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The Cultural Production of a Pharmaceutical Market: The Making of ADHD

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The pharmaceutical industry has grown into a global market worth nearly $1 trillion. How are we to make sense of this sudden upsurge? As I argue, the rising demand for pharmaceuticals must be contextualized within a culture of consumption, where health practices are yoked to individuals' purchasing habits. Through a case study of attention-deficit hyperactivity disorder (ADHD) and behavior-controlling drugs affecting six million children in the United States, this analysis shows how discourses of prevention and the quick fix originated in the school, family, and medical establishment; shape consumer demand; and are employed effectively in pharmaceutical advertising. This article concludes that the demand for pills is constructed by entangled discourses that induce new ways of relating to health and illness.

Keywords: pharmaceutical markets, ADHD, risk prevention discourses, education policy, moral panic

In February 2012, Shire Pharmaceuticals launched a campaign to promote the use of Vyvanse, a drug it would advertise for the treatment of adult attention-deficit hyperactivity disorder (ADHD). Shire's campaign is part of a growing market for health and illness, in which individual well-being is yoked to consumption. Moreover, it represents one such strategy for producing consumer demand that drives pharmaceutical markets. This campaign, and the emergence of new markets for health and illness, also signals the ongoing medicalization of society.

Medicalization refers to a process through which social problems and behavioral issues are addressed as symptoms of a medical disorder and "treated" with chemical substances on the basis of a diagnosis. In the decades following World War II, the political economic institution of medicine grew rapidly, capturing the attention of sociologists and anthropologists. Researchers have typically taken a social constructionist approach to examining medicalization processes, where the focus was on the construction of new medical labels that underlies the expansion of medical authority (Conrad, 1975; Zola, 1972). Many of the earliest studies assumed physicians were the major players behind medicalization, where the growing influence of medical expertise was equated with "medical imperialism" (Illich, 1976). This approach failed to recognize the complexity of medicalization processes, which are not simply the result of medical colonization but are fueled by multidirectional forces and interactions among patient organizations, social movements, corporate entities, and individual patients.

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More recently, researchers studying medicalization have theorized a "second transformation" in U.S. medicine (Starr, 1982), focusing on how the social and cultural aspects and meanings of medicine have been extended through a process of biomedicalization. According to Clarke, Shim, Mamo, Fosket, and Fishman (2003), biomedicalization describes "a shift from enhanced control over external nature (i.e., the world around us) to the harnessing and transformation of internal nature (i.e., biological processes of human and non-human life forms) often transforming 'life itself'" (p. 164). Put another way, biomedicalization differs from medicalization in its recognition that medical interventions are no longer imposed only by medical professionals but also function as "technologies of the self"—forms of self-government and self-regulation that individuals apply to themselves (Foucault, 1988; Rose, 1989, 2007). Now more than ever, biomedicine is capable of transforming how we understand ourselves as biological individuals.

One of the key processes that characterizes the shift from medicalization to biomedicalization is the changing political economic landscape of medicine. As medicine becomes increasingly privatized and commercialized, our understanding of what constitutes health is increasingly conditioned by commercial and market interests. According to Moynihan, Heath, and Henry (2002), some forms of medicalizing everyday life are now better thought of as "disease mongering," when the boundaries of treatable conditions are expanded in order to grow markets for those who manufacture and sell treatments. None have mastered the art and practice of "selling sickness" as have pharmaceutical companies.

An outpouring of recent work has addressed the role of the pharmaceutical industry in medicalization (Dumit, 2012; Healy, 1997, 2012; Lakoff, 2006; Moynihan & Cassels, 2005; Rose, 2004; Tone & Siegel-Watkins, 2007). As Joe Dumit discusses in his ethnography, Drugs for Life (2012), pharmaceutical companies play a major role in defining health and illness. Medical expertise has diminished in the wake of the growing influence and profitability of the pharmaceutical industry. This "disempowerment of the doctor" is compounded by pharmaceutical marketing discourses that create and maintain "pharmaceutical facts," which enter into doctors' discussions with their patients, ensuring that "official" health matters—diagnosis, prognosis, treatment recommendations, and so on—will be oriented toward the chronic consumption of pharmaceutical products (Dumit, 2012).

I propose to link a medicalization approach, which focuses on the cultural construction of mental illness, with an emphasis on the key economic actors and processes that drive the production of medical diagnoses.

When we talk about "big pharma," we are referring to a global market that, in 2013, was worth nearly $1 trillion (IMS Institute for Healthcare Informatics, 2013). As any other market does, the pharmaceutical industry depends on consumer demand for its products—namely, pills—in order to grow. But how are we to make sense of this growth, resulting from an upsurge in consumer demand for pills? Where does the demand for pills originate? What drives it? As I argue, the rising demand for pills is fueled by a set of entangled discourses about health and illness. These discourses provide the necessary, but not sufficient, conditions for the creation of a market for health and illness: Consumption, production, and market domination all have a role to play in the construction of the medical marketplace and the production of a social context in which "disorder" itself acquires cultural and economic value.

I focus on two distinct yet interrelated discourses that change the way we conceive of and relate to health and illness: the discourse of prevention, as a popular approach to health and illness; and an approach to the treatment of illness and the achievement of health ideals by way of a quick fix. Although discourses of prevention and the quick fix are by no means the only ones available for thinking about contemporary health and illness, I use them to illustrate how medicalization functions, while arguing that these discourses interact in ways that make possible the extension of medicalization beyond the medical marketplace and into society. I ground my analysis in a case study of the so-called epidemic of attention-deficit hyperactivity disorder, or ADHD, which can be examined as a development within the medicalization of society, in the context of a consumer culture. Although my analysis is specific to ADHD in its U.S. context, patterns of growth in countries outside the United States (the United Kingdom, Australia, and—most recently—Japan) suggest this analysis accounts for similar processes occurring in other countries with different health systems.[1]

Over the past decade, researchers in the social sciences, psychology, and psychiatry have carved out a space for critical examination of the phenomenon of ADHD. Psychiatrist Peter Breggin (2001) has long questioned the validity of the ADHD diagnosis, arguing that the label is a mechanism of social control over children. Similarly, Sami Timimi (2002, 2005; Timimi & Leo, 2009) has engaged with the production of ADHD from a critical psychiatric perspective, arguing that ADHD is the result of an ever-widening medicalization of childhood and of connections forged between medical practitioners, pharmaceutical companies, patient support groups, and lobbying efforts (Timimi & Leo, 2009). Sociologist Andrew Lakoff (2000) has likewise investigated the evolution of ADHD, focusing on the social and historical contexts from which ADHD emerged. According to Lakoff, a driving force of the evolution of ADHD was psychiatry's development of the standardized questionnaire, which made the disorder easy to diagnose and reproduce. The reproducibility of persons with ADHD also helped solidify an "ADHD identity" and community. In doing so, ADHD "bound together the various actors—patient and family support groups, physicians, school administrators, managed-care administrators, and pharmaceutical company representatives—whose alliance successfully made temperament and behavior a matter of health" (Lakoff, 2000, p. 166). What these accounts suggest is that the evolution of ADHD is not attributable to any one force or factor but has been variously shaped and propelled through the interactions among numerous actors, practices, and processes. Taken together, these have contributed to making the lives of certain individuals amenable to biomedical logics, chemical interventions, and commercial interests.

The growing phenomena of ADHD is part of a process of medicalization, but one in which the meaning of health is yoked to the production and consumption of pharmaceutical products. Furthermore, the consequences of this trend extend beyond the medical marketplace into the discursive and institutional construction of the pill society—a concept that will be developed in this article. The nucleus of the pill society is made up of medicalizing discourses and the material effects of their influence over individual bodies and populations.

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[1] For a discussion of growing rates of ADHD in the United Kingdom, see Rose (2004), Singh (2007), and Timimi and Leo (2009). For discussion of ADHD in the Australian context, see Kean (2009).

ADHD: Diagnosing Disruptive Childhood

Attention-deficit hyperactivity disorder is defined by the American Psychiatric Association in the Diagnostic and Statistical Manual for Mental Disorders (DSM) as a neurodevelopmental disorder (American Psychiatric Association [APA], 2013). It is most commonly applied to children (mostly boys, who are diagnosed at least twice as often as girls) who exhibit particular behavioral problems and learning difficulties (Visser et al., 2013). ADHD is often diagnosed by pediatricians and general practitioners based on a symptomology of behaviors—including overactivity (excessive energy, restlessness, etc.), a shorter-than-normal attention span, and recklessness or impulsivity. The medical definition—and, by extension, the diagnosis—of ADHD is based on the observation of a constellation of indicators of such "abnormal" behaviors. Although the ADHD label dates back to 1980, the medicalization of disruptive childhood behavior has a much longer history—beginning a century earlier.

In 1902, during a series of lectures to the Royal College of Physicians in London, George Frederic Still discussed an "abnormal defect of moral control in children" who had no physical impairments but who displayed an abnormal insensitivity to punishment. Still described 20 cases of children who demonstrated such "defects" (Still, 1902). Then, in 1937, Charles Bradley found that the behavior of such children could be altered effectively with amphetamine drugs. Bradley noted the somewhat paradoxical workings of these drugs, which should have stimulated the children who took them, but instead seemed to sedate them (Conrad & Schneider, 1980).

Throughout the next decade, ADHD-like symptoms were typically associated with brain damage. And by the 1960s, dozens of diagnoses related to childhood behavioral problems were collapsed into a single category of "minimal brain dysfunction," or MBD, which was thought to result from organic lesions in the brain (APA, 1968).

In 1980, the DSM-III replaced the MBD label with ADHD (APA, 1980). The definition of ADHD in the DSM-III marks a key turning point in its conceptualization. Rather than stemming from organic brain lesions or a moral defect, the site of causality of ADHD was relocated in the neural circuity of the brain. Disorderly behaviors, previously thought to result from a patient's history, were rearticulated as psychiatric symptoms resulting from dysfunction in the brain's electrochemical circuits. As Andrew Lakoff (2000) points out, this particular conceptualization is linked to the rise of the "neural" in the psychiatric sciences and the American turn toward a biomedical model of psychiatry. This shift in psychiatric models supported the rise of the ADHD diagnosis and how it would be conceived of and treated as a biological condition.[2]

Today, more than six million U.S. children are diagnosed and nearly four million are prescribed ADHD medications (Visser et al., 2013).[3] These medications, amphetamine or methylphenidate-based drugs

[2] It may also be the case that this ontological shift prompted a transformation in the protocol for treating ADHD: A chemical problem, as it were, suggests a chemical solution.

[3] The worldwide prevalence estimates of ADHD among people age 18 and younger are heterogeneous. In a systematic review of prescription databases, Polanczyk, Silva, Bernardo, Biederman, and Rohde (2007) estimated that the prevalence of ADHD was about 5.29% of the global population. Another article by

such as Ritalin and Adderall, occupy the same scheduled class as the street drugs opium, oxycodone, and cocaine, largely because of their highly addictive properties and severe side effects. Yet, despite the obvious health risks that accompany them, the number of children (including thousands of toddlers) taking ADHD medications on a daily basis is rapidly increasing (Schwarz, 2014).

Diagnosing Adult ADHD

The number of Americans taking ADHD medication increased 36% over the period 2008 to 2012, totaling 5 million individuals in 2012 (Express Scripts, 2014). Interestingly, the greatest increase in ADHD medication use during this five-year period was seen among adults, especially among women ages 26 to 34, whose diagnostic rates climbed 85%.

Even though the existence of adult ADHD has been acknowledged in clinical and scientific papers dating back nearly 50 years (Mendelson, Johnson, & Stewart, 1971), the condition was not widely recognized in the professional field of adult psychiatry until the mid-1990s (Barkley, 1994; Spencer et al., 1995; Wender, 1995).

To tell the story of the history of adult ADHD we can begin in 1995, when Paul Wender developed the first set of explicit criteria to diagnose the condition. Wender saw that the current diagnostic criteria for ADHD were not appropriate for adult patients, and, because of this inadequacy, it was also likely that adult ADHD was seriously underdiagnosed (Wender, 1995). To remedy this problem, he developed diagnostic criteria and a rating scale to aid in the retrospective diagnosis of teenagers and adults.

Wender's scale, and the criteria he recommended, quickly became part of standard practice for clinicians and investigators (Barkley, Murphy, & Fischer, 2010). As the 20th century came to a close, it appeared that the psychiatric community had largely accepted the legitimacy of adult ADHD, and were attempting to estimate its prevalence (Heiligenstein, Conyers, Berns, Miller, & Smith, 1998; Murphy & Barkley, 1996; Weyandt, Linterman, & Rice, 1995). As adult ADHD became more widely recognized among the psychiatric community, it also gained traction in the popular press, with the publication of Hallowell and Ratey's Driven to Distraction (1994), which became a best-selling book and helped popularize the disorder (Barkley et al., 2010).

Concurrently, several pharmaceutical manufacturers began developing new medications and testing them in thousands of adults until, in 2013, adult ADHD was officially incorporated into the DSM-V (APA, 2013). The integration of adult ADHD reconceptualized the disorder as a chronic mental illness, with a new symptom threshold developed specifically to "facilitate application across the lifespan" (APA, 2013). This recent expansion of ADHD's diagnostic criteria represents a key step in the process of medicalization, which broadens the scope of medical jurisdiction. In the case of adult ADHD, where 67% of diagnoses are accompanied by the prescription of stimulant medications (O'Connell, 2013), medicalization also enables the expansion of a pharmaceutical market for ADHD.

The Administration of Disorder

Scheffler, Hinshaw, Modrek, and Levine (2007) found that spending on ADHD medications in the United States alone makes up about 92% to 95% of total global expenditures.

The reality of ADHD is that it is not only a medical category that gets attached to individuals but also one that entails the prescription of certain behaviors and routines.

Medication is central to the governing ability of medicine, and pills themselves have become a forerunning technique for administering disorder in everyday life. The 2000s saw a 20% decrease in the use of non-pharmaceutical-based mental health treatments, along with a 13% increase in the proportion of Americans receiving outpatient care who are now being treated with drugs alone (Olfson & Marcus, 2010). All this is to say that outpatient mental health care is being redefined along the lines of psychopharmacology. Now more than ever, medical authority expands within the contours of the medical marketplace, where it is defined by relations of supply and demand and is reliant on consumer's demand for pills. That said, it is important to point out that medicalization also relies on the active participation of individual patients who are called upon to act as agents of their own health. Today's patients are those who willingly self-monitor and self-regulate through their routine consumption of health products.

"Prevention" and the "Quick Fix"

The construction of a market for health and illness (in general) and a market for ADHD (in particular) becomes possible through the production and circulation of discourses that create demand for pharmaceutical products. There are two separate, but interrelated, discourses that I suggest are major drivers of the medicalization process. These discourses, which I refer to as prevention and the quick fix, transform the way we conceive of, relate to, and engage practically with health and illness.

The quick fix has both discursive and material dimensions: As a discourse, it is framed by the widespread assumption that pharmaceutical treatments are just as—or perhaps even more—effective than other kinds of interventions such as physical therapy, cognitive behavior therapy and other forms of psychotherapy. In addition to its discursive dimensions, the quick-fix approach to health and illness should also be examined in its materiality, where it is reproduced through the ongoing manufacture and prescription of pills, material objects that find their way into medicine cabinets, the school nurse's office, and so on.

Separate from, but related to, the discourse of the quick fix is prevention. This discourse fundamentally changes the ways in which individuals are encouraged to think of themselves in terms of their own health and illness. A culture of prevention—where illness is defined as an always-present threat—encourages its members to think of themselves as potential patients, whose pursuit of health necessarily involves diligent self-monitoring, self-diagnosing, and self-medicating. Moreover, the preventative approach to health is such that the threat of illness must be engaged and combatted prior to any diagnosis. Thus, the discourse of prevention, which suspends illness over the time horizon as an always-looming threat, constructs health practices through the patient's routine self-problematization.

It is important to note that the representation of health and illness that gets constructed through prevention and quick-fix discourses does not necessarily align with observed practices. It is certainly the case that many individuals (such as children) do not play the role of actively self-problematizing consumer-patients. Even so, the growing profitability and influence of big pharma—which owes much to the lobbying

organizations, patient advocacy groups, and professional bodies that continue to fund and support it—intensifies the persuasive power of these discourses.

The combination of prevention and quick-fix discourses helps construct a market for health and illness through which demand is created by the constant self-diagnosing and self-medicating activities of individual consumer-patients. In the case of ADHD, the child who grows into an ADHD adult is produced as a biomedical subject who has been socialized in the art and practice of constant self-regulation and who achieves health and well-being through his or her purchasing habits.

Constructing a Market for ADHD

ADHD evolved as part of a larger discourse about childhood discipline and the problem of how to punish children acting out at home and in school. As Martha Wolfenstein (1951) and later Henry Jenkins (1997, 1998) have noted, postwar America experienced a shift from a culture of punishment to one based largely on permission. The shift from punishment to permission was based partially on the expansion of the consumer marketplace and the embrace of pleasure, which represented a drastic departure from industrial culture's emphasis on production, exercised through strict discipline and regimentation. This shift from production to consumption proved to be a major force in child-rearing practices which, in the decades following World War II, were guided by permissive themes that surfaced in parenting magazines, advice manuals, and family television programming (Jenkins, 1997).

Concurrently, the medicalization of child abuse also played a role in shifting the disciplinary paradigm, since parents and teachers who might have used corporal methods of punishment were now in danger of being pathologized as child abusers (Scheper-Hughes & Stein, 1998), and were therefore pressured to turn to new ways of regulating order within their homes and classrooms. In the culture of permission, medication emerges as one acceptable method of discipline. Rather than turning to the ruler or the rod, adults could turn instead to pills as a benign intervention for managing the disorderly conduct of children without fear of stigmatization. The discourse and practice of permissive control provides one necessary condition for the medicalization of childhood, where troublesome behavior becomes defined and treated as a medical condition rather than a strictly social problem. In the case of ADHD, behaviors such as defiance, distractedness, fidgeting, talking out of turn, and other social impairments are conceptualized in terms of a neurodevelopmental disorder resulting from a chemical imbalance in the brain.

The child who is diagnosed and medicated as having ADHD is not only an object of medical knowledge and administration; he has a role to play in the construction of a medical market where he functions as what Joy Fuqua has called a "consumer-patient" (Fuqua, 2012). He is a consumer-patient insofar as his patient status is tethered to consumption practices, and his quality of life (his ability to "get well") depends on his continued engagement (whether active or by proxy) with the pharmaceutical industry. Indeed, children are the fastest growing segment of the medicalized population, with behavior-controlling psychotropic drugs having become the most popular medications for this age group, eclipsing both antibiotics and asthma treatments (Conrad, 2005). Because the medicalization (and medication) of childhood constitutes a major force for medicalization in general, analyzing what has typically been

understood as a disorder of childhood (at least, originally) helps us understand the overall process of medicalization.

The Problem With Boys

If we consider ADHD exemplary of the medicalization of childhood, as Sami Timimi has argued (Timimi, 2002, 2005; Timimi & Leo, 2009), we must also consider that the medicalization of childhood is not a ubiquitous process but is, rather, a process of selective interpretation and uneven application. In the case of ADHD, it is important to ask whose childhood is being medicalized: It has been the case historically that ADHD is not only a disorder of childhood but specifically of male childhood. According to a report published by the Centers for Disease Control and Prevention (2013), boys are at least twice as likely as girls to be diagnosed with ADHD (Visser et al., 2013). An estimated 15.1% of boys ages 4 to 17 have ADHD, compared to 6.7% of girls. Jill Fisher and others (2007) have explored the gendered construction of the medical institution and the ways that medical practices can be thought to reflect gender expectations of bodily "abnormality" in a given society at a particular point in time. Examining the cultural production of ADHD necessitates addressing the way this diagnoses has been historically gendered.

The surge in ADHD diagnoses throughout the 1980s and 1990s coincided with a gendered discourse about boys' lackluster performance in school, particularly in areas traditionally thought of as "girls' subjects" (reading, writing, communicating). Until the 1980s, education was primarily a patriarchal institution, where girls were viewed as struggling to perform in disciplines such as math and science—the same areas where boys typically excelled and for which they went to college in disproportionate numbers (Hulbert, 2006). But starting in the mid-1980s, the situation reversed in the United States and experts shifted their attention away from girls and their academic disadvantages toward the lagging educational achievements of boys.

The crisis that formed around boys' education crystallized in what we might think of as a "moral panic,"[4] which combined discourses of performance, achievement, and academic improvement with the widespread circulation of fears and anxieties, thereby constructing the need for an immediate solution. Anxiety, as Sarah Banet-Weiser has noted, often functions as the underlying mechanism for advertising (Banet-Weiser, 2012). In the context of crises of the traditional school, anxiety about boys' declining academic performance may have facilitated the growth of a market for ADHD by strengthening the appeal of pharmaceutical marketing campaigns and driving up demand for behavior-controlling, performance-enhancing pills.

The declining performance and disruptive behavior of boys in school became a threat that acquired a life of its own. As Sara Ahmed (2004) explains, "Through designating something as already under threat in the present that very thing becomes installed as that which we must fight for in the future" (p. 77).

[4] Here I am referring to Stanley Cohen's 1980) definition of moral panics, which occur when "[a] condition, episode, person or group of persons emerges to become defined as a threat to societal values and interests" (p. 9). In the case of ADHD, rowdy boys may have functioned as society's scapegoat for other problems in education and society.

Through a discourse of prevention, the threat can be suspended and contained in the name of stability for society in the future.

Confronting the Crisis

Big pharma capitalizes on crisis discourses through lobbying efforts for education policies that imbue ADHD with cultural and economic value. ADHD also gains purchase in education, policy, and in discourses where high academic performance equates to job security for teachers and increased funding for schools.

Without positing a causal relationship between any one education policy and the proliferation of ADHD, it is important to emphasize the interplay between pharmaceutical companies, government policies, lobbies, parents, and schools that frames the institutional context of ADHD. Reforms in education policy toward the end of the 20th century were critical events in the eventual rise in ADHD diagnoses, and the result of collaboration not only between pharmaceutical companies and legislators but among parents, schools, and patient support groups that lobbied and campaigned for them. These collaborations, and the legislation that emerged from them, constitute part of the environment in which a market for ADHD could thrive.

Education reform has likewise been informed by discourses of prevention and the quick fix. That is, the discourses discussed in the previous sections shape both policy and the market, while policy itself authorizes and reinforces the construction and expansion of that market. In a brief discussion of two policy measures, the 1997 revisions of the Individuals With Disabilities Education Act (IDEA) and the 2001 No Child Left Behind Act, I will explain how the relationship between discourse and policy buttresses the growing market for ADHD.

The passing of the Individuals with Disabilities Education Act (IDEA) marks an important moment in the historical trajectory of ADHD. The iteration of IDEA that was passed in 1997 legislated ADHD into existence by recognizing it as a learning disorder eligible for a host of free federal special education services. ADHD children would now be able to receive counseling, physical therapy, diagnostic and prescription services, rehabilitation, and more (IDEA, 1997). Most prominently featured among these services was the development of Individualized Education Programs, which gave ADHD children the right to attend special classes tailored to their unique needs as well as separate schooling, a reduced number of homework assignments, and extra time on tests.

The passing of the 1997 IDEA amendments was in no small part a result of lobbying efforts by parent-based support groups—most notably CHADD (Children and Adults With Attention-Deficit/Hyperactivity Disorder), which aggressively campaigned for it. Indeed, as Andrew Lakoff (2000) has noted, advocacy groups such as CHADD played a major role in the legitimation of ADHD as a medical

diagnosis. Mobilizing a discourse of disability rights, groups advocating for ADHD helped shaped public awareness of it as a chronic medical condition, a learning disability akin to autism or dyslexia.[5]

The story of IDEA is crucial for understanding why ADHD diagnoses became valuable for parents. The legislation extended special services and protections not only to children with disabilities but to their parents, who would now also have access to public school educational resources and the right to participate with the school in every step of designing their children's education programs. Importantly, the Act also afforded parents a number of procedural safeguards, including access to educational records, the right to participate in school meetings, the right to receive written notice about amendments to special service offerings, and the right to due process in the case of a dispute with the school. Parents were also granted the right to receive independent medical evaluations and recommendations, which schools would be obliged to honor. Through the rights it granted to parents, IDEA made ADHD valuable for them in at least two ways: First, it provided parents a variety of free educational services. Second, it provided them with a way of understanding their children's struggles in school as a symptom of inadequate educational programming rather than as a symptom of bad parenting. In a way, IDEA helped lift the burden of responsibility off the shoulders of parents. If a child frequently underperformed or misbehaved, the number of persons held responsible under the Act for justifying (and eventually rectifying) his behavior multiplied, shifting away from parents toward public schools and the medical profession.

Although IDEA did not explicitly promote ADHD diagnoses, and cannot be said to have done so, its implementation coincides with an enormous upsurge in the production and use of Ritalin, which, over the 1990s, increased 700% (Diller, 1999). Then from 2001 to 2005, immediately following George W. Bush's signing into law of No Child Left Behind, ADHD diagnoses increased by 22% (Fulton et al., 2009). To be clear, these numbers do not represent a causal link. What they do suggest is that education policy contributed to a set of cultural and economic discourses that supported the growth of a market for ADHD.

Both of these policies took measures to tether school financing to students' performance on standardized tests, and thus legislated an increased prioritization and renewed emphasis on the value of academic improvement. Especially in states where the job security of teachers and administrators came to depend on the degree of improvement as shown in their students' test performance, the discourse of academic improvement feeds into the logic of medicalization.[6]

All this combined with the explosion of advertisements that began circulating information about ADHD on television and in popular magazines. The language in many of these advertisements declared academic impairment to be a sure sign of ADHD, and they showcased the effects of ADHD medications, such as Ritalin, as leading to well-tempered behavior and vast improvements in schoolwork. These associations fed right back into the discourse of academic improvement produced in education policy. This, in turn,

[5] A good example of the representation of ADHD as a learning disorder can be found in Malcolm Gladwell's (1999) widely read New Yorker article, which refers to ADHD as "a garden-variety learning disorder" (p. 80).

[6] A study of 491 physicians in Washington, DC, found that nearly 50% of their patients' ADHD diagnoses were initially suggested by teachers (Sax & Kautz, 2003).

reinforced the value of the ADHD diagnosis and made available medication as a route that parents, teachers, and administrators across the country could take as a means of achieving job security and financial stability.

The connection forged between academic improvement and educational funding should not be considered as an intentional effect of teachers and parents, but should rather be examined as a structural shift that facilitated the ongoing marketization of ADHD. The discourses of academic impairment and academic achievement were produced in social institutions, only then to be appropriated by individuals who internalized and responded to them.

A discourse of academic improvement—as measured by standardized testing rather than another method for evaluating academic success, such as mechanical skills, creativity, musical ability, and so on—enables medication to emerge as a legitimate response by teachers and parents struggling to find new ways of ensuring their children's success and maintaining stability in their own lives. As research has shown, parents and teachers frequently discuss the capacity of ADHD drugs to restore stability in their lives and give them hope for a better future for their children (Singh, 2002, 2003). Additionally, several studies of parent-child interactions for children with ADHD have yielded similar findings (Danforth, Barkley, Anderson, & Stokes, 1991; Johnston et al., 2000; Johnston & Mash, 2001; Podolski & Nigg, 2010; Tallmadge & Barkley, 1983). For example, Johnston et al. (2000) found that the experience of mothers of children with ADHD drastically improved once their child was medicated. The mothers reported believing that medication was the cause of their children's positive social behaviors as well as the increased stability of their families. If these parents suggest that medication is a source of hope, others imply that nonmedication is a recipe for disaster, which causes increased role dissatisfaction (Podolski & Nigg, 2010), higher risks of depression (Faraone et al., 1995), alcoholism (Pelham & Lang, 1999), and higher health care costs (Leibson, Katusic, Barbaresi, Ransom, & O'Brien, 2001).

The discourse surrounding ADHD drugs can be thought of as participating in what Nikolas Rose (2004) has called "a political economy of hope." In the political economy surrounding ADHD, stimulant medications provide schools, teachers, and parents with hope through the promise of an intervention that will directly address the anomaly at the root of their conflicts and concerns. But what about the conflicts arising out of a permissive culture immersed in a "crisis" of boys' disorderly behavior? Luckily, the most benign intervention also suggests the most effective and efficient solution—the quick-fix promise of a performance-enhancing pill.

Expanding the Market for ADHD: "It's Your ADHD. Own It."

Once in circulation, the discourses that surround ADHD may be incorporated into the medical marketplace, where they are activated by pharmaceutical companies in the promotion and advertising of ADHD medications. The marketing of ADHD through Shire Pharmaceutical's "Own Your ADHD" campaign provides a concrete example of how discourses of prevention and the quick fix are practically applied in ways that enable the production of lifelong medical subjects.

On February 8, 2012, Shire Pharmaceuticals gained approval from the U.S. Food and Drug Administration to prescribe Vyvanse for the maintenance and treatment of adult ADHD. That same year,

Shire launched a campaign to promote the use of Vyvanse. The campaign, illustratively titled, "Own Your ADHD," featured successful adults and celebrities in its commercials, including Adam Levine—the widely recognized lead singer of pop music group Maroon 5 and People Magazine's 2013 Sexiest Man Alive—as its figurehead. In one widely circulated print advertisement, Adam Levine is poised in front of a stage curtain; his forward-facing gaze is confident, demanding a reaction from the viewer who reads the text in which Levine asserts his patient status: "I remember being the kid with ADHD. Truth is, I still have it." Below his statement, in a direct address to the reader, the advertisement suggests, "If you had ADHD as a kid, you may still have it," and encourages the reader to find out more by taking an ADHD screening quiz and by talking to a doctor. In bold print centered at the bottom of the page is the campaign's slogan (repeated in every television and print ad): "It's Your ADHD. Own It."

The rhetoric in this advertisement is significant in a number of ways: First, the themes of empowerment and ownership connect with discourses of prevention and the quick fix that articulate ADHD, and health more generally, to consumption practices grounded in the rhetoric of self-empowerment. The rhetoric of empowerment that is incorporated into the ads of Shire's campaign capitalize on the market's growing attention to individualism and personal identification achieved through consumption, a trend that can be contextualized as neoliberal brand culture, in which brands "facilitate relationships between consumers and branders and encourage an affective connection based on authenticity and sincerity" (Banet-Weiser, 2012, p. 37). Certainly, in the case of Shire's campaign, the Vyvanse brand facilitates a relationship between consumers and Shire that demands interaction on the part of consumers whose active involvement in their own health and illness includes taking steps to self-monitor, self-diagnose, and self-prescribe. Here, the discourse of health as prevention is applied through the ad's recommendation that viewers visit Shire's website and participate in a quiz (designed by Shire) to identify their own ADHD-like symptoms and diagnose themselves. If the test-taker's score reveals the possibility that he or she may have ADHD (which it nearly always does), the consumer is urged to act again, in the name of prevention, to visit his or her doctor and receive an official ADHD diagnosis and Vyvanse prescription.

All these preventative acts are framed as empowering, as taking control over one's patient status by "owning it." However, as Joy Fuqua (2012) has suggested, the agency that is offered to consumer-patients in prescription drug advertisements is, at best, a "conditional agency," since the medications presented are not available for immediate purchase, but only through a physician. Consumer-patients must also possess the means to pay for expensive brand-name prescriptions and "to negotiate a complex medical structure that begins with access to a physician" (Fuqua, 2012, p. 103). Thus, the quick fix offered by pharmaceutical companies like Shire, and stimulant drugs like Vyvanse, is rarely as easily or efficiently achieved in practice.

Herein lies the paradox of combining discourses of prevention with the promise of a quick fix: It makes little sense that a diagnosis of adult ADHD, which hinges on the assumption that ADHD is not temporary, but rather a lifelong chronic illness, can and should be treated with a quick chemical fix. However, I contend that it is precisely this contradiction that makes possible the production of individuals with ADHD as biomedical subjects, who are obligated to continually regulate themselves in the name of self-care. For, in fact, the "quick fix" for ADHD is not an isolated event, but a routine. Though the act of swallowing a pill may last only a moment, it is part of a series of similar acts—a routine that lasts a lifetime.

The mismatch between the representation and reality makes the ideas of prevention and the quick fix particularly productive discourses, which pharmaceutical companies like Shire are quick to incorporate into marketing tactics. Here, health—and the consumption of health products—is constructed as a lifelong pursuit.

Today, health practices are located in spaces of consumption—on informational websites, in print newsletters, YouTube video channels, patient forums, screening tests, and so on—all of which are designed and managed on behalf of the drug company and its product brand. In the case of Vyvanse and the promotion of ADHD for adults, these discourses may be so effective as to eventually facilitate the official designation of adult ADHD in medical literature.[7]

Conclusion: Producing the Pill Society

The effects of prevention and quick-fix discourses can be located in wider society, where the issues of medicalization extend beyond the medical marketplace and into the production of what I call the pill society. The pill society is a concept that emphasizes the ubiquity and longevity of medicalization discourses, while locating their effects as power exercised over both the micro and macro levels of society.

At the macro level, the pill society is produced within a network of institutions, and in the discourses that change the ways the human population is able to conceive of and relate to health and illness. At the micro level, pills function as a forerunning technology for the administration and regulation of individual human bodies and their conduct. The management of medicated subjects within the pill society is exercised through diagnosis, which functions as the first step in the process of rendering individuals who are knowable (and thus governable) through their dual status as patients and consumers. Following diagnosis, prescription is the application of medical knowledge that feeds a growing market for pharmaceuticals. Within the pill society, the medical marketplace is the linchpin of power that gets exercised over individual bodies and at the macro level of society. Here, the regulatory abilities of medicine span health management organizations, chemical engineering research, pharmaceutical manufacturing, and health product advertising in a biomedical network that expands influence over the population.[8]

If the process of medicalization within the pill society is ubiquitous, it is also prolonged. The longevity of medicalization is made possible in the interaction of prevention and quick-fix discourses: The prevention aspect of modern health and illness presupposes the existence of medical problems that are always-already in need of a quick fix, where disorder is an always-present threat that must be confronted repeatedly. Indeed, the discourse of health achieved through the quick fix obscures the reality that, for

[7] Of the American Psychiatric Association members responsible for developing the DSM-V, 69% reported having financial ties to the pharmaceutical industry, while 13 members reported having financial ties specifically to ADHD drug manufacturers (Cosgrove & Krimsky, 2012).

[8] It is also worth acknowledging that the discourses that benefit pharmaceutical companies and drug advertisers are also perpetuated by individual actors—parents, teachers, adults who seek out a diagnosis, etc.—whose “bottom up” promotion of the diagnosis reinforces the internalization of power at play.

many (indeed most) individuals who are prescribed pharmaceutical treatments for mental disorders, achieving optimal mental health requires adherence to a routine of self-medicating that proves to be anything but temporary.

The practice of "getting better" has become a moral obligation, what Nikolas Rose (1989) has aptly referred to as the "therapeutic imperative," such that individuals who break the moral health contract by failing to follow the steps of their treatment program bear the consequence of being punished. For many, especially those who are prescribed highly addictive psychotropic drugs, the physical and emotional trauma that accompanies withdrawal will be the first punishment they experience, along with an eventual return of symptoms leading them back to medication, this time at a higher dosage level. Another, noncorporal punishment some may experience will be the future denial of insurance coverage, as HMOs have begun using prescription refill data to develop algorithms that predict which patients are likely to take their medications as prescribed and which are likely to deviate from their treatment plan (Parker-Pope, 2011).

The discourses of health and illness that function in the production of medicated subjects are now being applied in ways that extend the regulatory capacity of medicine on an unprecedented scale. And the consequences for noncompliance to the rules of medicine are becoming increasingly serious. What we are seeing in the discourses and practices of big pharma, in education policy, and in prescription drug advertising is power—the power to dictate people's relationship to their bodies. This power is exercised strategically by a network of institutions over individual consumption habits and in the activation of discourses of prevention and the quick fix that naturalize new ways of relating to and engaging practically with health and illness. Today, the pursuit of health is yoked to consumption, where consumption is rooted in routine that ultimately lasts a lifetime, and in the production of demand for pharmaceutical products that overflows—spilling out of the market and into a pill society.

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