in particular the concept of addictive affective dependence, offers an externalist framework for explaining how shifting addictive emotional dynamics can be a strategy for (re)gaining control over addictive behaviors. Specifically, I will discuss what strategies the psycho-socioeconomic risk factors for addictive affective dependence indicate are needed to bolster agency and control.

5.1. Bolstering agency through affective scaffolding

Self-control in addiction, in broad terms, is the ability to behave in line with one's goal to abstain from drug use in the face of competing motivations. This goal may be for complete abstinence, or it may be to abstain in particular moments in order to manage or reduce drug use. The philosophical literature on addiction and self-control has skewed heavily toward internalist explanations of how control is exercised over addictive behaviours. The focus has primarily been on 'synchronic intrapsychic strategies' for asserting control (Burdman, forthcoming, 1). That is, self-control is understood as the effortful inhibition of an occurrent addictive desire, temptation, impulse or other addictive motivational state. In some cases, this is described in terms of 'willpower' – the executive capacity for 'effortful resistance of temptation' (Snoek, Kennett, Levy 2016, 102).

My account of addictive affective dependence offers one route for challenging the internalist and individualist paradigm of explaining the exercise of control in addiction. And this contributes to a new and growing literature examining externalist strategies that explain how control can be exercised in addiction. (e.g., Burdman, forthcoming; Glackin, Roberts, and Krueger 2021; Kennett 2013; Snoek, Levy, Kennett 2016). The externalist turn in the literature on self-control in addiction is important because there is evidence that external strategies are highly effective for exercising self-control – perhaps more effective – compared to effortful inhibition (e.g., Hofmann, Baumeister, and Vohs 2012; Imhoff, Schmidt and Gerstenberg 2014; Snoek, Levy, Kennett 2016). In fact, effortful inhibition has been found to be insufficient on its own for ongoing abstinence in the face repeated motivational conflicts in addiction (Bechara 2005; Snoek, Levy, and Kennett 2016).

We can think of the external strategies that assist in the exercise of self-control as those that recruit environmental resources, including social relationships, or that change the environment in strategic ways to avoid motivational conflicts, to lessen the force of addictive motivation, or to enhance the capacity for resisting such motivation. Some of the known strategies that addicted agents use in this way include 'finding new social circles, and routes to and from work unassociated with their prior drug use; sending paycheques to spouses' accounts to prevent themselves from gambling; wearing long-sleeved shirts to avoid constantly seeing inviting and available veins; removing cigarette-lighters from their cars' (Glackin, Roberts, and Krueger 2021, 6). Such strategies can be enacted consciously, but it is possible that for some people, these strategies are deployed more subconsciously as a part of managing drug use. These examples of cultivating environments and social relationships to bolster one's ability to abstain from drug use suggest that control partially depends on external scaffolding strategies.

Taking up the lead from existing accounts of external strategies (which have focused primarily on cognitive scaffolding), I suggest that, in the same vein, affective scaffolding strategies can be leveraged for the sake of enabling control in addiction. I argued that addictive affective dependence is primed by high levels of emotional distress, lack of alternative tools to drug use to scaffold affectivity, and lack of resources to change distressing environmental conditions. These factors taken together suggest that, in order to counteract the control-undermining effect of addictive affective dependence, addiction treatment and recovery should prioritize 1) environmental changes that reduce overall psychic distress and emotional dysregulation (this includes thinking in terms of largescale change to the material, institutional and structural conditions that fuel socioeconomic deprivation), and 2) generating more options for tools to enact the emotional regulation functions that drug use originally played for the addicted agent – for example, building out their social scaffolding options. I will consider these in turn.

5.2. Structural change

It is well known that addressing poverty and economic inequality, providing accessible healthcare and other social services, fighting against the stigmatization of drug use and mental illness/madness, refusing the punitive agenda of the ongoing 'War on Drugs,' and other forms of social and political interventions are effective ways of combatting addiction. My account of affective scaffolding in addiction reveals one of the reasons *why* these are fruitful sites of intervention.

Because disproportionate emotional distress resulting from socioeconomic deprivation is a factor that primes addictive affective dependence, changing those conditions can thus help to shift affective scaffolding dynamics and this can serve as a pathway to bolstering agency and thereby control in addiction. Since these conditions are largely outside the domain of individual influence (e.g., poverty, lack of healthcare, institutional discrimination, social oppression etc.), this sheds light on why broader social and political interventions are essential for addressing addiction. On the scaffolded view of affectivity, these environmental conditions play a constitutive role in some of the motivational conflicts that undermine control in addiction.

Addressing addiction at the level of social and material conditions is not just a strategy for reducing distress and regulation needs, and thus shifting affective scaffolding dynamics. It is also a

way to expand a person's options for alternative scaffolding tools. An addicted agent's ability to achieve the emotional regulation that drug use originally provided by other means is largely dependent upon addressing the social, institutional and structural conditions that prime addictive affective dependence. Addressing socioeconomic conditions can create new environments that offer a different range of possibilities for emotional regulation.

5.3. Expanding options

As introduced, the looping effect of trust, individualization and entrenchment in affective scaffolding can lead to important parts of an addicted agent's affective repertoire being regarded as only accessible through drug use. In such cases, the agent once used the drug as one tool to carry out an emotional function, but over time, the agent-drug interaction becomes the only way available to them and this dynamic undermines control over drug using behaviour. Here, emotional regulation is outside the capacity of the agent without the drug. Consequently, one way to support someone in this situation is to (re)instate other affective scaffolding tools to create the option for carrying out the emotional functions that the drug originally played.

While Coninx and Stephan (2021) arrive at this point differently than I do, in their brief discussion of addiction and affective scaffolding they also suggest that 'an important part of treatment can be to break through these [self-reinforcing] cycles and reestablish a person's ability to flexibly engage with their environment' (55). Establishing alternative affective scaffolding options is one way to develop more flexible engagement with one's environment, thereby intervening on the self-reinforcing loop of trust, individualization and entrenchment that sustains addictive affective dependence. The availability of new tools can contribute, over time, to an agent transforming their affective repertoire, self-regulatory practices, and corresponding behaviors.

While I will not attempt to give a comprehensive account of how new scaffolding resources can be utilised in treatment and recovery to bolster agency, I will outline an example. One way to counteract the perceived impossibility of emotional regulation by means other than drug use is to expand interpersonal scaffolding that can be relied on to start building new habits of emotional regulation. Consider the role of social connection and peer support strategies in treatment and recovery. Introducing and forming new trustworthy social relationships is a widely practiced part of recovery (abstinence-based or not) across different arenas. This is a key component of, for example, many treatment programs, therapeutic communities, peer organized harm reduction projects, and 12 step recovery programs. A specific example is one of the roles 'sponsorship' can play in 12 step programs. In his discussion of how Alcoholics Anonymous functions, Heyman (2009) explains that 'new members have a sponsor or mentor to whom they can turn when they feel that they need to have a drink. The contact functions as an alternative or distraction, reorienting attention to something other than alcohol' (179). A sponsor is a fellow member of Alcoholics Anonymous whose trustworthiness is (at least in part) conferred through their shared understanding of addiction and their personal experience with recovery. While Heyman interprets this tool as a form of distraction, it can simultaneously be viewed as an instance of an alternative trustworthy affective scaffolding resource that is available when conflicts arise between the motivation to emotionally

regulate through drug use and the goal to abstain – that is, when someone who is trying to abstain feels they 'need to have a drink' to get through the moment.

Building out a person's social resources is a known effective addiction treatment strategy, and the concept of affective scaffolding explains one reason *why* this strategy is effective. It is not obvious at first pass why something like, for example, having a cup of coffee with a stranger from a recovery meeting helps to bolster agency over addictive behavior and thus re-establish control. My view gives one explanation: this social interaction is playing the same kind of affective scaffolding role as the drug that generated the process of addictive affective dependence in the first place. This is one way the agent can begin to modulate affectivity in a new way. The view provides a conceptual framework for a method that we know can work.

In summary, my analysis of addictive motivation and loss of control in addiction through the concept of affective scaffolding predicts something we know to be true about the kinds of treatment and interventions that work for bolstering agency in addiction: addressing system level problems (e.g., social, institutional, economic), and building out material and interpersonal supports (e.g., through recovery community). Furthermore, the analysis explains *why* these approaches work. And this explanation is distinctive from traditional internalist explanations of control and loss of control. Addressing the psycho-socioeconomic risk factors for addiction can be a direct form of intervention on addictive motivation. This demonstrates that it is important for theories of self-control to give more consideration to the motivational roles of emotions in addiction, and it advances an externalist approach.

Conclusion

Loss of control happens in some cases of drug use, but not others. This paper shows that affective scaffolding can help to explain why this is the case, and in doing so, can help to explain what loss of control in addiction consists of. By applying the concept of affective scaffolding, the paper develops and defends an account of addictive affective dependence as a control-undermining factor in addiction. In doing so, it offers a new externalist framing of the emotional dynamics of addictive motivation that is supported by extant research on the psycho-socioeconomic correlates of addiction. My analysis highlights a crucial role of social support in addressing addiction, and of material, institutional and structural changes that can counteract the compounding factors that prime addictive affective dependence. If my analysis is correct, addiction treatment will be more effective, and recovery more stable, when it involves supports for developing alternative affective scaffolding strategies. A benefit of the analysis is that this conclusion is applicable not only to abstinence-based conceptions of addiction treatment and recovery, but to any form of treatment and recovery that aims at supporting and bolstering the agency of people experiencing addiction.

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