

Transnationalizing Critical Drug Studies

NANCY D. CAMPBELL
RENSELAER POLYTECHNIC INSTITUTE
UNITED STATES

Abstract

This essay explores transnational STS as an analytic capable of recognizing the heterogeneities, pluralities, and relationalities of drugs—legal and illegal, products of agriculture or laboratory—as emblematic material-semiotic actors that move between global North, West, South, and East and into and out of bodies. Critical drug studies flourishes as a transdisciplinary knowledge project at the nexus of anthropology, history, sociology, political science, and other knowledge projects. This article situates critical drug studies in relation to the interdisciplinary knowledge project that is transnational STS and to postcolonial, postpositivist, and decolonial STS. The paper responds to the prompt offered by the organizers of a stream of papers in 2020—on “Transnational STS” for the Society for Social Studies of Science (4S): “What becomes visible when nation-state as the only analytic breaks down? What is the role of the nation-state with regard to education, research activities and the regulation of technologies in the contemporary period?” This article deals with the bifurcated regulation of drugs as technologies made legal or illegal by a global colonial, imperial, and nation-state-based regime that has made global drug policy since the early twentieth century. We are witnessing the reconfiguration of this regulatory system within and between nations—making a transnational analytic frame necessary for recognizing the relations facilitated by global drug policy.

Keywords

critical drug studies; drugs; drug policy; pharmaceuticals; post-positivist STS; transnational STS; postcolonial STS; decolonial STS

Introduction

Drugs themselves are almost too protean for stable definition. This essay defines “drugs” inclusively and assumes that the heterogeneity, plurality, and mobility of their relations—legal and illegal, products of agriculture or laboratory—make them material-semiotic actors that inhabit moral categories (Becker 2001) but also move between them. The stabilizing forces of law and policy are exerted over psychoactive substances, conscripting them into serving moral, political, and economic purposes. Tracing the heterogeneous and transnational relationships that drugs make between global North and South, this essay considers their implications for “epistemologies of the South” (de Sousa Santos 2018). Transnational STS is a conceptual framework that incorporates the insights of feminist post- and de-colonial STS into critical

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To email contact Nancy Campbell: campbell@rpi.edu.

drug studies, and is thus suitable for making sense of the post-positivist naturecultures of drugs and their users.

Few objects or subjects of knowledge present the embedded dilemmas of using transnationalism as a conceptual framework in such critically rich relation to histories of colonial extraction, imperialism, and global capitalism than do drugs. Typically extracted from plant-based materials grown in the global South until recently, drugs and alcohol are refined, distributed, and consumed as legally regulated or prohibited or promoted products largely in the global North. They circulate as illegal substances everywhere and in varying relation to statecraft. Colonial and imperial powers were dependent on drugs and alcohol for revenue. Among the earliest objects of truly global trade, both by political-cultural elites and non-elites, drugs have been subject to multiple reinventions as they crisscross the borders of nation-states. In *The Age of Intoxication* (2019), Benjamin Breen argues that early modern drug trading practices became the modern licit/illicit divide, dubbed the “drugs/medicines divide” by David Herzberg (2020). Revisionist histories of the British-Indian opium trade in China (Bauer 2019; ; Kim 2020) and early modern Chinese pharmacy (Bian 2020) suggest that forms of expertise, complex rituals, and social norms that mitigated harms were disrupted by global imposition of prohibitionist drug policy regimes that relied on monopoly and military power (Andreas 2020; Andreas and Nadelmann 2006). The dynamic processes through which drugs and alcohol have been conscripted to serve interests of nation, capital, and domination through “predatory accumulation” in licit and illicit markets (Bourgeois 2018) should inform scholars of science and technology studies, as well as students of capitalism, globalization, transnationalism, and post- and decolonial politics. Early modern drug trades facilitated relationships of extraction that persist within the eroding edifice of modern drug policy. The actors, categories, knowledges and modes of life produced in relation to that edifice for purposes of global governance to which nation-states were forced to agree are increasingly pressured to change.

What critical edge might STS scholars gain from pursuing transnational analysis of currently legal and illegal drugs and their users? In the social movements and crises of political order within which they are invoked, drugs are regularly made policy players for justifying repressive state activities and prerogative powers such as police violence, authoritarian policy and policing, militarization and mass incarceration (Alexander 2012; Andreas 2020; Hinton 2017). Yet they are also legally produced, promoted, traded, and prescribed as legal commodities like any other (Herzberg 2009, 2020). David Courtwright’s ([1982] 2001, 2001, 2019) concept of “psychoactive commerce” cast into high relief how market systems were built to profit from psychoactives rather than to prohibit them. The circuitry of globalization that makes these substances available in proliferating variety—what Courtwright (2019) has called “limbic capitalism”—has been held in place by policy regimes heavily influenced by crudely colonial and imperial powers for more than a century (Andreas 2020; McAllister 1999). Serving as tools of colonization, extraction, relief and resistance, drugs are used by nation-states as means of fiscal consolidation and signals of social disorder requiring political repression. Yet it is also worth bearing in mind Maziyar Ghiabi’s (2022) global comparative critique of the over-attribution of power to “drugs and disorder” generated from his ESRC-funded project of that name. Ghiabi considered cases of everyday forms of life in Afghanistan, Colombia, and Myanmar, attending to the ways people organize worldbuilding projects in critical response to the forms of relationality extracted from them by capitalist modes of life (*ibid.*).

Contrapuntal formations ([Said 1979](#)) are the stuff of STS social movement studies ([Breyman et al. 2016](#)). Critical drug studies is grounded in critique of capitalism ([Bourgois 2018](#); [Ghiabi 2022](#)) and critique of globalization ([Connell 2007](#); [Go 2016](#); [Richards 2014](#)) as ways of ordering the world. Transnational production, distribution and consumption of drugs is governed by nation-states stitched together into an international drug policy patchwork that attempts to keep intact the policy-made division between “drugs” and “medicines” ([Herzberg 2020](#)), despite the “strange trips” that psychoactive substances make between these poles ([Richert 2019b](#)). In the face of legal and political reconfigurations of this patchy regime, that division is collapsing in the face of the biosocial mimicry between drugs/medicines, evidence-based science, and the increasingly diverse knowledges and regulatory strategies concerning psychoactive substances. If drug policy is to be made wiser, fairer, more equitable, or more sustainable, we will need to recognize that how we know the ecologies that form in relation to legal and illegal drugs and the people who use them matters for how we live and die.

Extractive Economies: Agrarian Production, Monopoly Logics, and North–South Relations

Extraction of land, labor, and plant materials from the global South was a deliberate political and economic strategy by the colonial and early industrial powers from the global North in the nineteenth century. Extractive economies were backed by military power and upheld since the 1910s by global treaties governing psychoactive commerce that were remade in the wake of World War II. As Suzanna Reiss showed in *We Sell Drugs: The Alchemy of US Empire* ([2014](#)), postwar settlements allowed the United States to consolidate control over world opiate and coca supplies, and to shift sourcing to Latin America (through which Asian product has been trafficked since the 1940s, see [Carey 2009](#), [2014](#)). German dominance over pharmaceutical manufacturing was broken ([Reiss 2014, 22 and 33](#)) through patent transfers integral to Germany’s surrender in World War I ([McTavish 2004](#)). In the United States, postwar settlements brought about a spike in availability of heroin and injection equipment interacting with a “monopoly logic of enforcement” promulgated by the Federal Bureau of Narcotics (FBN) ([Reiss 2014, 76](#)). The FBN and, later, the Drug Enforcement Administration (DEA) have engaged decades-long racial projects ([Omi and Winant 2014](#)) to align racist ideologies with domestic subversion, underwriting a prohibitionist global regime for illicit drugs even as permissive monopolies for licit drugs have been enacted ([Room 2020](#)). When US President Dwight D. Eisenhower declared a “new war on narcotic addiction at the local, national, and international level” on November 27, 1954, the country was forty years into criminalizing “narcotics” (the term encompassed opiates, sedatives, and stimulants once commercially available without prescription as ingredients in proprietary medicines ([Spillane 2002](#)). By then the United States was half a century into exerting direct control over global drug policy—which had emerged at its insistence earlier in the century ([Andreas 2013](#); [Foster 2019](#); [McAllister 1999](#)). This approach was prohibition-oriented in the case of illegal drugs, and production-oriented in the case of legal pharmaceuticals.

Post-World War II, a transition occurred in the demographic profile of US heroin users, who had been white, male, and older than age 45 prior to the war. Postwar concern about “juvenile delinquents” centered on a younger cohort that contained more men from urban communities of color (see [Campbell 2022](#)). Harsh criminal penalties and the first mandatory minimum sentences were set for possession and trafficking in 1951, just as illicit drug markets became concentrated in Black neighborhoods—seeds of the coming crises ([Hall et al. 1978](#)) that would be heralded by the “War on Crime” and mass incarceration

([Alexander 2012](#); [Hinton 2017](#)). The 1950s witnessed expansion of licit pharmaceutical markets targeting anxiety and other problems of middle-class whites ([Herzberg 2009, 2020](#); [Tone 2008](#)) and early in the next decade these drugs were brought under global control ([Bewley-Taylor and Jelmsa 2012](#)). These highly regulated, legal “white drug markets” ([Herzberg 2020](#)) diverged from “urban,” “black,” and “grey” markets—all terms that code for race in the United States and Canada ([Boyd 2022](#)). While seemingly local, drug markets are always backed by transnational processes due to the sourcing of raw ingredients, and patterns in which refinement and consumption were set up to occur in the global North while agrarian production largely occurred in the global South. Transnational analysis is indispensable for understanding relational patterns of connection between domestic and international social, political, and economic conditions.

Transnationalism cannot be considered apart from anticolonial movements, including wars for independence ([Mbembe 2019](#)). The postcolonial and decolonial politics of the present, including struggles over indigenous sovereignty and knowledges, owe much to struggles for national sovereignty in the face of colonial and imperial powers and the austerity programs and other forms of governance that followed in their wake. Similarly, the cultural politics and domestic effects of the Cold War, the anxieties of affluence or poverty, social movements for civil and human rights, or in the case of South Africa, the struggle over apartheid ([Parle, Hodes, and Waetjen 2018](#); [Waetjen 2022](#)) must all be taken into account as exerting both local and global effects that nation-states have both exacerbated and mitigated. Transnational STS is a way to trace how geopolitical power works in relation to science, technology, and medicine. Within critical drug studies, a new drug historiography has arisen with the thawing of the archives ([Tobbell 2011](#)), resulting in new diplomatic histories of global drug policy and new drug histories that uncoil “relational and multiscalar analyses—those that closely connect different levels and geographies of power” ([Gootenberg and Campos 2015, 19](#)). Starting from the global South, historians have enriched knowledge about indigenous practices and indigenous elite interactions with colonial and imperial powers, such as those of the British and Dutch East India Companies ([Farooqui 2014](#); [Roersch van der Hoogte and Pieters 2014](#); [Waetjen 2016a, 2016b, 2017, 2019a, 2019b, 2019c](#)). Those who study licit and illicit drugs from historical and anthropological perspectives have cultivated a flourishing interdisciplinary knowledge about South-South transactions and relations ([Ghiabi 2018, 2019](#)). Joining with Boaventura de Sousa Santos’ call for “epistemologies of the South,” critical drug studies concern several kinds of knowledge as well as the articulations that can be established among them in the struggles against oppression. Such articulations I call ecologies of knowledges. There are two basic kinds of knowledge in the ecologies of knowledges: knowledges that are born in struggle and knowledges that, while not born in struggle, may be useful in the struggle. Either of these kinds may include scientific and nonscientific knowledges. I designate nonscientific knowledges as artisanal knowledges. . . . They are practical, empirical, popular knowledges, vernacular knowledges that are very diverse but have one feature in common: they were not produced separately, as knowledge-practices separated from other social practices ([de Sousa Santos 2018, 43](#)).

Such epistemologies are useful for making sense of the protean ambivalence into which drugs fall as objects and subjects of extractive economies. Following drugs into the knowledge ecologies they inhabit leads to methodological openings for STS scholars working on transnational dynamics and issues that span the borders of nation-states and multiple temporalities and timescapes.

Transnationalizing Critical Drug Studies

Critical drug studies has required new genealogies, archives, theories, and confrontations with forms of occlusion and duress that arise in the course of (post)colonial governance and “predatory accumulation” by licit and illicit producers ([Bourgois 2018](#); [Widmer and Lipphardt 2016](#)). Official archives allow us to tell stories of domination ([Stoler 2016, 14](#)), leading to conceptual occlusions derived from habits of mind that emplot stories of agrarian production as told above, emphasize the progressive movement of transoceanic shipping and overland transportation from periphery to metropole, and begin analysis only at the point of taxation, purchase, or consumption. Drugs are potent, perishable, toxic, pleasurable, and valuable—regulation can reduce harms but exact high human costs. Military policing of nonmedical markets ([Go 2020](#)) and the necropolitics of an “innovative ‘post-colonial’ mode of predatory production of a handful of globally illicit agricultural consumption items—heroin from poppies and cocaine from coca leaves [and now fentanyl no longer requires agrarian production at base]—[that] has inverted the directionality of the abusive Global South-to-North terms of unfavourable trade and capital flows for export agricultural products that have historically favored the more industrialized Global North” ([Bourgois 2018](#)). Thinking transnationally requires thinking about how narco-power flows through “gore capitalism” ([Valencia 2018](#)) and converges with necropolitics ([Márez 2004](#); [Mbembe 2019](#)) and with the industries that supply state-sanctioned legal and illegal drugs to consumers for whom national borders mean little.

But a relational and connective mode of analysis also enables those who study drugs to avoid the conceptual and political problems of biological or neurochemical essentialism or “substantialism,” and instead to embrace a more precise language that captures the mutually constitutive relations that comprise drug worlds. This mode of analysis may be extended to things that are often forgotten to be drugs, such as food, toxins, or endogenous chemicals such as hormones, neurotransmitters, proteins within and without, which change humans and nonhumans as these molecules modify bodies and brains. Social interactions are particularly relational when thinking about “substances” defined as “actors” in Latour’s terms as “anything that does modify a state of affairs by making a difference” ([2005, 71](#); quoted in [Go 2016, 141](#)). Agency inheres within these “anythings,” about which different need to be told in order to characterize their activities in the worlds they inhabit.

Asking how stories of drugs and the modern world can be told otherwise allows deconstruction of the metropole-centric narratives that founded the field of drug policy history. By diversifying world-systems-thinking and paying attention to land and labor, the human costs of the travels of these globalizing commodities are only beginning to be tallied. One assumption of critical drug studies is that there is such a thing as drug policy from below, situated within local knowledges and regional ecologies in ways that can be documented. The move to tell different stories differently ([Hemmings 2011, 16](#)) operates in capillary fashion due to the coupling of the decentralized nature of modern disciplinary power ([Foucault 1980](#); cf. [Fraser 1990, 17–34](#)) with the prerogative power of the carceral archipelago and of transnational police exchanges ([Andreas 2020](#); [Andreas and Nadelmann 2006](#); [Go 2020](#); [Koram 2022, 2019](#)). Global drug policy from above is imbricated with the metabolism of settler colonialism, statecraft, and market transactions. Attempting to decolonize a world in which whole nation-states are placed in subordinate relationships to international treaties ([Richards 2014](#)), and in which the most vulnerable are subject to narco-violence down to the cellular level due to extreme economic inequalities, means that examples of resistance to colonial relations emerge differently in different places.

Until recently, there was neither “drug policy from below” nor the notion of “decolonizing drugs.” Current calls for the decolonization of drug policy respond to the “racial distinction and subordination [that] were baked into the cake of capitalism” ([Hatch, Sternlieb, and Gordon 2019, 596](#)). The “sugar ecologies” characterized by Hatch et al. ([ibid.](#)) were the complex products of colonialism and imperialism, which comprised the basis for the racialization of agricultural capitalism starting with reliance on enslaved persons and leading into industrial production. Complex and dynamic, this ecology triangulated sugar, alcohol, and drugs, and was a central pillar supporting colonialism ([Andreas 2020](#)). Drugs are situated within similar ecologies in ways that render their stories capillary, corporeal, and seemingly marginal although they stand as one of the earliest instances of globalization.

Driven since the late nineteenth century by attempts to legislate—and make hegemonic—a white, North American morality ([Duster 1970](#)), those engaged in the earliest US-based attempts to legislate morality by governing drugs—California’s Chinese exclusion laws of the 1880s—made the intent of their racial project clear ([Musto \[1973\] 1999](#)). However “American” the so-called American disease was, “the racial dynamics that have been identified within the “War on Drugs” in the US are not only mirrored in other countries across the globe, but in fact have their genesis in global, not only American, histories and discourses of racial formation” ([Koram 2019, 6](#)). In recently adding corporeal distinctions to their concept of racial formation, Michael Omi and Howard Winant ([2014](#)) theorize racial projects as places where culture meets structure—an apt characterization of the interlinked racial projects central to the operation of transnational drug policy, and the assumptions and ideas that underlie their domestic effects. “The problem of race exceeds any one national narrative of racial divisions; it spans the globe encapsulating the legacies of apartheid and land appropriation in settler colonies, the hierarchy of populations produced through scientific racism and the notions of sub-humanity, as well as gendered ideas of stronger (masculine) and weaker (feminine) peoples that continue to haunt the contemporary, ostensibly post-racial world” ([Koram 2019, 6](#)).

While jumping scales to take biosocial shape as political technologies of the body, drugs also play a role in governing globalized interactions within and between nations party to transnational treaties. The differential handling of drug policy by colonial and imperial powers smuggled colonial relations into supposedly postcolonial relations through the Trojan horse of prohibition, the brunt of which has “consistently fallen hardest upon the poorest and most vulnerable populations of the world, especially groups already constructed as racial other” ([Koram 2019, 18](#)). Thus was the Washington-centric drug policy history that emerged in the 1970s in the midst of Richard Nixon’s so-called War on Drugs insufficient despite the originality of David Musto ([1999 \[1973\]](#)) and David Courtwright ([\[1981\] 2001](#)) in documenting the gendered and racialized projects leading to the 1914 Harrison Narcotics Act; a federal law taxing importation and distribution of opiates and coca products that effectively criminalized those who used them (see also [Lusane and Desmond 1991](#)). The ongoing role of prohibitionist drug policy logics for US state formation and statecraft has been demonstrated ([Andreas 2020](#); [Bartilow 2019](#); [Foster 2019](#); [Kohler-Hausmann 2017](#); [Hinton 2017](#); [McAllister 1999](#); [McGirr 2016](#); and [Reiss 2014](#)). Prohibition was undertaken to settle the question of who would produce, refine, distribute, consume, but above all, profit from drug trades at a variety of scales.

Michel Foucault ([\[1977\] 1990](#)) famously drove home the point that prohibition is productive, taking a variety of forms including everything from criminalization of individual acts or statuses to government

monopolies. Top-down, policy-centric diplomatic histories have given way to global and social histories sourced in regional dynamics of production, distribution, and resistance to global prohibition. Diana S. Kim's *Empires of Vice* speaks to the roots of global prohibition in regional problems of production and distribution of opium in Southeast Asia. Anne Foster (2019) suggests that the first opium bans levelled by the Americans in the Philippines appeared to restrict opium importation but instead drove it underground and promoted smuggling. While scholars of many stripes have argued that global and US drug policy are policy failures (Farber 2022; Márez 2004; Paley 2014)—based as they are upon prohibition—drug law and enforcement have proved consequentially productive. Proliferation of specific local genealogies and effects of prohibition are reflected in David Farber's edited volume, *The War on Drugs: A History* (2022); regional drug policy references in Latin America, Africa, and the Middle East; and *The Oxford Handbook of Global Drug History* (2022) edited by Paul Gootenberg.

New transnational drug stories tend to start from postcolonial places in global South or global North where capillary exchange occurs and where archives were untouched until recently (Baruah, forthcoming; Campos 2012; Gootenberg and Campos 2015; Carey 2014; Gootenberg 2022; Reiss 2014). For example, the 2012 “New Directions in the Histories of Health, Healing and Medicine in African Contexts” held in KwaZulu-Natal, South Africa, was the first time that South African drug scholars met in-country (as opposed to meeting in Europe, the US, or the UK; see Parle and Noble 2014). Little was published on drug and alcohol use, treatment, and traffic in post-socialist worlds before Eugene Raikhel's *Governing Habits: Treating Alcoholism in the Post-Soviet Clinic* (2016), which analyzes epidemiological constructs of excess mortality and democratic transition in the former Soviet Union and a “crisis of masculinity” in lived experience of economic precarity in which drugs and alcohol play an outsize role in housing and employment. Capturing changing subjectivities in the transition to capitalism, Raikhel saw in the theory and practice of Russian/Soviet/post-Soviet narcology a radical departure from normative Euroamerican notions of alcoholism, addiction, and treatment. Keeping heterogeneity in—rather than acceding to the homogeneity implied in ideas of “national styles” or “health disparities”—is integral to transnational studies focused on biomedicalization (Clarke et al. 2010). Conceptual methodologies capable of keeping heterogeneity, plurality, and relationality in transnational STS are necessary not only because of the distinct varieties of production, distribution, regulation, and circulation of these substances, but also because of their intense variety in affect, effects, embodiment, routes of administration, set and setting (Hartogsohn 2020), social status, and cultural as well as monetary value. Drugs always have to do with *both* political technologies of the body *and* diplomatic and necropolitical technologies of state. Transnational STS is a knowledge formation that not only tolerates but values such nimble scale-jumping and context-setting as a mode of engagement and analysis.

Postcolonial and Postpositivist Pharmaceuticals

STS itself was deeply informed at inception by the democratic and anticolonial social movements of the 1960s—and modulated by cross-cutting political and theoretical movements since. Disciplinary formations found themselves brought to crisis by post-positivist theories, methodologies, postcolonial, and decolonial critique stemming from engagement with social movements and movements for independence in the “Third World” (Sandoval 1991, 2000) and the contrapuntal character of “travelling theory” (Said 1979, 1983). Cross-fertilization between postcolonial movements and cultural studies led to emergence of postcolonial

STS, as well as anti-racist, queer, and feminist formations that flourish today. Medical anthropology, joined by anthropologists and historians of capitalism, converged on production and consumption of mass-market pharmaceuticals ([Banerjee 2020](#); [Dumit 2012](#); [Ecks 2013](#); [Herzberg 2009, 2020](#); [Rajan 2006, 2012a, 2012b, 2017](#); [Tomes 2016](#); [Tone 2008](#); [van der Geest, Whyte, and Hardon 1996](#)). Meeting at the interstices of the American Anthropological Association (CASTAC), the American Sociological Association, and the major historical professional associations (American Association for the History of Medicine, American Historical Association, the Organization of American Historians, the History of Science Society, and the Society for the History of Technology, the latter two occasionally in concert with the Society for the Social Studies of Science (4S), those who study drugs convivially created sections and networks that necessarily cross disciplinary and national boundaries. For instance, bio-prospecting appears to be a simple case of colonial extraction; those working on ethnobotany, ethnopharmacology, and plant sciences complexify that picture both by “animating” and decolonizing plants (see [Dawson 2018](#); [Duvall 2019](#); [Foster 2017](#); [Hartigan 2017](#); [Hayden 2003, 2007](#); [Jay 2019](#), [Monnais and Tousignant 2016](#)). Historians of science and medicine are tracing resurgence of social and scientific interest in psychedelics ([Dawson 2018](#); [Dyck 2008](#); [Giffort 2020](#); [Hartogsohn 2020](#); [Jay 2019](#); [Langlitz 2013](#); [Richert 2019a, 2019b](#)). These projects gain analytic purchase by rescripting drugs as “technologies” ([Campbell 2020a](#); [Foucault 1988](#)) that perform political, social, and cultural work.

By contrast to the larger scholarly societies mentioned in the above paragraph, there has been little or no comparable organizing between STS and the Alcohol and Drugs History Society (ADHS). This may partly be due to the tenacity of constructs of crime and delinquency in the illicit drugs arena. What could be more socially constructed than crime? Yet radical or critical criminology was suppressed in the United States; sociological criminology scaled up as little more than an apparatus for training corrections officers and police with expansion of the use of incarceration as drug policy. Illicit drugs preoccupied a motley crew of sociologists of “deviance” ([Campbell 2020b](#)) until the 1980s and 1990s when HIV and AIDS activists brought intravenous transmission—and thus illicit injectables—to public attention through protest, needle exchange, and pressure on the FDA drug approval process. In *Impure Science* (1996), Steve Epstein told this story as one of clashing modes of expertise (on which [Campbell 2020a](#) built). Within STS the status governing interaction between legal “pharmaceuticals” and illegal “substances” remains intact. Before a 2007 4S panel “Knowing Pain: The Cultural Logics of Pain and Drug Addiction Research” (see [Campbell 2007](#); [Meldrum 1994, 2016](#); [Tousignant 2011](#); and [Whelan and Asbridge 2013](#)), there was little examination of epistemological questions concerning pain and pain research in relation to addiction within the STS community.

Science studies mirrors the patterns and priorities of the sciences that are being studied. The world’s primary funder of research on drug “abuse” or “addiction,” the National Institute on Drug Abuse (NIDA), has placed drug ethnographers in epidemiologically surveillant rather than critical roles ([Agar 2002](#); [Bourgois 2002](#)). When Nora Volkow took NIDA’s reins to court neuroscientists to study “addiction” during the “Decade of the Brain” ([Campbell 2007, 2018](#); [Vrecko 2010, 2016](#)), social scientists were displaced, finding themselves “outsiders” to the very field they had helped create ([Campbell 2020b](#)). With notable exceptions ([Peterson 2014](#)), STS scholars have not ventured into illicit drug domains but have rather concentrated on the pharmaceuticalization of life ([Dumit 2012](#); [Lakoff 2006](#); [Petryna, Lakoff, and Kleinman 2006](#)), the (bio)medicalization of health ([Clarke et al. 2010](#)) and all things “neuro” ([Rose and Abi-Rached 2013](#)). History

and social science of pharmaceuticals suffers from proprietary enclosure. Even as history of pharmaceuticals (Healy 2004; Herzberg 2009, 2020; Richert 2019a, 2019b; Watkins 2007, 2009) burgeons and psychotropics are revealed central to the carceral ecologies of racial capitalism (Hatch 2019), it remains difficult to access corporate archives due to privatization, fear of and actual litigation, and general lack of access to proprietary archives in the United States (Lentacker 2016, 2021). By contrast to the Wellcome Trust archives, which contain detailed records of colonial extraction (Greenwood and Ingram 2018), the US industry largely skirted the archives until relatively recent opioid litigation expanded the necessity of access. Transnational drug historians and ethnographers, some of whom identify with the conceptual and methodological approaches of STS such as multi-situated ethnography or situational analysis, have accessed archives elsewhere (Dawson 2018; Foster 2017; Jay 2019; Kim 2020; Pollock 2012, 2019, 2021). Finally, the Betsy Gordon Psychoactive Substances Research Center at the Purdue University Archives and Special Collections (at <http://collections.lib.purdue.edu/psychoactive/collection.php>) has expanded access to historical documents in this niche. As cannabis legalization and psychedelic therapies expand, the agency of plants is becoming intriguing for STS thinkers—and plants have long been central to colonialism's classificatory appetites (Foster 2017; Hartigan 2017; Hayden 2003, 2007; Mills 2000; Richert and Mills 2021).

Navigating “matters of care” (de la Bellacasa 2017) and ‘matters of matter,’ the scholarly worlds of STS are on the cusp of displacing the enormously productive foundational idea that science is socially constructed with the co-implicated idea that all knowledge is situated knowledge (Haraway 1988). As an influential form of cultural production, science “socially constructs” its objects and subjects—the pleasures and dangers of which have been much discussed. Rather than reenact that conversation, I suggest that drugs work as objects and subjects of knowledge that are enacted in and through practice (Mol 2002, 32–35; Mol and Law 2004). Laboratory logics and their vernacular kin enact drugs just as clinical logics enact disease. Which enactments weigh more is consequential for drug policy; regulatory regimes depend not only upon certification of a drug's safety and efficacy, but its indication for particular disease conditions and thus for particular subjects constituted in and by regulatory processes, clinical practices, and vernacular uses. The performative language of enactment implies not that there is a “reality” under construction, but a social life that is being performed or lived out in accompaniment with drugs, neurons, metabolisms, receptors, and the other “matter” of various biosocial realities. Enactment opens a fruitful path for thinking better about drugs in ways that confound sociologics and biologics, leading those who study them to enact conceptually problematic oppositions between pharmacological effects, physiological substrates, and psychological, cultural, and social effects. Drugs always already have all these effects; this constellation of properties makes them attractive “props” for theorizing in a world where “we are all post-positivists now” (Go 2016, 76).

Actively transnational convergences between STS and drug studies have occurred in concert with attempts to situate ethnographic drug knowledges within postpositivist methodologies and human/nonhuman/more-than-human social worlds. Two recent STS fermentations, the “provincializing” move undertaken by John Law and Wen-Yuan Lin (2017a, 2017b) in relation to transnational Asian STS, and the “conviviality” expressed in Hebe Vessuri's 2019 re-examination of Law and Lin's arguments from plural perspectives emerging in Latin American STS open new inquiries for scholars aligned with the transnational trajectories of critical drug studies. While I do not have space to rehearse the “provincialization” of western science as broached by Law and Lin (2017a, 2017b), as taken up in Vessuri (2019), transnational drug scholarship that starts from the global South may accurately be characterized as recasting the drug crises of

the North and West as “provincial” responses to social, economic, political, and even spiritual relations in the global South ([Britto 2019](#); [de Moura 2020](#); [Ghiabi 2018, 2019](#); [Morris 2020](#)). In this way, drug ‘crises’ are typically both provincial and transnational. Unlike the disciplines, STS is a critical practice that exercises a thoroughgoing scrutiny of its own provinciality in its enactment of objects and subjects.

Anthropologists of subjectivity ([Biehl 2007](#); [Biehl, Good, and Kleinman 2007](#)) have pressured how subjectification, bodily agency, and nonhuman materiality “emerge through the drug-using/treatment event” ([Dennis 2019](#)). Building on European STS and in energetic conversation with queer, feminist, and postpositivist drug researchers in Australia such as Duncan, Duff, Sebar, and Lee ([2017](#)); Fraser, Moore, and Keane ([2014](#)); Fraser and Moore ([2011](#)); Fraser and valentine ([2008](#)); Race ([2009, 2017, 2018](#)), and Vittellone ([2017](#)), tight transnational citational networks have been drawn through partnerships with northern European researchers on post-positivist studies that are deeply theoretical, empirical and ethnographic—in conversation with experimental and ethnographic varieties of STS that disrupt the dubious unities of substance and see intoxicating events as “made with” humans and nonhumans, in and through Deleuze and Guattari’s rhizomes and plateaus, and material relationalities drawn from ANT and New Materialism. They emphasize pleasure and positive affect, both of which are usually swamped by emphasis on risk and harm, aversion, and downright disgust generated by the strong thread of prohibitionist policy that has dominated the past century of drug policy.

This particular assemblage builds upon the work of Emilie Gomart ([2002, 2004](#)), whose late 1990s doctoral research on methadone maintenance in France was directed by Bruno Latour. Gomart and Hennion ([1999](#)) argued in work on amateur musicians and drug users that “subjects may be seized, impassioned, and swept away,” becoming moved or attuned in Latour’s ([1999](#)) urging of attention to “that which attaches and activates” subjects—as drugs certainly do. These direct applications of STS theory to sociomaterial practices in drug-using social worlds, including drug treatment and prevention contexts, join feminist materialism in influencing ethnographers who study “drug scenes,” consumption events, and the pleasures they afford. Fay Dennis and Adrian Farrugia, in a 2017 editorial titled, “Materialising drugged pleasures: Practice, politics, care,” asked what new materialist modes of inquiry can tell us about drugged pleasure as they “delve[d] into the inner social and material workings of pleasure as a matter of concern [Latour], that is, a precarious ‘event’ or ‘enactment’ involving various human and nonhuman actors and forces, which make it vulnerable, contingent and multiple” ([Dennis and Farrugia 2017, 86](#)). They noted that, “One important implication of a new materialist analysis of pleasure is the requirement to become attuned to the politics and ethics of how research comes to make drugged pleasures matter,” not only for reducing harm but for expanding “notions and practices of living well, or living better” ([ibid.](#)).

Injecting Bodies in More-Than-Human Worlds ([Dennis 2019](#)) meditates upon the conceptual moves necessary for getting beyond social construction, which grant too much power to human sociality, and too little animacy to “significant non-human others.” Critical drug studies, too, disrupts “dubious unities” in favor of a discourse in which “making” and “mattering” predominate and proliferate, and a vocabulary of “making-with” attends to the relational work involved in producing meaning within dispersed assemblages of humans and nonhumans, bodies instead of brains, movement rather than fixity, and events rather than identities. New materialism imparts animacies ([Chen 2012](#)) and repetitive relationalities to attempts to reimagine or re-make “addiction” from the material of habit ([Bennett et al. 2013](#); [Fraser, Moore, and Keane 2014](#)). Within the performative register, “habits are central to how we do our bodies and become embodied,”

and are the “most indispensable” mode of existence ([Latour 2013, 264](#); [Dennis 2019](#))—with which anyone who has tried to break one can identify.

The project to re-make “addiction” has also provoked engagement between drug studies, affect theory, and materialities. Assimilating addiction to pleasure reveals how adherent addiction has been to negative emotions, compulsions, dependencies, limitations, automaticity, lack of creativity, and concerns about governance of so-called bad habits is a long-term outcome of prohibition. When erosions between such moral categories occur, there is potential room for proliferation of paradox and even positivity. Howard S. Becker’s short essay “Drugs: What Are They?” ([Becker 2001](#)) explores drugs as a moral category—Becker, it should be noted, learned French in order to read Latour, and is credited with bringing drugs together with proto-social constructionism as far back as the 1950s ([ibid. 1963](#)). Dennis notes that the “cleaner” the separations required by ruling relations—between medicine and not-medicine—the more complex hybrids are wont to appear. Pleasure and addiction, she argues, are in Latour’s terms modern paradoxes. Postpositivist approaches join “Deleuze’s ontology of ‘becoming’, Barad’s ‘agential realism’, Latour’s ‘Actor Network Theory’, and Jane Bennett’s ([2010](#)) ‘enchanted materialism’ [which] all move beyond notions that reality is a stable matter awaiting discovery and instead explore how materiality is relationally made or takes shape” ([Dennis and Farrugia 2017, 87](#)). Duncan et al., “‘Enjoying the kick’: Locating pleasure within the drug consumption room,” ([Duncan et al. 2017](#)) linked safe injection sites, a current drug policy innovation, to Maria Puig de la Bellacasa’s work on care ([2017](#)), in order to explore how bodies, forces and things coalesce into specific acts of care that produce positive subjectivities, capacities, and “conviviality, belonging and comfort.” The possibility that drugs perform “life-fulfilling work” lies closer to the animation of pharmaceuticals ([Dumit 2012](#)) than to the ways in which currently illicit drugs have been instantiated in STS.

Bridging Science and Science Studies: Locating Drug Users in Symbolic Economies

Events convened in the early to mid-2000s sought to bridge neuroscientists with those working the more social science side of “addiction”—historians, anthropologists, and sociologists, several of whom identify with STS. Howard Kushner and Scott Vrecko hosted “Addiction, the Brain, and Society,” at Emory University in Atlanta, Georgia, attended by Caroline J. Acker, Virginia Berridge, Nancy D. Campbell, David Courtwright, Joseph M. Gabriel, Claire E. Sterk, Helen Keane, Nicholas Rasmussen, and others. The European Union funded projects on critical neuroscience, addiction neuroscience, and neuroplasticity (convened by Ilpo Helen in Finland, Jason Clark, Saskia Nagel and Jan Slaby in Germany). Studies of smoking, tobacco, and/or nicotine ([Brandt 2007](#)) led to flourishing of work on the history and anthropology of capitalism as modulated through alcohol, cigarettes, coffee, and opium ([Benson 2012](#); [Berridge 1999](#); [Enstad 2018](#); [Kohrman et al. 2018](#); [Plys 2020](#); [Wailoo 2021](#)). Attempted rapprochements between science and society hit up against NIDA’s entrenched investments in addiction neuroscience, leaving the agency unprepared for the sensationalistic intensification of media reportage on the “white” opioid overdose crisis and the overdose epidemic (under-reported among African-American and LatinX populations such that racial disparities were reproduced and reinforced; see [Hansen, Parker, and Netherland 2020](#); [Hansen 2017](#); [Hansen and Roberts 2012](#); [Hansen and Skinner 2012](#); [Herzberg 2020](#); [Roberts 2012](#)).

“The symbolic economy of drugs,” Antoine Lentacker’s [2016](#) *Social Studies of Science* review essay, sought a common language to disaggregate differential contributions of brand, patent, clinical trial, and the

“drug itself” ([Greene 2014](#); [Gabriel 2014](#); [Healy 2004](#); [Peterson 2014](#) and [Petryna, Lakoff, and Kleinman 2006](#)). Historians of medicine and the sciences of psychoactive substances are now engaged in ongoing dialogue with anthropologists working on pharmaceutical circulation. Lentacker tellingly focused on consumers of legal pharmaceuticals produced by the regulated industry. Prior to that, few STS journals published articles focusing on drugs of any kind. Turning to drug-user or consumer-centered studies, we must ask, but where are drug users?

The transnational social movement of drug users and drug unions, for harm reduction and the human rights of drug users, converges with STS work on user-centered design ([Hyysalo, Jensen, and Oudshoorn 2016](#); [Oudshoorn 2003](#); [Oudshoorn and Pinch 2003](#)). Work by Isabelle Stengers ([2009](#), [2018](#)); Sara Ahmed ([2019](#)); and Paul B. Preciado ([2013](#)) offer STS-convergent ways of thinking about drugs and their users that displace the passive consumers of the commodification narratives so common in studies of medicine and its privileged position on the “right” side of the drugs/medicines divide. Habits of mind—like mapping the antinomy between legal medicines and illegal drugs onto the moral distinction between “good drugs” and “bad drugs”—must be dispensed with if drug users are to be fully recognized as actively exerting agency and care. Political animation of drug users through unions, safe consumption sites, and collective forms joins works designed to “humanize” drug users, to remodel languages of medicalization as respectfully person-centered, and to de-stigmatize repetitive use by relocating it to environments in which “safer supply” can be secured ([Boyd 2022](#)).

Conclusion

Drugs continue to prove good to think with as material-semiotic actors move from molecule to transnational policy regime. Drawing on user-centered design and the neuroscience of addiction, I have contended in this article that critical drug studies relies on basic tenets of STS thinking—social construction ([Hacking 1999](#); [Reinarman 1994](#)), situated knowledges ([Haraway 1988](#)), and the social shaping of the politics of design—that shape drugs, drug users, and drug policy. Transnational STS is an analytic practice of thinking together about molecules and matters that have never respected or maintained national borders. Critical drug studies responds to reconfigurations currently underway in transnational regulatory policy. The response to the collapse of the drugs/medicines divide cannot be to assert new national boundaries and borders; indeed in this arena the “nation-state as the only analytic [has broken] down,” in the words of the call for papers for the Society for Social Studies of Science (4S) panel for which this paper was written. When thinking about how—materially—drugs break frame with the nation-state, we must consider what takes its place given the predatory nature of non-state actors involved in the drugs trade and trafficking. At the same time, transnational STS contributes conceptual frameworks to critical drug studies and expands the transnational literature that center the heterogeneity of drugs—their social status as legal and illegal, products of agriculture or laboratory, and nonhuman inhabits of heterogeneous relationships between global North, West, South, and East. The transdisciplinary knowledge project of critical drug studies that is flourishing in anthropology, history, and sociology should also be cultivated within transnational STS, work that this article has just begun.

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Author Biography

Nancy D. Campbell is Professor of Science and Technology Studies at Rensselaer Polytechnic Institute in Troy, New York.

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