

2016

"It's Not a Real Disorder": Attention Deficit/ Hyperactivity Disorder and Paradigms of Childhood Harm

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Recommended Citation

Hamiter, Amelia, "'It's Not a Real Disorder": Attention Deficit/Hyperactivity Disorder and Paradigms of Childhood Harm" (2016).
Scripps Senior Theses. Paper 849.
http://scholarship.claremont.edu/scripps_theses/849

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“It’s Not a Real Disorder”:
Attention Deficit/Hyperactivity Disorder
and Paradigms of Childhood Harm

by
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Submitted to Scripps College in Partial Fulfillment of the
Degree of Bachelor of Arts

Professor Perini
Professor Hamilton
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April 22, 2016

Acknowledgements

I would like to thank Professor Laura Perini for spending many Friday mornings advising me through the process of writing a thesis and asking very helpful questions as I formulated my project. This project could not have been possible without her wise feedback and guidance. I am also so thankful to Professor Vivien Hamilton and Professor Nancy Williams for being my thesis readers. I would not have had the scholarly knowledge and analytical eye to ask these kinds of questions and seek these kinds of answers without the training I have received in Professor Hamilton's history of science courses. Professor Williams' support not only this semester but throughout the past several years as my advisor has been an invaluable source of guidance and encouragement. I would also like to thank Professor Marianne de Laet for always providing enthusiastic support of my STS pursuits and for providing much helpful feedback when I first began this project. I am grateful to many friends for providing reinforcements of confidence, perspective, and food during many stressful weeks. Finally, I must thank my parents, James and Julie, and my brother, Mark, for their constant love and support.

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Introduction

“Attention Deficit/Hyperactivity Disorder” is the most contemporary colloquial name for a mental disorder diagnosis that mental health experts have been making in children in the United States for decades. A disorder about hyperactive and inattentive children came into being in the late 1950s, and American psychiatry has provided medication options for the many diagnosed schoolchildren for almost as long. The mental disorder became nationally contested in the 1970s, 80s, and 90s when massive rates of children started being diagnosed and receiving medication. The contention continues today, as both experts and non-experts vocally disagree on what causes the disorder – that is, what the disorder actually *is* – and the proper methods of diagnosis and treatment. Many adults insist that since this disorder was rarely diagnosed in previous generations, it cannot be a “real” condition found in the physiology of children today. Others insist that the disorder does have a neurobiological basis, but its symptoms simply were not a concern or did not have proper treatment until recent decades. That many American schoolchildren continue to be diagnosed and treated intensifies the conversation.

ADHD¹ is taken quite seriously by many large national voices. The national organization Children and Adults with Attention-Deficit/Hyperactivity Disorder (CHADD) says, “ADHD is medically and legally recognized as a treatable yet potentially serious disorder, affecting up to nine percent of all children, and approximately four percent of adults.”² The Centers for Disease

¹ This disorder that emerged in the 1950s has been known by several different names in the years since, and at various points in time has been said to have various subtypes – hyperactivity, inattentive, and combination, roughly. The DSM-5 today categorizes ADHD as being one disorder, declaring these different “types” to be different “presentations” of the disorder (National Resource Center on ADHD). For simplicity, I will use the term “ADHD” to refer to the entity that the disorder has been throughout the years since the 1950s – the medical, psychological, psychiatric, and cultural space it has filled. In the section “The ADHD Network” in Chapter 1 I will provide more disambiguation of the various names the disorder has had.

² CHADD

Control and Prevention (CDC) also reports on the disorder. It states that 11% of children 4-17 years of age (6.4 million) are said to have been diagnosed as of 2011, an increase from 9.5% in 2007 and 7.8% in 2003.³ These significant amounts, having grown since the introduction of a hyperactivity disorder in the mid-twentieth century, fuel the national discussion of ADHD.

The way that families and doctors proceed after diagnosis is even more contestable. The CDC reports that the “preferred treatment approach for children ages 6 and older” is to have both medication treatment and behavior therapy, but of these diagnosed children, less than 1 in 3 children with ADHD were reported to be receiving both treatment methods. The percentage of children 4-17 years of age taking ADHD medication was reported to be 6.1% in 2011. In many cases medication treatment appears to be applied more regularly than behavior therapy; the CDC reports that “Only half of preschoolers (4-5 years of age) with ADHD received behavior therapy, which is now the recommended first-line treatment for this group,” yet “About half of preschoolers with ADHD were taking medication for ADHD, and about 1 in 4 were treated only with medication.”⁴ Concerns about such liberal medication prescriptions for young children fuel controversy, particularly when the legitimacy of an ADHD diagnosis is questioned in the first place.

While diagnostic criteria are based on an evaluation of a child’s behaviors and tendencies, scientific research pursues the discovery of a physiological basis for ADHD. No neurobiological basis has yet been determined; while many researchers have reported exciting findings suggesting a variety of causes, none have yet been decisive. Discussion about the research yields interesting comments on the controversial nature of the disorder and how finding

³ Centers for Disease Control and Prevention

⁴ Ibid.

a physiological basis is expected to change that controversy. An *MIT Technology Review* article on a brain scan study writes,

“The findings may also help quell some controversy surrounding the disorder. ADHD is diagnosed mainly by a child’s behavior, and some have argued that pushy pharmaceutical companies, impatient parents and overburdened teachers have led to chronic overdiagnosis and unnecessary medication of children. Identifying a mechanism by which a genetic allele might influence ADHD helps solidify a neurological basis of the disorder.”⁵

This paragraph portrays the national conversation of ADHD as a two-sided issue – one side suggests ADHD is a disorder invented to convenience big pharma, parents, and teachers, while the other believes there is a true neurobiological condition which deserves treatment. Another article on the website *BrainFacts*, published by the Society of Neuroscience, quotes the researcher Anita Thapar about her studies of genetic links to ADHD: “The parents of children with ADHD that I meet in the clinic are heroes [...] and they don't get a break – they don't get any sympathy, as there's no visible problem with their child. The affected children struggle with school and rejection by their peers. Now we can show people that these children have a neurodevelopmental disorder with an observable genetic contribution.”⁶ This statement also portrays ADHD as a disorder disadvantaged by its lack of solid neurobiological grounds, but it looks more directly at the actual lived experiences of diagnosed children and their parents.

Whether or not ADHD will ever be determined to have a physiological component, the children who are diagnosed with it experience enough difficulty for the diagnosis to become fairly prolific. However, do those difficulties stem from external or internal factors? If

⁵ Singer

⁶ “Taking a Genetic View of ADHD”

medication adequately lessens those difficulties for most children, does it matter whether it treats a “real” disorder or not? What makes a disorder “real” in the first place?

A Science, Technology, and Society approach to these questions will provide some illumination to the controversy of ADHD. The discipline of Science, Technology, and Society, or STS, is one that understands all three of these agents (Science, Technology, and Society) as infinitely intersecting in ways that make each one laden in the others. Conceptually uniting them in this way takes the STS scholar out of the dominant practice of separating them into different domains under which various objects of study belong to. In refusing to see an object of study as merely a product of the domain that it is widely attributed to, the STS scholar begins to escape the paradigms that make up how scientists, technologists, and society in general view knowledge and the world.

This is the goal of STS – to make the object of study “strange” to oneself by studying it from outside the framework with which one would usually see it. By doing so, one can draw conclusions about the framework itself. This is the goal for studying ADHD with an STS lens. By stepping outside of the cultural lens in which ADHD originated, grew, and became deeply embedded, one can gain a broader perspective on the various arguments about the disorder.

The first chapter in this work will utilize the STS actor network theory approach, a study that treats the question “Is ADHD real” by examining how external factors that have made it a common diagnosis. It will argue that ADHD is real because this assembly of external factors has made it so. The second chapter will examine the question of whether psychiatric medication is an appropriate response to ADHD diagnoses. It will do this by analyzing how the behaviors that the drugs target have been conceptualized as harmful and how other cultural factors may have contributed to medication becoming a popular solution. In sum, it will argue that dominant

diagnoses and treatments of ADHD target only its internal factors. Since ADHD in fact relies just as much if not more on external factors, I will conclude that the mainstream response to ADHD as a medicalized set of pathological behaviors is not the optimal approach.

Chapter 1: Actor Network Theory

A Brief Introduction

As tensions grow regarding the increasing number of children in the contemporary United States who are receiving ADHD diagnoses and treatment, concerned folks disagree on whether ADHD is a “real” disorder. Some believe there is a “real” neurobiological condition setting these children apart from their peers and deserving of accommodations and treatment, while others insist that a disorder that hardly “existed” half a century ago cannot have suddenly grown so frequent unless it has been or is being manufactured. As rates of children being prescribed drugs as treatment for the disorder also grow, the controversy heightens. People disagree on whether there is a real disorder to be treating, and if there is, on whether it is worth the drug treatment that is commonly prescribed.

When such an irreconcilable controversy arises in a school of knowledge, the STS scholar takes note. For the STS scholar, controversy opens an opportunity to study the school of knowledge as “a stranger,” a technique the STSs scholar uses to identify the wider paradigm otherwise invisible to someone embedded in the culture in which the controversy takes place. The STS scholar’s work, meanwhile, can provide an illuminating understanding of the disorder’s status for those wondering about ADHD’s existence.

STS Methodology

With ADHD the STS scholar can use the method of making strange the practices and artifacts in scientific disciplines that people generally take for granted. STS often utilizes the idea that in different cultures, communities, and points in time, different knowledge is regarded as truth or faces different criteria for becoming regarded as truth. People generally have difficulty seeing that knowledge-making in their community is context-specific rather than a universal and

objective process. A tactic for identifying these subjectivities and getting outside of them enough to make analyses is “playing the stranger” – making an object or incident “strange” to oneself by studying it from outside the framework in which one would usually see it.

Steven Shapin and Simon Shaffer write that moments of controversy are often prime points at which to “play the stranger.” They write that controversies in a discipline provide an opportune instance to examine a topic outside of the lens of its surrounding culture. In an otherwise established paradigm of thought, controversies “often involve disagreements over the reality of entities or propriety of practices whose existence or value are subsequently taken to be unproblematic or settled” and their participants “attempt to deconstruct the taken-for-granted quality of their antagonists’ preferred beliefs and practices [...] by trying to display the artifactual and conventional status of those beliefs and practices.”⁷ Likewise, Bruno Latour’s first Rule of Method observes that controversies “reopen” the black boxes of scientific facts – that is, they are opportune moments for the critical thinker to analyze the construction of those facts rather than take them for granted.⁸ Controversies reflect a moment in which some members of a community might find that their paradigm has some irreparable holes, but disagree with other members of the community regarding what the holes are or even if the holes exist. For the scholar hoping to “play the stranger,” the discourse between sides of the controversy has already begun unraveling things previously taken for granted, so the scholar is better able to peer at what the paradigm is and what the topic at hand might look like without it.

Therefore, that ADHD today represents a controversial moment in American psychiatry, education, and mental healthcare thus makes it an ideal site for STS examination.

⁷ Shapin and Shaffer 5

⁸ Latour 258

Network Theory

Latour writes that the contemporary Western system of research makes it easy to “black box” facts – that those living in its paradigm of knowledge tend not to think about how a theory, concept, or general item came about but to accept its validity as fact. “Black box” refers to a term “used by cyberneticians whenever a piece of machinery or a set of commands is too complex. In its place they draw a little box about which they need to know nothing but its input and output.”⁹ The same simplification, Latour writes, happens to pieces of knowledge in the Western scientific communities. He writes, “No matter how controversial their history, how complex their inner workings, how large the commercial or academic networks that hold them in place, only their input and output count.”¹⁰ Every piece of knowledge or result, Latour argues, was created through a series of decisions and challenges that are forgotten once they become end results or products. Because of this, knowledge is much less settled than it is perceived to be. In doing this, we disregard and forget about the assemblage of people, decisions, questions, challenges, and previously determined ideas that came before and contributed to the creation of this piece of knowledge.

However, Latour argues, every piece of knowledge *does* stand on a vast collection of findings and choices that have come before. Research results form the basis for future research, and so research results rely on pieces of knowledge that come from previous research. Accepting one such piece of knowledge as true requires accepting the truthfulness of these other pieces of knowledge that are connected to it. Latour writes, “We are never confronted with science, technology and society, but with a gamut of weaker and stronger *associations*.”¹¹ No piece of

⁹ Latour 2-3

¹⁰ Ibid. 3

¹¹ Ibid. 259

knowledge exists in a vacuum but exists because of its situation within a larger collection of pieces of knowledge.

This outlook on bodies of knowledge is a version of what STS scholars call a network. Networks are a conceptual tool and spring from the idea that an object exists as the result of a network of agents whose relationships cause it to exist as it does is. Commonly called actor network theory, this approach delves into how each object is embedded in a collection of associations. Actor network theory is conceptualized in different ways, and does not only apply to research results but to everything. Networks do not only consist of units that are similar (i.e. pieces of research – hypotheses, methods, analyses) but are heterogeneous (indeed, even the afore discussed research network is not only made up of pieces of research; the researchers, research decisions, funding sources, publication politics and audience, etc. are all other components). John Law uses the phrase “heterogeneous engineering” in his study of ships as networks, writing that the galley “is an emergent phenomenon; that is, it has attributes possessed by none of its individual components.”¹² This and other examples of framing technologies as networks discuss how the different capabilities of the technologies are reliant on agents that are not physical parts of a stand-alone physical object (i.e. Law writes that “the endurance of the galley was restricted by the size of its crew”¹³). Because so many things may fall under a network, it can be difficult to set boundaries to a specific object’s network. Annemarie Mol and Marianne de Laet do a study of the Zimbabwe bush pump, a piece of technology that, they argue, is not bound only to the physical form of the pump but also relies on the community (its users and maintainers) as well as on other physical objects with which it collaborates.¹⁴ However, they

¹² Law 115

¹³ Ibid. 116

¹⁴ Mol and de Laet 235

ask, when one includes community dynamics, other physical objects, etc. as all being collaborations that make the pump, where does the pump end?¹⁵ Exploring these facets of an object provide a nuanced consideration of the object's boundaries and its "reality."

Looking at ADHD through the lens of actor network theory suggests that the disorder is not *just* a disorder, but something that exists because of a heterogeneous assembly of agents. If this is the case, the answer to the question of whether ADHD is a "real" disorder or not is yes, it is real, because a network of various agents has come into place that makes it so. Contesting the reality from that point onward then requires examining the agents within the network and what makes them hold together. In this first chapter we will examine how a selection of agents ensures that ADHD exists; in the next chapter we will explore whether that network-dependent existence warrants drug treatment.

¹⁵ Ibid. 237

The ADHD Network

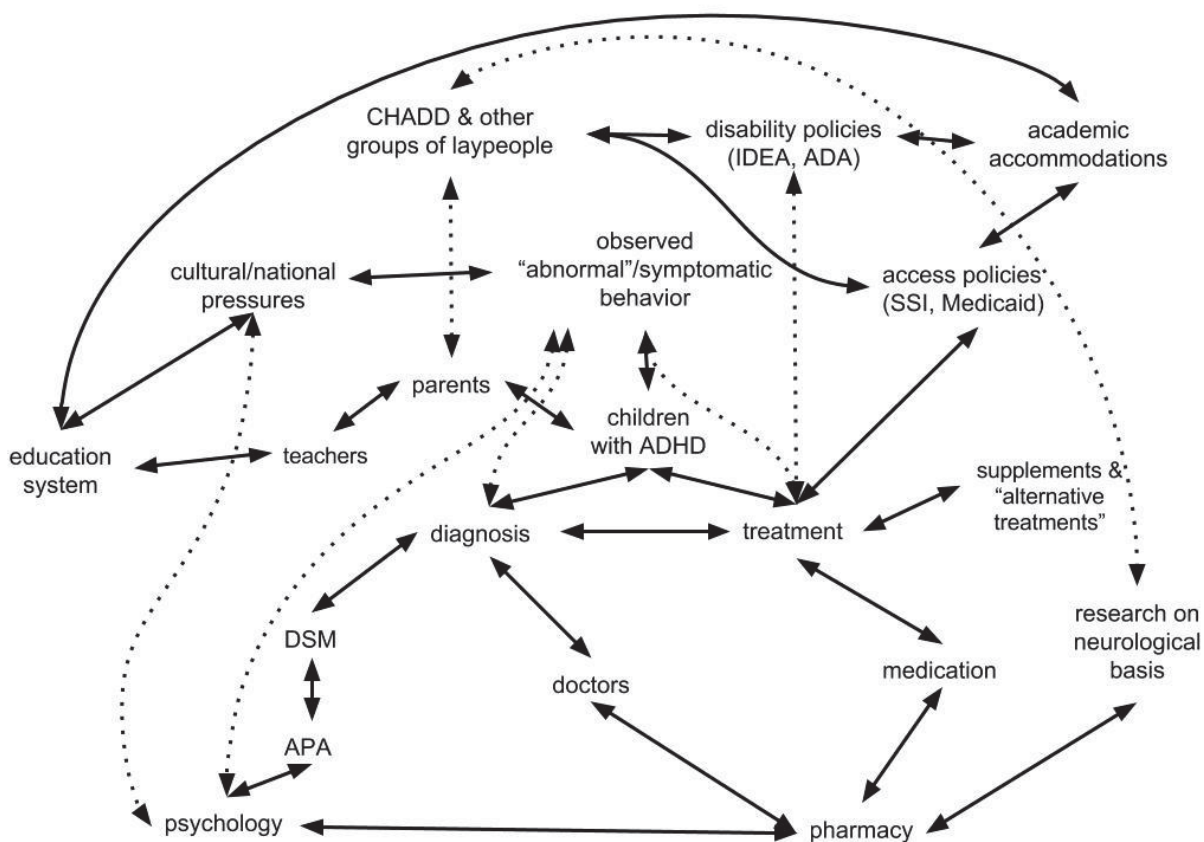


Figure 1: A schematic portrayal of the factors we look at and how they are networked together. Since a network can always be broken down into more agents and is infinitely connected, this should be considered a broad outline rather than a definitive guide. Arrows indicate relations between agents; since there are many overlaps, they are dashed and solid to reduce confusion.

We begin identifying this network (Figure 1.1.) by first looking at diagnostic ADHD, for it is diagnoses of this disorder that led to its appearance in the DSM and qualify children for treatment. Some may argue that the moment of diagnosis is not the most baseline qualifier for ADHD, since someone who is diagnosed surely had ADHD before the moment of diagnosis. However, for now we will look at diagnosis as the origin of ADHD more in the sense that ADHD exists as a widespread disorder recognized by established psychological and medical authorities because people started diagnosing it in children. In Chapter 2 we will focus on what children might experience regardless of diagnosis.

The defining diagnostic criteria for ADHD, as for all disorders in American psychiatry is found in the Diagnostic and Statistical Manual of Mental Disorders, better known as the DSM. The American Psychiatric Association, an authoritative nationwide institution, creates the DSM as a standard for defining criteria for “every psychiatric disorder recognized by the U.S. healthcare system.”¹⁶ The DSM is recognized by the government and by participating practitioners as the authority on criteria for mental disorders.¹⁷ Diagnosis according to its guidelines allows legal access to medication and accommodations.

However, what existed of ADHD before its appearance in the DSM? And how did it get there?

A Short History of the Origins – ADHD and the DSM

Because people who discuss ADHD are not agreed as to what extent the disorder “exists,” locating cases of ADHD in history is difficult. Outside of the diagnostic framework used today, how does one identify a case of ADHD? One can start with today’s DSM criteria and trace accounts of ADHD back through the DSM’s different editions. The DSM consistently undergoes revisions and is currently in its fifth edition. Looking back through this history of revisions traces ADHD back to a disorder that first appeared in the DSM-II (its second edition), published in 1968.¹⁸ This entry listed criteria for “hyperactivity and hyperkinetic impulse

¹⁶ American Psychiatric Association

¹⁷ The American Psychiatric Association website writes that “professionals in a wide array of contexts, including psychiatrists and other physicians, psychologists, social workers, nurses, occupational and rehabilitation therapists, and counselors, as well as by clinicians and researchers of many different orientations (e.g., biological, psychodynamic, cognitive, behavioral, interpersonal, family/systems)” (American Psychiatric Association) use the DSM, and that additionally “DSM is used in both clinical settings (inpatient, outpatient, partial hospital, consultation-liaison, clinic, private practice, and primary care) as well as with community populations. In addition to supplying detailed descriptions of diagnostic criteria, DSM is also a necessary tool for collecting and communicating accurate public health statistics about the diagnosis of psychiatric disorders” (American Psychiatric Association, “About DSM-5”).

¹⁸ Smith 52

disorder,” a disorder that in turn can be traced back to 1957, when it first began showing up in research published by Maurice Laufer and Eric Denhoff. These child psychologists had worked under a man named Charles Bradley of Emma Pendleton Bradley Home, a psychiatric asylum for children.¹⁹ In the 1930s, Bradley was working to treat headaches in children who had received spinal taps. He began prescribing them the amphetamine Bensedrine. This prescription did not cure the headaches, but he observed that it did improve the children’s performance in school, where they had previously been ill at focusing or been hyperactive. Bradley would have considered those traits to be side effects of the children’s already existing brain dysfunction and treatment processes. However, Laufer and Denhoff cited him as an influence when they published research on “hyperkinetic impulse disorder,” a disorder with a set of behaviors that was narrow yet was found in many children. Unlike the inattention and hyperactivity in Bradley’s patients, this diagnosis was not limited to children with previous brain dysfunction. In their reports they recommended the prescription of stimulants. More research on hyperkinetic impulse disorder arose, and in 1968 it appeared in the DSM-II. The DSM-III in 1980 presented it as “Attention Deficit Disorder” and the DSM-III-R²⁰ added “Attention Deficit/Hyperactivity Disorder” as an iteration of the disorder that included hyperactivity.²¹ Today, these two are seen as two presentations of one disorder.²²

In Addition to the DSM

Thus, diagnostic criteria for ADHD developed that has since been used to diagnose children and, thus, create “official” cases of ADHD. However, the research of child

¹⁹ Smith 41-43, 50

²⁰ A revised edition of the third edition (American Psychiatric Association, “History of the DSM”).

²¹ Mayes and Erkulwater 313

²² American Psychiatric Association, qtd. in National Resource Center on ADHD

psychologists was not the only factor contributing to the appearance and maintained appearance of these disorders in the DSM, and the presence of this disorder in the DSM would not have been the only factor causing diagnoses to happen. Recall that networks are heterogeneous and infinitely related to more agents. In the case of ADHD, specific agents motivated the reappearances of ADHD and its precursor disorders in the DSM, and specific agents motivated practitioners to diagnose it in children.

This was a disorder associated with school performance in children, and expectations of school performance were also changing throughout this decade. Events such as the Cold War propelled Americans into concerns about falling behind the Soviet Union in research and education.²³ Expectations of American schools changed –in past eras, students who did not fit well with the classroom setting usually had had the option of dropping out and make a living in other ways. However, alternative options now narrowed, as greater levels of education were expected and valued. As a result, more students who did not fit well with the classroom now had to stay in school.²⁴ At the same time, educators were facing more pressure to conform to a standard and produce results, so flexibility in the classroom structure was difficult. The development of this mold by which all students had to abide set the scene for medicalization of behaviors that prevented students from abiding – less and less flexibility was located in the school and environment, so it would have to be made in the student. This reflects an overall American movement towards more psychiatry, as will be discussed more in Chapter 2.

As mentioned above, US policy also has a role in this network. Rick Mayes and Jennifer Erkulwater write that prescribing drugs for children with behavioral issues fell out of favor in the

²³ Smith 54

²⁴ Smith 67

United States as the Cold War subsided,²⁵ but the disorder did not disappear. In 1987 the organization Children and Adults with Attention-Deficit/Hyperactivity Disorder (CHADD) emerged, partly financed by the manufacturer of Ritalin, the main stimulant drug prescribed for ADHD (a fact that has contributed to the controversy regarding to what extent ADHD could be a contrivance of pharmaceutical companies).²⁶ CHADD grew into a large community of people – often family members – concerned about children and adults with the disorder. CHADD perpetuated the salience of ADHD in the following years as it advocated for recognition of the disorder. In 1991 CHADD successfully lobbied ADHD to be protected under the Individuals with Disabilities Education Act (IDEA), which made ADHD a protected disability.²⁷ Thus CHADD becomes another part of the network – and within it, both layperson activism and drug manufacturer funding. With teachers becoming legally compelled to provide accommodations for students with ADHD, their growing awareness of what students might qualify for a diagnosis also would have increased.²⁸ Thus the participation of educators remains an important actor in the network.

In the 1980s the Supplementary Security Income (SSI) changed its assessments and therefore became open to a broader scope of learning and behavioral disorders in children, including those with ADHD.²⁹ Medicaid also expanded in the 1980s, bringing access to healthcare to more children.³⁰ This meant the sudden access of a large pool of children to diagnostic screening and treatment. They report that Medicaid spending for stimulants per child

²⁵ Mayes and Erkulwater 310

²⁶ Ibid. 313

²⁷ Ibid. 314

²⁸ Ibid. 327

²⁹ Ibid. 324, 325

³⁰ Ibid. 326

enrollee grew ninefold from 1991-2001 and number of prescriptions increased sixfold (when adjusted for inflation).³¹

Thus, while the DSM gave ADHD its birth as a disorder by establishing its criteria, expectations of children opened the way for ADHD to remain a pertinent disorder, and factors such as policies contributed to more children getting diagnosed.

Interlude on the Methods of Treatment

Earlier we noted that treatment is a reason that the moment of diagnosis is an important moment in the existence of ADHD. In the scope of American psychiatry and policy, diagnosis “legitimizes” an individual’s need for medication or academic accommodations. While medication is the most psychiatrically relevant mode of treatment and the most requiring of official diagnosis, it is also the site of much controversy, as many contest its actual benefit for children with ADHD.

When it comes to ADHD treatment in general, a variety of practices exist. The dominant one is medication; various drugs are available for prescription to children with the purpose of alleviating symptomatic behaviors and helping the child better assimilate into the classroom and other settings. Cognitive behavioral therapy, supplements, and special diets are other treatment options, generally regarded as alternative. Academic accommodations are also available to those with diagnoses according to ADA (Americans with Disabilities Act) legislation (this policy requires that proper adjustments be made for people with documented disabilities to have the same access to things as those without).³² With these accommodations, ADHD is officially regarded as a “disability.”

³¹ Ibid. 326

³² “Americans with Disabilities Act Basics.”

Conclusion: Looking Back at the Network

Many different things brought ADHD about and perpetuate its existence. ADHD is a real disorder, but would not necessarily be if not for the ways that the APA, DSM, American school system, and other factors have interacted since the mid-twentieth century. Thus, to ask whether ADHD is "real" demands a much more complex answer than a simple yes or no. Its existence is reliant on this network of agents.

In the scope of the controversy about ADHD and its high rates of diagnosis in American children, then, one can take this nuanced approach to the complexities of why it exists when a century ago it did not. However, this answer regarding ADHD's reality does not yet illuminate whether drug treatment is an appropriate solution for pediatric ADHD. The agents discussed in this chapter have all been external factors, yet psychiatric drugs treat the internal, making changes within the body of an individual who has been diagnosed with ADHD.

Generally, medical conditions can be conceptualized as being networks of factors, yet still have a physiological component that would exist in the bodies of individuals who have it whether or not the rest of the network existed. For example, Annemarie Mol and John Law when use actor network theory to write about anemia, yet varieties in human blood definitely exist regardless of external factors.³³ With ADHD, however, identifying such internal, network-independent components is a little more difficult. Although studies have been executed seeking a clear biological component that marks all those diagnosed with ADHD, no consensus has come about. The main indicators of ADHD are the behaviors that comprise the diagnostic criteria. The DSM-V criteria are specific behaviors, as shown in Table 1.1. While identifying these behaviors

³³ Mol and Law 641

as symptoms is a network-dependent practice – they wouldn't necessarily be grouped together and assigned to a disorder if not for the network – as things that children do, they do exist regardless of the network. How assessments of these behaviors have led to psychiatric drugs for ADHD will be the topic of the next chapter.

Table 1.1 The diagnostic criteria for ADHD as given in the DSM-V.

Inattentive Presentation	<ul style="list-style-type: none"> • Fails to give close attention to details or makes careless mistakes. • Has difficulty sustaining attention. • Does not appear to listen. • Struggles to follow through on instructions. • Has difficulty with organization. • Avoids or dislikes tasks requiring a lot of thinking. • Loses things. • Is easily distracted. • Is forgetful in daily activities.
Hyperactive-impulsive presentation	<ul style="list-style-type: none"> • Fidgets with hands or feet or squirms in chair. • Has difficulty remaining seated. • Runs about or climbs excessively in children; extreme restlessness in adults. • Difficulty engaging in activities quietly. • Acts as if driven by a motor; adults will often feel inside like they were driven by a motor. • Talks excessively. • Blurts out answers before questions have been completed. • Difficulty waiting or taking turns. • Interrupts or intrudes upon others.
Combined inattentive & hyperactive-impulsive presentation	<ul style="list-style-type: none"> • Has symptoms from both of the above presentations.

Chapter 2: Values

Introduction

As noted in the chapter above, ADHD's existence as a medical disorder is dependent on a network of external agents – the APA, the education system, CHADD, etc. – that have all played a role in creating and sustaining what it is today: a mental disorder commonly diagnosed in children and commonly treated in children using psychiatric drugs. What about internal agents of the network, though? In studying the network of a health condition one might always conclude that there *is* a biological condition that occurs outside of any other agent's taking notice. With ADHD, however, no clear-cut biological component exists. Although ADHD is now often treated as a psychiatric disorder, with drug treatment that affects the patient's biology to affect their ADHD symptoms, those who research ADHD have not yet reached a consensus about any biological abnormality shared by people diagnosed with ADHD. Reports have arisen suggesting links between ADHD and neurobiological causes such as structural differences in the brain, chemical differences in the nervous system and genetic predispositions.³⁴ No singular, decisive theory has been unanimously agreed upon, however. Hence the biological definition of ADHD remains ambiguous. ADHD continues to be identified not by a biological state but by specific behaviors (Table 2.1.).

These behaviors that comprise diagnostic criteria for ADHD do provide a component of the disorder that can be said to exist internally. Those who believe ADHD is a biological condition might say these behaviors are symptoms of ADHD, yet without diagnostic criteria for

³⁴ The websites ADHD and You (published by a biopharmaceutical company) and BrainFacts.org each report on different ideas about ADHD's physiological basis, showing how multiple possible neurobiological explanations for ADHD may simultaneously exist ("Understanding the Neurobiological Basis of ADHD," "Taking a Genetic View of ADHD"). MyAdhd.com is an example of how, at other times, many different ideas about ADHD's physiological basis may all be cited as explanations ("Causes of ADHD"). That all of these medical models can exist at once is reflective of how nebulous a concept the disorder is.

ADHD *other* than behaviors, it is more sensical to see these behaviors as comprising ADHD itself. That these behaviors have been grouped together and labeled criteria for ADHD is a network-dependent occurrence; the DSM and other agents of the network have made them so. However, each behavior in itself is not reliant on the networked creation of a hyperactivity and inattention disorder. One imagines that one could still find children who “lose things,” have “difficulty waiting or taking turns,” etc. in a universe in which ADHD and the network’s agents never existed.

That said, how have these behaviors come to be seen as warranting psychiatric treatment? In that universe in which ADHD and its network’s agents do not exist, would one necessarily notice these behaviors and believe that they ought to be “treated”?

Table 2.1 The diagnostic criteria for ADHD as given in the DSM-V.

Inattentive Presentation	<ul style="list-style-type: none"> • Fails to give close attention to details or makes careless mistakes. • Has difficulty sustaining attention. • Does not appear to listen. • Struggles to follow through on instructions. • Has difficulty with organization. • Avoids or dislikes tasks requiring a lot of thinking. • Loses things. • Is easily distracted. • Is forgetful in daily activities.
Hyperactive-impulsive presentation	<ul style="list-style-type: none"> • Fidgets with hands or feet or squirms in chair. • Has difficulty remaining seated. • Runs about or climbs excessively in children; extreme restlessness in adults. • Difficulty engaging in activities quietly. • Acts as if driven by a motor; adults will often feel inside like they were driven by a motor. • Talks excessively. • Blurts out answers before questions have been completed. • Difficulty waiting or taking turns. • Interrupts or intrudes upon others.
Combined inattentive & hyperactive-impulsive presentation	<ul style="list-style-type: none"> • Has symptoms from both of the above presentations.

Even though these behaviors can be considered internal agents, as they are expressed by the child with ADHD, the way the behaviors are evaluated *is* laden with subjectivity and values about children's behavior. These evaluative assessments of the behaviors lead to how they are targeted for treatment.

Values in Pathology: The Conceptualization of a Disorder

How are these behaviors affected by external evaluative forces? Perusing the DSM-V diagnostic criteria for ADHD shows that while the behaviors mentioned would probably be expressed in a universe that does not contain the ADHD network, the way they are assessed does draw on the viewer's subjective judgments.

The language used in many of these criteria is evaluative – they are not observations of facts but contain a value judgment. Criteria such as “Struggles to follow through on instructions” and “Is easily distracted,” for example, do not refer to a universal scale that defines at what point a child's carrying out instructions is a “struggle” or at what point a child's distraction comes “easily.” For a doctor or psychiatrist to identify these behaviors in a child when diagnosing (and, beforehand, for a parent or teacher before referring a child for diagnosis), they must make their own value judgments.

John Dupré suggests that psychiatric diagnostic criteria would not go far without evaluative language. Sticking to purely objective language, he writes, is difficult in psychology and psychiatry because evaluative language promotes a reason for taking action while objective language does not. Stating a fact about a situation does not motivate action; judging whether the current stats are *good* or *bad* does. Evaluative language takes that extra step of declaring judgment and thus giving reason to do something about a particular situation. For example, Dupré writes, when a psychologist or psychiatrist makes an assessment of a patient's mental

health, they are not likely to simply give the patient and family members an assessment of the patient's mental health on a scale or through another quantitative measurement. Such an answer in itself would not be meaningful to the patient and family members, so they use evaluative language to help the patient and family members understand whether action ought to be taken.³⁵ Dupré compares that situation to fields such as physics, where, he writes, results do not “matter” as much to humans in the same way, so objective language is used without a problem. While some might even argue that the field of physics is more value-laden than Dupré gives it credit for being, his conclusion about psychology and psychiatry is helpful. Because psychology and psychiatry weigh issues that affect individuals and their families directly, evaluative language comes into play. Likewise, assessments of mental health thus involve both the patient's and the family's level of concern about the issue and the diagnoser's assessments of the harm that may or may not be derived from the patient's condition of mental health.

This is seen in the ADHD diagnostic criteria. For example, the criteria “Runs about or climbs excessively in children; extreme restlessness in adults” and “Talks excessively” both require an evaluative judgment. An observation of running about, climbing, restlessness, or talking might be the more objective claim to make, but is not decisive towards diagnosing a disorder, since each of those is something that a child may exhibit at one time or another. Making a judgment about whether those behaviors are done “excessively” or to the “extreme” is what enables productive psychological and psychiatric work. Thus, the role that these behaviors play in making ADHD “exist” is dependent on the value judgments that are made about them. While they may originate in the child, they do not mean much until an external party judges whether they are beneficial or harmful.

³⁵ Dupré 29

Thus, value judgments of harm become key to the conceptualization of a mental disorder. Bengt Brülde writes that harm is central to the classification of a mental disorder.³⁶ Something becomes a disorder because someone has determined that it causes a certain level of harm to the individual who has it. The behaviors associated with ADHD, then, were brought into a disorder definition because some level of harm was being detected. The use of evaluative language in ADHD's diagnostic criteria, in addition to the high rates of diagnoses and prescriptions around the country, both suggest that many adults in children's lives are concerned about the effects of the behaviors in ADHD's diagnostic criteria. However, where does that judgment of harm in these behaviors come from?

Brülde writes that in the definition of a disorder, there are different ways in which a disorder can be considered harmful.³⁷ It can be considered harmful for the individual with it, for others, or both. And again, it can be a party other than the individual with the disorder that judges the nature and level of harm.

At least for ADHD in children, which is our area of concern, it is generally adults involved in a child's life – caregivers, teachers, physicians – who decide that the child ought to be assessed for diagnosis. Indeed, since the first research into a hyperactivity disorder in children, it has not been those who “had” the disorder who were determining that such traits comprised a disorder. The diagnosing practitioner, not the child, determines whether the child's hyperactivity has reached the point of being “excessive.” Diagnostic criterion such as “Does not appear to listen” relies on what other people, such as parents or a teacher, believe when they observe the child.

³⁶ Brülde 92

³⁷ Brülde 95

Brülde points out also that not all disorders are deemed harmful because or primarily because of harm to the individual. Some are made disorders on the basis of their harm to other people. Value judgments also echo in this. Brülde offers a helpful categorization of the value judgments made in this area: harmful-for-others judgments and judgments of abnormality.³⁸ When a disorder is deemed harmful yet not necessarily so for the individual, it is likely that either judgments of its harm towards others or judgments of it being deviant from a norm are being made.

A critical interpreter of ADHD might suspect that both of these are involved in the conceptualization of ADHD. Certainly some of the diagnostic criteria relate to harm to others. “Interrupts or interludes upon others” and “Difficulty waiting or taking turns” both allude to how the child’s behavior affects others. A CDC report on ADHD includes statistics about peer relationships, writing that “parents of children with a history of ADHD report almost 3 times as many peer problems as those without a history of ADHD.”³⁹ As a motivation for action about ADHD, how does this impact on others compare to the impact on the child?

That ADHD traits also diverge from a norm can also be observed in ADHD, as will be discussed in the next section.

Values in childhood behavior

As discussed in the previous chapter, hyperactivity and inattention have not been known to have garnered attention as major childhood issues (for children without previously existing neurological damage) in the United States until Denhoff and Laufer’s work in the mid-twentieth century. Their classification as harbingers of harm in that period and the following decades

³⁸ Brülde 98

³⁹ Centers for Disease Control and Prevention

likewise derived from some cultural shifts and values of the time, as briefly outlined in the actor network above. The United States in the latter twentieth century saw shifts in expectations of education and performance that changed the culture of schools. Child psychologists Maurice Laufer and Eric Denhoff published research on “hyperkinesis” in children in 1957, and a resulting disorder was put in the DSM-II in 1968. What may have led to people seeing “hyperkinesis” as a problematic issue in children?

The Cold War, also occurring in the latter half of the twentieth century, brought a new urgency to education, giving incentive for Americans to make sure their research could handle international competition. Concerned about falling behind the Soviet Union, American culture now wanted everyone to achieve greater levels of education. Matthew Smith writes that this contributed to schools beginning to keep an eye out for children who might have issues interfering with their performance that could be solved medically.⁴⁰ Funding for school counselors grew, this being a profession that mediated between education and medicine.⁴¹ Smith notes that a similar trend of pathologizing behaviors seen as detrimental to success in new ways had occurred in Britain during the Boer War. There, physicians and educators began worrying about a level of mental deficiency that was between being an “imbecile” and being of average mental capability, thus promoting fear about individuals who could disadvantage the state yet were not easily identifiable.

This appears to be a situation in which ideas about what was harmful or not for children were changing. Children were suddenly placed in a context which required greater intellectual abilities from them, and which measured these intellectual capacities through the education system. In such a context, behaviors such as paying attention, focusing deeply, and being adept

⁴⁰ Ibid. 54

⁴¹ Ibid. 71

with use of one's brain would be valued, while behaviors such as not well following an agenda well or sitting in a classroom for long, focused periods of time would have been devalued. The behaviors now comprising ADHD's DSM definition would be more harmful in this setting than in one in which such academic rigor was less of a priority.

However, while the United States began expecting more academic achievement, the education system did not necessarily change to make those achievements more accessible. United States school systems in the 1950s would have already been under pressure with resources, having had a recent economic depression, a war, and a teacher shortage.⁴² Smith notes that with the Baby Boomer generation, overcrowding also became an issue something that researchers have linked to behavioral issues. Laufer and Denhoff themselves, along with colleague Gerald Solomons, were amongst these researchers. Of their reasoning Smith comments, "Although the authors assumed that hyperactivity was a pre-existing condition which was exacerbated by the crowded classroom, as well as the hostility of the overworked teacher, it could also be argued that [...] children taught by a stressed teacher in a teeming classroom were more likely to be perceived as troublesome, and to be singled out for being so."⁴³ In this viewpoint, context affects the perception of a behavior.

With all these changes, the cultural image of a child's well-being came to involve the child's ability to be a contributing member of the classroom (and by implication, the future workforce). As these values about childhood's results changed, factors which might impede a child's performance in this particular definition of well-being were now seen as harmful. However, as discussed before, specific behaviors comprise the diagnostic criteria for ADHD, and they are what is targeted by the main treatment mode, psychiatric drugs. Other factors, such as

⁴² Smith 56

⁴³ Ibid. 57

classroom settings that do not match classroom expectations, are less widely discussed. This one-sided view of ADHD is both cause for and a result of ADHD having been medicalized.

Values in medicalization

The reaction to the harm found in ADHD (such as less efficiency in school) centers around a set of behaviors, even though other factors (such as difficult classroom environments) have contributed to that harm. And, even though no certain physiological basis for the tendency to express those behaviors can be agreed upon, the medical domain very actively responds to ADHD. As quoted in the Introduction to this thesis, CHADD describes ADHD as a “medically and legally recognized as a treatable yet potentially serious disorder.”⁴⁴ The DSM is a psychiatric resource, and psychiatry is the intersection of medicine and psychology, thus making ADHD as much a medical disorder as it is a mental one. While the CDC reports that having both medication and behavior therapy is the recommended treatment plan, medication appears to be the more common treatment (and is certainly the more controversial, since there is no certain specific neurobiological condition to target).⁴⁵ Resources on ADHD tend to report that the biological basis for ADHD is continually being researched. While many dissenters doubt the disorder’s medical legitimacy, there is first a clear medical connotation with ADHD that they react to. As ADHD has become a disorder, its behaviors have been conceptualized as a medical issue. This type of shift in classification is known as medicalization.

⁴⁴ CHADD

⁴⁵ Centers for Disease Control and Prevention

What is medicalization?

Hyperactivity and the other behaviors associated with ADHD today were not always things that fell into the domain of medicine. Behaviors, for instance, are often considered facets of psychology or even personality. However, there are lots of examples of things coming to be considered medical that were not before; this phenomenon is known as medicalization. Peter Conrad defines medicalization as the process by which nonmedical conditions come to be known and treated as medical issues.⁴⁶ Medicalization defines the condition in a way that places it in the medical domain. It is a collective action, influenced by both the general public and by those in the medical profession. Conrad writes that various factors such as the creation of medical markets has most likely contributed to increases in medicalization in recent decades – as more areas of profit open up in medicine, it behooves these sectors to have more medical conditions to work with. Cultural trends, the news, and the laity’s reaction to both also can be sources of influence for medicalization.

Medicalization is trickier when it involves conditions of mental health, since they generally involve emotional and behavioral traits rather than somatic ones. Medicalization of these traits may be more about categorizing them as issues that fall into the medical domain rather than defining them as a problem that has to do with biology. Peter Conrad’s definition of medicalization in a 1975 paper was stronger and more specific to this area: “By medicalization we mean defining behavior as a medical problem or illness and mandating or licensing the medical profession to provide some time of treatment for it”.⁴⁷ Medicalization of mental illnesses is important because it legitimizes or delegitimizes specific methods of treatment. It is also important because it locates problems within individuals’ biologies rather than in external issues

⁴⁶ Conrad “Medicalization of Society,” 4

⁴⁷ Conrad “Hyperkinesis,” 12.

which may also be pertinent causes. In the case of ADHD, medicalization means that diagnosis and treatment are focused on the individual's own behavior and ability to alter that behavior, as noted above. The process of medicalization shifted attention away from the psychology of behaviors or environmental factors to this centering of behaviors in the diagnosed individual's body.

The history of ADHD's medicalization

Historian Matthew Smith in his book *Hyperactive: The Controversial History of ADHD* argues that the medicalized, biological model of ADHD indeed specifically won out from these other models of ADHD in the 1950s-70s – that, indeed, the dominance of biology as a model for psychiatry overall was being established at this time. He writes that three ideological schools of psychiatry competed over both the opportunity to dominate psychiatry as a discipline and the opportunity to nail down the way ADHD would be conceptualized and treated.

The three psychiatric paradigms that Smith proposes were psychoanalysis, social psychiatry, and biological psychiatry. Psychoanalysts believed psychotherapy ought to be psychiatry's focus; in regards to ADHD, they believed working through the child's relationships to parents and others yielded positive results.⁴⁸ Social psychiatrists had a discourse of prevention; they believed that mental disorders such as ADHD were mostly caused by factors in the environment and could be prevented (more or less) by reducing social inequities.⁴⁹ Biological psychiatry, meanwhile, saw mental illnesses as the result of neurological conditions and other causes rooted in the body. The most effective treatment would thus be drugs.⁵⁰

⁴⁸ Smith 87

⁴⁹ Ibid. 88

⁵⁰ Ibid. 93

Biological psychiatry won out with both American psychiatry and ADHD. Smith suggests that its scientific, medical mindset may have appealed the most to psychiatrists' desires to be seen as part of a legitimate industry.⁵¹ It is likely that pharmaceutical companies also recognized that they had stakes in whether the biomedical model of mental illness predominated.⁵² As biological psychiatry prevailed in psychiatry as a whole, it affected conceptualization of ADHD. The revisers of the DSM-III echoed its sentiments, revising the description of the disorder to be more of this paradigm and less of the psychotherapy approach. In terms of ADHD specifically, biological psychiatry does propose the easiest treatment methods, as it is the simplest to implement for the wide population of diagnosed children. Psychoanalysis requires sustained time and effort for each individual child and would be expensive to secure for every diagnosed child, and ending social inequities requires even more effort on a larger scale.

As we saw earlier with the actor network theory, it is a variety of factors that contribute to the existence of ADHD. Earlier in this chapter we also established that ADHD-associated behaviors are deemed harmful because of contextual factors, such as expectations of school performance and classroom environments. The best approach to ADHD would be not to single out one psychiatric paradigm, which focuses on a one-dimensional view of ADHD, but to take all of them into account. Attempting to pin the disorder's harm down to one source rather than exploring a holistic picture is too narrow of an approach. However, it appears that the dominant narratives of ADHD in the 21st century United States tend to do exactly this.

A critique in 1975 by Peter Conrad titled "The Discovery of Hyperkinesis: Notes on the Medicalization of Deviant Behavior" expressed concerns about medicalization of deviant

⁵¹ Ibid. 78

⁵² Ibid. 94

behaviors. He critiques it as a form of social control, writing that it allows treatment of people with the deviant behaviors in question that might otherwise not be accepted (such as prescription of psychoactive drugs). Conrad focuses on the monopolization of expertise by medical professionals, attribution of social problems to a problem with the individual, and depoliticization of deviant behaviors, all of which contribute to this.⁵³ Conrad's argument suggests that medicalization of mental disorders does not spring solely from concern about assessed harm to the individual, or even to others around the individual, but rather from concern about effects on the general population. He suggests that those in whom expertise is located (the medical field) can exert control over society in this way. His argument remains pertinent to ADHD as it has existed throughout the decades in a culture where children are all required to conform to a socially mandated standard of productivity through educational accomplishment. In the long run, their academic achievement makes them more contributive members of the workforce. Thus those who are interested in social control would have something to benefit from identification and treatment of such childhood disorders.

As it is, because ADHD came to be regarded as a disorder with primarily biological causes, it has also come to be treated primarily in biomedical ways. As noted above, medicalization is important for its ability to canonize certain modes of treatment. For ADHD, this has meant psychiatric solutions, which mostly have taken the form of stimulant drugs such as Ritalin or Adderall. Rather than explore structural and environmental issues affecting a child, or working to train the child's mind, the widespread default is to medically procure a physiological state that reduces the child's ADHD behavior traits.

⁵³ Conrad "Hyperkinesis," 18-19

From medicalization to Treatment

We have already established that ADHD is seen as enough of a concern to warrant psychiatric treatment. Since ADHD has come to be primarily seen as biological in its nature (detracting attention from psychological, environmental, and systemic issues), the most canonical treatment is psychiatric treatment. These behaviors have been established as being both pathological enough and biomedical enough for children with them to be prescribed strong psychotropic drugs. However, this treatment method does not primarily meet concerns about harm to the child.

The application of drugs towards a disorder comprised of behaviors, such as ADHD, may be due more to cultural values about medicine, drugs, and effort than to their being the most appropriate choice for preventing harm to children. Some suggest that American culture has moved towards a more open attitude about taking psychotropic drugs. Richard DeGrandpre when discussing “the new laissez-faire attitudes we have developed toward prescription drugs” mentions the concept of cosmetic pharmacology. He describes this term, coined by psychiatrist Peter Kramer, as being “the notion of tinkering with our brain’s biochemistry not because something’s broken inside us but because if a drug can make us feel better, why not use it?”⁵⁴ Such an attitude would explain why medication for ADHD is such an easily accepted notion even when the biological basis for the disorder is vague or called into question.

DeGrandpre also suggests that the individualistic facet of American culture, in combination with a wide-spread technological optimism, cultivate a readiness to have one-dimensional, individualist explanations for things (such as the biological model for ADHD, which grounds the disorder in the individual rather than the individual’s surroundings or

⁵⁴ DeGrandpre 189

upbringing) and to have one-dimensional, quick fixes for things, such as a pill that reduces symptoms.⁵⁵ This individualism definitely seems pertinent to ADHD. If every family is responsible for its own child's performance in school or other settings, without structural support from the surrounding community, options become limited to what the individual family or child can make happen. If a child does not fit well into a classroom or other setting, it is the child who must compensate for the ill fit rather than the environment. The confidence in technological solutions also speaks to this – psychiatrists and teachers trust that the proper medication regime will improve a hyperactive or inattentive child's welfare and prospects. In doing so, they ground the treatment again in the individual child and the individual drug, requiring that they make up for the child's difficulties in the classroom and other settings. Such values of quick explanations and solutions to issues are permeating treatment of childhood and behavior. Thus medicalization and its suggested treatment appeals to medical professionals and many parents who value simple solutions for complex issues.

Medicalization of ADHD does appeal to parents' values of accessing responses for their children's ADHD diagnoses. As seen in the previous chapter, various policies such as more children having access to psychiatric services and more disorders (including ADHD) being covered under disability protection laws have allowed more children with ADHD behaviors to receive academic accommodations and other acknowledgments of their not totally fitting the classroom model. This is a way in which medicalization has been a boon for those diagnosed with ADHD. However, it still relies on a non-holistic view of ADHD that overlooks external factors which affect the harmfulness of ADHD-related behaviors to a child in favor of centering the cause of harm in the child. Since there are options to explore that do not so one-

⁵⁵ DeGrandpre 173

dimensionally require the child to be the point of compromise to meet cultural standards, medicalization and its psychiatric treatment regime is not the most helpful path for decreasing harm to children.

Conclusion

As remarked at the beginning of this thesis, the national controversy garnered by ADHD in children in the United States is sometimes seen as having two sides. One believes there is a truly harmful disorder, most likely with a neurobiological cause, which ought to receive treatment. The other believes that it is a contrivance by parents and teachers who are impatient with hardly exceptional childhood difficulties, or a contrivance by pharmaceutical companies taking advantage of such parents and teachers.

This thesis aimed to provide a more complex view of ADHD. It described the disorder as the result of nuanced relationships between a combination of external and internal factors, and argued that the medical treatment model that has come out of this network of factors is not optimal for achieving the goal of preventing harm to children diagnosed with ADHD. Since psychiatric drugs target a small fraction of the overall network that comprises ADHD, they are not capable of eradicating the disorder fully. And although they may alleviate the behaviors which motivate the diagnosis and treatment of ADHD, they do not exclusively serve the value of preventing harm to children with ADHD. The medicalization of ADHD also arises from a network of agents that have affected when drugs are chosen as a treatment method.

Seeking a better response to ADHD ought to involve a more holistic view of ADHD, with consideration of how many agents beyond a child's behaviors lead to an ADHD diagnosis and with understanding of how even assessing behaviors is a value-laden process. Extending the scope of ADHD treatment to target these external factors is a better plan than requiring children to be the only point of change. When a childhood disorder becomes as common as ADHD has, and its affects as much of a concern, it would be well worth it to seek out structural solutions. Although changing external factors at a large scale takes much cost and effort, given that

external factors have so contributed to the pathologizing of certain behaviors in children, it seems a more direct approach to remedying the disorder than is than changing every individual child.

A Final Note

Our focus in this thesis is ADHD in the United States, where its diagnoses did originate and have been most prevalent. It is important, however, to note that ADHD as a diagnosis has spread to other countries. Its identity has developed in different ways in other places, which speaks to the influence of culture and politics. In the United Kingdom, for example, diagnoses are less prevalent and are treated more as a psychotherapy issue.⁵⁶ In some non-Western nations, meanwhile, the conceptualization of ADHD is similar to the United States' biological model. Some dispute these are cases of movements orchestrated by pharmaceutical companies, suggesting that the disorder has been transplanted without accounting for cultural differences by companies seeking new markets.⁵⁷ However, in these countries too it has developed in different ways than it has in the United States, suggesting that those who would seek to transplant it ought to have accounted for cultural shifts.⁵⁸

As nations around the world continue to develop their own understandings of ADHD and their own uses for ADHD diagnoses and therapies, scope for understanding the external factors and the cultural impact on internal factors of the disorder will grow. A close study of its development in all these different cultures will provide an even better understanding of what ADHD "is" in relation to its cultural and historical context. This deeper comprehension will be invaluable as more children continue to receive ADHD diagnoses and treatment.

⁵⁶ DeGrandpre 160

⁵⁷ Smith 176

⁵⁸ Ibid. 181

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