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Developing a Transformative Drug Policy Research Agenda in the United States

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Abstract

Despite its strengths, drug policy scholarship in the United States has deficiencies and systemic biases that contribute to misinformation about drugs and people who use drugs. Factors ranging from funders' biases to an over-emphasis on abstinence-only or prohibition-related outcomes limit the scope and focus of drug policy research. These deficiencies, combined with the highly-politicized nature of drug policy reform, have led U.S. decision makers to largely reproduce the uninformed thinking that epitomizes failed drug policies. In an effort to address some of the limitations in drug policy research, we designed Unbounded Knowledge: Envisioning a New Future for Drug Policy Research, a project to engage researchers in thinking about how U.S. drug policy research should be transformed. The project involved a diverse group of multidisciplinary drug researchers and clinicians in a focused collaboration to identify what drug research should be—but is not—studying in the U.S. It consisted of three distinct parts: 1) a preliminary series of interviews with researchers, 2) the identification of common research constraints and a set of factors that would transform the direction of drug policy research in the U.S. and, 3) a day-long workshop to craft an aspirational research agenda built on this foundation. In this article, we report on the project, particularly its emphasis on how to better inform research deficiencies through a collaborative, innovative research agenda. Participants were broadly in consensus that significant changes are needed to create different ways to conduct drug policy research and new opportunities within the drug research environment. They also generated specific ideas for research that could better shape U.S. drug policies in ways that move beyond the dominant focus on criminalization and medicalization. This article offers detailed recommendations generated by the project for improving drug policy research in the U.S.

Introduction

      Drug policy in the United States has been influenced by multiple forces, including medicalization, harm reduction, and decriminalization, but among them prohibition remains dominant. Researchers in the U.S. have produced a breadth of high quality work in this context, and yet the narrow prohibitionist framework of American drug policy continues to influence and constrain the research it helps fund and produce. Some U.S. scholars note that drug policy research can manifest assumptions, deficiencies, and systemic biases that contribute to misinformation about drugs and people who use drugs. (Netherland, 2016; Kilmer, et al., 2012; Kleinman et al., 2012; Brownstein, 2016; Hunt et al., 2011; National Research Council, 2001). In a recent example, in 2015, Nancy Campbell and David Herzberg hosted a U.S. symposium calling for the incorporation of gender analysis into critical drug scholarship (Campbell & Herzberg, 2017). Yet, such critical analyses remain a subset of U.S. drug research. As a result, conversations about drug use in the public sphere, including those among policymakers, media, researchers and the general public, reveal a wide variety of thinking about who uses drugs, why, and with what outcomes. Many researchers in the U.S. struggle with the prohibitionist model's constraints and conditions, particularly its reductionist perceptions of drugs and people who use drugs through the lenses of criminalization and the medicalization of addiction (Hansen, 2017; Garriott, 2013; Alexander, 2011; Raikhel & Garriott, 2013; Clark, 2011; Granfield & Reinarman 2014; Reinarman, 2005; Hunt et al., 2007; Conrad & Schneider, 1992; Netherland, 2012; Hunt & Barker, 2001). Historically, much of this misunderstanding has been driven by racism, classism, and stigma about people who use illegal drugs and has resulted in punitive and largely ineffectual policies (McKim, 2017; Sales & Murphy, 2007; Mauer, 1999). While elsewhere in the world there may be a "quiet revolution" happening within drug policy research (Brownstein, 2016), in the U.S. the community of critical drug researchers is relatively small and drug policy research remains largely bound by the ideologies of criminalization and medicalization (Netherland, 2012).

      These deeply entrenched ideological forces affect drug policy, in that "the fundamental inconsistencies of drug prohibition continue to be accommodated in policy reform" (Taylor, Buchanan, &

Ayres, 2016, p. 453). We argue that the same can be said of the vast majority of drug policy and addiction research in the U.S.: because it accommodates and functions within the prohibitionist framework, it has limited effectiveness in producing new ideas or in helping propel forward needed changes. Indeed, Lancaster (2016) has pointed out that the "evidence" produced by researchers does not sit outside of the policy process but that policy processes and evidence are interrelated, each helping to enact the other. What we mean by "addiction" or "drugs" is constantly in flux, reflecting contemporary understandings and sociopolitical debates far more than any truths inherent in those concepts (Fraser, et al., 2014; Netherland, 2012). Often, U.S. research on drug policy and addiction reinforces the assumptions of the policy and cultural framework in which it is situated resulting, for example, in an over-emphasis on abstinence-only or prohibition-related outcomes with a focus on pathology, loss of control, and the harms associated with "problematic use" (Hunt & Barker, 2001; Heather, 2017; Frank & Nagel, 2017). At the same time, this frame and related drug policy research ignores the vast majority of drug use that is recreational and functional, while taking for granted the arbitrary lines drawn between legal and illegal substances. In the U.S., the ways in which prohibition has constituted a cultural understanding of drugs and users continue to produce problems with particular meanings, "problems" that reinforce assumptions about drugs and users rather than open new solutions at the state and federal levels (Bacchi, 2012). This understanding of drug policy as one site in which "the politics and materiality of drugs are made," (Fraser & Moore, 2011, p. 500) reflects the indeterminacy of "drugs" and "users," even as it acknowledges the dominance of prohibitionist knowledge production.

Additionally, how research informs policy poses particularly challenging systemic issues in the U.S. (Gstrein, 2017; Stein & Daniels, 2017; Daniels & Thistlewaite, 2016; Brownstein, 2013). Almost two decades ago, the U.S. National Research Council's (NRC) comprehensive report argued that the nation's data and research programs were "strikingly inadequate to support the full range of policy decisions that the nation must make" (NRC, 2001, p. 1). Little has changed to improve the "woeful lack of investment in programs of data collection and empirical research" about drug use to assess and inform drug policy (NRC, 2001, p. 1, 7). Despite recognized limitations in methods, common data sets like the

National Survey on Drug Use and Health (NSDUH) continue to be the standard in U.S. drug policy research (Barratt et al., 2017; Walker, 2017). Beyond the kinds of evidence that are produced, the dissemination of research suffers from a lack of communication among the disparate organizations, disciplines, and individuals involved in drug policy research—much of it is shared with small, focused audiences (Campbell & Herzberg, 2017; Taylor, 2016; Kleinman et al., 2012; Peretti-Watel, 2011; Ritter, 2009). Consequently, the use of research in policy-making is selective and tends to reinforce flawed understandings of both legal and illegal drugs and the people who use them (Du Rose, 2015; Sturgeon-Adams, 2013; Hammersley, 2011; Ritter, 2009; Moore, 2008; Weiss, 1983). This self-reinforcing dynamic extends to public discourse in the U.S., where the stigma, misinformation, and myths about drugs and people who use drugs persist, repeated even by reputable media outlets (Walker, 2017; Swalve & DeFoster, 2016; Linneman et al., 2013; Reeves & Campbell, 1994; Reinarman & Levine, 1989). The highly-politicized nature of drug policy reform, fed by a knowledge-deficit about drugs and the people who use them, has led U.S. decision makers to largely reproduce the uninformed thinking that epitomizes failed drug policies.

What has been missing in the U.S. is a research agenda that attempts to address the systemic, fundamental fallacies of the prohibitionist framework. Gstrein (2018), in a scoping review of social construction and ideation research in drug policy, defines drug policy as "government policy that addresses issues arising from the use of illicit drugs, with a particular focus on health outcomes" (Gstrein, 2016, p. 76). We use "drug policy research" here to refer to this domain but also include research that concerns addiction, treatment, harm reduction interventions, drug supply and markets, and drug-related criminal justice research. Despite the emergence of research contesting reductionist notions of drugs and people who use them—more broadly outside of the U.S. but also as a minority voice within U.S. research (see for example, Granfield & Reinarman, 2014; Raikhel & Garriott, 2013; Hunt et al., 2011; Moore, 2008; Reinarman, 2005; Campbell & Herzberg, 2017; Campbell 2002, 2007; Netherland, 2012)— dominant drug policy discourse in the U.S. continues to impede complex understanding of drug-related issues, perpetuating a research culture that confirms normative assumptions that drugs are a threat and

precludes alternative knowledges and more holistic research programs. To make more effective interventions in the widespread effects of prohibitionist thinking, Taylor (2016) calls for a "collective action by critical scholars to contest these damaging processes," for scholars to move forward with innovative research agendas, and for scholars to "go public" even when they risk being "othered" and devalued (Taylor, 2016, p. 101).

To focus on addressing these issues as well as answering the call for innovative research in the U.S., we initiated a project entitled, UnBounded Knowledge: Envisioning a New Future for Drug Policy Research (UBK). As a collaboration between a cultural studies scholar and a social scientist with a background in public health research, UBK brought concerns from those fields about the social construction of drugs and users to bear on the question of how U.S. drug policy research could be influenced to challenge (and think beyond) the cultural bounds of drug criminalization and medicalization. We also wanted to consider ways to approach related constraints within the U.S. research context, such as the lack of centralized data repositories, the absence of nationalized healthcare and attendant records, and the current inability to link administrative data systems at the level of individuals. The project included a diverse group of multidisciplinary drug researchers in a focused collaboration to identify what drug research in the U.S. should be (but is not) studying absent these constraints. UBK engaged this group of researchers through interviews and a structured, collaborative conversation to articulate ways to move past specific research barriers to create more interdisciplinary studies in areas that were identified as opportunities for and most critically in need of change. Through this project, we identified several key areas that would begin to move U.S. research beyond the current constraints, including new ways of doing drug policy research and specific research projects that would help shift U.S. policy in new directions. In this article, we report on the project, particularly its emphasis on how to better inform research gaps in the U.S. through a collaborative, interdisciplinary approach.

U.S. Research Environment

Drug policy research in the U.S. has been shaped, not only by the cultural context of stigma and

biases about people who use drugs, but also by systemic issues that have reinforced the prohibition model, such as how drug research is designed and funded, how academic incentives and organization shapes research, and a variety of methodological limitations within drug research practices. Critical drug scholars, largely outside the U.S., have focused on the ways in which the roles of stakeholders, ideas, politics, and public discourse co-construct drug policy and its conception of drugs and users (Gstrein, 2018; Thompson & Coveney, 2018; Lancaster et al., 2018; Race, 2017; Smith, 2016; MacGregor, 2013; Fraser & Moore, 2011). Such scholarship theorizes working more fluidly with the conceptual framework of evidence-based policy (EBP), pursuing ontological and epistemological questions about what and who constitute knowledge and evidence, and proposing "a post-evidence based approach to policy analysis" (Gstrein, 2018, p. 83). With drug policy research evolving in these theoretical directions elsewhere, we might ask how the U.S. drug policy research community remains somewhat entrenched in the EBP model and seems challenged to address its policy environment.

Two documents, produced sixteen years apart, help illustrate some of the ways in which drug policy research in the U.S. has trouble identifying, much less critiquing, the prohibitionist framework that frames and helps produce it. The 2001 NRC report for the Office of National Drug Control Policy (ONDCP), laid out a series of recommendations for improving drug policy research in the U.S. While the report covers an astonishing amount of terrain, its primary conclusions were to invest in infrastructure and data systems to better assess illegal drug consumption and the effectiveness of enforcement policies aimed at drug users. Written in service of the ONDCP at a time when billions of dollars had already been spent on punitive drug policies resulting in the mass criminalization of hundreds of thousands of Americans, the authors call for better and more diverse evidence to support or challenge the effectiveness of those policies. However, they fail to challenge the fundamental drug war framework by, for instance, interrogating the arbitrary divisions between illicit and legal substances or calling for research into the underlying motivations or root causes of drug use. Even their nod to a reduction of the demand for drugs is focused on evaluating the effectiveness of sanctions to reduce demand. While the report recognizes limitations inherent in the ONDCP's criminalization policy, such as the desirability of having better data

about drug consumption, the NRC review is restricted in its ability to question some of the fundamental fallacies and assumptions undergirding it (NRC, 2001, pp. 3, 6, and 11). This is not surprising at a time when the ONDCP's budget tripled, escalating funding for the war on drugs and anti-drug media campaigns (ONDCP H11225, 1998).

In 2018, more than fifteen years later, the key funders of drug research in the U.S., the National Institutes of Health (Courtwright, 2010; Malizia & Ferro, 2014), received an additional $500 million from Congress to address the opioid overdose crisis. In the research plan for the HEAL (Helping to End Addiction Long-Term) initiative, the NIH writes that it intends to focus on medications for treatment, overdose prevention and reversal; neonatal abstinence syndrome; non-addictive medications and alternative treatments to pain; and optimizing treatments for opioid use disorder with a focus on the expansion of medication assisted therapies (Collins, et al., 2018). While all laudable goals, this research plan, like the one proposed by the NRC, likely does little to disrupt a policy framework that remains rooted in a narrow individualistic approach overly focused on the end point of addiction, one that does little to account for (much less intervene in) the social determinants of drug use, or employ additional harm reduction interventions proven effective internationally, such as safer consumption spaces or heroin assisted treatment.

This challenge to establish a more expansive and critical research agenda in the U.S. is perhaps not surprising given that, in the U.S., drug research funding often comes with particular ideological purse strings. In addition to the federal mandate to sustain drug prohibition, the funding of drug policy research is tied not just to the drug war but to its twin logic, a medicalized understanding of drug use as addiction. The vast majority, up to 80%, of drug policy research is funded by the National Institute on Drug Abuse (NIDA) (Malizia & Ferro, 2014), whose mission and scope are narrow: "to lead the Nation in bringing the power of science to bear on drug abuse and addiction (Volkow, 2011)." NIDA's emphasis on addiction neuroscience has become a primary area in US drug research (Campbell, 2007; 2010; Reinarman, 2005). Sociologist Scott Vrecko describes NIDA as largely responsible for making "the neuroscientists' laboratory...an obligatory passage point for the production of truths about addiction (2010: 58)." NIDA's

overemphasis on the brain de-emphasizes other systemic factors influencing drug use, such as poverty, racism, and the social environment (Hansen & Netherland, forthcoming). A review of their 2016-2020 strategic plan reveals that NIDA generally does not intend to fund projects that examine harm reduction interventions, the therapeutic potential of drugs such as cannabis, or the harm associated with current drug policies grounded in abstinence, the threat of punishment, or its collateral consequences (NIDA, undated). For example, the words "harm reduction" appear nowhere in the sixty-page strategic plan. Rather, NIDA spent 43% ($438.1 million) of its budget on basic and clinical neuroscience, 25% ($252 million) on epidemiology, services and prevention research, and split 13% ($131.9 million) between medications development and research into how specialists in infectious diseases common among people who use drugs can help screen and provide interventions for addiction. The remaining 19% ($193.7 million) went to intramural research, support for a clinical trial network, and administrative support (Koch, 2015).

Some have argued that the National Institutes of Health's extramural funding system, including NIDA, creates another problem: it favors more experienced researchers over younger ones and more conservative projects over more innovative ones. According to an essay by four scientists, including Harold Varmus, MD, Nobel Prize co-recipient and once director of the National Institutes of Health, "The system now favors those who can guarantee results rather than those with potentially path-breaking ideas that, by definition, cannot promise success" (Alberts et al., 2014, p. 5774).

In addition to issues of focus and funding, the field of U.S. drug policy research faces a number of methodological limitations, in part, stemming from the policy context that shapes it. For example, there is a considerable focus on the most extreme drug use (addiction) and its treatment to the exclusion of other drug use and natural recovery (Decorte, 2011; O'Malley & Valverde, 2004; Sobell et al., 2000; Granfield & Cloud, 1999). The lack of a broad view of drug use means U.S. research consistently forgoes understanding the vast majority of people who use drugs, those who are self-regulating, and their motivations and concerns (Askew & Salinas, 2018; Kiepek & Beagan, 2018; Race, 2009; Race, 2017; Walker, 2017; Fraser, 2008; Duff, 2004). Also, in the U.S. policy context, there is often a failure to adequately include and involve those directly impacted by drug use or drug policies in research design,

collection, and interpretation of data based, in part, on stigma and assumptions about the inability of people to use drugs to engage meaningfully in such activities produced (Lancaster et al., 2018; Jurgens, 2005; Osborn & Small, 2006).

Taken together, all of these issues present a significant problem: they outline the context of what we in the U.S. can and do collectively "know" about drugs, the impact of our drug policies, and how to best respond to both ongoing and emerging drug-related problems. A significant challenge in the U.S. research environment is the self-fulfilling hold that the prohibitionist model has on many aspects of the drug policy landscape, from policy and funding to public health and public opinion. For example, in the midst of the current opioid overdose crisis, despite the emergence of interest in harm reduction strategies, the U.S. policy response to illegal drug use continues to be driven by prohibitionist and medicalized contexts. The federal government has doubled down on criminalization through mandates such the Department of Justice's memos to "combat this deadly [opioid] epidemic" by urging federal prosecutors to "consider every lawful tool at their disposal," including "seeking capital punishment for certain drug-related crimes" (U.S. Department of Justice, March 2018). This followed a memo in which the Department of Justice urged prosecutors to pursue marijuana violations to the fullest extent of the law (U.S. Department of Justice, January 2018). Further, because public drug discourse in the U.S. cannot seem to escape medicalization's logic of illegal drug use as harmful and drug addiction as requiring abstinence as a solution, harm reduction is a non-starter at the federal level. Instead, the focus is on reducing supply and addiction treatment (President's Commission on Opiate Disorders, 2017). While a handful of the states hit hardest by the opiate crisis are attempting to implement needle exchange programs and open safe consumption sites, such harm reduction measures struggle to win public support at the local level precisely because they are not seen, as Helen Keane argues in other contexts, as value-neutral in the moralized arena of drug debate (Keane, 2003).

UnBounded Knowledge Project

The UnBounded Knowledge project was designed as a deliberate attempt to generate fresh thinking about the future of U.S. drug policy research in ways that would address the confines of the prohibitionist and addiction-focused medicine frames that have dominated the field. While the premise of the project is founded in the scholarship that demonstrates particular gaps and biases in U.S. drug policy research landscape, we in no way mean to suggest that there is not excellent research being done in the U.S. and abroad that provides counterexamples and critiques to the U.S. prohibitionist framework. Nor did we construct this as a formal, disciplinary research study. Rather, the project was an attempt to be broadly generative in developing applied projects that would address the interstices and absences in current U.S. drug policy research. We acknowledge that UBK was informed by a certain political sensibility and that the project was intentionally framed to invite researchers to partner in a different kind intervention or problem-solving. If "evidence" is not fixed, but constituted in part by specific performances and practices (Lancaster, 2016), our hope was to invite and explore less dominant or conventional performances and practices. In particular, there are few opportunities in the U.S. for truly interdisciplinary drug research (Kushner, 2006; Dunbar, Kushner, & Vrecko, 2010) and, thus, the knowledge generated is frequently bound by disciplinary siloes as much as by the prohibitionist context in which we work.

UBK was conceived of and implemented by a university-based researcher and the Drug Policy Alliance (DPA), an advocacy organization whose mission is "to advance those policies and attitudes that best reduce the harms of both drug use and drug prohibition, and to promote the sovereignty of individuals over their minds and bodies (DPA, 2018)." In this sense, UBK was a deliberate attempt to collectively envision a research agenda that could imagine and work in a context beyond the frame of prohibition and to encourage participants to think expansively and in a multiplicity of ways about potential research that would improve U.S. drug policy. We thought a multi- and interdisciplinary collaboration across what are often epistemic or disciplinary boundaries would illuminate new ways to

address longstanding, systemic issues in drug policy research in the U.S. Our hope was to model a new way of working for U.S. drug researchers.

The project consisted of three distinct parts: 1) a preliminary series of interviews with researchers and drug policy-related professionals, 2) the identification of common research constraints and a set of factors that would transform the direction of drug policy research and, 3) a day-long workshop to craft an aspirational research agenda built on this foundation. The project's goals were to illuminate the problems in the current drug policy research landscape from a multidisciplinary perspective, imagine what drug policy research could and should look like, and develop a core of multidisciplinary researchers who might take this conversation back out into a variety of research contexts. Our ultimate objective was to start a dialogue within the drug research and research funding communities in order to begin to shift the kinds of research that is funded and conducted. Over the summer and fall of 2017, we interviewed more than 30 professionals, mostly from the field of research, whose work informs or reflects drug policy. Participants were selected to include individuals from a wide array of disciplines, stages of career, and settings. We sought individuals whose work is characterized by fresh thinking and applied solutions and whom we believed would welcome stepping outside the dominant U.S. research paradigm as well as collaborating freely across disciplines and areas of expertise. We selected participants in consultation with a committee of researchers from harm reduction, sociology, social work, drug policy, and gender studies. The participant group was crafted with special attention to perspectives that are often not well-represented in U.S. drug policy—such as the perspectives of people who use drugs—eventually creating a group of researchers, researcher/clinicians, and a journalist working at the intersection of science and drug policy. In designing the project, we had in mind methods akin to that used by David Nutt (2010), who convened a group of experts to help establish a framework for determining drug harms. Consensus methods have long been used in health and health services research, particularly for controversial topics. Our project also draws on the nominal group process in which participants are first asked to answer questions individually and then brought together for a structured group discussion (Jones and Hunter, 1995; Fink et al, 1984).

To gather individual answers, we conducted 30 one-on-one interviews by phone and a follow-up email. We asked participants to reflect on what factors currently constrain drug research in the U.S. and, as a result, what researchers currently do not know but should seek to learn. Using a semi-structured guide, the two authors of this manuscript conducted the interviews, which lasted between 45-60 minutes. The interview guide consisted of five questions about limitations and gaps in the current research environment, focusing upon gaps in the research, methodological issues, funding problems, and sources of bias in the research. For most of the interviews, a second staff person sat in on the interview and took notes. The interviews were not recorded or transcribed but were well-represented in extensive notes, which were then analyzed by the interviewers, along with the broader project team, to identify the key themes.

Researchers have debated the advantages of tape recording interviews (see for example, Weiss, 1995; Halcomb & Davidson, 2006; Cachia & Millward, 2011). We opted not to tape or transcribe our interviews due to the specific nature of this project. First, our request to participants to identify a significant set of constraints on research asked them to, potentially, be critical of the very systems in which they work (editorial boards, federal grant fund sources, etc.) and so we kept comments anonymous to increase their comfort and candor. Second, because we were asking participants to identify a systemic set of factors—the barriers they faced, the gaps they saw, and the methodological issues they observed— our interest was in capturing major themes and ideas rather than analyzing transcripts for a detailed textual or discourse analysis. Note-taking more than adequately captured these responses. Participants' responses provided a rich body of material from which to better understand various individual and shared factors that limit drug policy research. These data were developed into a "summary of constraints" and represent a significant set of problems that U.S. researchers commonly identified as limiting their work. This summary document was then sent to all participants so that they had the opportunity to review the summary we prepared to ensure that the summary accurately reflected their views, correct any misinformation, and/or add additional information.

Following the interviews, we shared the summary of constraints with participants and then asked them to propose three key changes that would improve and transform U.S. drug research and policy. From that set of factors, we devised a summary of improvements to the research environment. The two documents, outlining constraints and potential improvements, became the foundation for a day-long workshop on what kinds of research are most needed and, specifically, how to design and manifest a more effective research agenda. Our goals for the meeting were to: 1) work with the group collaboratively to create specific, actionable strategies for resolving research barriers, 2) articulate an aspirational list of research projects, and 3) highlight areas for immediate action.

In December of 2017, 25 researchers met in Washington, D.C. for the third phase of this project. This group included most of the original interviewees (some were not able to attend) as well as additional participants selected to create a multidimensional, representational, and interdisciplinary group that included one perspective external to the U.S. Attendees represented all points in their careers, from graduate students to emeritus professors and included a variety of perspectives involving quantitative and qualitative research, public health and health care practice, journalism, and policy-making. In addition, the participants' areas of expertise in research and practice focused on a wide range of topics from various methodologies and represented the fields of anthropology, clinical psychology, criminology, cultural studies, epidemiology, geography, history, law, methodology/statistics, media studies, medicine, public health, public policy, psychiatry, and sociology. Participants worked in various small groups (both random and self-selected by topic) in addition to working together as a whole. Through a two-part framework, we first asked participants to collectively build on the identified constraints to clarify what factors would most transform those limitations. Then, in four smaller groups, participants collaborated to create a list of projects that would form an aspirational research agenda. Finally, from the latter list, participants self-selected into different topic groups briefly developed a multidimensional, ideal research project to disrupt current barriers in drug policy research.

The information generated from the meeting was recorded in extensive notes as well as through the use of a graphic recording service, which translated conversations into images and text on large sheets

of paper as the meeting took place. Participants were invited to review and correct notes and the graphic recording on-site as well as to comment on a summary of the proceedings provided to them shortly after the meeting.

Moving Forward: Unbinding Knowledge

Participants in UBK generated a body of ideas about how to address current research constraints to move U.S. drug policy forward. Most notably, the meeting highlighted the importance of working in interdisciplinary research clusters to shape research design and outcomes across academic, organizational, public health, and health care practice domains. Perhaps the strongest finding from the project was the desire and need for more discussion of drug policy research across disciplines, with several attendees noting how their own thinking and work had been deepened by just one day of being exposed to other perspectives. The group came up with dozens of concrete suggestions that, while they may not be new in a global context, have simply not been centered in the U.S. drug research environment: from developing rapid-response grants to deal with emerging drug-related crises, to studying poly-drug use or changing the outcomes measures used to assess drug treatment and other intervention studies. Some of these recommendations may appear to be in tension with one another. For example, there was a strong emphasis on the need to look at the effects of structural forces but also a recommendation for more research on how individuals themselves manage drug use effectively. Such variations reflect a recognition of coexisting tensions between structural factors and the role of individual agency in drug use. There is a need for drug research that can inform policies at multiple levels, from individual interventions to policy change, with a recognition of the reciprocal relationship between micro and macro level forces. In a study that broadly explored needed areas for research, the recommendations focused on gaps that, when informed with data, may produce different policy opportunities. Participants acknowledged that, even as they push for visionary and sweeping change, incremental steps are needed to get there.

We focus first on "Different Ways to Research," recommendations that outline strategies to surmount systemic boundaries and limitations in the U.S. research environment, changes that would also

disrupt current research paradigms to generate more innovative projects. Next, we discuss "Research That Would Change Drug Policy," topics primarily related to the group's efforts to work beyond the individualist, prohibitionist, and addiction-focused frames in U.S. drug policy research. Specifically, these recommendations call for broader levels of analysis and deepening research on substance use in ways that challenge the narrow, but dominant, view of drugs as inherently dangerous. As a whole, this research outline has the potential to interrogate some of the primary myths and underlying fallacies of the prohibitionist frame that Taylor et al. (2016) identify, such as the belief that substances are currently categorized according to some scientific rationale, drugs inherently cause crime and social problems, continued drug use inevitably leads to addiction, and drug use has no place in a civil society. Based on the constraints generated from our interviews, we would add the fallacy that drug problems are fundamentally caused by individual behavior and choices as well as the failure to widely study harm reduction interventions, self-regulated drug use, and policy-level interventions.

Different Ways to Research

The strongest consensus to emerge from the meeting was the need for new ways of working in U.S. drug policy research. At the top of that list was the desire for interdisciplinary forums, such as the one created by the project itself. Participants agreed that many significant barriers to actionable and effective drug policy research are structural, including the mandate to work within a discipline (Campbell & Herzberg, 2017; Kushner, 2006, 2010; Dunbar et al., 2010). Further, the structure of academic and for-profit funding, research, and publication distances researchers from the immediacy and impact of policy on people who use drugs and their needs (Stein & Daniels, 2017). Putting a diverse group of people from fifteen different disciplines and all stages of career in a room together necessarily complicated issues in productive ways. The impetus for UBK was a recognition that drug policy problems in the U.S. are complex and multifactorial and as such, require deep thinking from multiple perspectives in conversation with one another. Inviting participants to problem-solve across disciplinary and professional domains led to a critically robust and collaborative discussion of research issues and potential solutions, including

their immediate impact on people who use drugs and those who work with them. Specific recommendations for improving the ways of doing drug policy research in the U.S. include:

Build Interdisciplinary Partnerships (especially between qualitative and quantitative researchers): Academic and professional silos, as well as the diverse and sometimes conflicting policy contexts of 50+ state and federal arenas, limit our ability to understand and contextualize the research we conduct. Multi- and interdisciplinary research is urgently needed. Many of the projects designed by the UBK participants required interdisciplinary teams working together in multi-stage studies. Creating pathways for those collaborations and partnerships is a critical first step. Identifying the most suitable venues for this kind of work is a key second step. Research engaged across disciplines and organizations would lead to more nuanced ways of tackling both long term and immediate needs (see also, Bourgois, 1999, 2002; Rhodes et al., 2010).

Redesign the Research Environment: The research process in the U.S.—from its structure, funding, design, and publication—needs to be modified. Structures of funding, research incentives, and career demands in academic and for-profit settings foreclose on the issues researchers might prefer to study, including topics that they believe would contribute to better drug policy. Participants underscored the need for publication outlets that serve policy-oriented outcomes, such as journals and other platforms that invite multi- and interdisciplinary scholarship. Specifically, participants identified a need to challenge the structure and incentives within academia to promote more innovative research as well as scholars' role in communicating to the media, the public, and policymakers–ideas that appear to be gaining more currency in academia (Daniels & Thistlewaite, 2016; Stein & Daniels, 2017; Badgett, 2016). These include strategies to teach and reward public scholarship and media work, develop forums for interdisciplinary work, and transform the peer review process to make it more constructive, rapid, and interdisciplinary. They also recommended creating new publication outlets, such as additional policy-oriented journals, journals for interdisciplinary and qualitative work, and accessible platforms for public-facing scholarship

about drug use and drug policy. These kinds of strategies would help push past existing barriers, open up more space for critical drug studies, and encourage the development of innovative research and policies.

Incorporate Different Types of Expertise: Too much drug research employs assumptions and thinking shaped by criminalization and stigma by researchers with little experience with drugs and/or exposure to people who use drugs. Research should involve stakeholders as investigators (people who use drugs, community members, etc.) across the spectrum from research design and data collection to analysis and dissemination of findings (Lancaster et al., 2018.). Among the potential benefits of such inclusion are: to identify areas for research unseen by people who do not use drugs, disabuse the research community of such mischaracterizations, and lift the silence on talking freely about illegal drug use practices—especially with regard to pleasure—and as a matter of social justice.

Diversify Funding Resources and Objectives: Not surprisingly, participants had a number of recommendations related to funding. These included more funding for innovative and exploratory work, access to rapid response grants, support for collaboration across disciplines (also across setting, research experience, or point in career), and backing for ethnographic and qualitative research as well as for modeling and cost effectiveness research. In addition, participants noted the need to fund younger or less-represented scholars—particularly women, people of color, and those impacted directly by the war on drugs—who often bring a much-needed fresh perspective.

Work to Reschedule Drugs, such as Cannabis and Psychedelics, to Promote Research on Their Therapeutic Uses: Current drug schedules in the U.S. are problematic for a variety of reasons, but particularly because of the lack of research underlying their categorization of drugs. Research is needed to address both the therapeutic uses and potential harms of substances is impeded by these misguided categorizations. A strategy to make schedule 1 drugs more accessible for research is essential to improve the knowledge base about scheduled drugs (see also, Doblin, 2000).

Alter the Metrics for Intervention Studies: In regard to intervention studies, the group recommended focusing on outcomes beyond reductions in or cessation of drug use and recidivism, such as quality of life, housing status, employment, family reunification, and client satisfaction and preferences.

Research That Would Change Drug Policy

In addition to changes in how drug researchers work and how the drug research environment is structured, participants broadly agreed on content areas that require greater focus. Participants chafed against the current emphasis in U.S. drug policy research on narrow, individualistic approaches that fail to contextualize drug use, its harm, and the harms and benefits of the interventions we employ to address it and how that focus contributes to a policy discourse that roots the solution to drug problems in addressing individual pathology through either criminalization or medicalization. Similarly, they commented on the relatively few studies that assess policy-level interventions or studies looking at international issues, such as how U.S. policy impacts other countries and global drug policy, and discussed the ways in which this gap may contribute to the failure of policymakers, the media, and the wider public to fully consider the implications of the U.S. drug policy abroad. Overall, they called for a broadening of perspective and scope, one that would necessitate the kinds of interdisciplinary approach described above. Recommendations for specific, much-needed areas of drug policy research in the U.S. are as follows:

Structural Issues: Expanding the Levels of Analysis

As noted above, the majority of research on drugs in the U.S. focuses at the level of individual drug use. These studies are critically important to understanding who uses drugs and why, but they are insufficient for providing policymakers and the public the information needed to respond effectively to drug problems. While the term "problematic use" can itself be problematic, we are using it here to acknowledge that drug use happens on a spectrum ranging from experiences that can enhance one's

functioning to those which can create substantive problems (albeit often exacerbated by social circumstances). Participants urged more research on the structural and social conditions (i.e., racism, network impoverishment, and other forms of oppression) that contribute to problematic drug use and/or support abstinence or functional drug use. Social determinants of drug use have received some attention internationally (see for example, Spooner & Hetherton, 2005) and in the U.S., (see for example, Galea & Vlahov, 2002; 2003). Although difficult to measure and study (NRC, 2001), in part, because of the complex interplay of factors, tackling some of the challenges of doing so could help us get to the root causes of problematic drug use, encouraging policymakers to intervene further upstream. For example, how do access to housing, education, employment, social cohesion, incarceration, or community institutions impact drug use? Researchers in Canada, for instance, found that injection drug users with unstable housing were more likely to end up in emergency departments and called for stable housing as a potential policy solution (Palepu et al.,1999). Why do certain subpopulations in a particular region struggle more with resolving substance use issues? For example, Gossop et al. (2000), looking at routes of administration among people seeking drug treatment in England, found significant regional variations that had implications for how policymakers and providers approached prevention and treatment as well as for health officials distribution of services, such as vaccination hepatitis B. Through interdisciplinary partnerships, between qualitative and quantitative researchers, participants projected ways to move from broad structural issues to sub-populations about which we know very little.

To provide a more concrete example from the UBK meeting itself, one of the smaller UBK working groups focused on the lack of research that examines how community- and structural-level factors impact drug markets and drug use. They were interested in understanding how and why certain drugs enter a community and whether or not there are community-level factors that deter the introduction of drugs and/or their use once introduced. Why, for example, do some communities have high opioid overdose rates, while others do not? Focusing on fentanyl, they suggested comparing two jurisdictions with different overdose rates and examining a range of factors to better understand what factors impact the market for and use of fentanyl. For instance, they would use mixed methods (qualitative and

quantitative) to examine the role of law enforcement, social services, housing and employment opportunities, and other factors. Working with historians, they would try to better understand the drug markets, how new drugs are introduced to the community, and what political and community forces might be at play. This research could lend insight into what kinds of policy and community factors might impede or mitigate the introduction and spread of drugs within communities as well as harmful drug use.

Just as we need to know more about the structural factors impacting sales and use, so too, we need to know more about the effectiveness of policy interventions at the macro level. While some studies are emerging about marijuana legalization (see for example, Cerda et al., 2012; Pacula et al., 2015; Bachuber et al., 2015), and there are a small number of studies about supply-side policies used to address the opioid overdose problem in the U.S. (see for example, Baehren et al., 2010; Buchmueller & Carey, 2017), participants encouraged more research and evaluation of policy interventions as they unfold, including studies of "natural experiments." Policy changes and practices beyond cannabis legalization— such as Good Samaritan Laws, naloxone access, drug induced homicide prosecutions, drug checking, expanded access to treatment—are being rapidly implemented, but studies of these interventions and their effectiveness are scarce (see for example, Bardwell & Kerr, 2018).

Deeping and Broadening Understandings of Substance Use

Perhaps nothing has shaped U.S. drug research more profoundly than the pervasive belief that illicit drugs are inherently harmful and addictive. The pathologizing of drugs and the people who use them influences our assumptions about motivations for drug use, the kinds of questions we ask, whom we study, and the outcomes we measure. Moreover, these kinds of logics and discourse undergird the neoliberal project of governing pleasure as well as the demonization and criminalization of those who use "demon drugs" (Walker, 2017; Race, 2009; Reinarman & Levine, 1997; O'Malley & Valverde, 2004). The intense focus on the harms of drugs in the U.S. has meant we know relatively little about their therapeutic and recreational uses or about the vast majority of people who stop using drugs on their own (Sobell et al., 2000; Granfield & Cloud, 1999). There were three areas identified for more focused research on

substance use: self-regulating drug use, the positive motivations for and outcomes of drug use, and better understanding of poly-drug use.

Participants noted we have much to learn from the vast majority of people who use drugs functionally. In addition to structural factors, what is it about self-regulating drug use that might become part of drug use education and harm reduction strategies? The potential benefits of studying normative drug use and self-regulating drug use are enormous. They can lend insight into why and how most people who use drugs can control their use and how many of those who cannot control use quit on their own (natural or spontaneous recovery). Research topics would include what kind of calculations or incentives motivate people to regulate or stop use, what resiliency or assets do people have or need to moderate drug use, and what motivates their use in the first place. By focusing on "problematic" drug use, we have learned much about the problem but not much about preventing it or what might be the most effective solutions. This area of research has great promise to lead us to new ways of approaching more severe and consequential drug use as well as better understanding a broader spectrum of drug use.

One of the major artifacts of prohibition is that we have little research about why people use drugs, the net-benefit of drug use, and the outcomes sought by people who use drugs. Research that addresses pleasure, life management, drug use for spiritual and health benefits, etc. would begin to fill in a cultural picture of the motivations for most drug use and allow policymakers to make more nuanced decisions about how and why they intervene in the consumption of drugs.

While most people who use drugs do not use a single drug at a time, drug policy research in the U.S. often isolates substance use by drug. People who use drugs may combine alcohol, opiates, stimulants, and benzodiazepines—some of which people who use drugs are not even aware will interact with other drugs. Indeed, some of the overdose deaths in the current opioid overdose crisis are the result of poly-substance use—mixing opioids with a deadly combination of alcohol and/or benzodiazepines (Park et al., 2015; Jan et al., 2014; Jones & McAnich, 2015). The opiate overdose crisis is just one example of a critical cultural and policy need for a better understanding of poly-substance use. With the proliferation of novel psychoactive substances ranging from spice to fentanyl, research on the short- and

long-term health effects of using drugs in combination is urgently needed. Additionally, more studies that collect ethnographic data about what drugs are actually being used together, why, and in which contexts are needed.

Conclusion

The participants in Unbounded Knowledge were emphatic that a better future for drug policy research in the U.S. requires researchers who can work collaboratively across boundaries of discipline and profession to answer the field's most challenging and urgent questions. In a setting that itself attempted to model such collaboration, they articulated significant structural changes to drug policy research and conceptualized projects that would meet crucial informational needs. Given the opportunity to work across disciplinary and organizational domains, participants were highly motivated to join forces to change the conversation and transform research and policy in the U.S. With an understanding that the dominance of prohibitionist logic permeates drug policy research, the participants wanted to commit to projects that would make the problems inherent in that framework more visible while providing better data to address immediate needs. Collectively, they endorsed improvements to research contexts to, in turn, build a better knowledge base.

We have highlighted just a few of the recommendations generated by the UBK project, and even the full spectrum of ideas that came out of the meeting are just a gesture toward what U.S drug policy research could become. We recognize that this was a select group that does not represent the drug policy research community in the U.S. and that the discussion would have been even richer had we been able to bring more international researchers to the table. Nonetheless, what the project demonstrated is both some of the problems with how U.S. research is currently conducted and the potential to reimagine drug policy research by bringing people together across disciplines and supporting them in thinking beyond the bounds that normally constrain them.

While we understand that changing such pervasive systemic and institutional factors will not happen as a result of one project, we also recognize that the conversation needs to begin somewhere. We

share these findings in the hopes of furthering the dialogue about how to improve drug research in the U.S.—by addressing both long-term challenges and offering ideas that may be addressed sooner as low-hanging fruit. In fact, the group generated several suggestions for advancing this agenda. These included using the findings to engage research funders – both public and private – in conversations about supporting more visionary projects; fostering conversations within academia, the media, and among policymakers about improving the field; instituting a recognition award to incentivize innovative, interdisciplinary projects; creating a virtual network of interdisciplinary critical drug scholars; training researchers to engage more directly with policy and funding change efforts; and developing additional forums for interdisciplinary work. Many of these suggestions are being taken up by the Drug Policy Alliance's Office of Academic Engagement, which convened the UBK group. In addition, some participants plan to move ahead on the collaborations they conceptualized at the meeting – even absent of additional funding and support.

It remains to be seen whether or not a small project like this can begin to shift entrenched systems and beliefs in the U.S. that structure how drug policy research is funded and conducted. The prohibitionist frame as well as the pull to individualize the problem of addiction are strong in the U.S. and are being bolstered in some ways by the current a political climate – including federal leadership that is dismissive of research in general. Nonetheless, there are also signs of tremendous opportunity, including a new interest in more progressive responses to the opioid overdose problem, driven in part by the racial politics of the problem (Netherland & Hansen, 2016, 2017), as well as what appears to be a resurgence of interest in scholar-activism and the publicly engaged researcher (Daniels & Thistlewaite, 2016; Stein & Daniels, 2017; Badgett, 2016). If the enthusiasm and commitment of the UBK participants is any indication, there seems to be a motivated cadre of critical drug scholars in the U.S. ready to work in new ways and to shape a new research landscape – one that can do more to critically interrogate the dominant and destructive ideologies that drive much of the U.S. drug policy.

The challenge remains to make the cultural changes that will help bridge disciplinary and organizational silos and support collaborative cross-disciplinary work to better inform and bring more

rationality to U.S. drug policy. To that end, the project drove home the need for spaces and funding to support interdisciplinary research networks and concrete projects, especially because so many of the policy problems that need to be solved are multi-faceted. Many of the most urgent and compelling questions in drug policy can only be answered through interdisciplinary approaches, and yet there are too few forums or incentives for researchers to engage in this way. The group recognized that to help solve some of the country's most vexing drug policy problems, we need collaborations that are not supported by current research structures, funding, and outlets. In the spirit of the project, we invite a conversation about how and where such interventions might already be taking place as well as where they might be welcome.

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