

THE END OF DRUGGING CHILDREN: TOWARD THE GENEALOGY OF THE ADHD SUBJECT

EDWARD J. COMSTOCK

This genealogy of the ADHD subject will demonstrate that over the course of the twentieth century a new relation between power, knowledge, the body, and ethical practices of self-formation emerged around the ADHD-type in ways that are not captured by the received critical perspective. By examining the history of knowledge and practices surrounding the ADHD-type, this work will argue that the deviant subject that was located relative to external institutional moral/juridical values or standards is replaced over the course of the century by a new intelligibility of rational self-management. A further analysis of this emergent intelligibility attempts to advance the critical understanding of the increasingly prevalent ADHD phenomenon by showing how novel drug and brain imaging technologies work to link behaviors to identity, establishing new relations of power to the subject not captured by the received medicalization perspective. This work will be of interest to anybody interested in the relations among knowledge, drugs, power, and the ADHD subject.
© 2011 Wiley Periodicals, Inc.

At the end of the nineteenth century [psychiatry] could claim to replace justice itself, and not only justice but also hygiene, and not only hygiene but eventually most social interventions and controls, so as to become the general body for the defense of society against the dangers that undermine it from within. (Foucault, 2003, p. 316)

Even as the prescription of powerful stimulant medications has multiplied for the treatment of attention deficit hyperactivity disorder (ADHD),¹ scholars remain divided over the legitimacy of the disorder. Many view ADHD as a genuine medical disorder with a long history that, thanks to scientific advances, we are only now able to correctly diagnose and treat (e.g., Barkley, 1990, 1997, 2006; Hallowell & Ratey, 1995). Others, however, view the disorder as a form of “social control” or even “mind control” (e.g., Conrad, 1975, 2007; Fitzgerald, 2009; Illich, 1976; Rafalovich, 2001, 2004; Schrag & Divoky, 1975; Timimi, 2002, 2005; Timimi & Taylor, 2004). Both of these approaches tend to ignore the historically situated meanings we give to the behaviors and practices that constitute this disorder, and tend toward a false dichotomy whereby we are forced to imagine the disorder as medical and “real” or socially constructed and “unreal” (Hacking, 1999; Hacking in Wasserman & Wachbroit, 2001). Rather than constructing a linear narrative of medical progress, or of ideology and control, this work will trace the more uneven process through which current treatment techniques emerged in relation to shifting discourses on deviancy and behavior disorders in the twentieth century.

1. A 2003 National Survey of Children’s Health (NSCH) found that 2.5 million people under 17 receive medication for ADHD.

EDWARD J. COMSTOCK is a term faculty member in the Department of Literature at American University in Washington, D.C. He received his PhD in Education from American University in 2008 with a multidisciplinary focus in Education Studies and an MA in Literature. His work focuses on the genealogy of ideas and practices in educational institutions, and specifically the history of disability, behavioral disorders, and abnormality in public schools. Toward this end his recent work has explored the history of attention and medication in educational institutions, especially in order to understand the proliferation of the modern ADHD subject.

In conversation with the received critical view,² this work argues that Michel Foucault's genealogical project will allow for an expanded critical understanding of drugs and ADHD, allowing us to get around some of the problems faced by medicalization theorists. As Hubert L. Dreyfus argues, "Genealogy seeks out discontinuities where others found continuous development . . . the task of the genealogist is to destroy the primacy of origins, of unchanging truths" (Dreyfus, 1982, pp. 106–108). This work will explore how, over the course of the century, through new relations between knowledge, the body, and techniques and technologies such as the drug test and brain scanning, ADHD emerged at the intersection of an ethical knowledge and practice that reflects an emerging psychiatric power, but that cannot be reduced to the terms of social control.³ In doing so, this essay agrees with and builds on earlier works by Nikolas Rose (1996, 1999, 2006) and Andrew Lakoff (2000), arguing that disorders like ADHD reflect a governmentality of self-management and an embodied norm of economic rational self-interest (man as *Homo economicus*⁴)—often even in the case of children, who are also actively involved in these processes of identity construction—the meanings and purposes of which are not exhausted in the terms of ideology and social control.

Further, in describing these shifting relations between knowledge and treatment techniques, this paper will argue that—reversing the received critical perspective—it is in fact only in the movement *away* from overt moral judgment, social/expert control, and most significantly, behavioral control in general, that we can begin to understand the recent proliferation of ADHD. This is because by the end of the century, deviant and antisocial behavior was no longer the *sine qua non* of the disorder being described; currently, as this paper will demonstrate, maladjusted social behavior is a sufficient but by no means necessary diagnostic principle. This is ultimately because the nosography through which the deviant subject was diagnosed relative to external moral/juridical values or standards is replaced over the course of the century within a shifting discourse on the body built around behavioral norms, where abnormal behaviors *of any kind* become a potential sign of ADHD. At the same time, techniques emerge intended to actually *produce* behaviors that are valued contingently around entirely new identities, rather than, and perhaps even in opposition to, techniques aimed at eradicating universally unwanted behaviors.

In order to trace the shift from deviancy to abnormality in the knowledge and treatment of behavior disorders in developing the genealogy of the ADHD subject, after a brief introduction

2. The received critical view in the scholarship on ADHD, I argue, is represented especially in the works of Peter Conrad and the medicalization scholars (such as Adam Rafalovich) that carry forward a line of critical (often post-Marxist) argumentation that began, roughly, in the 1970s with scholars such as Ivan Illich and Schrag and Divoky. This perspective also has traction in popular culture, where some dismiss ADHD as the unnecessary medicating of otherwise normal behaviors.

3. Nor to an organic biological origin. Along these lines, this work is "critical" to the extent that it brackets the claims of scientific discovery and advances made by the medical establishment for ADHD in order to trace the relations of knowledge to power. Foucault argues that for the genealogist, "Nothing in man—not even his body—is sufficiently stable to serve as the basis for self-recognition or for understanding other men" (1998, p. 380). In its refusal of origins and first principles, the genealogical method is implicitly critical of knowledge systems that make man—that "transcendental/empirical doublet" (Foucault, 1970)—the basis of knowledge, and instead is interested in how the body becomes a subject of knowledge within practices and rituals of power and knowledge. (It should be noted, however, that this is rather different than arguing that ADHD is "not real," or that there is some other "more true" knowledge of humanity.) I will further elaborate on the relation between genealogy and the critical perspective.

4. Michel Foucault (2008) and Thomas Lemke (2001), in articles building on Foucault's work, define *Homo economicus* as the transcendental program of humankind—that is, man as primarily a rational/economic creature. This figure replaces *homo criminalis*—man as constructed through concepts of deviancy, degeneration, and social hygiene—over the course of the century.

to the critical perspective on ADHD, this paper will analyze the shifting meanings and purposes given to stimulant medication over the course of the twentieth century. It will first analyze Charles Bradley's infamous "Benzedrine experiments" on institutionalized, deviant children in the context of George F. Still's earlier work on the "moral idiot." Having established the negative relation between drugs and behavior in the early discourse, this paper will next explore the continued mid-century stimulant drug experiments on children. It will argue that this discourse evidenced a shift in the relation of drugs to behavior, establishing positive practices of subjectification, in order to understand the expansion of the ADHD-type⁵ as something other than an increase in "drugging" (another term coined in the critical discourse) or social control. Educationist Roger Freeman, for example, as early as 1970, is very careful to argue that drugs are not used (or should not be used) to produce conformity, but rather specifically to improve the educational situation of the child (Freeman, 1970, p. 377). The goal in the mid-century research on deviant children was to produce a new (ADHD-type) identity and new, more productive behaviors through the general diffusion of psychiatric power and knowledge. However, as this work will show, this could only happen once drugs took on a new relation to the body and to ethical practices of self-formation, in the process circumventing age-old questions and criticism about the gap between behavior and the mind/body. As Nikolas Rose argues, "The individual is to adopt a new relation to his or her self in the everyday world, in which the self itself is to be an object of knowledge and autonomy is to be achieved through a continual enterprise of self-improvement through the application of a rational knowledge and a technique" (1999, p. 93).

Next, this work will analyze the new relations between power, knowledge, and ADHD identity by explaining the significance of the "drug test" (that is, the process by which drug effects on the subject factor into diagnosis). Because the so-called "paradox effect" of stimulants in the case of ADHD subjects is given *de facto* diagnostic power, and also used to bridge the gap between pathological behavior and the pathological body in medical discourse, the drug test is a privileged technique in the subjectification of the ADHD-type. I argue here that radical shifts in the knowledge of the "paradox effect" of stimulants reflect shifts in the relation of power to the subject that can help us better understand the ADHD phenomenon and the role of psychodynamic drugs *qua* medication in our society.

Finally, having established the shift in intelligibility of behavior across these discourses from moral and juridical terms (deviancy) to individualistic terms (economical/functional normality), I will demonstrate that behaviors shed their absolute value as each begins to "function" at the level of the individual (rather than at the level of society and social adjustment). As a result, the valuation of behavior is given a new basis in the "deepest" levels of the individual—where the individual represents the self as a subject of knowledge and rational investment, and where drugs work to establish our true identity. In these terms Russell A. Barkley describes ADHD as the inability to "turn away from the pleasures and seductions of the moment, and even engage in self-deprivation, so as to concentrate their attention on maximizing future gains" (Barkley, 1997, p. 2). This shift in the intelligibility of the ADHD-type occurred first in the experimental literature that used drugs to imagine new possibilities of self through increased discipline and better performance in school—a discourse quickly appropriated by educationists in the late mid-century.

Following Foucault's genealogical method, I am ultimately arguing that tracing this new relation between knowledge, the subject, and subjectifying techniques allows for a more

5. I use this term, which reifies the ADHD subject, reluctantly, but as shorthand for all of the historical disorders and constellations of behavior that both critical and medical scholars place under the banner of ADHD.

robust critical account of ADHD and the role of medicine in our culture. The genealogical method is often theorized as a critical approach meant both to advance and to challenge the received critical accounts of knowledge and the subject; it is in this spirit that I intend to demonstrate how the genealogical approach can help educationists, medicalization scholars, and other interested parties better understand the massive proliferation of ADHD, especially in the United States, and how the disorder relates to power. Thomas S. Popkewitz and Marie Brennan summarize the new relation of knowledge to the subject implied by the genealogical method: “Knowledge, for our purposes, is a material practice that constitutes the ‘self’ in the world rather than a part of what Marxist analyses refer to as an epi-phenomenon” (Popkewitz & Brennan, 1998, p. 5). Or again, in the words of Dreyfus, the genealogical method “is not a simple variant of the sociology of knowledge nor a Marxist analysis of the . . . reception of knowledge. It is more radical and far-reaching than either, although it obviously grows out of these traditions” (Dreyfus, 1982, p. 115). I believe that rooting out Marxian tropes and language will provide a more “far-reaching” critical account of ADHD.

To the extent that Foucault’s ideas and methods have entered the conversation about ADHD to date, they’re mostly used to demonstrate how current ADHD practices reflect disciplinary power and governmentality; but these studies tend to limit the analysis of disciplinary practices to “top-down” processes and techniques of ideology and social control enacted by powerful cultural agents and “moral entrepreneurs” (Rafalovich, 2001). Foucault, for the most part, is cited to develop the relationship between medicalization and institutional control, rather than to develop the more specific relations between knowledge, meaning, and subjectification. This genealogy of the ADHD subject will begin to develop the complex relations between the subject, knowledge, drugs, and the body in historical context, not through reference to the negative imposition of power, but within positive practices of ethical self-formation.

THE ORIGINS OF ADHD AND THE MEDICALIZATION DEBATE

It is conventionally accepted—both by ADHD gurus such as Russell A. Barkley (2006) and by critical theorists on “medicalization” such as Adam Rafalovich (2001)—that what we now know as ADHD originated with George F. Still’s “Defect of Moral Control” in 1902, based on his clinical observations of 20 deviant children. In both accounts this origin implies a crucial moment of discovery: in one narrative, the discovery of a significant medical disorder, and in the other, the discovery of new possibilities for social control. But in tracing contemporary ADHD practices to this origin, scholars fail to account for the specific relations of knowledge and power to subjectification, instead taking at face value that these children were studied for behaviors that link them to ADHD. Because the meanings and intelligibility evident in Still’s “moral idiocy”—and moreover in the behaviors themselves—are nonreciprocal with our own knowledge practices, it is insufficient to claim that ADHD, beginning with Still, evidences increased medicalization of formally normal behaviors (or otherwise medical advances in the discovery of an underlying disorder that links these behaviors). Scholars on both sides fail to provide us with a coherent understanding of the relation of power to knowledge within these practices of subjectification.

George Still’s behavioral science was a call to action to research links between transgressive behaviors, abnormal physiology, degeneration, and the natural-born criminal, meant to protect society from individuals whose inherited genetics posed a threat to the species. As Foucault demonstrates, as the “social enemy” began to disappear in favor of the deviant, “a certain significant generality moved between the least irregularity and the greatest crime;

it was no longer the offence, the attack on the common interest, it was the departure from the norm, the anomaly; it was this that haunted the school, the court, the asylum or the prison” (Foucault, 1977, p. 299). The eugenic sciences Still worked within, through the concepts of degeneration and developmental recapitulation, linked together everyday transgressive behaviors and physiological abnormalities around quasi-scientific moral judgments with the goal of protecting the species and society.

So while medicalization scholars are correct to point out that Still’s “Defect of Moral Control” made an important claim for medicine on the more everyday public discourses concerning morality and behavior, we must also understand that the naturally immoral psychological type was limited in its application to individuals who actually transgressed laws (institutional or otherwise). Still’s patients were children who had committed actual crimes or habitually transgressed clear moral boundaries, but because of their age could not be adjudicated and therefore presented a singular problem. Still describes his “moral idiots” as “lawless,” further clarifying that:

By lawlessness I do not mean, of course, the occasional or even frequent failure to conform to law—whether it be nursery law, school law, or the law of the land—which in greater or less degree is natural to children, but a reckless disregard for command and authority. (Still, 1902, p. 1009)

We must understand Still’s “Defect of Moral Control” in the terms of the *fin de siècle* eugenic and moral hygiene sciences popularized by the eugenic criminology of Cesare Lombroso.⁶ Indeed, Still studied these incorrigible children as “moral idiots” because their behaviors suggested typical “idiocy”—and therefore, following Lombroso, represented a threat to the species—but because of their normal intelligence could not be labeled idiots.

The trace of the eugenicist’s knowledge, as well as their techniques, remains even today (see Baker, 2002), and often had clear influences on behavioral sciences even late into the twentieth century. As stated in the seminal mid-century Johns Hopkins drug experiments, “There is evidence to suggest that such a population breeds criminality and mental illness” (Molling et al., 1962, p. 96). Even ADHD apologist Russell Barkley notes that Virginia Douglas, whom Barkley sees as a progenitor and champion of his own theory of the explanatory power of “attention deficits” over “hyperactivity disorders,” had moral overtones to her work as recently as the late 1970s. Barkley states, “Like Still 70 years earlier, Douglass commented on the probable association between deficits in attention/impulse control and deficiencies in moral development” (Barkley, 1990, p. 13).

So on the one hand, these sciences had a clear role in linking, for the first time, behaviors that were previously outside of scientific knowledge to a medical discourse (which would continue with studies of encephalitis, MBD, and similar medical disorders through the mid-century), thus laying the groundwork for the types of intervention implied by ADHD. Further, we can still see the trace of these eugenic and moral hygiene sciences in the mid-century human subject drug research (Mayes, Bagewell, & Erkulwaller, 2009, p. 52)—and even later into the century in some of the beliefs surrounding hyperkinesis. But the intelligibility represented by these sciences mostly dissolved by the mid-century (see Baker, 2001), and the meanings given to ADHD behaviors and treatment techniques no longer always cohere to *overt* moral judgments and valuations. So while it’s true that we can see in these sciences that mapped psychological typology over preexisting moral judgments, a clear case of top-down “expert control” through knowledge, I believe that we need to limit claims about overt social

6. For a full analysis of Lombroso’s influence on the social sciences see Rafter (1998).

control to these early relations between knowledge and subjects in order to understand *contemporary* ADHD.

But in tracing the history of ADHD to practices associated with these origins, critical scholars have constructed a narrative of increasing “social control” culminating with our current “drugging” practices (Schrag & Divoky, 1975; Conrad, 1975, 2007; Rafalovich, 2001, 2004). Usually these studies interpret the relation of power to ADHD in sovereign terms: ADHD is an ideological knowledge that powerful social agents and “Big Pharma” hold over lay people for purposes of social control or profit. While it’s clear that Still’s behavioral sciences reflected what critical scholars call “expert control,” and that, as this work will confirm, the early ADHD-type was often indeed “drugged” for overt control purposes, can we understand our contemporary practices in these same terms?

First of all, where hyperactivity was “medicalized” through the mid-twentieth century, as with Still, diagnosis was restricted to extreme cases of immorality with the express purpose of eradicating unwanted behaviors (and, in more extreme cases, unwanted lives). Given the current prevalence of the disorder, and the distancing of moral criteria from diagnosis, it is difficult to agree with the critical account of contemporary ADHD as merely a progression or continuation of these drugging, overt expert control, and social control practices. Similarly, the conventional claim that ADHD reflects a more or less singular character type that science has recognized for over a century—“these children have remained recognizable in terms of their description decade after decade under different diagnostic labels” (Mayes, Bagewell, & Erkulwater, 2009, p. 45)—reifies the subject (and “normal childhood behaviors”) by ignoring shifting relations of knowledge to practices of subjectification.

In addition, the received critical tropes of increased “social control” (Conrad, 1979; Illich, 1976; Schrag & Divoky, 1975) and “ideology” (Conrad, 1975, 2007; Rafalovich, 2001, 2004) fail to account for the new meanings that give drugs used to treat ADHD their currency in our culture and for the popular belief that ADHD treatment helps individuals gain rather than lose control over their lives. Indeed, the conventional critical perspectives fail to account for how it is possible that so many would accept being controlled or “drugged” within broad trends of “over-diagnosis” except by simplifying (or denying) the role of the individual in subjectification through the worn out critical concepts “ideology” and “social control.”

Further, the received critical theories are further ostensibly incapable of accounting for mounting evidence that children from lower socioeconomic statuses, as well as minorities such as blacks and Hispanics, are “less likely to have the diagnosis even after controlling for other characteristics” (Schneider & Eisenberg, 2006, p. 601). The common assumption perpetuated by theories of top-down power is that power, by definition, is concentrated at the top and flows downward. But how might we explain the possible underrepresentation of “have nots” with ADHD if we conceive of it as a top-down form of social control?⁷

These explanatory problems are reflected recently in the medicalization scholarship, as Peter Conrad (2005) has called for more research into the role of the “lay individual” in defining and diagnosing medical identity.⁸ And multiple studies that lay the groundwork for analyzing the complex role of individuals in medicalization (Barker, 2002, 2008; Charland, 2004;

7. While it is important to note that there is a great deal of disagreement over the relation of race and class to ADHD in the international literature—and that issues of race and class are constructed differently in different places—scholars have simply ignored the theoretical implications of this evidence that runs counter to their theory of power in society.

8. For example, Conrad and Potter allow that in the case of adult ADHD, “medication treatment may be seen as much as an enhancement as a form of social control” (2000, p. 575).

Conrad, 2005; Conrad & Potter, 2000; Lakoff, 2000; McHoul & Rapley, 2005; Reissman, 1983; Singh, 2002). However, so far, in attempting to understand the recent proliferation in ADHD and the significance of the identity, this research has limited itself to analyses of the complicity of the individual in ideological processes, the desire of the individual for the benefits that come with the identity, and analyses of changes to the American Psychiatric Association's *Diagnostic and Statistical Manual* (DSM) that allow for diagnosis based only on inattention (rather than inattention with hyperactivity).⁹ As a result, because medicalization theory continues to view ADHD primarily in the terms of ideology and social control, this new research on the first-person experience with ADHD often simply transfers the process of ideology production from the medical industry to the patient. Conrad insists that "Individuals who, prior to diagnosis, would not have seen themselves having a disability find themselves reaping the benefits of disability legislation" (Conrad & Potter, 2000, p. 574). Iliina Singh establishes that for many mothers of troubled children, an ADHD diagnosis—backed by Big Pharma and media ideology—is "very welcome" (2002, p. 593). And as Kristin Barker argues about the medicalization of fibromyalgia syndrome, "Because of the benefits of medicalization to the individual (e.g., the extension of cultural meaning and legitimacy to suffering, exemption from personal responsibility, and access to resources that promise to lessen distress) it makes sense that [online] self-help communities would promote medicalization" (Barker, 2002, 295).

While I do not deny that these benefits are important to understanding the construction of the ADHD identity, the implication of these arguments is always that the ADHD individual (much like the medical industry) is in a kind of bad relation to knowledge, is manipulated by or accepting of the ideology of powerful social agents or institutions, or otherwise is assuming a kind of false identity in order to accrue benefits. But this negative relation to knowledge is not representative of the ways these individuals fashion ethical identities of and through knowledge; indeed, ADHD evidences a case where individuals frequently (even, sometimes, children who had no say in the initial diagnosis) establish their identity within an intelligibility of their self (and behaviors) that extends out of accepted knowledge and "truth." In other words, many view the greatest "benefit" of diagnosis as the ability to *positively* make sense of their lives and behaviors in nontrivial ways—not *just* to explain and relieve various failures and inadequacies—by linking to a knowledge of self-management and empowerment. As Nikolas Rose formulates, "psychotherapeutics elaborates an ethics for which the way to happiness . . . can be specified in terms of apparently rational knowledges of subjectivity and where life conduct is to be shaped according to procedures that have a rational justification in terms of psychological norms of health and contentment" (1999, p. 93). And although many individuals may well still sometimes be diagnosed for social control purposes at home or in schools, or otherwise to accrue benefits, even in the case of children, these critical categories fail in helping us to understand the complex positions these individuals (and their families) take in relation to the ADHD identity, and the meanings they—and society in general—give to their treatment.

Because of their historical role in social control as well as in modern subjectification practices, stimulant drugs like Ritalin are at the center of this argument over legitimacy, origins,

9. In line with his argument about expert power, Conrad at points seems to favor the latter explanation of the proliferation of ADHD. While the issues raised by the fact that most adult ADHD sufferers are "self-diagnosed" were acknowledged and elaborated upon in Conrad and Potter's article (2000), an update of Conrad's seminal earlier work on the ADHD-type, the significance of this phenomenon relative to the functioning of power and social control were set aside in the interest of examining "diagnostic expansion" (p. 573). For a more thorough analysis of the DSM-III and the process of medicalization, see Mayes and Horwitz, 2005.

and the relation of the individual to ADHD knowledge. In an attempt to contribute to these recent developments in the medicalization position, the analysis below will attempt to demonstrate how, over the course of the century, the ADHD subject emerges through drug regimens and other techniques within shifting relations of knowledge, human nature, the body, and ethical behavior.

CHARLES BRADLEY AND THE BENZEDRINE EXPERIMENTS

Even as early as the late eighteenth century, “drugging” with sedatives and hypnotics such as hashish was a popular technique among proto-psychiatrists to control deviant and pathological behavior (Foucault, 2006a, pp. 277–278). By the mid-twentieth century, individual psychotropic “drug regimens” became a common technique for controlling the behaviors of individuals both within and outside of institutions.¹⁰ For example, an article in the *American Journal of Psychiatry* justified the use of the powerful drug Thorazine on schoolchildren, in the absence of psychotherapy, because “Certainly the quieter child makes less demands on the environment, parental giving is more freely offered when placidity abounds, [and] learning is facilitated when teachers are not frustrated” (cited in Mayes, Bagewell, & Erkulwater, 2009, p. 59). These drug treatments for behavior disorders marked the confluence of the old techniques of sovereign judgment and domination over individuals (and to this extent drugging was indeed like a punishment or control established over the body) with the disciplinary and psychiatric powers that emerged around the normalized developmental body (and to this extent drugging was not a penalty, but a treatment). Over the course of the twentieth century, the latter would almost totally engulf the former. The genealogy of ADHD must account for the nexus of knowledge and institutional practice in the mid-twentieth century to understand the emergence of the drug regimen techniques that remain with us today as “treatment.”

Following the early traditions of using drugs to manage behavior, Charles Bradley, in his Benzedrine experiments in the early mid-twentieth century with institutionalized deviant children, demonstrated that stimulants (as opposed to sedatives) could be useful in controlling children’s behaviors. He defined the criteria by which improvement could be measured through drugs: “A child’s behavior is generally considered improving when he begins to engage in activities that are useful and helpful to himself and those around him” (Bradley & Bowen, 1941, p. 97). With this criterion established, Bradley administered “amphetamine sulfate” to children with the hope, based on some limited experimental observations, that the stimulants would supplement psychotherapy and work to reduce hyperactivity and other behavior problems, improve “schoolroom adjustment” and “academic performance,” and improve “psychometric test scores.” (Bradley & Bowen, 1941, p. 92).

While the eugenic sciences thrived even after the volitional defect described by Still, there was very little activity in the psychology of hyperactivity and attention until Bradley’s experiments, save for work that connected these behaviors to organic brain damage (specifically encephalitis). But following in the footsteps of eugenics, and drawing on psychoanalytical conventions, Bradley was foremost still concerned with the moral status of behaviors themselves and their meaning relative to “social adjustment” and the health (and safety) of society (through their eradication). At the same time, however, we can begin to see an opening in the

10. Of course, there is a long and complex history of drug regimens outside of institutions with more or less tenuous relations to the modern psychiatric disciplines—as with patent medicines, herbal and other folk medicines, and various narcotics and barbiturates. For the most part, though, and with the ADHD-type, these regimens treated symptoms, and were not understood to “cure” the underlying disorder.

discourse where drugs can begin to be understood to facilitate new possibilities of identity through the *synthetic production of desirable behaviors*, such as increased school performance. (However, we must be careful here to note that at this point such productive behavior was associated more closely with the eradication of unwanted antisocial behaviors.)

Indeed, in this early experimental research, there is clearly a negative relation between medication and behavior—medication was used to eradicate and control the deviant behavior of children. Throughout the discourse, one can find the trace of the earlier supposition that those with attention problems, or those displaying hyperactive behavior, were suffering from a lack of moral development caused by acute brain damage or pathological development owing to inferior genetics; no doubt these assumptions—and concerns about the relation between deviant behaviors and health, both of the individual and of the species—were behind the impetus to control unwanted behaviors by eliminating them through drugs.

But while the hope was ultimately to provide the positive conditions by which the student could be more successful in school, signaling the beginning of a shift in the intelligibility of the subject, it was the deviant behaviors themselves, rather than the child as “deep” psychological subject, that drugs targeted. To begin with, the person with an attention deficit or hyperactivity did not occupy a positive identity as a “human kind” (e.g., Hacking, 1991; Hacking in Wasserman & Wachbroit, 2001); rather, these individuals were understood to have (heterogeneous) underlying psychological conflicts that resulted in antisocial behaviors that the drugs, alongside other therapeutic techniques, were meant to eradicate (deviancy in general). The focus was on behaviors, conformity, and institutional roles. Bradley expressly did not understand drugs to operate at the level where higher-order (CNS) functioning related to behavior. He argued that stimulant use “induces better performance in these two spheres only insofar as the drug alters the emotional attitude of individuals towards their intellectual task” (Bradley & Bowen, 1941, p. 102). In other words, while drugs changed the moods of his subjects and therefore their behaviors, he did not understand drugs to change anything essential about their character, much less correspond with or treat some specific organic or psychological “lesion” (although his colleagues, such as Maurice Laufer, had occasion to speculate in their own reports). Indeed, as Mayes, Bagewell, and Erkulwater demonstrate, Bradley and his team “saw illness as psychodynamic in origin, yet treatable with medications that could facilitate psychotherapy” (2009, p. 58).

Again, despite his hopes for the positive results drugs might yield for the individual, in the first instance these results were understood to come from the control and eradication of antisocial behaviors, especially inasmuch as the drugs prepared the ground for psychotherapeutic treatment that would foster “basic inner change” (as cited in Mayes, Bagewell, & Erkulwater, 2009, p. 53). The drugs did not, in other words, work at the level of the disorder. Indeed, while Bradley quickly noticed what we now know as the “paradoxical effect” of stimulants on the children (as well as the expected stimulation of behavior), he was quick to qualify this effect on their behavior as “social rather than . . . physiological” (Bradley & Bowen, 1941, p. 95). Rather than actually “treating,” through its paradoxical effect, some specific physiological condition that correlates to hyperkinetic behavior, the drug merely works to make one feel better and forget about or ignore one’s underlying psychological conflicts. The goal of the administration of the drugs is “a return toward accepted social standards,” meaning that the drug is meant to produce short-term effects of conforming behaviors, rather than to treat the underlying disorder.

Ultimately, Bradley claims that there is no “paradox” in this behavioral effect at all: As “the origin of the problem is generally sought in the development of emotional conflicts,” the problem is “expressed” not only through “aggressive, assaultive, hyperkinetic behavior,”

but also “pathologically shy, withdrawn and underactive” behaviors (Bradley & Bowen, 1941, p. 101; Bradley, 1950, p. 35). Although the stimulant drugs paradoxically sedate hyperactive individuals, in theorizing “the problem” as psychological conflict, and often “unhappiness” in general, Bradley understands their action as ultimately negative—as a technique that eradicates emotional conflict, and therefore unwanted behaviors, through the euphoric effect of the drug.

Indeed, this euphoria is universal; the therapeutic effect of stimulant medications is not only evident on hyperactive children, but also on withdrawn children. Benzedrine “brings about improvement in both types, and is therefore presumably attacking some common factor” (Bradley & Bowen, 1941, p. 101; Bradley, 1950, p. 35). This is because the “common factor” is not some physiological condition or disorder that the drug “treats.” Instead, the drug works negatively by temporarily removing or drowning out the internal conflict, producing an altered state that can only be more normal than the perturbed state of these troubled children.

Again, the problem in these troubled children, Bradley notes, is psychological rather than physiological: “[A]mphetamine may well impart a sense of stimulation, well-being, and confidence . . . to a degree that [psychological] conflicts, though still present, are no longer irritating and distressing. In this sense the child is then no longer provoked to abnormal or unacceptable behavior” (Bradley & Bowen, 1941, pp. 101–102). In other words, “Obviously the drug does not work by removing the sources of conflict,” but rather by temporarily sublimating them through the sense of “well-being” produced by the stimulation (Bradley & Bowen, 1941, p. 101). Or again, “As a result [of medication] children return to a more ‘normal’ adjustment, which for some appears to be more subdued behavior and for others stimulation to greater activity” (Bradley, 1950, p. 35). The key word here is “adjustment”; Bradley was not anticipating a return to some more inherently normal or ideal self for his subjects, but rather a return to more socially normal (adjusted) behaviors and roles. Ultimately, the drug is used to treat behavior—in the first instance to eliminate socially unacceptable behaviors—providing the conditions under which one can do better in school. But drugs only work in this regard by temporarily eliminating unwanted behaviors, not by addressing an underlying disorder.¹¹ As Bradley clarifies: “[N]either drug directly attacks a disease process” (Bradley & Bowen, 1941, p. 102).

This negative relation between drugs and the subject in psychiatric practice and the fact that drugs were not understood to act on an underlying disorder is well documented, and characterizes early psychiatric practice in general (rather than just the treatment of the hyperactive/inattentive type). Foucault describes this early “medico-legal” relation between drugs and the subject in *Psychiatric Power* (2006a). He documents the “enormous use of drugs in psychiatric hospitals” through most of the nineteenth century to discipline and control patients (Foucault, 2006a, p. 278). Indeed, it was not until the 1950s, and the invention and diffusion of chlorpromazine in psychiatric institutions, that some psychiatrists would begin to claim drugs as something like a *cure* (or at least a medical treatment) for mental disorders.

11. Of course, the history of medication and psychiatric disorders is complex, and “cures” for madness before the advent of psychiatric sciences have a long history that includes the prescription of various chemicals. However, as Foucault argues, “There is no sense in hunting for a distinction in the classical age between physical therapeutics and psychological medication, for the simple reason the psychology did not exist. When, for example, the absorption of bitters was prescribed, it was not simply a question of physical treatment, as the soul as well as the body was to be scoured” (2006b, pp. 338–339). Further along these lines, the very concept of madness and medical treatment is nonreciprocal with our own discourse, and an analysis of historical practices surrounding madness or mental illness will not yield easy correspondences with our own practices.

Peter Conrad and Joseph Schneider, in their critique of the “third revolution” in psychiatry—the development of psychotropic drugs that “exert their principal effect on a person’s mind, thought, or behavior”—document the increasing popularity of chlorpromazine and similar drugs in mental institutions to not simply sedate patients, but to help them “function better” (Conrad & Schneider, 1992, p. 61). The “third revolution” helped further develop the link between psychiatry and the scientific rigor of pathological anatomy; drugs used in these ways to treat disorders could now be viewed as *medications*: “Drugs qua medication suited perfectly the rhetoric of medicine in the treatment of madness” (Conrad & Schneider, 1992, p. 62). This is not to say that the drug regimen is the only or even the most important treatment for the ADHD-type, or even that even the most “pro-drug” scholars and practitioners believe the drugs by themselves to be a “magic bullet” cure; but as we shall see, stimulant treatment has a privileged place in knowledge and in practice in the subjectification of the ADHD individual.

Although Bradley did not view these drugs as medication in this way, the grounds for drug treatment in this early-mid-century discourse marked a nascent tension between negative control techniques and the positive articulation of identity. This tension is made clear when Bradley claims that “Amphetamine sulfate bears to psychiatric disorders of children a relationship analogous to that of digitalis in many forms of cardiac disease. While neither drug directly attacks a disease process . . . the fact remains that through their use certain individuals may enjoy a happy useful existence which would otherwise be impossible” (Bradley & Bowen, 1941, p. 102). Here we can see the tension between the fact that the drugs are meant primarily to eradicate unwanted behavior, and, isomorphically, especially inasmuch as drugs became linked to broader processes of psychiatric therapy, the emerging possibility that drugs (alongside other treatment techniques) could help one lead a different kind of *existence*. We can see here the beginnings of a new relation between drugs and self that would become an important part of psychiatric practice in the late twentieth century.

Although we can see here the opening of the possibility of new configurations of knowledge, those social critics who argue that the goal of drugging was “social control” are certainly correct when it comes to the theoretical and experimental discourse on the effects of stimulant medication on children during the early mid-century. Certainly this would also suggest that medication was used in practice at this point specifically to induce altered emotional states (druggings) that would directly improve the institutional behavior of children at home and in the classroom (although further evidence for this claim is beyond the scope of this paper). Indeed, as we have seen, Bradley is quite explicit that this is the case.

Further, stimulants were certainly not the only drug being used and researched to control behaviors during the mid-twentieth century; indeed, Bradley’s greatest contribution was his findings about the utility of stimulant medications relative to behavior. But the early- and mid-twentieth-century experimental literature on drugs and hyperactivity was dominated by tranquilizer studies. As Freeman (1966) states, by 1965 there were over 5,000 studies done on the effects of tranquilizers. Drug groups such as Chlorpromazine, Thioridazine, Prochlorperazine, Trifluoperazine, Promazine, Perphenazine, Triflupromazine, Mepazine, Acetophenazine, Fluphenazine, Promethazine, Reserpine, Chlorprothixene, and many others were the subject of research on “behavior disorders” (Freeman, 1966). While the analysis of the discourse on tranquilizers is beyond the scope of this project, the bottom line was that these drugs allowed for, as with Chlorpromazine, the “[c]ontrol of hyperactivity in children of normal intelligence”; the drug “seems to have a beneficial effect in that it quiets some highly disturbed or unmanageable children” (Freeman, 1966, pp. 24–25). The use of drugs on institutionalized children for purposes of social control is perhaps even more explicit in the case of sedatives and tranquilizers.

So in both cases it is quite clear that drugs were used at this point to make children adhere to social norms. As Bradley states, “When [the] individual’s conduct begins to deviate from accepted *social standards*, a behavior problem is said to have arisen”; or again, “Improvement in behavior implies a return toward *accepted social standards*” (Bradley & Bowen, 1941, p. 101, my italics). I need to point out again here that whatever our current ADHD subject is, it implies something more than social standards precisely because one can both have ADHD *and* meet what counts as social standards of behavior, and Bradley’s intelligibility is in this way nonreciprocal with our own.

This is because, with Bradley, power and the norm still extended from the universal ethical and moral standards implied by the moral/judicial concept of deviancy, even as deviant behaviors were becoming medicalized. As I will show in the next section, through analogy between institutional discourses, often explicitly but also implicitly, physical and moral defects remained related at every point, such that deviancy in school could relate analogically to a medical deviancy. And meaning and knowledge still first passed through external institutional laws, rules, and moral norms.

In summary, at least compared to our current situation, the drugging practices evidenced in Bradley’s experiments were relatively circumscribed and specific; at this point, drugs are used to eliminate deviant behavior in institutions, and the practice was explicitly justified in the pragmatic terms of social control. By comparison, this use of drugs seems rather straightforward as a control tactic, and no doubt it is for this reason that many have characterized this research as barbaric and Orwellian (e.g., Schrag & Divoky, 1975, p. 77). Perhaps critics are right that this cannot be overstated; after all, these social control experiments with “strong” drugs (amphetamines) were being performed on children (and usually poor urban children, no less). Yet, whatever we can say about the “inhumanity” of these early experiments and the use of drugs to control behavior, *vis-à-vis* our own practices we are talking about an extremely limited, controlled, and perhaps relatively insignificant practice when juxtaposed with our own uses of the same family of medications on exponentially larger populations.

But for the purposes of the genealogy of ADHD and the medicating of behavior disorders, the major significance of Bradley’s work is in shifting the nature of the problem from behaviors as a sign of an organic or metaphysical deficiency, to behaviors as the problems themselves. To wit, shortly following Bradley, hyperactivity becomes not a sign of minimal brain dysfunction or organic pathology, but a “disorder” of its own: hyperkinesis.¹² And for the first time drugs are used in processes meant to produce behaviors and identities, rather than solely to eradicate immoral behaviors owing to moral concern.¹³ As institutionalized practices of power created new possibilities for managing and producing behaviors, the subject of knowledge shifts accordingly.

DRUGS AND THE “FUNCTIONAL” BODY

In a very short span that marked the passage from human-subject research with stimulants in the 1950s and 1960s, to the psychological and educational developmentalist discourse on hyperkinesis and its effects on learning in the 1970s, we can begin to see a shift in the relation between drugs and behavior that informs our contemporary intelligibility of ADHD.

12. However, even with hyperkinesis late in the century, some researchers hypothesized the cause as acute brain damage—specifically, injury to the diencephalon early in life (Mayes, Bagewell, & Erkulwater, 2009, p. 57).

13. I do not mean to say drugs are a constant that predictably produces desired behaviors in subjects, but that they become part of a ritual through which individuals embrace, resist, and enact the medical identity within practices of ethical self formation.

To wit, in a 1964 experiment with stimulants on children by Keith Conners, Leon Eisenberg, and Lawrence Sharpe, the authors claim that stimulants “function at a behavioral level,” clearly articulating the impossibility of a reduction of behavior to a *specific* CNS mechanism (Conners, Eisenberg, & Sharpe, 1964, p. 20). This was in line with Charles Bradley’s conclusion that there is “no physiological evidence” that stimulant administration “influences the behavior of children by stimulating higher levels of the central nervous system” (Bradley & Bowen, 1941, p. 102).

By 1971, however, Leon Oettinger, reviewing the literature on stimulant medication, arguing against mounting accusations that children were being “drugged” in order to make them more controllable, is insistent that “[t]he primary object of medication is *not to calm the child*. Rather, it is to improve the functioning of the brain so that the child becomes more normal in his thinking and responses” (1971, p. 165). In other words, while Bradley and the experimental psychologists understood stimulant medication to work precisely through the emotional effect of the “drugging” of the child and the “sense of stimulation, well-being, and confidence” that the drug imparts (Bradley & Bowen, 1941, p. 101), now it is understood that the drugs “stabilize the brain” and normalize biological “function,” making the most inner and essential mental processes of the child “more normal” (Oettinger, 1971, p. 163). What an incredible reversal!

In 1963, following the conclusions drawn by Charles Bradley in his Benzedrine experiments in the 1940s, experimental psychiatry was very careful to conclude that stimulant drugs worked only at the level of behavior as a result of stimulation effects at the emotional level. By the 1970s, and having nothing to do with any obvious discovery or advance, psychiatry was suddenly keen to point out that drugs worked primarily at the “deep” level of normal higher-order brain function.¹⁴

In part, no doubt, we see here a shift in theoretical models—the passing from behaviorism to cognitivism as the *en vogue* theory of child development in education and psychology. However, at a more fundamental level, this shift can be attributed to the emergence of a new body—a new human nature made intelligible in part by positing a universal functioning of the individual as naturally self-interested and entrepreneurial.

This new intelligibility of body makes its appearance during the mid-twentieth century, and is evident in the proliferation experimental studies on both children and adults that attempt to codify relations of drugs to the higher-order CNS functions.¹⁵ The post-Bradley experimental discourse, which straddles, as I have said, the modern and contemporary intelligibilities, bares features of both. On the one hand, we see techniques of disciplinary control meant to produce moral and socially adjusted behaviors, and on the other hand, we begin to see the emergence of practices meant to produce entirely new behaviors and identities.

As this new body emerges out of the disciplinary institutions, the relation between the doctor, the patient, knowledge, and the body changes as well: Families and individuals begin to reach out to psychiatrists for the new kind of treatment (and the new possibilities of self) that drugs offer.¹⁶ In this process, for many adults and some children, treatment (and a drug

14. For example, Russell Barkley’s neuropsychological model places the “executive functions,” which govern “self-regulation,” as the highest (and latest) form of human development. He further claims that “any theory of ADHD is, of necessity, a theory of executive functions and self-regulation” (Barkley, 1997, p. viii). Drawing on his review of the research on how stimulants act on the executive functions, Barkley ultimately argues that stimulants seem to bring such great improvements because they work directly on the executive functions (Barkley, 1997, p. 299).

15. This is not to say that this discourse, or the drug experiments, were somehow the cause of this shift, or the only important factor in the reconfiguring of the ADHD-type in knowledge. Rather, the point is that we can see the shift clearly within this discourse that was also closely related to the non-discursive or pre-discursive institutional practices, strategies, and beliefs that also gave shape to it.

16. And as McHoul and Rapley (2005) demonstrate, despite the skepticism of some parents, often simply reaching out is grounds enough for a diagnosis.

regimen) originates not with powerful social agents but rather the individual him/herself, and even for many children, ADHD becomes not so much a label as an identity that allows the subject to imagine and construct the self in new ways and in conformity with “official” knowledge. Indeed, far from being a label applied or enforced by powerful agents, many of these individuals begin to “see themselves” in the disorder, and begin to act within this “human kind” in what Ian Hacking calls the “looping effect” (Hacking in Wasserman & Wachbroit, 2001). This is in part because, as we will see, for both adults and children it is precisely the inability to meaningfully integrate behaviors in relation to a volitional self that defines the individual as ADHD in the first place, and by the same token, the ADHD identity allows these individuals to make meaning of their behaviors and lives by linking to knowledge.

It must be noted that as these shifts in knowledge occurred, a critical discourse emerged that, to this day, informs the public conversation about this relationship between drugs and the body. Indeed, the voice of the critical perspective was loudest in the 1970s as concerned parents and scholars attacked the foundations of the relation between drugs and behavioral disorders. And Oettinger and others at this time were, as we’ve seen, at pains to distance the relation between drugging, emotions, and behavior, and to stipulate that drugs work at the level of the abnormal functioning of the brain (this is to be differentiated from an actual organic lesion). At the same time, and for these same reasons, this relation of drugs to biological function becomes supercharged with meaning and highly controversial. After all, exponentially more children were being issued drugs to deal with their disorders.

With Bradley, on the other hand, although drugs do not “attack the disease process,” the drugging of the child, while it must be done with great discretion, was not problematic to the extent that the conditions of the child’s emotional problems “cannot always be altered,” and therefore drugs might “offer considerable assistance to some children” (Bradley & Bowen, 1941, p. 102). But by 1971 drugs were linked very clearly to the “condition”—the normal thinking and functioning—of the child. No doubt this assumption of the power of drugs to affect the individual in fundamental ways also gave force to the critical perspective. The implications of this are now very familiar to us. But what, since we know there was no scientific discovery of an underlying condition, is responsible for this shift in the meaning of practices of medicating behavior?

THE SIGNIFICANCE OF THE “DRUG TEST”

In the post-Bradley, late-mid-century experiments with stimulants on children, the same themes of deviancy prevail, but with these themes appear new possibilities of drug treatment. Just as Bradley had unabashedly directed his psychotherapeutic treatment toward making the child socially “useful,” researchers such as Leon Eisenberg and Keith Conners in the early 1960s saw in stimulant medication an opportunity to “improve” the lives of deviant children. The difference is that by the time of the Johns Hopkins studies in the early 1960s, “usefulness” and “improvement” are not simply articulated relative to external *social norms*—norms derived from ethical and institutional custom and law—but instead these developmental concepts are elaborated in relation to norms of *behavior itself* at the level of the individual.

As Foucault argues, because the psychiatric diagnosis is binary and absolute (that is, one is either mad or one is not mad) rather than differential (as in pathological anatomy, where symptoms are related through the process of elimination to different possible organic lesions), “The problem psychiatry faces becomes precisely that of constituting, of establishing, the kind of test, or series of tests, that will enable it to meet [the] requirement of absolute diagnosis”

(Foucault, 2006a, p. 267). Because the material body is absent in diagnosis of ADHD-type behavioral disorders—that is, without an organic lesion that corresponds to the deviant behaviors—the psychiatric sciences would have to seek “proof” in the form of a test—a paradoxical reaction to stimulant medications, for example. However, significantly, over the course of the century, these tests would also come to serve as technologies that could allow for a differential diagnosis of ADHD-type behaviors.

By the end of the twentieth century, new techniques and technologies—especially psychotropic drugs trials and brain imaging technology—were employed to help bridge the gap between deviant behaviors and a purported cause in the case of these individuals where, problematically, no physiological etiology could be found. These new techniques would ultimately provide the medical warrant for the differential diagnosis of this behavioral disorder—and, tautologically, for a drug treatment regimen—without reference to deviancy or morality by making behaviors a “function” of a transcendental human truth written into the neurological substrate. These new techniques helped establish the brain as the ultimate material cause of behavior,¹⁷ and moreover, its “functioning” the background against which behavior could be ordered and evaluated within a kind of differential diagnosis.

The difference with the old relation of brain to behavior in the ADHD-type is subtle but profound: By establishing the brain as the material cause and principle of intelligibility of behaviors in this way, there is a direct relationship between the brain—which “functions” in knowable ways according to a transcendental human program—and behaviors, rather than an implied and generic relationship between a physiological abnormality and behavioral abnormality. In this new configuration, behaviors lose their absolute value and are now only intelligible by relating them back to the individual (who is reducible to a brain) and the transcendental economical/rational brain program that caused them. In other words, within this circular and self-confirming system of knowledge, behaviors, given this organic basis, can now be viewed and codified in terms of their functionality at the level of the individual rather than in terms of their institutional/moral quality. As Nikolas Rose argues, “At a time when the individual is to be free from the imposition of codes of morality by religious, political or legal authorities, we have no authoritative ways of judging conduct other than those founded upon a scientific knowledge of the self” (1999, p. 93).

However, I need to be clear here that obviously most individuals are not diagnosed directly through brain imaging technologies; nor are drugs the only treatment for the disorder or viewed as a “magic bullet” cure. And while scholars like Barkley believe that drugs evidence the most profound treatment effects, they are quick to insist that drug regimes complement other forms of behavioral and psychological treatment—even if in reality drugs are frequently the only treatment. Further, while this new configuration appears in many places across psychiatric knowledge in general, I make no claim that this intelligibility is established universally in psychiatric knowledge or practice (further research needs to be done relative to other medicalized identities). Nor do I claim that this configuration goes uncontested within knowledge. The point here is rather that these technologies helped to create the conditions of possibility that would bring vague suppositions and assertions about the ADHD-type into a knowledge discourse, allowing for the underwriting of “true” identities and ethical practices of self formation within knowledge, and the spread of psychiatric power through the proliferation of the

17. A story told by Iliina Singh illustrates this neatly. “In comments to me on a research proposal, a prominent pediatrician and author wrote that ‘the ideology of ADHD behavior as a brain disorder is so strongly entrenched in the U.S., that any study that might deny or delay the use of medication in the above age 6 years age group might be seen as medically unethical’” (Singh, 2002, p. 579).

ADHD-type. In other words, in many “official” versions of knowledge, these technologies would help give ADHD the status of a differentially diagnosed neurological disorder, and thus the hard-science status of pathological anatomy and true illness.

We can begin to see this shift toward differential diagnosis in the experimental discourse on the ADHD-type through new relations of behavior to the subject. While the later drug experiments were no doubt similarly conducted on “institutionalized delinquent boys . . . rebellious youths who have lost hope” (Molling et al., 1962, p. 76) and other individuals who had been through adjudication processes, the difference is in the intelligibility of the problem, which now evoked seemingly endless possibilities of behavioral abnormality. The norm, in this regard, is no longer simply mapped on top of the sovereign and juridical as it applies to a universal trajectory of human development (the social norm). By the mid-century, as the culmination of a discourse on deviancy and the body that had emerged years before, the technique of “the norm” becomes freely applied to *any and all* human behavior by way of analogy to normal and abnormal physical “functions.” As a result, for example, deficiency in attention can become in and of itself a disorder.

Again, taking a step back, Bradley, and even Still, to the extent that they were concerned with behaviors associated with a lack of moral self-control, articulated behavioral norms specific to the child’s moral development. For this reason the child’s behavior was a problem only *after* adjudication in a juridical apparatus; that is to say, it was the violation of social norms that Bradley was ultimately concerned with, and it was precisely the violation of moral law that was, tautologically, the sign of a lack of moral development. But how could medicine link moral development (which was still in some sense the domain of a sovereign juridical power) to physical development (the domain of a possible psychiatric power)? At first, this gap was bridged through *analogy*, and through tests that would determine and guarantee the analogical relations between behavior, body, and subject.

Through the mid-twentieth century, hyperactivity and deficiency in attention—to the extent that they were themselves medical problems beyond cases of deviancy—were understood to emerge from more obviously physical defects, such as those that occurred in cases of encephalitis or brain contusions or other traumas. Generically, the conditions were called minimal brain dysfunction, or MBD. The pathological behavior of these children—and this idea has its roots in the discourse on idiocy and Still’s conceptualization—was established by analogy to physical defects and traumas that gave the condition its intelligibility; because children with brain damage acted impulsive and hyperactive, it was believed that children with no obvious physical damage might nevertheless be suffering from some analogical “structural damage of central nervous system” (Bradley & Bowen, 1941, p. 93). Or to put this another way, behavioral abnormalities were understood as more or less directly analogous to physical abnormalities, even when no organic lesion could be located (e.g., Eisenberg et al., 1963, p. 432). Treatment also turned on an analogy. As Connors, Eisenberg, and Sharpe stated:

In some respects children with behavior disorders share important common features with the brain damaged child. . . . These children function as though they lacked central cortical inhibitory capacity over their internal drives and the external stimuli impinging upon them. It seems plausible to assume that the clinical improvement in such children when given central stimulants results from some form of heightened cortical activity. Such an increase in central functioning should result in a greater ability to attend to relevant task dimensions, to inhibit irrelevant stimuli, and to inhibit impulsive responding. (1964, p. 15)

This formulation is important because it reveals the clear analogical relation between the behaviors of the child across institutions—deviancy in the school was, by analogy, also a medical

deviancy. And stimulants here are the test that both determines and guarantees these relationships. Making behavior analogous to physiology was also implicitly behind diagnosis.

So it was through analogy that the deviant was linked to the pathological, as norms of behavior were assumed to reflect norms of the body and by proxy the inherited code of the species—morality and law were inscribed in the disciplinary body through the inherited human nature (which, of course, the deviant deviated from). In this way, identity found its unity and singularity in knowledge across the myriad institutions and social spaces—it became possible for the individual to have an identity that both emerges from institutional experience and is transferable (through analogical relations) across the institutions. The role of the analogy is in this way consistent with the disciplinary and panoptic regime of power described by Michel Foucault (1977). In short, disciplinary power is concerned with making individuals willfully adhere to social and moral rules and norms through either the tangible observation or the liminal perception that one is constantly being surveilled. “Discipline ‘makes’ individuals; it is the specific technique of a power that regards individuals both as objects and as instruments of its exercise” (Foucault, 1977, p. 170). In this regime, the body is seen as an object for expert forms of analysis; it must be divided and organized, and as in the school, exercised, trained, and surveilled, in accordance with endless “micro-techniques.” This disciplining served in forming a docile body “that may be subjected, used, transformed and improved,” and the subjectifying practices through a knowledge built on analogical relations across institutions contributed to this (Foucault, 1977, p. 136).

However, the possibilities of a knowledge of deviant identities was limited (from the perspective of psychiatric power) by the necessity of these analogical connections in the pursuit of totalitarian unities; there always had to be in the first instance a breach of normal social behavior in the school and in the family in order for medicine to intervene. At this point, to be medically abnormal, one had to first be socially abnormal, and the power of moral law and custom always preceded medical power.

We can see in the later experimental discourse, however, that the norm from which psychiatry was able to speak on behaviors is set free from moral and juridical codes through a new system of analogies that allowed any behavioral abnormality to be correlated to normal body functions. The unity of the subject would no longer correspond first to judgments made across and in relation to institutions (e.g., through tests, norms, labels), but to the “functionality” of the individual him/herself in accordance with concepts of self-interest (which, of course, relate to institutional norms in a secondary way). And drugs themselves, no longer primarily tools of control that pin the individual to his/her identity, become instrumental in establishing the certainty (and the cause) of pathological behaviors. No longer referring to social deviancy *per se*, these mental technicians were able link identity to the “normal” or expected response to *the drugs themselves*, thus making the analogy itself—the major issue psychiatric power had to overcome to insinuate itself in the institutions—invisible.

After Bradley’s discussion of the “paradox effect” (1931)—and either misinterpreting or recontextualizing Bradley’s own claims—many clinical researchers began to claim (roughly) that if the subject has an abnormal reaction to the medication—if the stimulants tend to sedate—then this becomes proof of an analogical physiological pathology. While, as Adam Rafalovich (2004) points out, scholars have debated the truth of the paradox effect, aligning themselves into pro-stimulant (Conners, 1972; Barkley et al., 1991) and anti-stimulant (Breggin, 1998) positions, the pragmatic position that improvements in behavior owing to a drug regimen suggest a neurological pathology has become far more widely accepted in the psychological discourse.

In interviews with clinicians, Adam Rafalovich (2004) demonstrates that frequently the supposition that ADHD is a neurological disorder is logically linked to, and tautologically

confirmed by, the tendency toward prescribing drugs. We already know that the warrant for using drugs comes in part from a belief that ADHD has a neurological etiology: “Through arguing that medication is the most effective treatment for ADHD, a neurological etiology of the disorder can be levied.” But in addition to this, “the nature of the ADHD ailment can be understood through the child’s response to the medication—an act of reverse engineering that states the treatment defines the ailment it is treating” (Rafalovich, 2004, p. 73). In developing this argument that the positive effects of drugs become the proof of the disorder (and of its etiology)—which has been key in legitimizing ADHD—Rafalovich points back to the work of Leon Eisenberg. Eisenberg makes it clear that, whatever else may be brought to bear in diagnosis, the drugs themselves offer the definitive proof. For example, in the case of one unclear diagnosis, psychologists “had indeed noted real phenomena in this family; their error lay in ascribing causal priority to these issues because of a psychogenic bias . . . but it was the response to the stimulants that ‘settled’ the dispute” (in Wender, 1971, p. x).

Now, instead of immoral behavior in school and external rules and norms serving as the test for a corresponding analogical physical abnormality, medicine finds its own test. It is one that ostensibly offers an external objective standard that could replace the external moral and juridical norms, the supposed persistent violation of which, in behavior disorders, always involves a certain amount of subjective evaluation. In other words, if the drugs improve the behavior of the individual, then it can be confirmed that there is a biological disorder. That is, the effect of stimulant medications is frequently used as a warrant for the existence, and the continued treatment, of the disorder. Because chemicals are a natural constant, as opposed to the suspicions and evaluations of parents and teachers, their proof is objective (if not definitive).

But perhaps most importantly, because psychotropic drugs replace institutional moral and juridical norms as the test for this behavior disorder, the new disorder could be found in anybody and in any behaviors based no longer on these norms but on the reaction to the drug in relation to a synthetic ideal of behavior. The fact that the drugs “work” in making the individual function better is often enough. And in this process, by bridging the gap between behaviors and the body, psychotropic drugs establish an ostensible *causative* relation to appear between brain and behavior, where before (at least in cases where no physical pathology was evident) there was only an analogical relation between behavior and body.

For the first time we can see in this experimental discourse that drugs are no longer understood to capture the body only at the level of its emotions and “lower-order” cognitive functioning, but also at the physical level of muscles and nerves, at the level of functions, and, finally, at the level of identity and self-representation (i.e., higher-order functions). Stimulants are viewed as altering the very ground where behaviors originate, rather than the behaviors themselves. By acting on the very center from which symptoms of ADHD extend, drugs allow for the capture of the body that had been achieved by pathological anatomy but that had remained elusive to psychiatry (Foucault, 2006a, p. 288).

This new perspective was elaborated and validated in part through the new brain scanning technologies, such as EEG, which allowed researchers like Eisenberg to speculate about a relation between abnormal behavior and abnormal brain function (Eisenberg et al., 1963, p. 432). The advantage of neuroscience in articulating behavioral norms was that it opened up a field of corresponding neurological functionings that could serve as the substrate on which the equivalent of pathological “lesions” might appear that could be confirmed by EEG technology. Moreover, EEG research promised to justify the use of drugs by mapping how the drugs work on higher-order brain processes (especially, as with Barkley, the “executive functions”).

Oettinger offers the following metaphor: “Drugs do stabilize the brain and make it function more normally. It might be likened to farming, in that if a farmer throws seed on unprepared

land the yield is minimal. . . . Drug treatment might be thought of as a preparation in which the functioning of the mind as a unit, cognitively, evaluatively, and behaviorally, and as a control for physical activities is improved so that it can then respond in a more nearly normal pattern” (Oettinger, 1971, p. 166). Here we can see clearly that the individual is redefined as an organic “unit,” a move that Oettinger and others can only make by reducing behavior, control, and cognition to brain functioning. We can also see a corresponding shift in the operating metaphors of development, from Still’s metaphor of the child as “savage” (where development simply either proceeds or halts along a preordained trajectory corresponding the fixed nature of the species), to a metaphor of *fecundity and production* (in which the mind acts dynamically with the environment rather than in accordance with the universal measures implied by moral and social norms). Ritalin and other medications, it was hoped, would not only alter behaviors and temporarily remove bad feelings, but actually “prepare” the grounds on which behavior itself is produced.

At the level of discourse, neuroscience begins to map behaviors to brain functions. While there were never any claims toward having crossed the epistemological threshold in this mapping process, the promise was enough. By the 1970s, having moved beyond MBD, there were many studies that sought a neurological etiology for hyperactivity and inattention by studying brain functions using increasingly sophisticated brain scanning techniques. As Russell Barkley notes, although many scientists persisted in trying to make the connection, eventually hyperactive behavior was no longer seen as the result of an overstimulated, hyperactive brain, but rather as result of a brain whose synapses were somehow functioning abnormally (1990, p. 20). Articles begin to appear on pathological brain activity (Wender, 1971). Hastings and Barkley (1978) and Rosenthal and Allen (1978) published important reviews of the literature that concluded that the brain of the ADHD-type was “sluggish” rather than hyperactive.

Once it was understood that brain function was at issue with ADHD, the use of medications was given its final justification as the best way to reach the disorder itself. The seeming “paradox” of drug effects on the ADHD-type could be reconciled—without resorting to an explanation that referenced the euphoric dimensions of the drug—by recognizing that stimulants allowed the brain to function more normally, more naturally. Eventually, with advancements made in computerized imaging of brain activity, neuroscience would play a large role in defining the etiology of the ADHD subject. ADHD becomes an abnormal—which is not to say damaged—functioning of the brain.

This new “body-background” was similar in some respects to the earlier normalized body, except that there was now no need to search for an original abnormality or moral-judicial transgression to explain behavior. Now, for example, instead of referring to the abstract concepts of happiness or discontent, one could reduce these things to the “pleasure center” in the brain and speak of the quality and character of mental representations, and then use EEG technologies as empirical evidence. Hyperactivity, rather than belonging to an organic defect, becomes reducible to the firing of synapses—and therefore can become in and of itself an abnormality.

But the concept of normal neurological functioning allowed not only for the possibility that behaviors could be abnormal without referring to an original deviancy, but also that behaviors that used to be considered abnormal on their face (in reference to moral and juridical law) might indeed be normal depending on the individual context and circumstance. In other words, the field of brain functioning was large and vague enough to serve as a causative substrate on which the large and vague field of behaviors could be mapped, while also (through the new technologies) allowing for the promise of specific relations to be articulated between the two. While the ability to map this field (using current technologies) has been the

source of a great amount of criticism of neuroscience, few question the ontological commitment implied by its opening.

One might claim that this “new” intelligibility amounts only to the extreme logical limit of a line of reasoning set in motion in Still’s early discourse on attention—namely, the ordering of behaviors against a general background of “abnormality” that constitutes the intelligibility of the psychological condition. However, I believe that there is something more in operation here; I believe that normality itself finds its basis in a “pure” discourse (and a technology) that has the effect of opening up *all* behaviors to normalization techniques.

Or again, while before, psychology was able to make distinctions between normal and pathological behaviors only in reference to social norms, the violation of which served as the principle through which all could agree on a “behavior problem,” by adopting the principles of pathological anatomy and applying these principles to the empirical field of “brain functions,” psychology could make claims that behaviors themselves function at the level of the “organism” in accordance with its ability to represent and therefore construct a “self”—a level that medicine could finally reach. As the next section will show, in this move, once behaviors themselves are understood to function in relation to the CNS, it became possible that any behavior could potentially be viewed as a sign of abnormal brain function.

In children, it becomes evident that their primary function, their most natural function, is to learn. This new intelligibility allows Eisenberg to make the “self-evident” claim that “learning is a central evolutionary stratagem for survival” (1976, p. 155). Any behavior that runs against this function is suspect, such that simply not doing well in school—which is not to say being antisocial or deviant—begins to signify a problem.

Because it was shown that drugs could, potentially at least, allow for increased school performance, it became clear in turn that drugs could work as a supplement to somehow induce the natural functioning of the body and the “true” articulation of identity. The supplement is reinscribed at the center. The reasoning was circular, and is most evident in the “paradox effect” ascribed to stimulant medications, now reanimated with new meaning and significance quite different than Bradley’s earlier analogical explanation of the phenomenon. Drugs become a test of the pathology in question. They work not only through the eradication of behaviors, but in the production of entirely new identities that extend from these tests. We see here a kind of inversion of the relationship between the norm, drugs, and identity compared to the relationship we saw with Bradley.

THE BEHAVIOR ECONOMY OF CONTEMPORARY ADHD DISCOURSE

In the late mid-century there appear more signs of a break with the old intelligibility, as behaviors become intelligible purely in relation to their normal occurrence—freed from moral and juridical reference—at the level of the individual. As the basis of the norm shifts from social external standards to the “deep” spaces of individuality, the individual him/herself replaces a universal social reality as the principle of a knowledge of behaviors. Each behavior is given its value no longer in relation to moral systems but relative to an *economy of self* in which each behavior functions. In other words, it is only in relation to the self that a behavior can be valued; precisely, behaviors are valued to the extent that they are efficacious in the various “markets” the individual is invested in. The essential “paradox” that stimulant medications in fact resolve is the paradox of the individual that does not organize the self in keeping with their best interests and, indeed, their “survival.”

In the new economy of the self, the individual makes various investments in and of the self, and behavior is a kind of currency that is valued or devalued in relation to its returns in

the market. A recent quote from professor Robert Resnick in a UPI article illustrates this point perfectly:

“Center-city children and teens are less likely to be picked up as having ADHD in part because some of those behaviors—aggressiveness, being driven to push for yourself—in their culture have survival value,” he said. “Different communities have different thresholds for behavior.” (Wasowicz, 2006)

The value of a behavior is never set, but always fluctuating in relation to a complex matrix of possible outcomes. Indeed, investing in “moral behavior” in a given market may not pay off. The abnormal individual is now one who either fails to recognize and enter into this economy, or one who is unwilling or unable to modulate behavioral investments in relation to their returns. Perhaps most importantly, because of its obvious links to “self-investment,” simply not doing well in school itself becomes a symptom and a dysfunction.

For example, in the mid-twentieth century, there appears in the experimental discourse an increasingly odd litany of diverse behaviors that are surveilled and monitored, such as: humming and making “odd noises,” “nightmares,” “tattling,” “stomach aches,” “is too easily led,” “oversensitive,” and “homosexuality.” By themselves, some of these behaviors violate social norms, while others do not. The point, however, is that none of them signify on their own; behaviors are now only given value in relation to the complex interplay of the volitional self, environmental context, and the particular biological/developmental needs and limitations of the individual. And whereas before only illegal and immoral behaviors were viewed as symptoms of a developmental disorder, where behaviors themselves were the sign and the symptom of the disorder, by the late mid-twentieth century all behaviors become potential symptoms of the malfunctioning organism.

Indeed, behaviors cannot be valued except in reference to a kind of biography of the subject. Diagnosis must now “account for . . . the fluctuation of symptoms across settings and the variability of behavior over time” (Barkley, 1997, p. 13), and is only “official” to the extent that it can make intelligible behaviors in reference to a “deeper” lack of self-management that serves as the principle of their (e)valuation. The great variability of symptom items on the lists themselves suggests the one thing the lists share in common—the fact that *all behaviors* were potentially subject to questioning and plotting along an ordinal scale signifying abnormal self-management or the lack of an enterprising volition. This leads Russell Barkley to conclude that ADHD diagnosis must evaluate not just behaviors, but the subject him/herself “across a number of contexts” (Barkley, 1997, p. 331). Barkley no longer views attention deficit or hyperactivity as the *sine qua non* of ADHD. Behaviors only have value for Barkley in relation to a kind of biography that captures a deep transcendental truth about the subject; in this process, the norm shifts from behavior itself to a new transcendental human nature.

But it is important to consider here significant differences in how diagnosis actually plays out in reality. On the one hand, the effects relative to the processes of subjectification of the ADHD individual are significantly different for adults and children, and it is true that monitoring these behaviors in children bares the trace of the kind of social control critical scholars recognize. And certainly, many ADHD children are “treated” against their will and are made to conform to social norms.

However, even with children, in the processes in which they are made a subject of knowledge and are asked to view themselves as ADHD (although it is clear that many do not embrace the identity), specific deviant behaviors are no longer targeted (at least in the official knowledge) in diagnosis. This being said, it remains clear that any *actual* diagnosis of a child—many, if not most, of which originate with frustrated teachers and parents—potentially

occurs for reasons of behavioral control. In this way, *the concept of social control is still important to understanding how diagnosis actually occurs*; however, while analyzing actual diagnoses is beyond the scope of this paper,¹⁸ it is clear that these social control practices are no longer in conformity with ADHD knowledge, and that the processes of medical diagnosis are changing to meet this new intelligibility. Nothing about my argument here precludes the possibility that overt social control exists or that some children are drugged to control their behavior; however, it is also clear that this kind of social control is “outside” of knowledge and not sufficient to fully understanding the relations between power, knowledge, and the ADHD body.

These extensive lists of behaviors used in ADHD diagnosis mark a new technique in the ordering of behaviors in the discourse in accordance with the quality of self-representation (rather than in accordance with moral/juridical rules). Even in Bradley’s 1941 Bensedrine experiment, the application of the norm relative to changes in behavior was rudimentary. Bradley’s ordering of behaviors of treated children was broken down into only four categories: “Children Who Became Subdued,” “Children Who Became Stimulated,” “Children Who Improved in School,” and “Children Whose Behavior Was Unaffected.” From this, it is clear that Bradley meant only to observe the effects of the stimulant medication on behavior at a very general level rather than to suggest that he was treating some underlying pathology of which any specific abnormality might be a symptom.

The lists of behaviors were used in the diagnosis of a behavior disorder, in determining the effectiveness of treatments, or both. The lists of monitored behavioral symptoms appear across many of the experimental articles; however, there is little standardization of the types of behaviors that constituted a disorder. The common denominator of these symptoms was rather the identification of *any* unexpected or abnormal behavior in the classroom or institution. Indeed, in the research of Connors, Eisenberg, and Barcai in 1967, teachers in two Baltimore elementary schools were asked to list any behavioral “symptoms” on a scale ranging from “not at all” to “very much” in referring children for experimental drug treatment with stimulant medications: “They were asked to provide a list of all children in the fifth and sixth grades who were having significant difficulties in their school work or their classroom behavior. *No restriction was placed on the type of problem to be considered*” (p. 480, my italics).

A study by Molling et al. (1962) observed the behaviors of children divided into a treatment and a control group; although the list of observed behaviors is not provided, the authors specify that they used a scale that “included 61 items pertaining to problems of bodily dysfunction, sexual problems, difficulties in cottage behavior, group participation, and attitudes towards authority” (p. 97). The 61 items, as is typical across the discourse, were ranked ordinally in relation to the severity of the behavioral symptoms. Connors and Eisenberg used a similar 48-item “symptom inventory,” not provided in the article, in their 1963 experiment on institutionalized children—only this time the inventory was issued both before and after the treatment. As is typical in these experiments, in each study the symptom inventory was coupled with other “established” scales and tests, such as the “Children’s Manifest Anxiety Scale” and the “Porteus Maze” test, as well as peer observations, interviews, and other measures. Other experiments, such as Connors, Eisenberg, and Sharpe (1964), used these “performance” measures exclusively (ostensibly in order to supplement findings from studies using behavioral measures).

18. In any event, as McHoul and Rapley note, “The literature on ADHD diagnosis . . . is almost non-existent” (2005, p. 446).

In addition, articles stipulate the need for the construction of case histories of the child's behavioral symptoms and "the evaluation of the patient as an entity" (Oettinger, 1971, p. 165). Oettinger (1971) insisted that "[o]riginal evaluation should involve a thorough history with emphasis on time of onset, type of behavior first noted, characteristics of behavior at the time of evaluation" (p. 165); he was one of the first to argue that behavior should be monitored across different institutions (i.e., family, school, and physician's office). This is because the *specific* behaviors themselves become less and less important than the individual "underneath" them, which gives the behaviors their intelligibility. Significantly, in addition to a rigorous battery of tests for organic malfunction, these authors made overt claims for the importance of observing the "soft signs" which are "more productive and more educational" (Oettinger, 1971, p. 165).

At this point some might object that the experiments reviewed above mark a rather isolated and idiosyncratic epic in psychiatric knowledge, one moreover fraught with serious ethical concerns. And it is true that there was a great amount of hand-wringing in the discourse (see Freeman, 1966, 1970, and 1971), owing to popular criticism of these studies and their dubious scientific rigor. But for the purposes of the genealogy, what is important here is not the efficacy of the experiments but the intelligibility they represent; it scarcely matters the extent to which these studies were able to cross the epistemological threshold as long as they continued to make sense in their own terms as a system of meaning that existed on top of a given set of social relations and practices. While certain claims in the discourse were clearly premature (although by comparison with the contemporary discourse the types of claims being made seem austere), the issue cannot be reduced to claims that the behaviors being studied were just "normal aspects of growing up" that these researchers were trying to control. To phrase the problem this way, as is so often done, is already to have lost the argument.

Further, the meaningful context for such lists of behaviors would have been unthinkable during Still's era, just 50 years before. It needs to be restated, however, that this shift could only occur in the first instance by holding an abstract ideal of what "normal" human nature is, such that even if the epistemological threshold were to be crossed (which it hasn't) by matching behavior-symptoms to a corresponding mental pathology, the possibility of this knowledge would always be based on the essential tautology that makes the human being both the transcendental source and empirical location of meaning (Foucault, 1970). Moreover, these lists of behaviors appear because behavior itself, at least any *specific behavior*; is no longer important. What *is* important is determining the effects of medication on the "soul" of the organism. The question becomes not "what specific behaviors are associated with this disorder?" but rather, "has medication made this individual's behavior more productive by allowing the individual to manage all of his/her behaviors?" If the answer is yes, then medicine can assume that there was a pathology of brain function all along; it is the fundamental norm of a universal human nature to be a self-managing and enterprising individual.

Ultimately, the function of the norm itself has shifted from the limited construct of a social/moral behavioral norm to a "deep" norm of human nature that applies to any behavior whatsoever. Whereas before one was normal with respect to an ontological discourse based on the absolute construct of morality and the universally applicable social contract, now, freed from this discourse, science bases its new mode of seeing and knowing on nothing but a discourse on human behavior itself. I believe that this was the final transformation or rupture in the intelligibility of the human body during the twentieth century. In the shifts within the discourse on the ADHD-type, we can see a compelling example of an entirely new, nonreciprocal, intelligibility or *dispositif* of the body that emerged over the course of the century around the enterprising and self-interested individual, *Homo economicus*.

CONCLUSION

While ADHD is conventionally understood to have emerged through either scientific progress or diagnostic expansion from Still's moral idiocy and minimal brain dysfunction (MBD) research, the possibility of ADHD as we know it owes more to the techniques that emerged with human-subject drug research that occurred during the mid-twentieth century. It may be tempting to say, as so many have, that these new classifications of behaviors represent a continuing annex of the social domain by the medical industry and an attempt by the school and family institutions to eliminate prohibited behaviors through "drugging." But this kind of analysis will only get us so far.

As a result, the disorder is no longer even fundamentally about hyperactivity or attention—and it is widely accepted that ADHD-types pay perfect attention to some things and not enough to other things—so much as something much "deeper." A new organizing principle, based no longer on moral/judicial rules but on the individual subject, emerges that will make behaviors intelligible. By problematizing behavior in new ways nonreciprocal with Still's discourse on "moral idiocy," ADHD is no longer construed through the ability to represent a universal moral truth, but rather through an ability to create and regulate one's self as a self-interested individual. This shift marks a corresponding shift in the intelligibility of the body, where the developmental body of recapitulation theory—with all of the eugenic implications of "normal" social and moral adjustment and the savage/civil binary—is replaced by a body of "functions."

The production of new "functional" behaviors and identities through medication and medicalization, as well as the sheer volume and persistence of this phenomenon, occurs at the point where the body and its biological destiny are finally freed from the moral-judicial implications of the body that recapitulates the development of Man from a savage to lawful, moral, and sovereign individual. The goal is no longer to identify deviant individuals or to control deviant behaviors—both of which extend from an intelligibility that ascribes absolute (moral) value to behaviors—but to produce new possibilities of behavior and identity by changing the ethical relationship Man has with him/herself. It is in the terms of these processes of subjectification that I believe "drugging" must be viewed in order to understand how these practices are widely accepted (and desired) by individuals.

ACKNOWLEDGMENTS

This work owes much to years of support and guidance from Vivian Vasquez. I can't thank her enough. I would also like to thank Richard Sha for his moral and intellectual support. In addition, I am grateful to Ian Nicholson and three anonymous reviewers for their valuable feedback.

REFERENCES

- Baker, B. M. (2001). *In perpetual motion: Theories of power, educational history, and the child*. New York: Peter Lang.
- Baker, B. (2002). *The hunt for disability: The new eugenics and the normalization of school children*. New York: Teachers College Press.
- Barker, K. (2002). Self-help literature and the making of illness identity: The case of fibromyalgia syndrome. *Social Problems*, 49, 279–300.
- Barker, K. (2008). Electronic support groups, patient-consumers, and medicalisation: The case of contested illness. *Journal of Health and Social Behavior*, 49, 20–36.
- Barkley, R. (1990). *Attention-deficit hyperactivity disorder*. New York: The Guilford Press.
- Barkley, R. (1997). *ADHD and the nature of self-control*. London: Guilford Press.

- Barkley, R. (2006). The relevance of the Still lectures to attention-deficit/hyperactivity disorder: A commentary. *Journal of Attention Disorders*, 10, 137–140.
- Barkley, R., DuPaul, G., McMurray, M. (1991). Attention deficit disorder with and without hyperactivity: Clinical response to three dose levels of methylphenidate. *Pediatrics*, 87, 519–531.
- Barkley, R., Murphy, K., & Fisher, M. (2008). *ADHD in adults: What the science says*. New York: The Guildford Press.
- Bradley, C. (1950). Benzedrine and Dexedrine in the treatment of children's behavior disorders. *Pediatrics*, 5, 24–37.
- Bradley, C., & Bowen, M. (1941). Amphetamine (Benzedrine) therapy of children's behavior disorders. *American Journal of Orthopsychiatry*, 11, 92–103.
- Breggin, P. (1998). *Talking back to Ritalin*. Monroe, ME: Common Courage Press.
- Charland, L. (2004). A madness for identity: Psychiatric labels, consumer autonomy, and the perils of the Internet. *Philosophy, Psychiatry, Psychology*, 11, 335–349.
- Conners, C. (1972). Psychological effects of stimulant drugs in children with minimal brain dysfunction. *Pediatrics*, 49, 702–708.
- Conners, K., & Eisenberg, L. (1963). The effects of methylphenidate on symptomatology and learning in disturbed children. *American Journal of Psychiatry*, 120, 458–464.
- Conners, K., Eisenberg, L., & Barcai, A. (1967). Effect of dextroamphetamine on children: Studies on subjects with learning disabilities and school behavior problems. *Archives of General Psychiatry*, 17, 478–485.
- Conners, K., Eisenberg, L., & Sharpe, L. (1964). Effects of methylphenidate (Ritalin) on paired-associate learning and porteus maze performance in emotionally disturbed children. *Journal of Consulting Psychology*, 28, 14–22.
- Conrad, P. (1975). The discovery of hyperkinesia: Notes on the medicalisation of deviant behavior. *Social Problems*, 23, 12–21.
- Conrad, P. (1976). *Identifying hyperactive children: The medicalisation of deviant behavior*. Lexington, MA: Lexington Books.
- Conrad, P. (1979). Types of medical social control. *Sociology of Health & Illness*, 1, 1–11.
- Conrad, P. (2005). The shifting engines of medicalization. *Journal of Health and Social Behavior*, 46, 3–14.
- Conrad, P. (2007). *The medicalization of society: On the transformation of human conditions into treatable disorders*. Baltimore, MD: The Johns Hopkins University Press.
- Conrad, P., & Potter, D. (2000). From hyperactive children to ADHD adults: Observations on the expansion of medical categories. *Social Problems* 47, 559–582.
- Conrad, P., & Schneider, J. (1992). *Deviance and medicalization: From badness to sickness*. Philadelphia: Temple University Press.
- Dreyfus, H., & Rabinow, P. (1982). *Michel Foucault: Beyond structuralism and hermeneutics*. Chicago: University of Chicago Press.
- Eisenberg, L. (1976). Future threats or clear and present dangers? *The School Review* 85, 155–165.
- Eisenberg, L., Gilbert, A., Cytryn, L., & Molling, P. (1960). The effect of psychotherapy alone and in conjunction with perphenazine or placebo in the treatment of neurotic or hyperkinetic children. *American Journal of Psychiatry*, 117, 1088–1093.
- Eisenberg, L., Lachman, R., Molling, P., Lockner, A., Miselle, J., & Conners, K. (1963). A psychopharmacologic experiment in a training school for delinquent boys: Methods, problems, findings. *American Journal of Orthopsychiatry*, 33, 431–447.
- Fitzgerald, T. (2009). Controlling the black school-age male. *Urban Education*, 44, 225–247.
- Foucault, M. (1970). *The order of things: An archaeology of the human sciences*. New York: Random House.
- Foucault, M. (1977). *Discipline and punish: The birth of the prison* (A. M. Sheridan Smith, Trans.). New York: Random House.
- Foucault, M. (1998). *Aesthetics, method, and epistemology* (J. D. Faubion, Ed.). New York: The New Press.
- Foucault, M. (2003). *Abnormal: Lectures at the Collège de France 1974–1975* (V. Marchetti & A. Salomoni, Eds.; G. Burchell, Trans.). New York: Picador.
- Foucault, M. (2006a). *Psychiatric power: Lectures at the Collège de France 1973–1974* (J. Lagrange, Ed.; G. Burchell, Trans.). New York: Palgrave Macmillan.
- Foucault, M. (2006b). *History of Madness* (J. Khalfa, Ed.; J. Murphy & J. Khalfa, Trans.). London: Routledge.
- Foucault, M. (2008). *The birth of biopolitics: Lectures at the Collège de France 1978–1979* (M. Senellart, Ed.; G. Burchell, Trans.). New York: Palgrave MacMillan.
- Fitzgerald, T. (2009). Controlling the black school-age male. *Urban Education*, 44(2), 225–247.
- Freeman, R. (1966). Drug effects on learning in children: A selective review of the past thirty years. *Journal of Special Education*, 1, 17–44.
- Freeman, R. (1970). Review of medicine in special education: Another look at drugs and behavior. *Journal of Special Education*, 4, 377–385.
- Freeman, R. (1971). Review of medicine in special education: Medical-behavioral pseudorelationships. *The Journal of Special Education*, 5, 93–99.
- Hacking, I. (1991). A tradition of natural kinds. *Philosophical Studies*, 61, 109–126.
- Hacking, I. (1999). *The social construction of what?* Cambridge, MA: Harvard University Press.
- Hallowell, E. M., & Rately, J. J. (1995). *Driven to distraction: Recognizing and coping with attention deficit disorder from childhood through adulthood*. New York: Simon and Schuster.

- Hastings, J., & Barkley, R. (1978). A review of psychophysiological research with hyperkinetic children. *Journal of Abnormal Child Psychology*, 6, 413–447.
- Illich, I. (1976). *Medical nemesis*. New York: Pantheon.
- Lakoff, A. (2000). Adaptive will: The evolution of attention deficit disorder. *Journal of the History of the Behavioral Sciences*, 36, 149–169.
- Lemke, T. (2001). The birth of bio-politics: Michel Foucault's lecture at the Collège de France on neo-liberal governmentality. *Economy and Society*, 30, 190–207.
- Mayes, R., Bagewell, C., & Erkulwalter, J. (2009). *Medicating children: ADHD and pediatric mental health*. Cambridge, MA: Harvard University Press.
- Mayes, R., & Horwitz, A. (2005). DSM-III and the revolution in the classification of mental illness. *Journal of the History of the Behavioral Sciences*, 41, 249–267. DOI:10.1002/jhbs.20103.
- McHoul, A., & Rapley, M. (2005). A case of attention-deficit/hyperactivity disorder diagnosis. *Discourse & Society*, 16, 419–449.
- Mental Health in the United States: Prevalence of Diagnosis and Medication Treatment for Attention-Deficit/Hyperactivity Disorder. (2003). *Morbidity and Mortality Weekly Report*, 54, 842–847.
- Molling, P., Lockner, A., Sauls, R., & Eisenberg, L. (1962). Committed delinquent boys: The impact of pephazine and of placebo. *American Journal of Orthopsychiatry*, 7, 96–102.
- Oettinger, L. (1971). Learning disorders, hyperkinesis, and the use of drugs in children. *Rehabilitation Literature*, 32, 162–167.
- Popkewitz, T., & Brennan, M. (1998). Restructuring of social and political theory in education: Foucault and a social epistemology of school practices. In T. Popkewitz & M. Brennan (Eds.), *Foucault's challenge: Discourse, knowledge, and power in education* (pp. 3–35). New York: Teachers College Press.
- Rafalovich, A. (2001). The conceptual history of attention deficit hyperactivity disorder: Idiocy, imbecility, encephalitis and the child deviant, 1877–1929. *Deviant Behavior* 22, 93–115.
- Rafalovich, A. (2004). *Framing ADHD children: A critical examination of the history, discourse, and everyday experience of attention deficit/hyperactivity disorder*. Latham, MD: Rowman and Littlefield-Lexington Books.
- Rafter, N. H. (1998). *Creating born criminals*. Chicago: University of Illinois Press.
- Reissman, C. (1983). Women and medicalization: A new perspective. *Social Policy*, 14, 3–18.
- Rose, N. (1996). *Inventing our selves: Psychology, power, and personhood*. Cambridge, UK: Cambridge University Press.
- Rose, N. (1999). *Powers of freedom: reframing political thought*. Cambridge, UK: Cambridge University Press.
- Rose, N. (2006). Disorders without borders? The expanding scope of psychiatric practice. *BioSocieties*, 1, 465–484.
- Rosenthal, R., & Allen, T. (1978). An examination of attention, arousal, and learning dysfunctions of hyperkinetic children. *Psychological Bulletin*, 85, 689–715.
- Schneider, H., & Eisenberg, D. (2005). Who receives a diagnosis of attention-deficit/hyperactivity disorder in the United States elementary school population? *Pediatrics*, 117, 601–609.
- Schrag, P., & Divoky, D. (1975). *The myth of the hyperactive child and other means of child control*. New York: Pantheon.
- Singh, I. (2002). Bad boys, good mothers, and the “miracle” of Ritalin. *Science in Context*, 15, 577–603.
- Still, G. (1902). Some abnormal psychical conditions in children (Lecture I). *The Lancet*, 1, 1008–1012.
- Still, G. (1902). Some abnormal psychical conditions in children (Lecture II). *The Lancet*, 1, 1077–1082.
- Timimi, S. (2002). *Pathological child psychiatry and the medicalization of childhood*. New York: Brunner-Routledge.
- Timimi, S. (2005). *Naughty boys: Anti-social behaviour, ADHD and the role of culture*. London: Palgrave.
- Timimi, S., & Taylor, E. (2004). ADHD is best understood as a cultural construct. *British Journal of Psychiatry*, 184, 8–9.
- Wasowicz, L. (2006, February 15). *Ped med: Drawing the ADHD line*. United Press International. Retrieved December 19, 2009, from http://www.upi.com/NewsTrack/Health/2006/02/15/ped_med_drawing_the_adhd_line/6812/.
- Wasserman, D. T., & Wachbroit, R. S. (2001). *Genetics and criminal behavior*. Cambridge, UK: Cambridge University Press.
- Wender, P. (1971). *Minimal brain dysfunction in children*. New York: Wiley Interscience.