Op-Ed/Editorials – Pandora's Black Box: Crime, Addiction, Behaviorism, and Agency

May 4, 2005

Welcome to the BASIS special series on Crime & Addiction. Over the next four weeks we will publish editorials that probe various linkages and phenomena associated with crime and addiction. This week Dr. Sarah Nelson discusses the science of crime and addiction. Join us during the next four weeks as we explore whether pathological gambling should excuse criminal behavior, gambling in prison, and problem gambling court diversion programs. We hope you enjoy this series and find it thought provoking. We look forward to your comments and feedback.

Debi LaPlante, Senior Editor

Crime and Addiction: Part 1

Pandora's Black Box: Crime, Addiction, Behaviorism, and Agency

Sarah E. Nelson, Ph.D. Division on Addictions

Addiction and crime go together like Steinbrenner and the Yankees. That's one fact everyone agrees on. Between 50 and 80% of people arrested, prison populations, and juvenile offenders have substance use problems (Arrestee Drug Abuse Monitoring Program, 2000; Lipton, 1995; Oregon Youth Authority, 2002; VanderWaal, McBride, Terry-McElrath, & VanBuren, 2001). But despite the fact that men were shooting each other over vodka shots and card games in the American West and London neighborhoods were known as hotbeds of crime and heavy substance use (e.g., "Gin Lane") long before criminologists and psychologists came on the scene, our understanding of this link is still in its infancy.

Let's look at the way the debate is often framed. A relationship between two variables (in this case, crime and addiction) is typically explained in one of three ways: A causes B, B causes A, or both are caused by a third variable or set of variables, C. For crime and addiction, we have found both that A -> B and B -> A. Scientists and studies have not reached consensus on the temporal progression and causal sequence of the two. The body of evidence suggests the unsatisfying conclusion that both are right – sometimes addiction precedes crime, sometimes crime precedes addiction, and sometimes one is instrumental in the conduct of the other. What about C: some other set of variables causes both crime and addiction? Scientists who have researched this option have not fared much better. They've found causes – plenty of them – society, biology, genetics, mental health, peers, family, trauma, you name it – and that's the problem. But what do these add up to? Even with full models to describe each of these risk factors, they do not leave us with a comprehensive picture of the common causes of addiction and crime. Would someone with all of these risk factors definitely develop both problems? No. Are the risk factors related in some conceptual way? No.

The fact is, for every risk factor proposed, there are plenty of cases (most cases, even) who never develop addiction or criminal patterns. Our models of crime and addiction aren't useless – they illustrate the parameters and context within which addiction and crime develop – the shared antecedent and consequent factors – but they do not identify direct causes. If we want to learn why crime and addiction co-occur, for whom crime and addiction co-occur, for whom they don't co-occur, and how to prevent crime and addiction from co-occurring (or occurring at all), perhaps we need a different approach.

Food for thought: Prior to the cognitive revolution, behaviorists attempted to explain all behavior through stimulus response patterns, ignoring the individual's mind as an irrelevant "black box" – a processor with no causal influence. They failed. Today, thanks to the cognitive revolution, most would argue that we've opened up that black box. I disagree. Though our explanations are no longer constrained to external, observable behavior, we have simply moved the behaviorists' explanation modality inside and redefined the black box. Now, external or internal objects (i.e., environment, past experiences, genetics, brain chemistry) act on the individual and produce a response. The black box has become the individual's thoughts, motivations, and choices – the individual as actor rather than acted upon. Perhaps if we open up this new black box and investigate these thoughts and motivations as they relate to crime and addiction,

we'll come closer to understanding crime and addiction and their relationship.

STIMULUS ⟶ ■ ⟶ RESPONSE

But then again, we might just be adding more indirect causes to our repertoire in a sort of infinite regress. Knowing that certain types of thoughts and motivations predict both crime and addiction adds another set of predictors, more closely linked to behavior, but it doesn't tell us who will choose to act on those thoughts or motivations. Perhaps the real problem is classic determinism. Psychologists try to reduce psychology and its objects to the equivalent of a hard science and its objects – looking for a universal theory of everything but ignoring the very human characteristics that make their subject matter unique. Investigating thoughts and motivations brings us closer to that uniqueness, but does not fully capture it. By its very nature, psychology might never be able to capture it. Humans are not agency-less input-output machines. However, even if we do not have and might never have a good way of measuring that uniqueness, it oughtn't be ignored as an irrelevant black box. Let's not interpret our lack of tools to open the box as proof of its emptiness.

So what does this mean for the question of crime and addiction? We can characterize the context within which crime and addiction occur more and more thoroughly, we can elucidate population trends in crime and addiction and their progression, and we can even investigate the thought patterns and motivations that tend to precede both behaviors. But when we lament the small amount of variance for which our models account or wonder why we can't pin down whether crime causes addiction or vice versa, it's time to look at the error term in our models and consider those residuals – those exceptions to our theories – to be more than just lack of precision.

What do you think? You can address comments to Sarah E. Nelson.

References

Arrestee Drug Abuse Monitoring Program. (2000). 1999 Annual report on drug use among adult and juvenile arrestees. Washington, D.C.: National Institute of Justice.

Lipton, D. S. (1995). The effectiveness of treatment for drug abusers under

criminal justice supervision (No. NCJ 157642). Washington, D.C.: National Institute of Justice.

Oregon Youth Authority. (2002). Mental health and offenders in the custody of the Oregon Youth Authority: April, 2002. Retrieved February 1st, 2004, from http://www.oya.state.or.us/StatewideMHGap.pdf

VanderWaal, C. J., McBride, D. C., Terry-McElrath, Y. M., & VanBuren, H. (2001). Breaking the juvenile drug-crime cycle: A guide for practitioners and policymakers (No. NCJ 186156). Washington, D.C.: National Institute of Justice.