TWO TIERS OF BIOMEDICALIZATION: METHADONE, BUPRENORPHINE, AND THE RACIAL POLITICS OF ADDICTION TREATMENT

Helena Hansen and Samuel K. Roberts

ABSTRACT

Purpose – To compare the histories of two opioid medications that are pharmacologically similar but subject to contrasting regulations in their use in treatment of opiate dependence in the United States – methadone and buprenorphine – in order to analyze the role of racial imagery and racial politics in the legalization and clinical promotion of their use.

Methodology/approach — Historical methods of archival analysis of published articles and unpublished governmental records were used in researching methodone. Ethnographic methods of participant observation and semistructured interviews were used in researching buprenorphine.

Findings – Contrasting uses of racial imagery played a major role in shaping the current regulatory differences between the two treatments.

Critical Perspectives on Addiction Advances in Medical Sociology, Volume 14, 79–102 Copyright © 2012 by Emerald Group Publishing Limited All rights of reproduction in any form reserved ISSN: 1057-6290/doi:10.1108/S1057-6290(2012)0000014008

79

The association of methadone with black and Latino heroin users has contributed to its increased federal regulation, while the association of buprenorphine with white, middle class prescription opioid users enabled its use in deregulated private physicians' offices.

Originality/value of paper – Advocates of biomedicalization of behaviors and conditions thought of as social or moral, such as addiction, argue that biomedicalization reduces the stigma of the condition and imply that, in turn, it also reduces the racial inequalities associated with the condition. This study of the biomedicalization of treatment for opioid dependence indicates that the very process of biomedicalization depended on heightened racial imagery associated with each treatment and ultimately intensified, rather than reduced, the stigma of addiction for black and Latino low-income patients.

Keywords: Opiate addiction; methadone maintenance; buprenorphine treatment; race; biomedicalization; medicalization

INTRODUCTION

This chapter presents the intertwined histories of racialization of two substances used in narcotics maintenance – methadone and buprenorphine – outlining the relationship between (bio)medicalization and racialization. Science studies scholars, historians, and social scientists of medicine have long called attention to the phenomenon of medicalization of behaviors or conditions formerly thought of as social or moral problems, such as addiction (Conrad, 2005). More recently, scholars of medicalization have proposed a new iteration of this process, which they call biomedicalization, reflecting the intensified capitalization and corporatization of clinical medicine, clinical medicine's contemporary focus on molecular/genetic level biological causation rather than on physiological systems or organs, and the decentralization of biomedical expertise and decision making in an era of public Internet access to biomedical publications (Clarke, Shim, Mamo, Fosket, & Fishman, 2003; see Campbell, 2012). Generally, advocates of (bio)medicalization-of redefining conditions or behaviors that were previously stigmatized or laden with moral connotations as biologically rooted and treatable in the realm of clinical medicine-claim that (bio)medicalization reduces the stigma and social inequality associated with the said condition or behavior. Less examined, however, is the role that social inequalities,

such as those of race and class, play in enabling the process of (bio)medicalization itself. Here, we present two cases of pharmaceuticals used for opiate dependence that demonstrate the critical role of racial imagery and racial politics in promoting the stronghold of clinical medicine on addiction treatment.

The first section of this chapter describes the early history of methadone maintenance treatment (MMT), tracing it from its origins in New York City to the national stage. It draws from a larger work on the history of MMT politics in the United States that employs historical methods. Primary sources include published newspaper, magazine, and journal articles from 1965 to 1975. They also include the unpublished material housed at various archives, principally the Municipal Archive of the City of New York, the New York State Archives and Records Administration (Albany, NY), and the National Archives and Records Administration (College Park, MD).

The historical record reveals that as a medical practice, MMT belongs on a continuum of other medical practices for the treatment of addiction in which physicians prescribed for temporary or long-term maintenance purposes a range of opioids, including laudanum, morphine, dolophine, and methadone. Between 1914 and the mid-1960s, such practices were illicit, having been criminalized by the Harrison Narcotics Act (Acker, 2002; Campbell, 2007; Courtwright, Joseph, & Des Jarlais, 1989; Glenn, 2005; Hickman, 2004; Musto, 1999; Schneider, 2008). As a health policy, MMT had its origins at the Rockefeller University, in New York City, where Vincent Dole and Marie Nyswander in late 1963 began to use the modality experimentally, concluding that MMT was a viable means of rehabilitating heroin addicts. After widely publicized reports of success, MMT expanded to other cities and in 1970–1971 for the first time came under the regulatory authority of the Food and Drug Administration (FDA), along with the Bureau of Narcotics and Dangerous Drugs (BNDD), leaving MMT in a unique and heavily surveilled regulatory category.

The racialization of MMT came about through a confluence of factors. By 1970, the association in the public imagination of heroin abuse and crime with African Americans and Latinos was fairly secure. In reality, research on the demographics of illicit drug use was producing increasing evidence that the higher proportion of black and Latino users was a product of geographic and social proximity to distribution networks, since illicit substances were and are frequently traded in low-income neighborhoods, and that drug use was not the product of a supposed culture of poverty (Agar, Bourgois, French, & Murdoch, 2001; Johnson, 1977). That the main political thrust in support of MMT had been crime reduction, as many

critics pointed out, made MMT seem like a covert means of policing especially designed for black and brown center cities. On the other hand, MMT clinics have been forcibly located in such neighborhoods due to protests from neighborhood associations, which would prefer have facilities "Not In My Back Yard."

The second section of this chapter turns to a more recent phenomenon — the FDA's approval of the opioid buprenorphine (commercially known as Suboxone® or Subutex®) for treatment of opioid dependence in private physicians' offices. This section provides a recent history of buprenorphine's approval and marketing based upon in-depth 30–90 minute, topically directed, open-ended interviews by the first author with 56 policy makers, pharmaceutical executives, physicians and patients, as well as four years of participant observation working as a psychiatry resident and fellow in a substance abuse treatment program. The participant observation involved observing doctor—patient encounters, addiction medicine conferences, and working groups, as well as the daily work of agencies and community-based organizations devoted to addiction treatment.

Data from these interviews and observations reveal that, in contrast to methadone maintenance, buprenorphine maintenance was introduced to solve a new problem of white, middle class, suburban, or rural opioid abuse, primarily in the form of prescription opioids such as Oxycontin[®]. New federal legislation was passed creating a unique regulatory designation for buprenorphine so that it could be prescribed monthly by private practitioners in a much less surveilled and more (bio)medically mainstream environment, largely to insured and privately financed patients. Although methadone and buprenorphine are in the same class of opioid drugs and have similar pharmacological actions, they are currently dispensed in contrasting settings, subject to vastly different levels of regulation. This was made possible due to the association of buprenorphine with a white and middle class market of potential users, and it was subsequently successfully marketed to that clientele. While methadone maintenance was politically possible because it was publicized as a governmental intervention to lower black and Latino urban crime, buprenorphine maintenance was politically possible because it was publicized as an opportunity for a robust publicprivate partnership in which a corporation would disseminate the drug among less stigmatized, white consumers assumed to be at lower risk of diverting or misusing it.

Understanding the historical and social aspects of stigma is important especially as it becomes clear that popular understanding of mental illnesses as being biologically based has little effect over time on stigma (Pescosolido

et al., 2010). Indeed, there are abundant historical examples when a racialized construction of biology has worked to reinforce stigma (Roberts, 2009). Patients being treated for addiction, such as those receiving methadone, continue to face stigma and police harassment (Lipson, 2011). The individual experience of addiction and its treatment are clearly shaped by race. But it is equally important to understand the institutional factors that racialize addiction, including those in the guise of biological understandings of addiction. This chapter traces the influence of the state as well as of private pharmaceutical corporations in racializing addiction in tandem with addiction's increasing (bio)medicalization.

RACIALIZATION AND CENTER CITY POLITICS: METHADONE'S FRACTURED LIBERALISM

The racialization of drug use antedated the racialization of MMT. Indeed, near the heart of virtually all the United States drug panics was the issue of race (the association of Chinese immigrants with opium use, of Irish with liquor consumption, of Mexicans/Mexican-Americans with marijuana use in the 1920s, of African Americans with cocaine use in the early twentieth century and with crack cocaine in the 1980s/90s). Before WWII, the use of heroin or opium had not been associated with African Americans. However, after the war, distribution circuits changed, and by the late 1950s, Harlem appeared to be the leader in drug arrests and deaths, followed by East Harlem (majority black and Puerto Rican), the Lower East Side (white immigrant, Jewish), and Greenwich Village (white working class). By the mid-1960s, Harlem's heroin problem was known to the world. Unfortunately, the association typically was one of race, not markets, in that little attention was paid to the fact that racketeers had free run in Harlem due to their ownership of local law enforcement. Instead, conservative commentators spoke of black and Puerto Rican heroin abuse in terms of lack of morality and work ethic, and even liberal observers relied on the "culture of poverty" thesis popular in the 1960s and 1970s. (Courtwright et al., 1989; Hannerz, 2004; Iiyama, Nishi, & Johnson, 1976; Johnson & Nishi, 1976; Schneider, 2008). Ironically, researchers such as Ann Brunswick found that neither account was particularly accurate: although black Americans in Harlem had greater opportunity to try heroin, rates of sustained use after first experimentation seemed not much higher than among whites (Brunswick, 1977, 1979, 1980, 1988; Robins & Murphy, 1967). By the

mid-1960s, public concern centered on the potential for the spread of narcotics use from "the ghettoes" to the white suburbs (Arnold, 1965; Folsom, 1964; "Queens Boy Dies at Heroin Party," 1964).

MMT, one of the most controversial public health measures of the late twentieth century, had an early history of fractured liberalism, in that MMT's emergence, first in New York City in the mid-1960s, revealed the fragility of the liberal opposition to criminalization of addiction. New York City, estimated to be the home of 50% or more of the nation's illicit narcotics users, was the center of addiction politics. Its mayor, Robert F. Wagner, Jr. (1954–1965), had maintained the law and order stance enforced by the BNDD, which also assisted New York City police in investigations. Vocal advocates for treatment over criminalization included Alfred Lindesmith, the New York Academy of Medicine, the American Medical Association (in conjunction with the American Bar Association), all of whom between 1947 and 1960 articulated positions in favor of treatment (medicalization) over punishment (criminalization). They called for a system of narcotics maintenance, administered directly by a physician or in a clinic (Bayer, 1976). Yet a second group opposing the criminalization of addiction was a made up of private social work, charity, and religious organizations represented in the late 1950s by the New York Neighborhoods Council on Narcotics Addiction (NYNCNA). Many in this group embraced social scientific notions of social dislocation and anomie, a position that emerged from their work with drug users and their families. In offering services in counseling, medically assisted detoxification, hospital referral, and educational and vocational placement, some organizations developed their analysis of the drug problem within a critique of economic and racial inequality which they witnessed daily (indeed, it is worth mentioning that many of the important early drug ethnographers – such as Seymour Fiddle, Michael Agar, and Dan Waldorf - began with connections to neighborhood groups). Some of the NYNCNA organizations called for at least some consideration of a maintenance system, but the most emphasis was placed on measures to address social dislocation and alienation among youth.

Between 1957 and 1965, the confrontation between the liberal social work coalition of NYNCNA and Mayor Wagner centered on the former's demand not only for hospital services but also for aftercare, educational and vocational training, and humane treatment of incarcerated addicts, among other things. The initial engagement met only staunch official resistance and therefore quickly evolved to organized protests featuring a widening coalition of supporters, which included leaders in labor, civil rights, social

work, and religious life. The mayor's intransigence was as much political as it was philosophical. At the leadership of the NYNCNA, which by 1960 claimed some 25 member organizations, were the East Harlem Protestant Parish (EHPP), the Lower East Side Service Center, and the Greenwich Village Association (GVA), each of which were vocal advocates of progressive New York City causes such as housing rights, equality in job and educational opportunity for blacks and Puerto Ricans, and investigation of police brutality and corruption. In several ways, NYNCNA leaders argued, these issues were at the root of the drug problem. Although the most active NYNCNA organizations were allied with the various insurgent progressive political clubs in the city's Democratic Party, Wagner was more connected with the conservative elements (the Tammany Hall machine) of the Democratic Party. Though not overtly hostile to civil rights, for example, conservative Democrats preferred incremental and managed change and would not brook intraparty challenges lightly (Samuel Roberts, 2012, forthcoming).

This was the political setting in which New York adopted MMT. As his circle of critics expanded, the mayor recognized the importance of action and of not being perceived as being obdurately unyielding only for political considerations. In September 1958, he announced the formation of a Health Research Council (HRC), an august body of physicians and research experts with no ties to the neighborhood groups who had worked in addiction treatment since the early 1950s or any of the civil rights and labor rights organizations. In 1962, the HRC began to solicit proposals for research designed to discover "a chemical compound that would relieve the need for drugs in addicted persons," a description virtually tailor-made for the Dole-Nyswander project, which began in 1964 with an HRC grant of \$100,000. The experiment at the Rockefeller Institute began at first with two morphine addicts who reported a sharply decreased opiate hunger as a result of taking methadone hydrochloride. Four subsequent subjects (making a total of six) reported similarly. By the end of 1964, there were some 22 patients in the Rockefeller Institute program.

Political alignments were therefore a major factor leading to the racialization and popular perception of MMT as a treatment administered by white physicians to black patients. The formation of the HRC marked the beginning of fractured liberal opinion against drug policy status quo. Wagner's had been a brilliant political move, for it won over those within organized medicine who had called for narcotic maintenance. It also called for research and development based in the city's expanding biomedical network, firmly attached to the democratic political machine. The City

Commissioner of Hospitals, Ray Trussell, viewed the early MMT results with optimism and quickly mustered \$1.4 million (\$1 million of it from City antipoverty funds) for the expansion and relocation of the program (Farrell, 1965; Gollance, 1970). Aside from Dole, Nyswander, and Trussell, however, the most vocal public supporters of Wagner's methadone coalition were moderate and conservative pundits and Democrats in City Hall and City Council who had funded MMT rather than the neighborhood organizations. Liberal Republican John V. Lindsay won the mayoral election in 1965, in part by promising more attention to community rehabilitation groups, and to housing and job provision as well (thereby gaining the support of disaffected progressive Democrats). Because of these developments, by 1965 the debate of "methadone vs. drug-free community groups" had entered the larger debate regarding racial pluralism, civil rights, and economic rights in New York City (Biondi, 2003; Cannato, 2001). Between 1965 and 1970, New York City became the staging ground for the early national debate regarding MMT.

REGULATION & CONTROVERSY

In 1970 Science writer John Walsh noted, "Because methadone treatment involves the substitution of one form of narcotic addiction for another, there has been a backstairs wrangle within government over how the narcotics laws can be reconciled with large-scale methadone treatment program" (Walsh, 1970). This turmoil within the federal government was reflected in methadone maintenance regulatory policy, which changed frequently and rapidly between 1970 and 1975, ultimately leaving methadone maintenance as the most heavily regulated and policed treatment modality – for any condition - in the country. MMT first came under FDA regulation in mid-1970, some weeks after the Nixon administration signaled its willingness to support the expansion of methadone use to include physician-prescribed maintenance (prior to that time, FDA guidelines on methadone allowed it only for use as an analgesic or for medically supervised withdrawal). The new guidelines, formed jointly by the FDA and the BNDD, classified methadone for maintenance as an investigational drug, with guidelines in practitioner licensing; maximum daily dosage; diversion prevention; strict record keeping; staff supervision; applicant screening; patient monitoring for abuse other drugs (urine testing); and provision of ancillary services (such as counseling, psychotherapy, and vocational assistance). Excluded from treatment were minors, pregnant women, and persons suffering from

psychosis or from extreme physical disability ("Conditions for Investigational Use of Methadone for Maintenance Programs for Narcotic Addicts," 1970).

The BNDD eventually relaxed some of its resistance to MMT, allowing the FDA on April 3, 1972 to apply "a novel form of control designed to reflect the unique problems posed by this drug." The FDA imposed a hybrid set of guidelines and approved it for narcotic addiction treatment. The move was intended in part to extend access to the estimated 25,000 heroin users who had sought treatment in one or more of the then 450 clinics nationwide but who could not be helped. The new regulations also elevated dosage maximums and abandoned the goal of eventual abstinence. Private physicians no longer could dispense methadone for maintenance purposes from their offices. Instead, methadone maintenance was restricted to federally approved and licensed programs. These programs and their patients were to be under constant scrutiny, subject to unannounced inspections. At the same time, President Nixon's drug czar, Dr. Jerome Jaffe, announced that \$1 billion would be allocated for monitoring and improvement of MMT services over the next three years (Edwards, 1972; "A Reclassification for Methadone," 1972).

The regulations had been designed to strike a balance between two sets of public concerns, which had been elaborated between 1966 and 1970, when the debate around MMT moved from New York City to the national level. One position was in favor of MMT and another expressed concerns about its social and therapeutic viability. In favor of liberalizing methadone regulations were maintenance advocates. The most ardent of these, often physicians, saw in methadone maintenance real rehabilitative potential, especially when combined with counseling, social services, and vocational or educational assistance (historically, a combination that has produced the best results). If not as enthusiastic, more pragmatic supporters hoped that the adoption of MMT would reduce crime. Opposing MMT liberalization were those who took a social scientific view of drug use and worried that MMT failed to rehabilitate or address the "true causes" of addiction. Still others expressed deep concern that MMT's long-term effects were still unknown. Meanwhile, the BNDD policed – even harassed – MMT clinics to ensure that no methadone doses were diverted to street use (Courtwright et al., 1989).

The philosophical/political critique of MMT made three larger points. First was the critique of MMT as false cure. Second was the critique of the rationale of MMT as an anticrime measure. Because the issue of race was either explicit or implicit in both of these arguments, there naturally

emerged the third critique, MMT as having the potential for racial control. The "false cure" critique relied heavily on social constructions, originating in the mid-nineteenth century, of the true and pristine self – and hence on the equation of rehabilitation ("cure") with total abstinence (Acker, 2002; Hickman, 2004). Maintenance advocates, on the other hand, typically viewed addiction as being physiologically rooted, and hence construed rehabilitation in terms of ability to function socially without using street heroin, even if maintained on methadone. Official federal distrust of this approach was exemplified in the BNDD's harassment of methadone providers in the late 1960s and into the 1970s (Courtwright et al., 1989). However, on political grounds advocates of "drug-free" approaches (recovery without maintenance) rightfully pointed out that the processes that may lead any individual into a state of "addiction" were complex and might involve any range of social or individual problems. MMT proponents whose medicalization of addiction gave primacy to physiological dependency, some critics argued, actually propagated the myth of "once an addict, always an addict," even though many long-time users had been able to guit without maintenance. Henry Lennard, Leon Epstein, and Mitchell Rosenthal in 1972 most forcefully derided the rage to fund MMT programs, noting with some alarm the 1972 regulatory expansion.

The rapidly increased use of methadone may prove to be a prime example of how offering solutions to a problem that is not well understood may ultimately lead to far more serious consequences than those inherent in the problem itself. If heroin use were "the problem," then methadone might well be the answer. If, however, physical, psychological, and social costs of drug use for the person and the community are "the problem," then methadone may well contribute to the problem rather than to the solution: one need only consider that the methadone "solution" must surely reinforce the popular illusion that a drug can be a fast, cheap, and magical answer to complex human and social problems. (Lennard, Epstein, & Rosenthal, 1972)

More polemically, the Health Policy Advisory Center (HEATH-PAC) announced their skepticism of not only methadone but also the "proliferating treatment programs, . . . designed for the most part by white professionals, [which] have little chance of success for great numbers of black and brown addicts." Declaring that "there is no quick legal or medical 'fix' for drug addiction," HEALTH-PAC made clear its belief that:

[O]nly when political struggle, waged by the people who are most oppressed in our society, succeeds in changing the conditions which are influencing entire generations to seek fulfillment ... through drugs, will youth – black, brown, and white – feel there is a meaningful alternative to drugs. Drugs are inundating and crippling oppressed communities with the tacit approval of the power structure, and the struggle against

drugs can only be successful in the context of the struggle for total liberation. (HEALTH-PAC Workshop on Drug Addiction, Block, & Wallerstein, 1970)

In the second critique, it was not lost on critics that some of the most ardent supporters of MMT had been moderate-to-conservative politicians, not necessarily physicians, who valued MMT more for its crime reductive promise than for its therapeutic capacity. Captivated in particular by Dole's reports of reduced crime involvement among patients, for example, Mayor Lindsay's Democratic opposition in New York's City Council moved precipitously to pass a bill to enact mandatory MMT for up to 5,000 confirmed drug users at Riker's Island, doing so even over the protests of the Mayor and of the City's Commissioners of Corrections, Addiction Services, and Health Services (Lindsay vetoed the measure). By 1969–1970, officials at the federal level gave attention to MMT's potential crime reductive capacities. The 1969 report of the National Commission on the Causes and Prevention of Violence gave significant space to consideration of the connection between narcotic addiction and nonviolent as well as violent crime, recommending that "more and better facilities be established and that research and testing of treatment programs receive high priority [and that] additional research on drug maintenance programs, such as the methadone program in New York, should be encouraged" (Mulvihill, Tumin, Curtis, 1969).

At the same time, federal lawmakers and White House officials closely watched Washington, DC's, crime wave, which had begun in 1966. The 1970 congressional hearings on crime in the nation's capital featured a number of opponents of MMT, most of them arguing that the modality presented a false cure. Defending MMT, however, was Dr. Stephen Brown, Superintendent of the U.S. Public Health Service, who noted:

[W]e must be honest with ourselves in facing the fact that certainly one of the major things that concern us with opiate addiction is the crime which results from opiate addiction It is precisely this criminal activity which would come to an end if heroin addicts ... could obtain legal narcotics, such as methadone, from a medically capable source of supply. (Crime in the National Capital. Part 2: Narcotics-Crime Crisis in the Washington Area. Hearings Before the United States Senate Committee on the District of Columbia, 1969).

Washington Post columnist William Raspberry in 1971 expressed his deep skepticism at politicians' zeal for "the miracle drug that will cure the curse of heroin addiction." Raspberry argued, "methadone is not so much a means for treating addicts as a way of fighting crime [M]ethadone not only blocks the effects of heroin in the addict; it blocks the effects of drug

addiction on society, rendering addiction a merely personal problem" (Raspberry, 1971b).

President Nixon's interest in MMT, beginning in 1970–1971, had evolved largely from his law and order agenda, tempered by the counsel of advisors who observed that law enforcement measures should be seen as balanced by support for treatment modalities, especially MMT (Glenn, 2005). In some ways, public demands for crime control were of his own making, as he had made drug abuse an issue in the 1968 campaign although public opinion had not ranked it as highly troubling as the Vietnam occupation or the economy. There were in fact aspects of the Nixon administration that hailed the first "therapeutic presidency," as one historian has called it (Yuill, 2009). However, many suspected that his "war on drugs," declared 14 July 1969, was not unconnected from his appeal on 3 November 1969 to the "silent majority" of (white, conservative) Americans who had become weary, even resentful, of the politics of anti-war mobilizations, civil rights, and economic rights and of the alliance between organized labor, civil rights, and the Democratic Party (Epstein, 1974, 1975; Holden, 1975). Finally, there was the administration's support of measures that were decidedly untherapeutic. For example, the Department of Justice seemed to have the support of the President and many influential senators and members of Congress on both sides of the aisle (Musto & Korsmeyer, 2002) that led to the passage of the Comprehensive Drug Abuse Prevention and Control Act of 1970, to perform "no-knock" raids on private residences.

Given this apparent direction in federal policy, some wondered if funding for methadone maintenance was the velvet glove in which lay curled the fist of state power and racial control. Raspberry predicted, ominously, that "If methadone maintenance by itself shows promising signs of reducing crime, [providers] will be increasingly hard put to justify expenditures for [the supportive services of] psychiatrists, social workers, placement specialists and the rest Some of our officials would just as soon narcotize the whole ghetto population on a cheap synthetic if that would stop crime" (Raspberry, 1971a). In October 1972, U.S. House of Representatives Delegate Walter E. Fauntroy (District of Columbia) held two days of hearings on MMT, airing his skepticism of the benefits for black communities, if not black patients. Ron Clark, the director of Washington, DC's, RAP, Inc., argued that MMT was "politically expedient," referring to the manner in which MMT figured into the politics of crime and fear. RAP, Inc.'s position was that real recovery was "supposed to 'rehabilitate' [the addict] back into the mainstream of the

larger society that produced him in the first place. Presumably, he is better able to cope with the same contradictions in his community: the availability of drugs, inadequate employment conditions, inadequate education or none at all" (Osnos, 1972). For these MMT opponents, MMT was conceived either as a "technological fix" for the problems of inequality that often fell along lines of race or as having the potential for social control of black and brown patients (Bellis, 1981; Etzioni & Remp, 1972; Nelkin, 1973).

Such was the state of the controversy throughout the 1970s and 1980s, and MMT clinics seemed the orphans of the mental health industry. Aside from patients and administrators, few would come to their defense when, after the liberalization of licensing laws, a wave of NIMBY protests began. Here, the racial overtones played themselves out in the language of blight and potential damage to property values, to young people residing nearby, and to local commerce. Over the past forty years, this has produced the geographic marginalization of MMT clinics, forcing many to move to places where local opposition is less organized, such as low income and black or Latino neighborhoods. In New York City, a major case emerged in 1973-1974, where local residents of the largely white East 84th Street area - supported by City Councilman Carter Burden and U.S. Congressman Ed Koch - sought to have the Ithaca Medical Center, a private MMT clinic, removed. The clinic's owner, Dr. Eugene Silbermann, noted to city and state officials that the complaints only began when he began seeing Medicaid patients who were not the white and middle-class patients seen before (See Mayor John Lindsay Subject Files Box #67, Folders 1304 and 1305, New York City Municipal Archives; New York State Health Commissioner's Subject Files (Series 13307-82) Box #51; New York State Archives and Records Administration). Though successfully defending his practice in court, Silbermann eventually decided to move it 25 blocks north to East Harlem where protesters were not sufficiently connected and able to prevent the move. In another example, between 1970 and 1974, branches of the Addiction Research and Treatment Corporation (ARTC), also in New York, were the target of both NIMBYist protests (black and white homeowners) and political protests (from competing drug-free treatment centers). The ARTC's executive director, Beny Primm, treated patients with methadone, but also combined it with the kinds of social and psychiatric services, which MMT critics said most facilities lacked. In testimony before a U.S. Senate hearing, Dr. Robert Newman, the director of New York City's MMT system noted that the city seemed particularly riven by the controversies surrounding MMT.

One of the results of this skepticism [towards MMT] is the community opposition that we face in opening clinics. We simply haven't been able to get the point across in many areas that we are not just collecting a bunch of dope fiends and bringing them together for a legal fix. ... They are receiving medication, and the overwhelming majority of them do very well and are in every way indistinguishable from any other normal person. To make this understood is a constant battle" (Drug Addict Treatment and Rehabilitation Act of 1972 – Hearings Before the U.S. Senate Subcommittee on Alcoholism and Narcotics of the Senate Committee on Labor and Public Welfare, 1972).

The racial associations of methadone treatment with urban, black and brown heroin users has on one hand made possible the legalization of methadone treatment due to its promotion as a crime fighting measure and on the other hand prevented the full adoption of methadone into mainstream medicine, by forcing methadone clinics into marginal neighborhoods geographically distant from general medical centers and maintaining a system of tight federal regulation restricting methadone's use to licensed clinics that often require daily observed dosing in order to prevent its diversion. Race, in the case of methadone, undergirded a partial medicalization in which methadone maintenance is dispensed in a clinical setting that is distinct from mainstream medicine and has the trappings of an arm of law enforcement, including the oversight of the DEA. Decades later, however, new developments in the epidemiology of opioid misuse, as well as in the political economic environment of addiction treatment, led to a contrasting use of race in a move to advance the biomedicalization of addiction.

WHITE, CORPORATE BIOMEDICALIZATION: BUPRENORPHINE AND THE NEOLIBERAL TURN

Thirty years after the introduction of MMT, 1996 marked a turning point in Americans' addiction to opiates. Already over the prior decade a new heroin market had surfaced: inexpensive, pure heroin flooded the Eastern U.S. from newly planted opium fields in Colombia, bringing a crop of new middle class heroin consumers onto the scene (Hamid et al., 1997). They were attracted by the possibility of sniffing, rather than injecting, this high purity heroin, lowering the risk of HIV infection and of arrest based on possession of injection equipment. But in 1996, Purdue Pharmaceuticals introduced a new product that would shift the source of abused opioids from street markets to private physicians and would shift the bulk of opioid trade from impoverished inner city neighborhoods to white, often middle

class, suburban and rural districts (Van Zee, 2009). By 2004, Purdue's product led prescription opioids to outstrip heroin as the major opiate of abuse in the United States and by 2010 led prescription opiates to outstrip marijuana as the most abused class of substances among U.S. high school seniors (NIDA, 2011).

The commodity in question was extended release oxycodone, marketed as Oxycontin®. Purdue successfully lobbied the FDA for Oxycontin's designation as a "minimally addictive opioid pain reliever," with a less than 1% risk of addiction, based on time-limited trials among severely ill patient populations with such as those with terminal cancer (Van Zee, 2009). The logic of these claims of low abusability was Oxycontin's manufacture in a time release capsule, a capsule that opioid abusers soon found they could crush in order to ingest, snort or inject its contents for an intense rush (Butler, Black, Cassidy, Daily, & Simon, 2011; Cicero, Inciardi & Munoz, 2005). Purdue built on its claims of low abusability when recruiting a cadre of 671 drug representatives to market Oxycontin to a call list of almost 100,000 physicians, many of them without prior experience prescribing longterm opioid treatment. By 2003 half of those prescribing Oxycontin were primary care physicians using it for everything from bone pain to chronic lower back pain (Van Zee, 2009). Five years after Oxycontin's release, states such as Maine and West Virginia reported increases in numbers of opioid abuse patients of 500% or more, and the popular press reported on the white, privileged clientele newly dependent on Oxycontin, including celebrities such as Rush Limbaugh (CNN, 2003).

This created a dilemma for those treating opioid addiction. Thirty years prior, methadone advocates had gotten past federal bans on the clinical use of opiates to treat opiate addiction by citing the need for methadone to stem the tide of Blackk and Latino inner city criminality and unemployment. Since its clinical adoption, methadone proved one of the most effective treatments for opiate addiction, with methadone patients demonstrating higher retention rates and lower illicit drug use rates than those treated without medication (Mattick, Breen, Kimber, & Marina, 2003; Sees et al., 2000). Yet methadone's promotion as an intervention for center city blacks and Latinos brought with it tight surveillance and segregation from the rest of clinical medicine through DEA regulated, federally licensed clinics. This made methadone too restricted and stigmatized for an emerging cohort of white middle class prescription opioid dependents. Such patients were generally educated, insured, and accustomed to seeing personal private practice physicians for their needs. As explained by a key federal drug policy maker in an interview with us, these middle class patients were seen as

unlikely to attend publicly financed clinics with long lines at medication windows, observed urination booths for drug testing samples, and security guards.

By the late 1990s and early 2000s, middle class prescription opioid abuse had created the consumer demand and administrative need for an opioid maintenance medication that was seen as nonabusable, nondivertable, able to be prescribed in a private office but with the long-term maintenance treatment potential of methadone. Coincidentally, the prescription opioid abuse epidemic also came on the heels of President Bush I's Decade of the Brain, during which NIDA devoted its research agenda to biotechnology for addiction and to basic science locating the cause for addiction in the brain and biology of individuals (Campbell, 2010; Vocci, Acri, & Elkashef, 2005; Vrecko, 2010). At the end of the Decade of the Brain, in 2000, a widely cited article was published by leading addictions researchers in the Journal of the American Medical Association (JAMA) entitled "Drug Dependence, A Chronic Medical Illness" (McLellan, Lewis, O'Brien, & Herbert, 2000). It claimed that chemical addictions were comparable to diabetes, asthma, and hypertension in terms of heritability, contribution of environment, and treatment adherence. The chapter argued that these similarities called for addiction to be treated as a chronic physiological disease, in general medicine (as opposed to psychiatric) settings, with pharmaceuticals. As explained by three addiction specialists interviewed for this study, addiction treatment advocates across the country used the JAMA article to campaign for placing addictions treatment in the mainstream of biomedicine, with the idea that fully biomedicalizing addiction, treating it in the same clinics, and in the same way as other chronic diseases – that is, with long-term medication – would destignatize addiction, end decades of punitive addiction treatment, and desegregate addiction treatment from mainstream medicine (see Campbell, 2012).

Also coincidentally, Reckitt-Benckiser Pharmaceuticals was looking for alternative clinical applications for its patented opioid, buprenorphine, first developed in the early 1970s as an analgesic. NIDA researchers had tested buprenorphine as a treatment for opiate addiction in the 1970s with promising results, but the company initially shied away from marketing buprenorphine for addiction treatment (Donald Jasinski, personal communication, August 3, 2010), probably because addiction pharmaceuticals had proven to be a risky investment economically and symbolically, with much of the stigma of addiction carrying over to treatment manufacturers and almost no precedent for significant corporate profits from addiction pharmaceuticals (Lovell, 2006).

Two decades later, however, NIDA had made development of pharmacological treatments for addiction a national priority, and buprenorphine was one of the only promising drugs on the horizon. To entice the company into the addiction treatment market, NIDA awarded \$23 million in grants for clinical trials of buprenorphine for opiate dependence and collaborated with the manufacturer and key legislators to pass the Drug Abuse Treatment Act 2000 (Substance Abuse and Mental Health Services Administration (SAMHSA), 2000), aptly named to convey the era of biomedicalized, evidence-based addiction treatments. This act permitted private, office-based physicians to prescribe opioid drugs that are Schedule III-that, is, rated by the DEA as at low to moderate risk of creating dependence-for treatment of opioid dependence (Jaffe & O'Keeffe, 2003). A key part of this lobbying involved distinguishing the targeted market for buprenorphine-white, middle class users-from other, presumably less trustworthy, nonwhite low-income heroin injectors who would need more tightly regulated treatments such as methadone. This argument was not made explicitly in terms of race but rather used a coded language of urban and suburban: as Alan Leshner, Director of NIDA at the time, testified to congress in favor of DATA 2000, said: "The current system, which tends to concentrate in urban areas, is a poor fit for the suburban spread of narcotic addiction" (quoted in Netherland, 2010, p. 61).

Federal regulators required that buprenorphine prescribers complete an eight hour training course, qualifying them to apply for a special DEA waiver and associated prescription registration number, making buprenorphine the first and only medication with such a training and registration requirement. As many physicians pointed out in interviews for this study, this ensured that a majority of prescribers would be private physicians with an affluent and potentially profitable clientele, rather than overburdened public sector physicians who had no incentive to add to their patient load or training requirements. To further allay legislators' fears about buprenorphine's abusability, Reckitt-Benckiser manufactured buprenorphine in combination with Naloxone, an opioid antagonist that is not absorbed when taken orally, but which causes acute withdrawal if injected (U.S. FDA, 2002). This combination, sold as Suboxone[®], along with research demonstrating a lower risk of overdose death from buprenorphine than methadone (Bell, Butler, Lawrence, Batey, & Salmelainen, 2009), helped to persuade the FDA to approve buprenorphine for office-based opioid maintenance treatment. In addition, NIDA officials facilitated a patent extension for Suboxone® through 2009 to protect the manufacturer's profits under the congressional Orphan Drug Act of 1983, an act that was originally intended to stimulate drug development for rare diseases or diseases in low-income countries, which would otherwise not be attractive for corporate research investment (Jaffe & O'Keeffe, 2003).

Reckitt-Benckiser pharmaceuticals swiftly launched an Internet-based promotional campaign, funding a nonprofit organization called the National Alliance for Advocates of Buprenorphine Treatment to host an online buprenorphine-prescribing physician referral service (https://www. treatmentmatch.org/patients.cfm) and to develop web-based public service announcements featuring white, middle class buprenorphine consumers such as "Mike's Story." Mike, a white, middle-aged diner owner in Ohio, seated in front of an American flag mounted on the wall of his diner, relates how his unwitting dependence on prescription opioids prescribed for a lower back injury endangered his role as coach of his son's baseball team and singer in his church choir, while buprenorphine prescribed by a trusted physician helped him reclaim his life (http://www.naabt.org/mike). The strategy paid off handsomely for Reckitt Benckiser. Four years after its FDA approval, nationally representative surveys of buprenorphine and methadone patients revealed that buprenorphine patients were more likely to be white (92% vs. 53% of methadone patients), employed (56% vs. 29%), to have college education (56% vs. 19%) (Stanton, McLeod, Luckey, Kissin, & Sonnefeld, 2006). With governmental research subsidies and patent extension in place, Reckitt Benckiser went on to claim buprenorphine revenues of \$3.4 billion between 2005 and 2010 in the United States and Australia (Reckitt Benckiser Pharmaceuticals, 2009).

In contrast to methadone, which emerged in the post war era of federal intervention, buprenorphine, in its commercially marketed form, as Suboxone[®], emerged in an historical moment of private capitalization, governmental deregulation, pharmaceuticalization, and industrial subsidies in the form of "public-private partnerships" (Healy, 2004; Moynihan, Heath, & Henry, 2002). The impetus for office-based buprenorphine treatment, while facilitated by NIDA's mandate to develop addiction pharmaceuticals, came largely from the manufacturer's recognition of a growing, untapped and less legally and symbolically risky market for addiction treatments in the form of white, middle class prescription opioid abusers. Such market segmentation by ethnicity and class is common in many industrial sectors; in the marketing of maintenance opioids, it had counterintuitive uses. Since opioid maintenance treatment, in the form of methadone, had been promoted by the federal government with the goal controlling already marginalized and racially segregated populations (as revealed by methadone's primary clinical outcome indicators of lower

criminality and higher legal employment), buprenorphine/Suboxone[®]'s penetration and expansion of new markets required mainstreaming and destigmatizing the image of opioid addiction. Federal policy makers and agencies such as NIDA may not have had explicit racializing strategies in mind and may have had the conscious goal of enhancing access to treatment for all groups, but to accomplish mainstreaming of opioid maintenance, buprenorphine's manufacturers drew on time-tested ethnic and class symbols of American respectability, with the ironic result that the attempt to fully biologize popular concepts of addiction and expand opioid maintenance treatment to the mainstream ultimately further segregated and stigmatized the treatment of low-income, nonwhite opiate dependent people.

CONCLUSION: BIOMEDICALIZATION AND RACE

The trajectories of methadone and buprenorphine demonstrate two routes to the racialization of addiction through biomedical structures and practice. Methadone, emerging in an era of strong government and of threats to elite political structures by the civil rights movement and community activism, represents the state's use of clinical medicine to protect addiction as a realm of intervention for state, rather than community, control. Although the actual politics of methadone advocates were more nuanced, with many advocates seeing methadone as a socially progressive alternative to punitive narcotics policy and resulting race-stratified mass incarceration, the methadone initiatives of Nixon's War on Drugs were motivated by the state's need "control crime" among urban ethnic minority youth. Buprenorphine, in contrast, was motivated by profitable pharmaceutical markets that were themselves created by neoliberal deregulation and industry promotion of narcotic prescriptions. The continuation of methadone clinics after legalization of office-based buprenorphine as part of a two-tiered opioid maintenance treatment system demonstrates the dependence of the second route to racialization of addiction – its association with whites and resultant mainstreaming through buprenorphine – on the first route – of biomedical control of marginalized nonwhite populations through methadone.

These two racializing processes can be seen as resulting from two different stages of the progression from medicalization to biomedicalization as outlined by Adele Clarke and colleagues (Clarke et al., 2003). Methadone maintenance, with its origins in state control and clinical surveillance, through public systems of care, enabled by health policy intended to solve the problems of urban unrest, falls closer to medicalization. Buprenorphine,

with its origins in the sector of private capital, NIDA's public subsidies of the manufacturer's clinical trails, and pharmaceutical industry-led dissemination-rather than governmental administration of clinical research and dissemination-targeting insured, individually paying consumers, featuring technological surveillance in the form of chemical additives to prevent prescription misuse, and based on a concept of addiction as a molecular disorder, falls squarely into late biomedicalization. Yet methadone maintenance has some features of biomedicalization, such as outcomes/ evidence based rather than individual case-based justifications for its use (methadone maintenance was adopted after a widely publicized clinical trial), as well as the technology's creation of a collective identity (that of "the methadone patient"): it therefore might be seen as a product of early biomedicalization. Furthermore, the early biomedical structure of methadone maintenance is currently perpetuated in order to sustain the new layer of biomedicalization introduced by buprenorphine. We therefore see methadone and buprenorphine as products of early and late biomedicalization of addiction; not as discontinuous, but as overlapping and mutually constitutive phases of the same symbolic and political process. Indeed, the phases of medicalization and biomedicalization have not reached completion: addiction treatment in the United States has never been fully biomedicalized but has proceeded with multiple cooccurring underlying concepts of addiction, as social, psychological and physiological, with each concept coming to the fore in different phases of American drug control and health service policies (Campbell, 2012).

Although to our knowledge this is the first paper to delineate the increased centrality of race as a function of the biomedicalization of addiction, our findings parallel survey and experimental psychology research on stigma demonstrating that biomedicalization in itself does not reduce the stigma associated with substance abuse (Pescosolido et al., 2010; Phelan & Link, 2012; Link & Phelan, 2010). Paradoxically, biomedicalizing processes that are thought by their advocates to reduce stigma, as well as social distinctions such as ethnicity and race, due to their biological rather than moral or characterological causative models, in many cases are associated with increased stigma of the identified conditions or social groups. The cases of buprenorphine and methadone provide examples of political economic and professional-symbolic mechanisms by which this paradox may unfold. In the case of addictions, the very project of destigmatizing treatment for some leads to intensified stigma for others, as a feature of the way color caste systems are utilized in commodified biomedical economies.

REFERENCES

- A reclassification for methadone. (1972). Science News, 101(15), 229.
- Acker, C. J. (2002). Creating the American Junkie: Addiction research in the classic era of narcotic control. Baltimore, MA: Johns Hopkins University Press.
- Agar, M., Bourgois, P., French, J., & Murdoch, O. (2001). Buprenorphine: 'Field trials' of a new drug. Qualitative Health Research, 11(1), 69–84.
- Arnold, M. (1965). Narcotics a growing problem of affluent youth. New York Times, January 4.
- Bayer, R. (1976). Heroin maintenance: An historical perspective on the exhaustion of liberal narcotics reform. *Journal of Psychedelic Drugs*, 8(2), 157–165.
- Bell, J. R., Butler, B., Lawrence, A., Batey, R., & Salmelainen, P. (2009). Comparing overdose mortality associated with methadone and buprenorphine. *Drug and Alcohol Dependence*, 104(1–2), 73–77.
- Bellis, D. J. (1981). Heroin and politicians: The failure of public policy to control addiction in America. Westport, CT: Greenwood Press.
- Biondi, M. (2003). To stand and fight: The struggle for civil rights in postwar New York City. Cambridge: Harvard University Press.
- Brunswick, A. F. (1977). Health and drug behavior: A study of urban black adolescents. *Addictive Diseases*, 3(2), 197–214.
- Brunswick, A. F. (1979). Black youths and drug-use behavior. In G. M. Beschner & A. S. Friedman (Eds.), *Youth drug abuse: Problems, issues, and treatment*. Lexington, MA: Lexington Books.
- Brunswick, A. F. (1980). Social meanings and developmental needs: Perspectives on black youth's drug abuse. *Youth & Society*, 11(4), 449–473.
- Brunswick, A. F. (1988). Young black males and substance abuse. In J. T. Gibbs (Ed.), *Young, black, and male in America: An endangered species* (pp. 166–187). Dover, MA: Auburn House Publishing Company.
- Butler, S., Black, R., Cassidy, T., Daily, T., & Simon, B. (2011). Abuse risks and routes of administration of different prescription opioid compounds and formulations. *Harm Reduction Journal*, 8, 29. Retrieved from http://www.harmreductionjournal.com/ content/8/1/29. Accessed on January 30, 2012.
- Campbell, N. (2010). Toward a critical neuroscience of addiction. BioSocieties, 5, 89-104.
- Campbell, N. (2012). Medicalization and biomedicalization: Does the diseasing of addiction fit the frame? In J. Netherland (Ed.), *Critical perspectives on addiction* (Vol. 14). Advances in medical anthropology. Bingley: Emerald.
- Campbell, N. D. (2007). Discovering addiction: The science and politics of substance abuse research. Ann Arbor, MI: University of Michigan Press.
- Cannato, V. J. (2001). The ungovernable city: John Lindsay and his struggle to save New York. New York, NY: Basic Books.
- Cicero, T. J., Inciardi, J. A., & Munoz, A. (2005). Trends in abuse of Oxycontin and other opioid analgesics in the United States: 2002–2004. *Journal of Pain*, 6(10), 662–672.
- Clarke, A. E., Shim, J. K., Mamo, L., Fosket, J. R., & Fishman, J. R. (2003). Biomedicalization: Technoscientific transformations of health, illness, and U.S. biomedicine. *American Sociological Review*, 68(2), 161–194.
- CNN (Cable News Network). Rush Limbaugh admits addiction to pain medication. CNN Entertainment, October 10, 2003. Retrieved from http://articles.cnn.com/2003-10-10/

- entertainment/rush.limbaugh_l_wilma-cline-rush-limbaugh-inaccuracies-and-distortions?_s= PM:SHOWBIZ. Accessed on January 6, 2012.
- Conditions for investigational use of methadone for maintenance programs for narcotic addicts. (1970). Federal Register, 35(113), pp. 9014–9016.
- Conrad, P. (2005). The shifting engines of medicalization. *Journal of Health and Social Behavior*, 46(1), 3–14.
- Courtwright, D., Joseph, H., & Des Jarlais, D. (1989). Addicts who survived: An oral history of narcotic use in America, 1923–1965 (1st ed). Knoxville, TN: University of Tennessee Press
- Crime in the National Capital. Part 2: Narcotics-Crime Crisis in the Washington Area. Hearings Before the United States Senate Committee on the District of Columbia, United States Senate Committee on the District of Columbia, 1 Sess. (1969).
- Drug Addict Treatment and Rehabilitation Act of 1972 Hearings Before the U.S. Senate Subcommittee on Alcoholism and Narcotics of the Senate Committee on Labor and Public Welfare (1972).
- Edwards, C. C. (1972). Approved new drugs requiring continuation of long-term studies, records, and reports; listing of methadone with special requirements for use. *Federal Register*, 37(242), 26790–26806.
- Epstein, E. J. (1974, December). War of the poppies. Esquire.
- Epstein, E. J. (1975). The Krogh file-The politics of 'Law and Order'. Public Interest, 39, 99-124.
- Etzioni, A., & Remp, R. (1972). Technological 'shortcuts' to social change. *Source Science*, 175(4017), 31–37.
- Farrell, W. E. (1965). City backs plan to cure addicts. New York Times, June 8.
- Folsom, M. (1964). Teen-age addicts a Yonkers worry. New York Times, p. 1, August 20.
- Glenn, J. E. (2005). Medicalizing addictions, criminalizing addicts: race, politics and profit in narratives of addiction. Unpublished doctoral dissertation, Harvard University, Cambridge, MA.
- Gollance, H. (1970). Methadone maintenance treatment program. *Maryland State Medical Journal*, 19(11), 74–79.
- Hamid, A., Curtis, R., McCoy, K., McGuire, J., Conde, A., Bushell, W., et al. (1997). The heroin epidemic in New York City: Current status and prognoses. *Journal of Psychoactive Drugs*, 29(4), 375–391.
- Hannerz, U. (2004). Soulside: Inquiries into Ghetto Culture and Community. Chicago, IL: University of Chicago.
- HEALTH-PAC Workshop on Drug Addiction, Block, H., & Wallerstein, L. (1970, June). Who benefits from the American drug culture? HEALTH-PAC Bulletin, pp. 1–20.
- Healy, D. (2004). Let them Eat Prozac: The unhealthy relationship between the pharmaceutical industry and depression. New York, NY: New York University Press.
- Hickman, T. A. (2004). The double meaning of addiction: Habitual narcotic use and the logic of professionalizing medical authority in the United States, 1900–1920. In S. W. Tracy & C. J. Acker (Eds.), Altering American consciouness: The history of alcohol and drug use in the United States, 1800–2000 (pp. 182–202). Amherst, MA: University of Massachusetts Press.
- Holden, C. (1975). Drug abuse 1975: The 'war' is past, the problem is as big as ever. *Science*, 190(4215), 638–641.
- Iiyama, P., Nishi, S., & Johnson, B. D. (1976). Drug use and abuse among U.S. minorities: An annotated bibliography. New York, NY: Praeger.

- Jaffe, J., & O'Keeffe, C. (2003). From morphine clinics to buprenorphine: Regulating opioid agonist treatment of addiction in the United States. *Drug and Alcohol Dependence*, 70, S3–S11.
- Johnson, B. D. (1977). The race, class, and irreversibility hypotheses: Myths and research about heroin. In J. D. Rittenhouse (Ed.), *The epidemiology of heroin and other narcotics (NIDA research monograph 16)* (pp. 51–57). Rockville, MD: National Institute on Drug Abuse Division of Research.
- Johnson, B. D., & Nishi, S. (1976). Myths and realities of drug use by minorities. In P. Iiyama,
 S. Nishi & B. D. Johnson (Eds.), *Drug use and abuse among U.S. minorities: An annotated bibliography* (pp. 3–68). New York, NY: Praeger.
- Lennard, H. L., Epstein, L. J., & Rosenthal, M. S. (1972). The methadone illusion. *Science*, 176(4037), 881–884.
- Link, B., & Phelan, J. (2010). Labeling and stigma. In T. L. Scheid & T. N. Brown (Eds.), New York, NY: Cambridge University Press.
- Lipson, S. (2011, 20 December). Mixed evidence of methadone crackdown: An advocacy group's survey says police harassment of methadone patients is common. Statistics Suggest Methadone-Related Arrests Are Rare. City Limits.
- Lovell, A. M. (2006). Addiction markets: The case of high-dose Buprenorphine in France. In A. Petryna, A. Lakoff & A. Kleinman (Eds.), Global pharmaceuticals: Ethics, markets, practices (pp. 136–170). Durham, NC: Duke University Press.
- Mattick, R., Breen, C., Kimber, J., & Marina, D. (2003). Methadone maintenance therapy versus no opioid replacement therapy for opioid dependence. Cochrane Database Systems Review, (2), CD002209.
- McLellan, A. T., Lewis, D., O'Brien, C., & Herbert, K. (2000). Drug dependence: A chronic mental illness. *JAMA*, 284, 1689–1694.
- Moynihan, R., Heath, I., & Henry, D. (2002). Selling sickness: The pharmaceutical industry and disease mongering. *BMJ*, *324*(7342), 886–891.
- Mulvihill, D. J., Tumin, M. M., Curtis, L. A. (1969). United States Task Force on Individual Acts of Violence, & United States National Commission on the Causes and Prevention of Violence. Crimes of Violence: A Staff Report Submitted to the National Commission on the Causes & Prevention of Violence. Washington, DC: Government Printing Office.
- Musto, D. F. (1999). *The American disease: Origins of narcotic control* (3rd ed). New York, NY: Oxford University Press.
- Musto, D. F., & Korsmeyer, P. (2002). The quest for drug control: Politics and federal policy in a period of increasing substance abuse, 1963–1981. New Haven, CT: Yale University Press.
- Nelkin, D. (1973). Methadone maintenance: A technological fix. New York, NY: G. Braziller.
- Netherland, J. (2010). Becoming normal: The social construction of buprenorphine and new attempts to medicalize addiction. Dissertation, Department of Sociology, City University of New York Graduate Center.
- New York Times. (1964 March 2). Queens Boy dies at Heroin Party. New York Times, p. 13.
 NIDA (National Institute of Drug Abuse) (2011, May). Prescription drug abuse: A research update from the National Institute on Drug Abuse. Retrieved from http://drugabuse.gov/tib/prescription.html. Accessed on November 23, 2012.
- Osnos, P. (1972 December 26). Is it a solution? The Washington Post.
- Pescosolido, B. A., Martin, J. K., Long, J. S., Medina, T. R., Phelan, J. C., & Link, B. G. (2010). 'A disease like any other"? A decade of change in public reactions to

- schizophrenia, depression, and alcohol dependence. American Journal of Psychiatry, 167(11), 1321–1330.
- Phelan, J., & Link, B. (2012). Genetics, addiction, and stigma. In A. R. Chapman (Ed.), *Genetic research on addiction*. New York, NY: Cambridge University Press.
- Raspberry, W. (1971a June 25). Holdups or hangups? The Washington Post.
- Raspberry, W. (1971b May 11). Methadone use: Another blunder. The Washington Post.
- Reckitt Benckiser Pharmaceuticals. (2009). *Annual Report 2009*. Retrieved from http://annualreport2009.rb.com/Home. Accessed on April 28, 2012.
- Reckitt Benckiser Pharmaceuticals. *Annual Report 2010*. Retrieved from http://www.rb.com/ Investor-information/Investor-information/Online-Annual-Report-2010. Accessed on April 28, 2012.
- Roberts, S. (2009). *Infectious fear: Politics, disease, and the health effects of segregation*. Chapel Hill, NC: University of North Carolina Press.
- Roberts, S. (2012, forthcoming). 'Rehabilitation' as boundary object: Medicalization, local activism, and narcotics addiction policy in New York City, 1951–1962. Social History of Alcohol and Drugs, 26(2).
- Robins, L. N., & Murphy, G. E. (1967). Drug use in a normal population of young Negro men. *American Journal of Public Health*, *57*(9), 1580–1596.
- SAMHSA (Substance Abuse and Mental Health Services Administration). (2012). Drug Addiction Treatment Act of 2000. Retrieved from http://buprenorphine.samhsa.gov/data.html. Accessed on May 1, 2012.
- Sees, K. L., Delucchi, K. L., Masson, C., Rosen, A., Clark, H. W., Robillard, H., ... Hall, S. M. (2000). Methadone maintenance vs. 180-day psychosocially enriched detoxification for treatment of opioid dependence: A randomized controlled trial. *JAMA*, 283(10), 1303–1310.
- Schneider, E. C. (2008). Smack: Heroin and the American City. Philadelphia, PA: University of Pennsylvania Press.
- Stanton, A., McLeod, C., Luckey, B., Kissin, W., & Sonnefeld, L. J. (2006). Expanding treatment of opioid dependence: Initial physician and patient experiences with the adoption of buprenorphine. Retrieved from http://www.buprenorphine.samhsa.gov/ASAM_06_Final Results.pdf. Accessed on March 10, 2010.
- U.S. FDA (2002). Subutex and Suboxone approved to treat opiate dependence. Retrieved from http://www.fda.gov/Drugs/DrugSafety/PostmarketDrugSafetyInformationforPatients andProviders/ucm191521.htm. Accessed on May 1, 2012.
- Van Zee, A. (2009). The promotion and marketing of oxycontin: Commercial triumph, public health tragedy. *American Journal of Public Health*, 99(2), 221–227.
- Vocci, F., Acri, J., & Elkashef, A. (2005). Medication development for addictive disorders: The state of the science. *American Journal of Psychiatry*, 162, 1432–1440.
- Vrecko, S. (2010). Birth of a brain disease: Science, the state and addiction neuropolitics. *History of the Human Sciences*, 23(4), 52–67.
- Walsh, J. (1970). Methadone and heroin addiction: Rehabilitation without a 'cure'. *Science*, 168(3932), 684–686.
- Yuill, K. (2009). Another take on the Nixon presidency: The first therapeutic president? *Journal of Policy History*, 21(02), 138–162.