

Seeing Addiction as a Learning Disorder Changes Everything

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Editor's note: The following op-ed was written by Maia Szalavitz as part of our [Special Series on Pathways to Addiction](#). Ms. Szalavitz is the author of [Unbroken Brain: A Revolutionary New Way of Understanding Addiction](#) and [Undoing Drugs: How Harm Reduction is Changing the Future of Drugs and Addiction](#). She is also a contributing opinion writer for the New York Times.



While advocates have long tried to convince the public that addiction is a disease— a position ratified by most experts— this view has also always been controversial. For one, many drugs are criminalized, suggesting that it is a moral problem rather than an illness. Secondly, addictive behavior is not completely involuntary, in contrast to conditions like Alzheimer's that cannot be altered by changes in motivation.

I see addiction as a developmental learning disorder: a condition that definitely belongs in the realm of medicine and psychiatry, not the criminal legal system. Understanding the role of learning in addiction helps resolve some of the paradoxes that prompt resistance to the idea that addiction is a medical, not moral, issue.

First, I want to note that I am absolutely not original in taking this perspective: no one who studies addiction would claim that learning is not involved. In fact, when I first announced that I was writing a book to make this argument, one neuroscientist said there was no need for it because the idea is so obvious to everyone in the field. I responded that even if this is so, scientists have done a terrible job communicating it to the general public.

In fact, recognizing that addiction is a developmental disorder sheds great light on its mysteries. For one, it explains why the vast majority of addictions start during adolescence and early adulthood. This is a developmentally sensitive period for the growth of certain brain regions— and it's also why so many other neurodevelopmental disorders like schizophrenia and depression first become

manifest at the same ages. (75% of all mental illness, in fact, begins in adolescence or early adulthood).

Both genetic and environmental influences shape these brain circuits over time, putting some people—for example, those predisposed genetically to mental illnesses and those who have suffered childhood trauma—at much higher risk for addiction than others.

Understanding which particular networks are being shaped during this sensitive period also clarifies the type of learning that goes astray and why addictive behavior can be so difficult to change.

During adolescence and early adulthood, cortical and subcortical areas critical to motivation and behavioral control are being rewired. In order for teens to separate from their parents and find their own mates, they need to be ready to take more risks, to have a greater desire to socialize with peers and to want to begin to engage in and manage sexual and romantic relationships.

This reproductive drive is one of the most powerful motivations faced by human beings. As a result, it's routine for people in love or those who have just had children to completely change every priority in their lives to focus on the new partner or child.

Drug addiction, essentially, is what occurs when this force is directed towards an unhealthy relationship with a substance. People in love and new parents are not deprived of free will—but they are overwhelmingly motivated to protect their relationships and some will engage in extreme behavior if they believe that these relationships are threatened.

The same is true in addiction: it doesn't turn people into automata and they certainly plan behavior to protect their drug use (i.e., most hide it from those who might interfere and they can refrain from using in circumstances like court appearances where it would be especially detrimental). Put this way, it's much easier to understand why addictive behavior looks more voluntary than it is. Learning basically shapes desire over time, which makes escaping the loop this creates difficult.

Indeed, research shows that over the course of addiction, behavior shifts from being completely voluntary and easy to change to being more automatic. This

occurs in the brain in much the way that when people learn any skill, they go from consciously having to guide their action to being able to do it without thinking. This type of learning, however, is much more useful if you are trying to play a piano or drive a car than if you are getting stuck in an addiction.

Viewing addiction as a learning disorder also helps detach the idea of addiction as disease from its association with the belief that the only way to treat it is via total abstinence and lifelong participation in 12 step programs. Research shows that most people recover without any treatment or 12-step groups: this makes sense in a developmental disorder that affects executive function, which naturally tends to improve with age. And this doesn't mean that there aren't severe cases where people do need help.

Seeing addiction as a learning disorder also offers insight into effective prevention and treatment approaches. For one, it means that prevention can't simply focus on teaching kids the dangers of drugs: this ignores the developmental factors that make drugs attractive to teenagers as well as the predispositions and stresses that put some of them at high risk.

Secondly, it means that trying to solve the problem by preventing exposure to substances will not be very effective. People who become addicted are not "hooked" by the drug alone, but by what it gives them that they are seeking. Treatment needs to focus on why people need escape and relief and providing alternative ways to solve their problems, not just taking away a substance.

And treatment also needs to teach people skills that allow them to change their behavior: addiction is fundamentally defined as persistence despite negative consequences, essentially a failure to respond to punishment by learning. Punishing people with addictions for this inability to respond to punishment is both absurd and ineffective.

Think about what would happen if you punished students for failing to learn math but didn't actually teach them mathematical concepts or allow them to study them on their own. Most would become demoralized and likely learn to hate math, not become mathematicians. Perhaps a rare genius might be smart enough to re-invent math from first principles— but this is generally an ineffective and counterproductive method of instruction.

Understanding addiction as a learning disorder allows the field to sidestep the

endless debates over whether it is a disease or a sin. This describes the condition, fits the data, makes testable predictions and suggest ways to improve policy, prevention and recovery. It's an idea whose time has come.

— Maia Szalavitz, *Author; Contributing Opinion Writer for the New York Times*

Conflict of Interest Statement

Ms. Szalavitz has no conflicts of interest to disclose of personal, financial, or other benefits that could be seen as influencing the content of this editorial.

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