



Determinism and Destigmatization: Mitigating Blame for Addiction

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Abstract The brain disease model of addiction is widely endorsed by agencies concerned with treating behavioral disorders and combatting the stigma often associated with addiction. However, both its accuracy and its effectiveness in reducing stigma have been challenged. A proposed alternative, the “choice” model, recognizes the residual rational behavior control capacities of addicted individuals and their ability to make choices, some of which may cause harm. Since harmful choices are ordinarily perceived as blameworthy, the choice model may inadvertently help justify stigma. This paper seeks to fully naturalize the choice model by highlighting the determinants of voluntary action and thus increase its potential for destigmatizing addiction. In light of a deterministic understanding of behavior, it is unreasonable to suppose that addicted individuals could have made different choices in becoming addicted and in subsequent situations. To the extent that stigma is motivated by the supposition that addicted individuals could have chosen otherwise in actual situations, a deterministic understanding of addictive behavior promises to mitigate blame and stigma.

Keywords Addiction · Stigma · Disease model · Choice model · Determinism · Moral responsibility

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Introduction: Models of Addiction

The brain disease model of addiction is widely endorsed in the drug prevention and treatment community as a means to reduce stigma [1]. It is portrayed as a more scientific and more compassionate understanding of addiction than the so-called moral model since diseases are not typically seen as blameworthy failures of character or will. The disease process, not the person, is primarily to blame for addictive behavior because it generates urges and impulses that overpower normal capacities for self-control. However, skepticism is growing about the cogency of the disease model and its efficacy in combatting stigma and promoting recovery [2–6]. Disease model skeptics can agree with proponents that, as substance use (including use of alcohol and nicotine) continues, the brain changes in ways that help explain the syndromes typical of addiction: persistent drug-seeking and consumption that significantly compromise an individual’s physical and psychological welfare and hinder pursuit of non-drug-related goals. However, they argue, addiction itself is more accurately characterized as a person-level disorder of behavior, behavior that, although often dysfunctional, is also decision-laden and goal-directed. A *choice model* therefore best captures the nature of addiction: addicted individuals retain at least some impulse control and choice-making capacities, capacities that can be leveraged in treating the disorder itself [7–12].

The choice model recognizes the important voluntary aspect of addictive behavior: that persons with drug addiction consciously seek out and consume their

preferred substance(s), successfully negotiating barriers to obtaining them. Although they may suffer impairments in the ability to plan or act on long-term goals, they can imagine counterfactual scenarios (where and how might I next obtain drugs?), deliberate, and eventually choose among them in order to maximize the chances of satisfying cravings or avoiding withdrawal. Given a motivational hierarchy that makes drug consumption the top priority, such behavior counts as rational since it takes into account the possible contingencies involved when pursuing an intended objective. It is not merely a matter of involuntary motor reflex or blind compulsion. True, from the perspective of those not in the grip of addiction, such behavior is patently *irrational*, given the damaging consequences of drug use and the failure to pursue a normal suite of life-enhancing goals. It's a relatively easy choice, for the non-addicted, to refrain from damaging substance use, but not once addiction takes hold. Even from the addicted perspective, in sober moments the global irrationality of one's behavior may be appreciated: one's continuing failures to keep resolutions to not use drugs, to meet obligations, to achieve life ambitions. But although the motivational priorities of those struggling with addiction might be radically disordered, enough impulse control and choice-making capacities remain to enable the intelligent pursuit of drugs. Under the choice model, it is these remaining capacities that can be recruited to *recover* from addiction, a process of reconfiguring one's motivational priorities so that the scope of voluntary behavior expands beyond, and leaves behind, the use of drugs.

For those worried about stigma, the hazard of adopting the choice model, however well it might capture the nature of addiction, is that it might return us to the moral model. Choices, after all, are normally understood as the free, uncoerced expressions of an individual's character, motives, and values, and unless morally questionable choices have salient antecedents in circumstances beyond an individual's control, they are ordinarily deemed blameworthy. As an expression of moral blame, the stigma attached to addiction seems logically to follow from characterizing it as involving voluntary choices, not, as the disease model characterizes it, an involuntary disease process.

In what follows. I will press the issue of the *causal determinants of voluntary action* with the aim of mitigating blame and stigma, but without eliminating or ignoring the moral dimension of addictive behavior. The choice model need not return

us to the moral model even though moral considerations still apply. In this endeavor I join others, such as Hanna Pickard [13] (see below, "[Rethinking blame in addressing addiction](#)"), who seek less punitive and more effective modes of treating addiction. Although causal determinism is arguably a working assumption when adducing science-based explanations of behavior, behavioral scientists and clinicians rarely make it explicit; nor are its implications for mitigating stigma, as argued for below, usually spelled out in any detail. Explicating determinism – sometimes misunderstood (perhaps even by some clinicians) as a threat to agency and accountability – may therefore help to increase acceptance by the therapeutic community of a properly nuanced choice model, and adoption of more compassionate and effective approaches to addiction.

Moral Harms and the Harm of Stigma

It is uncontroversial that the harms incurred by addictive behavior often have a moral dimension. The deception, negligence, theft, and broken promises sometimes involved in addiction are normative transgressions that may directly impact others. Such harms help to explain the stigma attached to addiction and why the moral model still holds sway in some quarters. Stigmatization – engaging in condemnation or disapproval, whether by act or omission – is an expression of blame that can serve to maintain social norms [9]. The stigma attached to addiction should therefore come as no surprise. It arises from our natural, emotion-laden response to norm violations, not out of the blue as a completely irrational prejudice on the part of those who stigmatize. Of course, no one deliberately *chooses* to become addicted [14], and there are often obvious predisposing environmental factors, such as parental and peer drug use, as well as genetic susceptibilities to addiction; when pointed out, these can reduce perceived responsibility for having become addicted. Nevertheless, voluntary choices to use drugs commonly known to be addictive may be seen as retroactively blameworthy should an addiction ensue, and once addicted, the choice to engage in harmful addictive behavior is prototypically blameworthy as conceived under the moral model, thus potentially deserving of stigmatization.

The Harm of Stigma

Although stigma may sometimes play a role in correcting bad behavior, the stigma attached to addiction has its own harmful consequences [13, 15]. Acceptance of stigma reinforces the perception that addicted persons deserve social punishment – disdain, condemnation, ostracism – not help. Clinicians who harbor prejudicial attitudes may avoid engaging with addicted patients, prolonging their distress, and keeping them and others at risk of further harm [16]. As targets of stigma, persons with addictions may feel shame, leading them to conceal their condition and preventing them from seeking treatment. Even if stigma sometimes helps to discourage drug consumption and the resulting harms, it fails as an effective, humane response to addiction. Reducing stigma and developing effective but non-punitive approaches to behavioral disorders are thus worthy public health objectives.

Limitations of the Disease Model in Reducing Stigma

Despite its current popularity, the disease model strategy against stigma faces at least two difficulties. First, as noted above, voluntary behavior and contingency-responsive choices figure centrally in addiction, both in its inception and further expression. Addicted persons can therefore be understood as at least partially responsible for becoming addicted, and for continuing to make choices that sometimes incur harm. Thus, stigma may be perceived as fairly applied to those with addictions, should they behave badly.

Second, attitudinal research suggests that the disease model may not reduce stigma to the extent its proponents might hope. Characterizing addiction as essentially an involuntary, physical brain disorder may increase pessimism about possible recovery and highlights the risks of deviant or harmful behavior due to deficits in self-control, with the unintended consequence of encouraging social distance [17–20]. Those who suffer from uncontrollable compulsions due to a brain disease may be perceived as less trustworthy and predictable, perhaps even dangerous [19], so are more likely to be shunned or avoided.

The upshot is that those with addictions may end up stigmatized either way: if you can't control yourself because addiction is a brain disease, you can't be trusted and perhaps constitute an indefinite burden of care. If you *can* control yourself, at least to some extent, as the choice model holds, then you can be stigmatized for

making blameworthy choices, whether in the process of becoming addicted or in the pursuit of drugs. In response to this dilemma, I suggest that an explicitly deterministic understanding of voluntary behavior and choice-making, were it championed by behavioral scientists, clinicians and their clients, would help to reduce stigma by placing the addicted individual fully within the causal context of a choice.

In what follows, and as it is usually defined in philosophical (philosophical and scientific) literature, causal determinism holds when, given current circumstances and laws of nature, there is a single next possible state of affairs [21]. Determinism may not be universally the case due to inherent randomness or indeterminism in the world, including in human persons. However, I will argue that since indeterminism cannot add to or enhance control or responsibility, we are justified for all practical purposes in taking a deterministic view of human behavior, including the voluntary choices involved in addiction. I call this *pragmatic* determinism.

Determinism Vs. the Contra-Causal Assumption

If, as choice model theorists propose, addiction is essentially a disorder of one's motivational architecture within which voluntary choices are made, then understanding the etiology of that architecture and the resulting choices is a logical goal of addiction research. Taking this charge to heart, we must examine assumptions that work to block the full investigation of the determinants of choice, in particular the idea that we have the capacity to transcend causal determinism when making choices, what I will call the *contra-causal assumption*. This has it that, in most actual situations, individuals could have chosen or acted otherwise even given the exact causes and circumstances in play; we have, as philosophers sometimes put it, the *unconditional* ability to do otherwise.¹ Recent survey data and experimental findings

¹ The unconditional ability to do otherwise contrasts with the *conditional* ability, which holds that had, counterfactually, the set of conditions been relevantly different, a different choice or action might have resulted had the agent possessed the capacity to respond otherwise. The conditional ability to do otherwise is thus compatible with determinism since the imagined change in circumstances causes the imagined change in behavior. Contrary to the position taken here, *compatibilists* (who hold that free will and moral responsibility are compatible with determinism) sometimes claim that the conditional ability is sufficient to justify credit or blame for voluntary choices in the "basic desert" sense; see "[Rethinking blame in addressing addiction](#)" below and note 5.

suggest that belief in having this ability may be prevalent [22–25]. A deterministic view of human agency – that the causes in actual situations, both inside and outside the person, necessitate the resulting behavior (any indeterminism aside) – obviously calls this assumption into question.

Physicalism

Proponents of the disease model routinely cite the physical basis of addiction: sufficiently frequent and heavy substance use may result in changes to the brain that then drive drug seeking and consumption. A choice model theorist can happily join them in a neuro-materialist understanding of addiction, even if voluntary behavior plays an important role. Explanatory models of addiction as the gradual development of a disordered motivational architecture, within which choices continue to be made, are fully consistent with, and indeed depend on, the neural determinants of choices themselves. Examples, which are likely consilient, include incentive salience mediated by D2 dopamine receptors [26], operant conditioning [27], glucose-regulated ego depletion [28], the “neural tug of war” between impulse and self-control [11], and hyperbolic discounting [29]. Such mechanisms, in concert with environmental and contextual factors (e.g., domestic violence, lack of rewarding non-drug alternatives), can explain why drug seeking and consumption sometimes come to predominate over other goals. The increased motivational salience of drug-related cues, and the powerfully reinforcing effects of drugs, end up driving the behavioral agenda. But as noted above, the pursuit of this agenda involves the rational capacity to choose among courses of action in light of anticipated consequences, the hallmark of voluntary action.

Whatever neuroscientific model, or combination of models, eventually gains the most evidential support, we have good reason to suppose that the choices made by those with addictive disorders, at each and every stage of addiction, are entirely a function of neurally-instantiated decision-making processes. These encode subjectively experienced drive states (e.g., craving, pain, anxiety), and represent the current situation, anticipated contingencies, and the likely consequences of action. To introduce, absent compelling evidence, a non-physical factor into causal accounts of addictive behavior would therefore conflict with what looks to be a very plausible constraint on naturalistic explanations.

“Soul Control” – The Contra-Causal Assumption

Nevertheless, the widely held, substance-dualist folk view of human agents – that we have immaterial souls or mental essences as well as bodies [30–33] – works to support just such an introduction, thus weakening the commitment to a fully causal view of addiction. A purportedly non-physical aspect or component of the person has the capacity to select among options from an uncaused vantage point, exerting what could colloquially be called “soul control” [34]. Whatever physical processes might operate in the brain and body to produce behavior, there’s a categorically immaterial, undetermined controller that makes the final determination in deciding how to act. Operating outside the ambit of causal laws and relations, it has the capacity to have chosen otherwise in an actual situation, even given all the physically-instantiated factors in play – the unconditional capacity to do otherwise [25, 34].

As suggested above, there’s no observational evidence or behavior-theoretic rationale for a non-physical contributor to decision-making, something that influences the playing out of brain and bodily processes involved in choices to consume substances, or refrain from substance use. Of course, we are far from a complete understanding of the neural mechanisms involved in choice-making, but from an empirical perspective, knowledge gaps provide no justification for positing anything immaterial that contravenes or overrides physical law, whether at the chemical or neurological level. In particular, there’s no evidence that the conscious experience of deliberation and choosing, sometimes characterized as a categorically mental phenomenon, functions as a non-physical, uncaused controller of the neural processes it is associated with and the resulting behavior [34, 35]. If we side with science, we shouldn’t suppose a different choice, predictable or not, would have arisen in a situation, given the actual causes and circumstances in play (unless indeterminism plays a role, to be discussed below).

Person-Level Determinants

Decisions and choices are made by – determined by – human agents, so the notion of causal determinism is hardly foreign to commonsense thinking about voluntary behavior. Choices only become intelligible by ascribing them to some interacting combination of motives, character, and situation – a confluence of

determinants located in, around, and constituted by the individual. Although there is no science-based reason to suppose anything categorically non-physical contributes to making choices, this needn't prevent the explanation of a choice from including the psychological and intentional levels [36] – the motives and reasons for action that the individual and others might cite. Indeed, such levels are indispensable when seeking to account for addictive behavior in which action is often goal-directed and governed by the conscious anticipation of short-term rewards, with scant attention given to longer-term costs.

Although the motivational syndromes characteristic of addiction are physically instantiated at the sub-personal, neural level, the considerations that come into play when acting on their urging (where to find drugs, whether to enter treatment), are often most usefully described in terms of person-level feelings, desires, beliefs, and deliberations. The point here is that psychological and intentional explanations for choices made by those with addictions do not contravene or by-pass causation, but simply invoke causation at the personal and psychological, not sub-personal, level. Addicted individuals make their choices for various reasons which they can articulate if asked, for instance to avoid opioid withdrawal or to satisfy cue-triggered cravings for cocaine; such reasons count as causes of voluntary action even though brain-based, neuro-behavioral explanations also apply [37, 38]. There is nothing, therefore, in citing person-level psychological and reasons-based explanations of addictive behavior that is inconsistent with physicalism, or that lends support to the contra-causal assumption, the idea that a person might have done otherwise in an actual situation. Indeed, the reasons in play help explain why she acted as she did, and *not* otherwise.

Indeterminism

Those seeking to defend the contra-causal assumption might cite the possible existence of *indeterminism* in nature to explain why a person could have done otherwise in an actual situation: if indeterminism holds at some level of explanation, then the current causes – physical, psychological, and reasons-based – may not necessitate a single, unique choice or action. Therefore, the thinking goes, were we to replay the actual situation, all circumstances held constant, a different outcome might have ensued; as a result, the agent could have

and might have chosen otherwise, even though she did not. Realists (as opposed to skeptics) about libertarian conceptions of free will lean strongly on indeterminism as an essential prerequisite for making choices for which individuals can be held morally responsible, and thus blamed for (conscious, intentional, uncoerced) wrongful behavior [39–43]. The self that chooses, according to libertarians about free will, originates the choice in some crucial respect that owes nothing to determining factors, not even its own characteristics. Such a self thus becomes a first cause, an ultimately responsible originator.

The difficulty here is that, if indeterminism plays a pivotal role in originating a choice, it is hard to see how this makes a choice *more* (and not less) attributable to the chooser. Instead, it becomes a motivational mystery. As noted above, for a choice to be an agent's it has to result from causes (determinants) having to do with her settled physiology, psychology, and/or reasons. There must be *agential determinism*: persons have to be more or less stable clusters of persisting characteristics which we then cite as the determinants of their actions; we rightly *don't* assign agenthood as a function of *indeterminism*. Indeed, the contra-causal assumption is precisely an assumption about determinative agency: it asserts that addicted persons might have done otherwise in actual situations in a way that *they as agents* are responsible for, in a way that's up to them because *they*, not chance, determined the choice.

Since indeterminism prevents there being a clear causal connection between an agent's character, motivations, and choices (or at least cannot *add* to such a connection), it cannot make the agent *more* responsible for a choice than if it resulted from completely deterministic processes involving her physiology, feelings, beliefs, and desires. Were it to play much of a role in behavior, indeterminism would leave us at an explanatory and practical loss when it comes to addiction, or any disorder for that matter.²

Of course, we can't always predict how an intervention aimed at inducing recovery from addiction will play out, but this isn't evidence for something within the person unconstrained by causal regularities. For all practical purposes, therefore, we can be determinists in good

² A thorough critique of libertarian views on human agency is beyond the scope of this paper, but would be along the lines suggested in the main text: it is difficult to establish indeterminism as endowing agents with enhanced control and responsibility compared to what accrues under agential determinism. For an in-depth critique of one libertarian's thesis, and his reply, see Clark [44].

conscience concerning addictive behavior: we should pursue its causal explanations on the very plausible assumption they exist, even if they are sometimes complex, multi-factorial, probabilistic, or currently beyond our grasp. Human agency doesn't outrun its physical instantiation or its historical and situational context, even if some indeterminism holds, and even if the causal influences in play are not straightforwardly algorithmic or mechanistic. A *pragmatic determinism*, crucially including the agential determinism of choice and control, therefore recommends itself as both a useful and likely true perspective on addictive behavior. However, concerns about the implications of such a view are not uncommon and need to be addressed, the burden of the next section.

Preserving Accountability

Some might worry that rejecting the contra-causal assumption in favor of causal determinism renders an agent completely *unaccountable*: if those struggling with addiction couldn't have chosen otherwise – ever – as their addiction developed, then it might be supposed they can't be held responsible and all is excused. As the French proverb would have it: “Tout comprendre, c'est tout pardonner” (to understand all is to forgive all). This saying gets at an important psychological response to accepting the ubiquity of causation in behavior, what I call the *mitigation response* (discussed below). But it overlooks the fact that, although they have causal histories that explain who they are and what they do, agents themselves are causers that first need controlling, not pardoning or forgiveness, when their choices cause harm, as sometimes happens in addiction.

Proximate Responsibility

There is an obvious practical necessity in holding agents responsible for choices as a way of “guiding goodness” [45] even if past choices were fully determined. Making rewards and sanctions contingent on behavior recruits an agent's capacities of memory, anticipation, and deliberation, diminished though these might be in the case of addiction. Being held responsible or accountable – what we can think of as the “contingency management” of behavior [46] in the broadest possible sense – is therefore an important tool to help individuals behave

otherwise in *future* situations, e.g., to avoid cues that trigger cravings, refuse a proffered drink or smoke, or finally seek out treatment. So although we can't, as the moral model might suggest, hold the addicted individual *ultimately* responsible for her character and choices, which are traceable to circumstances she didn't choose, we can hold her *proximately* responsible, as the (fully caused) person whose behavior we are trying to improve by a policy of accountability.

Excuses

It is critical to see that causal determinism is neither a universal excuse nor grounds for automatic forgiveness for normative transgressions [12].³ To excuse is to withhold sanctions because they aren't justifiable, but sanctions (and rewards, of course) can be justified as forward-looking influences, a way to *cause* the addicted person to make better choices. To forgive is for a victim's desire to condemn and retaliate against a harm-doer to dissipate, and is usually contingent upon credible evidence of regret and the determination to reform. The *agent status* of those with addictions – that they are justifiably seen as reasons-responsive and accountable to some behavior-guiding extent – legitimizes the (natural) demands for apologies and restitution coming from those they harm. All told, addicted persons can justifiably be held (proximately) responsible as a means of influencing their choices, and they should not be seen as beyond redemption, even though they couldn't have chosen otherwise in past situations (indeterminism aside). The question then becomes: when addressing addiction, what sorts of responsibility practices and interventions are justifiable under a pragmatic determinism?

Determinism and Desert

Critics of the choice model, and sometimes proponents, worry that attributions of responsibility for voluntary behavior will be used to justify punitive treatment of addicted persons, as sometimes happens under the moral model [11, 48, 49]. After all, unless excusing conditions hold, don't basically sane individuals *deserve* punishment, social or otherwise, for actions that violate moral and legal norms and that inflict harm? If so, those with

³ Stephen Morse calls the idea that causation is a universal excuse the “fundamental psycho-legal error,” see Moore [47].

addictions, having some capacity for choice, are to some extent culpable and thus might merit punitive responses to such behavior, including stigmatization.

Under the contra-causal assumption, addicted individuals exercising “soul control” could have made choices that led to their *not* becoming addicted, even given their exact genetic and environmental circumstances, however difficult those might have been [50, pp.1074–6]. But they chose not to, which places blame squarely on them for their predicament.⁴ True, conditions might have been conducive to making a bad choice – e.g., a situation involving peer pressure to try cocaine – but, having the capacity to transcend causation, they could have resisted and chosen otherwise in the exact situation the offer was in fact accepted. By discounting or downplaying the actual causal story behind character, motivation, and choices, such a view of agency makes the person an ultimate originator of action, thus ultimately responsible. Applied to those with addictions, it suggests that they might deeply *deserve* stigmatization – social punishment – for having ended up addicted. This of course is the moral model of addiction in full force, and research suggests that belief in contra-causality can indeed influence judgments of blame and desert [51, 52].

The Mitigation Response

Giving up the contra-causal assumption, as recommended here, means that the person can no longer be seen as standing outside the causal flux of genetics, environment, character, beliefs, desires, and situation, and therefore as having willfully originated harmful choices from some uncaused vantage point. Accepting that she indeed could *not* have chosen or done otherwise in actual situations, at least in a way that would make her more responsible than were her decisions fully caused, can trigger what we might call the *mitigation response*: it helps to undercut the assignment of strong, ultimate responsibility and the associated agent-focused blame. Understanding the deterministic provenance of the person and her choices distributes causal responsibility for behavior to all those non-agent factors that played a role in her formation; such understanding can thus help defuse punitive responses to behavior premised on

⁴ With the obvious exceptions of those whose addictions resulted from medical practice such as opioid treatment for pain, see Kolodny et al. [53]. Not even those under the sway of the contra-causal assumption would hold such individuals responsible for their addiction.

seeing her as an ultimate originator. Anyone in her situation, given more or less the same set of biological and psychological characteristics, would have done more or less the same, any indeterminism aside. And indeterminism, I’ve argued, can’t increase control or responsibility. Disbelief in contra-causal agency can thus keep our natural reactivity in check, making room for more productive attitudes and policies as we seek to prevent and treat addiction. As Frank and Nagel [48] put it, “...as we learn more about the nature of addiction and its complex causal trajectory, we may mitigate the extent to which we morally engage with the addict in the same way we do with non-addicted persons.” It is difficult to justify the claim that those with addiction deserve stigmatization and harsh treatment, such as withholding treatment or harm reduction measures, for having had the misfortune to be exposed to the bio-psycho-social circumstances that produced their character and disorder. By undercutting the contra-causal assumption, a deterministic understanding of addiction helps to prevent the choice model from regressing to the moral model, in which blame and stigma are seen as legitimate and perhaps essential responses. Moreover, it points to what actually caused addiction in the first place and thus what might work to prevent and overcome it.

The Legitimate Role of Reactivity

An important caveat is in order, however. It isn’t as if our morally relevant reactions (e.g., anger, distrust, resentment) to addictive behavior will be completely deactivated by the mitigation response, nor should they. After all, such reactions are the emotional points of our moral compass. Rather, we can understand them as natural responses to normative violations, but ones that we need not, and indeed *should* not, indulge in full measure in many, perhaps most instances, given the harms that often result from such indulgence (exceptions of course are immediate threats to life and limb). Anger and disgust remain valid indicators of encountering problematic behavior, but we should not suppose that addicted individuals deserve what, on the contra-causal assumption, we might have thought was their just comeuppance: stigma and harsh treatment.

The same psychological dynamic can help addicted individuals themselves. Should they come to accept that they are not *ultimately* responsible for their character, choices, and current situation, this can help defuse corrosive self-blame and recrimination. In many cases they

can, and should, make moral judgments about their choices, judgments which can help motivate efforts to break free of addiction and make amends and restitution to those they may have harmed. But seeing how one's behavior was indeed fully a function of internal and external conditions prevents taking on the deep, irrevocable shame and self-blame premised on the contra-causal assumption: that one could have done otherwise in an actual situation, but culpably chose not to. This can further reduce stigma by reinforcing the perception that addiction *can* be overcome *if* the right conditions are in place (whether in or outside treatment), and that those with addictions, since they are not bereft of agency, can eventually be reintegrated into communities of trust.

A Realistic Prescription?

Although the challenge to the contra-causal assumption is logically and empirically well-grounded, and offers many practical benefits, it runs counter to entrenched conceptions of human agency, so may be difficult to promote as a means to mitigate stigma. We are taught early on not to “pass the buck,” to take “personal responsibility,” so causal explanations of character, choices and behavior may be seen as threats to autonomy and accountability as these are often conceived: as based in our supposed capacity to originate choices from an undetermined vantage point. Without there being some wiggle room in the causal chain such that we can ultimately credit or blame agents for their actions, how is anything really *their* doing and not just the dead hand of the past playing itself out?

Agential Determinism and Efficacy

The answer is simply that the agent survives in our causal analysis as the most proximate determinant of behavior, without which behavior becomes unintelligible. Agents needn't be ultimate originators, ultimately self-made, or exceptions to causal regularities, to be legitimate targets of accountability or to *take* responsibility, as Bruce Waller puts it [54], for their behavior; indeed, our accountability practices wouldn't work if behavior were contra-causal to any significant degree. If someone attempts to pass the moral buck by citing the causes of their addiction, we point out that causation *per se* is not an excuse [12, 47] and that they too are causes of behavior that must be kept within morally acceptable

bounds. But, as I've suggested, if we give up the contra-causal assumption, the accountability practices *themselves* will be better kept within those bounds (thus excluding stigmatization as an acceptable practice) *and* be more effective [55].

Another objection is that a deterministic view of ourselves, even if true, might engender passivity: if we aren't ultimate originators, then aren't we just simply along for the causal ride? Perhaps, as argued by Saul Smilansky [56], we should (paternalistically) hide the truth of pragmatic determinism, given the possible demotivating effect of discovering we are not self-created first causes. But we needn't be *first* causes to be effective causers in our own right. Efforts to change arise out of motivational dynamics that we aren't in a position to set aside: when we're sufficiently hungry, we'll generally look for something to eat. The life- and welfare-threatening aspects of addiction and the attractions of competing positive incentives are often enough, eventually, to spur behavior change, including entering treatment; and treatment itself is, or should be, predicated on the rationale that behavior change results from exposure to changed circumstances, not an uninfluenced personal will.

A science-based, fully naturalized, deterministic choice model of addiction must accept that better choices and better exercise of self-control are always a function of sufficient incentives and conditions. If those struggling with addiction believe that they should be able to muster the will to do better *independently* of circumstances, this sets them up for self-blame should they fail to improve, and may promote incuriosity about how treatment can help. On the other hand, knowing that one's behavior is indeed fully a function of conditions, internal and external, can motivate efforts to create the conditions conducive to recovery, including use of appropriate medications [57].

Naturalizing Choice

Yet another objection might run as follows: you can't reasonably continue to call your model of addiction a “choice” model, since *real* choices require that we could have chosen otherwise in an actual situation as it played out (the unconditional ability to do otherwise). To insist, as this objection does, on contra-causality as a necessary feature of choice (as has biologist Jerry Coyne [58]) would require us to find another expression for the actual causal processes involved when we decide between competing alternatives. This is unreasonable

since the contra-causal assumption lacks empirical justification and “making choices” is a perfectly good description of deliberating and deciding between alternatives, even if pragmatic determinism holds.

The incoherence of the contra-causal assumption, and thus the viability of pragmatic determinism, becomes clear by posing this question: if those with addiction, at any point in its development or current manifestation, could have done otherwise, *why didn't they?* If they have some residual capacity to resist cravings, what explains their continuing failures to exercise this capacity? These reasonable requests for explanation put pressure on the idea that there is something or someone outside of causal relations that could have intervened in the choice process as it actually transpired. Exercising one's remaining capacity for impulse control is a fully caused bit of behavior. A craving would only have been resisted *if* sufficient countervailing incentives had been present, and the failure to resist – to exert sufficient impulse control – is explained by their absence. We can see that a so-called “irresistible impulse” would not have been resisted *no matter what* incentives had been present, but that a “resistible impulse” is resisted *only if* sufficient countervailing factors are in play. Coming fully to grips with the determinants of character, motivation, choice, and action will help identify such factors, contributing to the prevention and control of addiction.

Rethinking Blame in Addressing Addiction

What, practically speaking, might follow were we to take a fully causal, deterministic view of addictive behavior? I can do no better than join Hanna Pickard [13] in her recommendation to assign “responsibility without blame” to those with substance use or other behavioral disorders (as do Kennett et al., [50 p. 1079ff]). While acknowledging the remaining capacity for choice, and thus the residual responsibility we can fairly attribute to those with addiction, she nevertheless asks clinicians (and the rest of us) not to indulge in “*affective* blame,” defined as “a set of hostile feelings typically accompanied by equally hostile thoughts and actions.” This is enabled by shifting the focus from moral evaluation to forward-looking responsibility:

In the clinic, the purpose of employing the concept of responsibility is ... not fundamentally a form of backwards looking moral evaluation, whereby a

person is judged and potentially condemned for their past behaviour. Rather, the purpose of employing the concept of responsibility is fundamentally forwards-looking, serving to identify where there exists capacity for change thanks to the presence of choice and control, and, through clinical practices of holding responsible and to account, to motivate and encourage people to break the cycle... The clinic thus offers a corrective to the tendency to understand our concept of responsibility as linked with affective blame, by offering a clear and established practice of attributing responsibility for problematic behaviour and holding to account without affective blame, but instead with positive regard, maintaining attitudes such as concern, respect, and compassion throughout. [13]

Pickard recommends assigning responsibility without (affective) blame primarily because it promotes patient autonomy in service to recovery, but it also finds support in the considerations, discussed above, that mitigate the emotions driving stigma. By focusing on the supposed capacity of the agent to have done otherwise in actual situations, the contra-causal assumption provides fertile ground for reactive blame, while ignoring causal explanations. Dropping this assumption allows an appreciation of the actual determinants of addictive behavior, thus keeping reactivity in check while motivating the forward-looking concept of responsibility.

Questioning “Basic Desert”

As Pickard recognizes, therapeutic approaches may sometimes involve interventions that are unavoidably felt as punitive (e.g., withholding privileges in response to positive drug screens), but under her model these are justified not in terms of deserved punishment but what works best in behavior change. This rationale holds even if we accept that there are sometimes morally problematic dimensions of addictive behavior that must be addressed [59]. We need not revert to the moral model of addiction and its emphasis on blame and punishment to keep our moral compass intact. Should we decide some sort of emotion-laden response is in order (“You should *not* have done that!”), we recognize it as instrumental and forward-looking, not invoking judgments based in the contra-causal assumption.

Others have recommended rethinking our conception of blame in light of a causal understanding of behavior.

Gregg Caruso [60] and Derk Pereboom [61] argue that individuals are not morally responsible in the “basic desert” sense required to justify retributive attitudes and responses, those which need not appeal to any ameliorative consequence of placing blame. Pereboom suggests that blame compatible with determinism should be restricted to forward-looking functions, including self-protection from and reconciliation with the wrong-doer and fostering their moral improvement. Likewise, Erin Kelly [62] questions the retributive, backwards-looking component of blame without denying its social and moral functions.⁵

Pointing out the causal antecedents of choices as a means to mitigate reactive responses to moral harms is, of course, nothing new (e.g., the French proverb quoted above), and many have sided with Pickard in recommending a more compassionate, less blame-focused approach to addictive disorders, among them Burgess [15], Levy [28], Wakefield [59], and Flanagan [67]. With blame and recrimination de-emphasized, those suffering from addiction and other behavioral disorders are more likely to seek out treatment, find supportive programs, and thus stay the course in recovery. Understanding the actual causal etiology of the choices involved in addictive behavior is essential for the design of effective interventions, so taking a pragmatically determinist view of addiction seems clinically warranted.

Resistance to Challenging Contra-Causality

Still, it is an open question whether the challenge to the contra-causal assumption can be successfully recruited in support of a compassionate choice model of addiction, one that preserves (limited) agency but that helps mitigate blame and stigma. This assumption may be too deeply rooted in our folk, pre-scientific model of human agency to be dislodged by pointing out that addiction, and human behavior more generally, are fully caused phenomena.

⁵ I should note that *compatibilists* about free will and moral responsibility (see note 1), sometimes argue that under determinism we can still justify retributive, backwards-looking desert, blame and punishment, for instance as based in our natural reactive attitudes (see, for example, Hirstein, Sifferd, and Fagan [63, pp. 210–214]) or as a means of upholding a particular conception of human dignity (as does Stephen Morse [64, p. 443]). They hold that a merely *conditional* sense of could have done otherwise (note 1) is sufficient for assigning robust, affective blame, and, contrary to the position taken here, they may dismiss what I call the mitigation response as a “moral hallucination,” as does Michael Moore [65, p. 132]). An adjudication of this disagreement is beyond the scope of this paper, but see Clark [66].

Moreover, our natural penchant for placing affective, punitive blame finds a convenient target in the purportedly ultimately responsible self that could have done otherwise in an actual situation, but chose not to; such a propensity could motivate resistance to deterministic understandings of behavioral disorders. Nevertheless, reconceptualizing human agency in light of science – naturalizing ourselves as fully caused agents who nevertheless deliberate, decide and act within a moral framework – may reinforce the judgment that the stigma attached to addiction is, in the main, neither deserved nor efficacious. Making the public case for pragmatic determinism will present its own set of challenges, but is worth pursuing as we seek more compassionate and effective approaches to prevent and treat behavioral disorders.

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