

THE CHEMICAL LIVES OF “CHILDREN”

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ABSTRACT

Stimulants and ADHD have become nearly synonymous in recent decades. The now common practice of prescribing stimulants to children has fueled the long-standing controversy surrounding the legitimacy of what is commonly known as Attention Deficit Hyperactivity Disorder (ADHD). The need to medically justify stimulant use has sharpened the debate between those who argue for the disorder's medical validity and those who describe the disorder as a social construction. Historical inquiry into ADHD has maintained this dichotomy, retroactively fusing psycho-stimulants and children, and reifying rather than challenging a false choice between medical and constructivist explanations of the disorder.

This dissertation reexamines the significance of psychostimulants to two doctors in their work with children. Charles Bradley and Leon Eisenberg have, in recent years, figured prominently in historical accounts of ADHD as pioneering advocates of psychopharmacological treatment of children with hyperactive and inattentive children, in particular with stimulants. Scholars have selectively mined the published works of these two doctors to either validate or contest a biomedical explanation of ADHD and, thus, the appropriateness of pharmacologic treatment. However, each man wrote during distinct periods in American intellectual history, and their interpretation of the issues of the day influenced how they framed the results of their studies. A careful reading of the published works of Bradley and Eisenberg in light of their broader historical, intellectual and therapeutic contexts illuminates how both men derived a much wider range of uses for and

interpretations of stimulants as a diagnostic and therapeutic tool for a range of children's disorders.

In contrast to contemporary debates, a close reading of the published works of Bradley and Eisenberg demonstrates that social constructions of childhood buttressed rather than contradicted the commitment of both men to psycho-stimulant research and treatment in children. More importantly, both men wrestled with a different dualism, one that current medical and critical arguments leave intact. Stimulants, to each man, disrupted American clinical and popular models of mental and physical illness and distinctions between them. They struggled with the distinction between organic diseases and adaptive disorders.

A better understanding of Bradley and Eisenberg's views will enable a more nuanced reading of current theories of ADHD by explaining not simply who is right among varying perspectives, but how we can account for continually divergent interpretations of the relationship between stimulants, children, and ADHD. Careful scrutiny of their work will also expand the range of issues necessary to understand ADHD—the most commonly diagnosed childhood behavior disorder.

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INTRODUCTION:

RECONSIDERING HISTORIES OF CHILDREN AND STIMULANTS

There would be little discussion about Attention Deficit Hyperactive Disorder (ADHD) if stimulants (also known as psychostimulants) and children had never mixed company. But they did. That isn't to say children's problems of attention and behavior are made up, but merely that medication has played a critical role in defining the controversial history of ADHD, and perhaps the disorder itself. For several decades, diagnosis and treatment of ADHD have remained in the spotlight as the most common and contested childhood mental disorders. Stimulants, the medications most commonly used to treat ADHD, have figured prominently in professional and public debates since the 1970s. These debates have centered largely on questions of when or if a child's hyperactive or inattentive behavior should be artificially modified with medication and whether ADHD is a real neurocognitive disorder of the brain or a constructed social concept. As ADHD and stimulants have become synonymous, we have lost account of alternative histories and interpretations of stimulants as a diagnostic and therapeutic tool for children.

This dissertation recovers and revives the significance of psychostimulants to two doctors, Charles Bradley and Leon Eisenberg, in their work with children. This history of ideas is intended as an intervention into current thinking around stimulants and children. In contrast to the current deadlock between biomedical and constructionist accounts of ADHD,

Bradley and Eisenberg explored the relationship between organic and adaptive diseases and disorders. By better understanding the intellectual context in which Charles Bradley and Leon Eisenberg advocated for the use of stimulants with children, we can disrupt a pattern of thought that has become cemented in contemporary controversies surrounding ADHD, better understand the continually conflicting interpretations of contemporary research data, and consider how to better study the etiology and treatment of problems with attention and activity.

Charles Bradley, a Rhode Island physician, became the first medical director of the Emma Pendleton Bradley Hospital in 1933. Promoted as the first neuropsychiatric hospital for children in the United States, the home admitted patients with convulsive disorders, behavior disorders following epidemic encephalitis, cerebral palsy, and severe behavior problems with unknown causes. Over the next fifteen years (1933-1948), Bradley would publish studies on the diagnosis and treatment of a variety of childhood diseases and disorders: epilepsy, mental deficiency, childhood schizophrenia, and other nervous disorders. Bradley drew from his work with each of these conditions as he interpreted the significance of stimulants in diagnosing and treating the children in his care. However today, the vast majority of his work has been forgotten and Bradley's relevance to modern medicine has been reduced to a single contribution. Charles Bradley is credited as the first physician to note, in 1937, that several children in his care showed a "spectacular change in behavior...remarkably improved school performance" during a week of treatment with Benzedrine (a stimulant first marketed in the United States by the pharmaceutical company Smith, Kline, and French in 1933).¹ He is credited as a pioneer insofar as his work laid the

1 C. Bradley, "The Behavior of Children Receiving Benzedrine," *American Journal of Psychiatry* 94 (1937c), 577-585.

foundation for future research to establish the benefit of stimulants in the treatment of ADHD yet his own thinking on stimulants has been ignored.

Like Bradley, Leon Eisenberg's reasons for administering stimulants to children have been erased in histories of ADHD. Colleagues best remembered Leon Eisenberg for his work on autism and school phobia, and for his dedication to serving disadvantaged and socially marginalized populations. Eisenberg worked at and became the second director of the first American academic child psychiatry center, located at Johns Hopkins University. During his tenure at Hopkins (1953-1967), Eisenberg's writings spanned a number of topics: autistic disturbances of childhood; the physical, mental and intellectual effects of maternal deprivation; psychological effects of mental deficiency and brain damage in children; school phobia and school desegregation. Eisenberg introduced randomized clinical trials (RCTs) into psychopharmacological studies with children, but eventually turned away from this practice and critiqued RCTs as a method of evaluating long-term behavior changes. He continually advocated for a public health strategy to eradicate health disparities between children: black and white, poor and middle class. Throughout his writings, Eisenberg grappled with the distinction between mind and brain and turned to philosophy to explain obstacles to psychiatric progress. He would eventually become the chair of a newly founded program in social medicine at Harvard University in 1980. At Harvard, he would continue to write against a clean distinction in medicine between organic and adaptive models of mental diseases and disorders. Despite his many interests, Eisenberg has become (in)famous in histories of ADHD as the first to receive federal funding to test psychopharmacological agents on children in the early 1960s. As an early and vocal champion of stimulant medications for children's behavior problems, Eisenberg has been both celebrated and

vilified for endorsing the use of stimulants for children's behavior problems and for applying scientific methods (in the form of the RCT) to demonstrate the effectiveness of stimulants in treating ADHD.

ADHD: A Current Deadlock in Thinking

One of the great challenges to investigating the historical relationship between children and the prescription of stimulants is the tendency to interpret the past in terms of modern values and concepts. In the past several decades, stimulants have become inextricably linked in our culture with what we now call ADHD. Moreover, since the 1970s, stimulants have figured prominently in professional and public debates over whether or when a child's behavior should be artificially modified. Looking back, critical discourse around ADHD, childrent, and the prescription of stimulants can essentially be bifurcated into those espousing the biological approach or those embracing a constructivist understanding. This deep divide obscures a critical part of the history of ADHD – that the well-recognized pioneers in research, Bradley and Eisenberg, both had a profound appreciation of the constructivist AND biological understandings. Because historians/researchers have failed to recognize this fact, discourse around this topic is in a deadlock between two competing theories.

Now a rare week passes without mention of ADHD in the media. Claims that ADHD is a valid medical diagnosis largely determined by genetics appear alongside a chorus of well-known competing refrains suggesting it is a socially fabricated phenomenon, with varying explanations:

- *ADHD is a made up diagnosis invented by the United States, governments, schools, pharmaceutical companies, irresponsible parents (take your pick).*²
- *Rather than improving academic performance, stimulants control children who adults find bothersome.*³
- *ADHD isn't fixed with a pill but with a better diet, more exercise, better schooling, less technology (again, take your pick).*^{4 5}
- *Stimulants work on "normal" kids and adults as (unfair) cognitive enhancements.*⁶

These types of arguments advance competing definitions of what is normal and natural in childhood. These common arguments create a limiting dichotomy pitting biological and constructivist etiologies of ADHD against one another and positing a false choice between these two dominant orientations. These arguments in the biomedical and lay press reflect specific concepts in philosophy and history. At one extreme is the biological notion that there are distinct mental states that are pathological and caused by identifiable brain malfunction. At the other extreme is the constructivist concept that there are a range of naturally-occurring and potentially successful mental states and capacities, but that only some of these states will be defined as disorders (or positive attributes) by the norms of the communities in which the individuals live.

In this paradigm, one can either side with the biological camp or the constructivist camp. Those espousing the biological line of argument conclude that all mental illness is just like any other disease or illness (such as HIV or cancer). In doing so, they accept an implicit

2 A. Schwarz, "The Selling of Attention Deficit Disorder," *The New York Times* December 14, 2013, 2013.

3 K. Sharpe, "Medication: The Smart-Pill Oversell," *Nature* 506, no. 7487 (Feb 13, 2014), 146-148.

4 S. Hinshaw and R. Scheffler, "Expand Pre-K, Not ADHD," *The New York Times* February 23, 2014, .
<http://www.nytimes.com/2014/02/24/opinion/expand-pre-k-not-adhd.html>.

5 Ken Robinson, "Changing Education Paradigms," *RSA Animate, the Royal Society of Arts, London*, <Http://Www.Youtube.Com/Watch> (2010).

6 S. Petrow, "The Drugs of Work-Performance Enhancement," *The Atlantic*, November 4, 2013, .
<http://www.theatlantic.com/health/archive/2013/11/the-drugs-of-work-performance-enhancement/281055/>.

understanding of disease as a discrete ontological entity (a condition of the body or some part or organ of the body), best defined and treated through methods derived from “objective” medical research. In the case of ADHD, this biologically oriented position is represented by clinical assertions that neurology and genetics play the greatest role in determining which children are at risk for developing the disorder and that studies of the brain will eventually illuminate its exact cause. According to this view, health and sickness are posited as phenomena that are objectively defined. Further, proper diagnosis and treatment with stimulants are justified through the belief that stimulants correct an underlying neurochemical imbalance. Some critics agree that ADHD is an objectively valid diagnosis, yet express concern that stimulants are used too broadly instead of behavioral interventions. Other critics point to the environmental causes of the disorder (lead poisoning, maternal smoking, food additives, and the like).

Alternately, on the other end of this binary divide, a constructivist might argue that the categories of normal and pathological are historically contingent, or “socially constructed.”⁷ In this camp, proponents try to explain the social, cultural, and political factors that led individuals to re-label millions of children previously considered healthy, ordinary, and “normal” as medical subjects.⁸ As one researcher put it, “Perhaps more than any other diagnosis on the medical market today, ADHD problematizes the assumption of an objective measure of ‘normal’ functioning and points to the distinctly social tasks of judging normative

7 Matthew Smith, *Hyperactive: The Controversial History of ADHD* (London, UK: Reaktion Books, 2013).

8 A few examples: Peter Conrad, *The Medicalization of Society: On the Transformation of Human Conditions into Treatable Disorders* (Baltimore: Johns Hopkins University Press, 2007), 204.; Allan V. Horwitz and Jerome C. Wakefield, *The Loss of Sadness: How Psychiatry Transformed Normal Sorrow into Depressive Disorder* (Oxford University Press, 2007).; Peter Schrag and Diane Divoky, *The Myth of the Hyperactive Child: And Other Means of Child Control* (Pantheon Books New York, 1975).

behaviors, assigning diagnostic labels and deciding on and responding to medical treatments.”⁹

With these two extremes in place, a hybrid position accepts that there are certain children who really have ADHD and therefore may deserve treatment (including medication), but still acknowledges that many normal children are either being controlled with medication or receiving unfair cognitive enhancements, depending on the nature and context of their behaviors.¹⁰ Because these controversies arose in response to the treatment of children with stimulants, it is important to understand exactly how the discussion of children and now federally regulated medical stimulants became inseparable in public and academic exchanges. Likewise, to fully appreciate this deadlock in thinking about ADHD, it is necessary to consider exactly how relatively recent concerns about medicating children have restricted our understanding of the context out of which medical professionals advocated to bring children and psycho-stimulants together in the first place.

A Brief History: The Rocky Marriage of Stimulants and ADHD

In the 1960s and 1970s tremendous growth in the practice of prescribing stimulants to children was accompanied by a rising awareness of the risks of stimulant abuse. During those decades, hyperactive/inattentive children became closely associated with the prescription of stimulants. Researchers during this time began considering hyperactive/inattentive symptoms as the basis of a distinct syndrome (what eventually was called ADD). Concurrently, abuse of stimulants, and

⁹ Ilina Singh, "ADHD, Culture and Education," *Early Child Development and Care* 178, no. 4 (2008a), 347-361.

¹⁰ Lawrence H. Diller, *Running on Ritalin: A Physician Reflects on Children, Society, and Performance in a Pill* (Random House LLC, 2009).; Rick Mayes, Catherine Bagwell and Jennifer L. Erkulwater, *Medicating Children: ADHD and Pediatric Mental Health* (Harvard University Press, 2009).

social/political unrest led to restrictions on the medical use of stimulants. Clinical professionals as well as laypersons have used stimulants for different purposes since their creation, yet social and political unrest in the 1970s led to restrictions on the medical uses of stimulants. These restrictions came at a time when a base of interested researchers began considering hyperactive and inattentive symptoms as the basis of a distinct syndrome.

As the practice of prescribing stimulants to schoolchildren grew, so did the controversy. An article appearing in a September 1970 issue of the Washington Post newspaper reported that “behavior” drugs were being administered to between 5% and 10% of schoolchildren in Omaha, Nebraska.¹¹ The story alleged that families were being coerced to medicate children identified by teachers as hyperactive and unmanageable. At a school board meeting, black parents and community organizers charged the city with attempting to drug their children into submission. One mother argued that medication would communicate the wrong message to children. That message? “As soon as things aren’t going right, they can take a pill to make it better.”¹² Other articles followed later that year. In one, pediatricians and educational specialists were characterized as “speed” merchants; dope pushers prescribing dangerous drugs to children.¹³ The practice of medicating children was likened to practices in Russia in which political dissidents were silenced by being placed in “loony bins.” The Village Voice published the story of a schoolteacher who had recommended two young Hispanic boys for psychiatric evaluation.¹⁴ According to the students and their parents, the teacher treated Spanish-speaking children more harshly than

11 Robert Maynard, "Omaha Pupils Given “behavior” Drugs," *Washington Post* 29 (1970).

12 Ibid.

13 N. Von Hoffmann, "Student Pep Talk," *The Washington Post* July 22, 1970.

14 N. Hentoff, "Order in the Classroom!" *The Village Voice* December 3, 1970., .

she did the others, calling them ‘idiots’ and ‘morons.’ The author concluded that it was the classrooms, not the students, which needed rewiring.

By 1970, the rising tide of media coverage and unrest prompted a national debate, a congressional hearing, and a national conference that same year. Representative John Wyder of New York spoke his mind, voicing skepticism and concern with medicating this type of behavior:

I would think that what you describe as a problem is practically almost the average child that goes to school. They all have these kinds of problems. All you are dealing with is a question of degree. Don't most children have a problem of attention span and things of this nature? This is almost natural. I would think that is a normal problem. I have that problem myself.¹⁵

Public and congressional concern over the abuse of stimulants (specifically speed) overlapped with these emerging stories and presented a problem. How could a national campaign exposing the dangers of speed coexist with the rising amount of research supporting the use of stimulants in children?¹⁶ A national conference focused on behavior modification drugs led Congress to pass the Comprehensive Drug Abuse Prevention and Control Act in December 1970. That Act placed restrictions on the production and use of both amphetamines and methylphenidate (Ritalin), and recommended limiting the use of stimulants to the treatment of the specific diagnosis of minimal brain dysfunction (considered by many to be a diagnostic predecessor to the label of ADHD).¹⁷ Controversies over the conceptual understanding of what is natural and normal behavior encouraged medical

15 CE Gallagher, "Federal Involvement in the use of Behavior Modification Drugs on Grammar School Children of the Right to Privacy Inquiry," *Hearing before a Subcommittee of the Committee on Government Operations, House of Representatives* (1970).

¹⁶ Chemically, there is a range of stimulants that fall within the class of amphetamine. For more on the chemical distinctions of various stimulants, see: Nathan William Moon, "The Amphetamine Years: A Study of the Medical Applications and Extramedical Consumption of Psychostimulant Drugs in the Postwar United States, 1945-1980" (PhD, Georgia Institute of Technology), 1-376.

¹⁷ Mayes, Bagwell and Erkulwater, *Medicating Children: ADHD and Pediatric Mental Health* (Harvard University Press, 2009). 65.

professionals to come to consensus around a clear medical entity to avoid further backlash.¹⁸

By 1980, a new term, Attention Deficit Disorder (ADD), was introduced widely into the medical field through its publication in an updated diagnostic manual.¹⁹

This political controversy was not the sole impetus for medical professionals to work towards consensus, nor was it the first time medical professionals linked hyperactive behavior to organic causes or gave stimulants to children. Prior to ADD and ADHD, doctors attributed hyperactive and inattentive behavior symptoms to a number of conditions, including moral imbecility, defective moral control, encephalitis lethargica, postencephalitic syndrome, organic drivenness, hyperkinetic impulse disorder, minimal brain damage, minimal brain dysfunction. Meanwhile, pharmaceutical companies adapted to the new regulations by positioning their stimulant products in the marketplace for a diverse range of treatments: nasal decongestion, narcolepsy, chronic fatigue, depression, and dementia.²⁰ However, companies patiently avoided marketing stimulants for use with children until researchers (backed with federal funding) gave their endorsement.

18 Rick Mayes and Allan V. Horwitz, "DSM-III and the Revolution in the Classification of Mental Illness," *J Hist Behav Sci.* 41, no. 3 (2005), 249-267.

19 American Psychiatric Association, *DSM III. Diagnostic and Statistical Manual of Mental Disorders (Third Edition)* (Washington, D.C.: American Psychiatric Association, 1980). The H for Hyperactivity was introduced in the modified DSM, published in 1987.

²⁰ Nathan Moon has documented widely ranging medical and extramedical uses for psychostimulant drugs in the U.S. following WWII. Ilina Singh and Nicholas Rasmussen have also explored the ways that pharmaceutical companies have adapted their marketing strategies as researchers discovered new uses. Moon, *The Amphetamine Years: A Study of the Medical Applications and Extramedical Consumption of Psychostimulant Drugs in the Postwar United States, 1945-1980*, PhD ed. Georgia Institute of Technology, (2009), 1-376.; Ilina Singh, "Not just Naughty: 50 Years of Stimulant Drug Advertising," in *Medicating Modern America: Prescription Drugs in History*, eds. Andrea Tone and Elizabeth Siegel Watkins (New York: NYU Press, 2007), 131-155.; Nicolas Rasmussen, *On Speed: The Many Lives of Amphetamine* (New York: NYU Press, 2008).

Prior to the debates around the prescription of stimulants, other controversies were challenging the validity of the field of psychiatry generally.²¹ In the 1960s, critics of psychiatry grew in number, followed in the 1970s by critiques and alternative theories of hyperactivity and attention deficits. All of this discord set the stage for contemporary arguments around the disorder's validity. Recent historiography of hyperactive and inattentive children has been shaped by issues that emerged during this tumultuous time. Unsurprisingly, considering the divided debate outlined above, these recent historiographies also nurture the current deadlock between social and medical explanations of ADHD, setting the stage for mis-reading Bradley and Eisenberg's beliefs about the justifications for treating children with stimulants.

Misrepresenting Bradley and Eisenberg: Histories of ADHD

A literature review of the history of ADHD reveals the damage done by these battles. This deep fissure in discourse, the dichotomy between those defending ADHD as an objective biomedical diagnosis and those arguing that it is socially constructed, has constrained the questions that historical researchers, among others, ask.

Clinicians and researchers have produced numerous histories of ADHD over the past decades (starting in the 1980s).²² In most cases, these histories have focused on isolating key research findings that explain and develop theories of ADHD. These histories draw narrowly

²¹ There were much earlier critics of psychiatry, however, the type of arguments changed during this time. For earlier critiques, see, for example: Joseph Brennemann, "The Menace of Psychiatry," *Archives of Pediatrics & Adolescent Medicine* 42, no. 2 (1931), 376.

²² Clinicians might debate this timeline as several books on conditions considered to be predecessors to ADHD (minimal brain damage; hyperkinetic reaction of child). In all likelihood, many clinical histories of ADHD borrowed from books and articles on previous disorders, but even after the introduction of the term ADHD in 1980, clinicians also continued for some years to include ADHD as only the most recent title given to other problems (hyperactivity, for example). For example: Dorothea M. Ross and Sheila A. Ross, *Hyperactivity: Current Issues, Research, and Theory* (Wiley New York, 1982).

from the work of Bradley and Eisenberg, among others, carefully selecting content most supportive of current understanding. A recent example illustrates the selective reading of Bradley. Near the end of the 20th century, the *American Journal of Psychiatry* paid tribute to Bradley, crediting him with one of the most important discoveries in the history of psychiatric treatment: the beneficial effects of Benzedrine on school performance.²³ The journal's short biographical sketch featured his 1937 findings in a story now common in ADHD histories. Bradley's "accidental" discovery came after he administered Benzedrine in an attempt to alleviate the headaches of children following a painful neurological diagnostic procedure.²⁴ Although the medicine did little for the children's headaches, teachers reported a striking improvement in the school performance of the children receiving Benzedrine. The 1937 article describing these changes, "The Behavior of Children Receiving Benzedrine,"²⁵ has been cited over 1000 times in subsequent publications.²⁶ This news may have come as a surprise to Bradley, since his colleagues credited his works on childhood schizophrenia and other nervous diseases more regularly in the decades following publication (1940s-1960s) than his work on Benzedrine, which rose to fame in the past four decades.²⁷

Leon Eisenberg's work is likewise selectively mined by researchers and, consequently, has suffered a similar fate to Bradley in histories of ADHD. Eisenberg's work is most often interpreted as simply forwarding a neurogenetic basis for ADHD. Eisenberg's is often given even more weight than Bradley's because Eisenberg is credited with applying a

23 W. A. Brown, "Charles Bradley, MD, 1902-1979 - Images in Psychiatry," *American Journal of Psychiatry* 155, no. 7 (July, 1998), 968-968.

24 Even if actually accidental, it is still important to distinguish between what he found and how he chose to frame findings.

25 Bradley, C. The Behavior of Children Receiving Benzedrine. 1937. *The American Journal of Psychiatry*. 94: pp. 577-585.

26 A search of citations through Google Scholar produced 1032 results.

27 An interesting pattern emerges concerning the timing of its circulation, with an exponential rise in references to the article in the past four decades. 29 documented citations between the article's publication and 1960 contrasts with 49 references in the following decade alone, and almost 500 citations since the year 2000.

more rigorous and scientific methodology to drugs studies with children. Eisenberg along with his colleagues contributed to a significant surge in research showing that stimulants had dramatic effects on hyperactive and inattentive behavior in children.

The fact that Bradley and Eisenberg made some of the most significant contributions to understanding the effects of stimulants on children is not contested in histories of ADHD. However, the lens through which Bradley and Eisenberg have been interpreted obscures why they were so interested in stimulants. Recent interpretations of these two pioneering figures strip away the distinct therapeutic challenges they both described - challenges that were critical to their understanding of stimulants and unaccounted for in traditional clinical histories of ADHD.

In all fairness, proponents of a biomedical explanation for ADHD are not the only ones to take very polarized and partial views of the condition and its treatment. For example, historian Matthew Smith offers the following criticism:

The reason why the history of hyperactivity has been sought in past centuries and decades has been to reinforce the notion that such behavior has nothing to do with the social environment; it is all about neurological factors which are rooted in genetics and, therefore, timeless and universal.²⁸

Though the effects of such history may be interpreted in this way, the tendency to ascribe intent demonstrates cross-disciplinary politics and continued distrust of clinicians. This tendency fails to account for the practice of clinicians to draw from historical examples to better understand the psychological mechanisms of a disease or disorder.

²⁸ Smith, *Hyperactive: The Controversial History of ADHD* (London, UK: Reaktion Books, 2013). Similar arguments have been suggested by Adam Rafalovich and Ilina Singh. Adam Rafalovich, *Framing ADHD Children: A Critical Examination of the History, Discourse, and Everyday Experience of Attention Deficit/Hyperactivity Disorder* (Lanham, MD: Lexington Books, 2004).; Ilina Singh, "Bad Boys, Good Mothers, and the "Miracle" of Ritalin," *Science in Context* 15, no. 4 (2002), 577-603.

In the new millenium, scholars have introduced a small body of work revisiting the history of ADHD. Recent histories of the disorder written by scholars have focused on specific questions highlighting skepticism of the validity of ADHD. Why did ADHD emerge as a diagnostic label in the United States ahead of other countries?²⁹ Why is the diagnosis along with stimulant treatment so uneven geographically?³⁰ How did mothers become open to the notion of medicating their problematic sons?³¹ Why did biomedical explanations of ADHD win out over social, developmental, and environmental ones?³² Each of these questions anticipates a social explanation, looking to the past to unearth evidence relevance to contemporary interests. In doing so, scholars have returned to Bradley and Eisenberg, often to demonstrate both the differences between the populations each worked with and how they considered use of stimulants for a wider range of behavior problems than hyperactivity or lack of attention. Although more nuanced and sensitive to the broader work of Bradley and Eisenberg, these histories are also guilty of , ignoring how Bradley and Eisenberg represented their therapeutic contexts, different behavior problems, and stimulants.

These more recent scholars have suggested that historians and social scientists have left the history of ADHD virtually untouched.³³ However, if the broader social, political, and economic conditions in which ADHD emerged as a medical phenomenon are of concern, the

29 Matthew Smith, "Putting Hyperactivity in its Place: Cold War Politics, the Brain Race and the Origins of Hyperactivity in the United States, 1957–68," *Locating Health: Historical and Anthropological Investigations of Health and Place*, London: Pickering & Chatto (2011b), 57-69.

30 Ibid. Singh, *ADHD, Culture and Education*, Vol. 178 Taylor & Francis, 2008a), 347-361.

31 Singh, *Bad Boys, Good Mothers, and the "Miracle" of Ritalin*, Vol. 15, 2002), 577-603.

32 Smith, *Hyperactive: The Controversial History of ADHD* (London, UK: Reaktion Books, 2013).; Matthew Smith, *An Alternative History of Hyperactivity* (Piscataway, NY: Rutgers University Press, 2011a).; Matthew Smith, "Roy Porter Student Essay Prize Winner Psychiatry Limited: Hyperactivity and the Evolution of American Psychiatry, 1957-1980," *Social History of Medicine* 21, no. 3 (DEC, 2008), 541-559.

33 Singh, *Bad Boys, Good Mothers, and the "Miracle" of Ritalin*, Vol. 15, 2002), 577-603.; Smith, *Hyperactive: The Controversial History of ADHD* (London, UK: Reaktion Books, 2013).; Rafalovich, *Framing ADHD Children: A Critical Examination of the History, Discourse, and Everyday Experience of Attention Deficit/Hyperactivity Disorder* (Lanham, MD: Lexington Books, 2004).

historiography relevant to ADHD has been growing for decades. That is, the suggestion that there has been little historiography on ADHD can be a bit misleading.

Key Background Themes

ADHD as a “loose concept”

The question of what to look for in history, in this case, is dependent on the prism through which one interprets ADHD and this is where things get complicated. A collective memory of the history of psychiatry remains particularly elusive and scholars in the field have argued that histories of the profession of psychiatry “reveal a vastly greater degree of difference among themselves than historical accounts of any other discipline.”³⁴ In the 1970s, as the treatment of children with stimulants gained wider professional and popular attention, the proliferation of perspectives on psychiatry played out dramatically among those defending a biomedical framework of medicating hyperactive children and their opponents. Historian Ilana Lowy employed the phrase “loose concept” to medical terms flexible enough to create alliances between diverse medical practitioners, thereby allowing flexibility in interpretation.³⁵ Recently, historian Matthew Smith suggested that ADHD fit the model of a “loose concept” because it helped to link and create alliances between professional groups:

This [hyperactivity functioning as a “loose concept”] appears to be the case in the history of hyperactivity as physicians representing a number of disciplines (for example, pediatrics, psychiatry, neurology, and general practice) were able to interact successfully with psychologists, educators, social workers and even parents to legitimize the concept of hyperactivity and validate the means by which to treat it.³⁶

34 Roy Porter and Mark S. Micale, "Introduction: Reflections on Psychiatry and its Histories," in *Discovering the History of Psychiatry*, eds. Roy Porter and Mark S. Micale (New York: Oxford University Press, 1994), 3-36.

35 Ilana Löwy, "The Strength of Loose Concepts-Boundary Concepts, Federative Experimental Strategies and Disciplinary Growth: The Case of Immunology," *History of Science* 30, no. 90 (1990), 371-396.

36 Smith, *Hyperactive: The Controversial History of ADHD* (London, UK: Reaktion Books, 2013).53.

Here and elsewhere, Smith implied that the idea of hyperactivity allowed a facile way for multiple interests to organize around a set of “problem” children. The idea of hyperactivity also expanded the applicability of the label to a larger pool, thereby suiting the common needs of a variety of practitioners while maintaining their distinct perspectives.³⁷ There is certainly evidence to support this thesis, yet conceptual “looseness” eventually became a cause for concern among professionals who saw the diagnosis as vague, over-inclusive, and of little diagnostic or etiological precision.³⁸ It is somewhat understandable that researchers of ADHD, still under suspicion since the controversies of the 1960s and 1970s, might focus so much energy on isolating the physiological mechanisms tied to attention and hyperactivity.

If we limit the application of “looseness” of interpretation only to those in the mental health world, we miss the ways that such a concept has worked in a much broader landscape. The “loose” conceptual boundaries of hyperactive children may have been interpreted as harmful to medical practitioners at different times, but they did serve as a useful platform for a variety of rising social and cultural critiques of medicine’s reach. The medical diagnosis of hyperactivity and use of stimulants as treatment supplied a concept flexible to enough to speak to a variety of often competing interests. As a result, divergent accounts of the causes of hyperactive children began to emerge.

As a concept, ADHD and its conceptual predecessors have given voice to a much broader range of interests and concerns than can be limited to medical practices. So have stimulants. Drugs and medications, like everything we perceive, are coded with messages and meaning. As chemical ideas, they are active conveyors of information, the interpretation

³⁷ There are excellent examples in the history of medicine as well as the history of information consistent with this notion of looseness. See, for example:

³⁸ Russell A. Barkley, *Attention-Deficit Hyperactivity Disorder: A Handbook for Diagnosis and Treatment*, Third ed. (New York, NY: Guilford Press, 2005).

of which also depends on the context, knowledge, experience, and values of the receiver. It has spoken to many beyond the medical community: civil rights advocates concerned with racial and class injustice; libertarians espousing the myth of mental illness; liberals and conservatives dedicated to preserving boyhood (since boys are much more likely to be diagnosed than girls) and childhood; educators concerned with school standardization and testing; critics of institutionalization; cultural commentators concerned with the pace of life and technology; and political economists trying to preserve democracy and capitalism. Rexamining the work of Bradley and Eisenberg contributes in previously unacknowledged ways to these many interests by highlighting the interests in and interpretations of stimulants to each man.

Child Psychiatry and Stimulants

Historical studies of stimulants and of ADHD have commonly brought out differing arguments relevant to specific stakeholders including but not limited to pharmaceutical companies, governmental bodies, general clinicians, psychiatrists, educators, and families.³⁹ Bradley and Eisenberg are the focus of this dissertation not only because of their prominence in histories of ADHD and stimulants, but also because their work reflects the iterative adaptations of the emerging profession of child psychiatry. Over the course of the twentieth century, the profession developed from a number of disparate initiatives with loosely and tenuously maintained areas of mutual contact to a board certified medical subspecialty. Doctors interested in children's mental health problems worked throughout the 20th century to develop a professional body of knowledge and methods distinct from its "parent" field of psychiatry. In doing so, workers fought against the belief that models of mental illness based

³⁹ Moon, Singh, Mayes, Rafalovich, Rasmussen, Singh (mothers and fathers)

on work with adults could be applied to children and developed new definitions of childhood. Once stimulants and children came together under the heading of ADHD, specialists were no longer required for the administration of stimulants to children. As a small field, child psychiatry has never successfully controlled conversations around their topic. Comparing the ideas of these two men working in distinctly different periods of the profession's growth, the following case studies shed new light on the changing principles guiding the study, diagnosis, and treatment of children with stimulants. Of equal importance, the writings of each man help unlock the current deadlock represented in contemporary debates around ADHD, which have become tethered to questions regarding the impacts of medicating children with psychostimulants and whether ADHD is a distinctly identifiable brain disorder or a social construct.

Central Arguments

This dissertation will begin by exploring Bradley and Eisenberg's arguments. I will argue that the interests of both Bradley and Eisenberg in psychostimulants can only be properly understood in light of their broader historical, intellectual, and therapeutic contexts. I will then analyze the repercussions of the success of Bradley and Eisenberg's specific studies on stimulants in reaching a broader audience. As pieces of published studies made their way into broader clinical and popular audiences, Bradley and Eisenberg lost control of their intended interpretations.

Carefully re-examining the published works of Bradley and Eisenberg, as well as subsequent literature on their work, ADHD, and stimulants, I will advance four principle arguments. First, I argue that forcing a choice between biomedical and socially constructed explanations of ADHD undermines the insights that Bradley and Eisenberg were attempting

to advance. A close reading of the published works of Bradley and Eisenberg suggests that an appreciation of the social, environmental, organic, and conceptual determinants of childhood disorders complemented rather than contradicted the interests of both Bradley and Eisenberg in biological and pharmacological research. Both disagreed with medical training that simply focused on defining and locating specific disease pathologies in the body. Alternately, Bradley and Eisenberg expressed frustration with psychoanalytic and psychodynamic practitioners, who remained immune to evidence that physiological changes could cause psychic disturbances and that psychosocial stresses could cause what appeared to be changes suggestive of specific disease pathology.

Second, Bradley and Eisenberg were acutely aware of the changing cultural expectations of children. They expressed this while working to give previously stigmatized and marginalized children (who, to many at the time, were not regarded as children at all) access to psychiatric services. . In articulating the needs of their patients, Bradley and Eisenberg exposed implicit assumptions and expectations of childhood in existing psychodynamic, psychoanalytic, and biomedical orientations to child psychiatry. These models, according to both men, gave too few children access to treatment and opportunities to develop to their full capacity.

Third, both Bradley and Eisenberg found it increasingly difficult to justify a clear distinction between organic and maladaptive ways of interpreting mental illness in children. Stimulants disrupted cultural assumptions about the shared ceremonies and beliefs that allowed certain children to take credit for a series of random and contingent factors (organic and environmental) as something deserved and “natural”.⁴⁰ The message of stimulants to

⁴⁰ Of course, this isn't to suggest that the chemical changes resulting from these drugs are the same as the chemical changes that occur through other means. The point is that the subjective experience of self, as viewed

both Bradley and Eisenberg was not simply that these pills opened up a path to manipulating “natural” beings, but that stimulants retroactively upset beliefs around childhood and free will. Both Bradley and Eisenberg were already working with patient groups who were largely excluded from the category of normal children. Stimulants, like the children these men worked with, illuminated and challenged the assumptions of what a child achieves on his own or “naturally.”

Finally, since Eisenberg’s career spanned an era of increased skepticism and critique of psychiatry, I will argue that critics – both those who argued against the “medicalization” of hyperactive and inattentive children as well as those that defended genetic and biomedical explanations of mental illness – failed to contend with the arguments that Bradley and Eisenberg advanced. Although these critics did address concerns of vital importance to a broader discussion of stimulants and children, their avoidance of Bradley and Eisenberg’s arguments around stimulants has left in place beliefs that distinguish between natural and artificial means of modifying children’s behavior.

Descriptions of Chapters

In Chapter Two, I will return to the writings of Charles Bradley, most of which he produced during his time at the Emma Pendleton Bradley Hospital in Providence, Rhode Island. I argue that the now famous Benzedrine Paper can only be fully understood through an analysis the therapeutic vision Bradley espoused for the patients served at the Emma Pendleton Bradley Home. Promoted as the first neuropsychiatric hospital for children, the Bradley Home represented the convergence of three dominant intellectual influences in the

by doctors, teachers, parents, and children, changes through the administration of these drugs in a way that disrupts a sense of one’s control over their own behavior through “natural” means.

early twentieth century: scientific medicine, the child guidance movement, and pragmatism. Against common practice and expert consensus, the home admitted patients with known neurological and organic diseases such as epilepsy and encephalitis along with children with extreme behavior disorders. As Bradley wrote about epilepsy, schizophrenia, and mental deficiency in childhood, he illuminated existing cultural expectations of children. Bradley encouraged physicians, when diagnosing and treating organic diseases in children, to pay equal attention the effects of illness on a child's adaptation and acceptance in his community. Though Bradley acknowledged that Benzedrine would become popular for its effects on children in the schoolroom, he also saw promise in the drug as a treatment for children diagnosed with convulsive and other movement disorders as well as schizophrenia. What he found surprising was that the drug had a favorable effect of behavior problems whether their origins were considered organic or adaptive in nature. Through a direct manipulation of psychic qualities, Benzedrine, like laboratory tests, provided visible evidence that a chemical could "work" to produce results that interpersonal symbolic rituals could not, retroactively challenging the assumptions around what a "normal" child achieves "naturally."

Chapter Three will explore the intellectual and therapeutic context in which Eisenberg interpreted the message of stimulants. In the 1950s, as Eisenberg entered the profession, leaders in the field worked to establish a board certified medical subspecialty in child psychiatry. Over the following few decades, child psychiatrists exchanged visions for the profession and looked to improve standards for training. In chapter three I will explore the vision that Eisenberg presented to his colleagues in medicine and child psychiatry. Working under Leo Kanner at Johns Hopkins, Eisenberg studied children newly classified under the diagnosis of autistic disturbance of childhood. As Eisenberg wrote about autism,

maternal deprivation, and minimal brain damage, he argued that organic, environmental, social, and conceptual factors always worked together to create disease and disorder. Drawing from evidence on each condition, he argued that a clean distinction between organic and adaptive diseases and disorders was no longer useful. His work with two kinds of school phobias convinced him that insight did not need to precede transformation and that strong leadership, conviction, and ideas could influence not only beliefs, but also the health of communities. Eisenberg expressed frustration that existing psychiatric services rarely reached children in greatest need of services and argued that available knowledge and resources should be deployed strategically to reduce health disparities between middle and lower class children and families. An advocate for the use of scientific methods (in the form of the randomized control trial), Eisenberg's interpretations of his pharmacological RCTs with children read like psychological studies. He reported that milieu, treatment, and medications conveyed meaning both to the children and the staff in residential treatment facilities. Stimulants, along with the study design and implementation, demonstrated an impact of research on its participants (beyond any specific intervention).

In Chapter Four, I will argue that critics in the 1960s and 1970s— both those who argued against the “medicalization” of hyperactive and inattentive children as well as those that defended genetic and biomedical explanations of mental illness — failed to contend with the arguments that Bradley and Eisenberg advanced. Although these critics did address concerns of vital importance to a broader discussion of stimulants and children, their failure to contend with Bradley and Eisenberg's arguments around stimulants has left in place beliefs that distinguish between natural and artificial means of modifying children's behavior and rigid distinctions between organic disease and mental illness.

In the end, this dissertation considers fundamental, but overlooked, interpretations of stimulants. At the core, historical accounts of ADHD fail to wrestle with a set of questions that stimulants, as applied to children or adults, raise about freedom, choice, determination, and hard work: ideals that still haunt how we think about who deserves what more than a decade into 21st century America. In the face of scientific uncertainty, both Bradley and Eisenberg advanced a “pragmatic” or practical agenda to treat children. How each man ultimately formed his thought and navigated his circumstances, while important, is not the central focus of this dissertation. I am centrally concerned with what is thinkable at a given time. Stimulants have always been more than a chemical substance. Drugs and medications, like everything we perceive, are coded with messages and meaning. As chemical ideas, they are active conveyors of information, the interpretation of which also depends on the context, knowledge, experience, and values of the receiver. We metabolize drugs as ideas. Whether or not we ingest the pills themselves, we ingest their meaning. For Bradley and Eisenberg, stimulants raised important questions about human nature and human willpower. These questions were as much philosophical in their origins and implications as they were therapeutic and are as relevant and necessary today as ever. As we face daily decisions about labeling and medicating children’s behavior problems (whether as a parent, teacher, medical professional, or policy maker) we must contend with these questions if we are to better define and advance health and freedom.

CHAPTER TWO:

CHARLES BRADLEY AND THE BENZEDRINE PAPER REVISITED

In this chapter, I will argue that Bradley's 1937 Benzedrine Paper and his interpretation of the practice of administering stimulants to children can only be understood through an analysis of the therapeutic vision Bradley espoused for the patients served at the Emma Pendleton Bradley Home. Bradley's description of the home's design drew from several important historical, philosophical, and therapeutic traditions that shed light on his intellectual orientation to treatment.⁴¹ As a self-declared pragmatist, Bradley demonstrated the transformation of pragmatism as a philosophical tradition as it gained broad popular appeal. Bradley's descriptions of his patient population (epileptic, schizophrenic, brain damaged, post-encephalitic, etc.) highlighted, through contrast, prevalent cultural definitions and expectations of children. According to Bradley, children in his care were excluded unnecessarily from participation in rituals and social engagement necessary to ensure that each child would find a place in society. In a clear nod to pragmatism, Bradley promoted "useful" definitions and strategies to help his patients meet the expectations of childhood and to replace existing expectations of children with new ones that would open opportunities for stigmatized children. Though the Bradley Home was designed to supply all of the medical and environmental tools to promote successful child development, stimulants (Benzedrine) blurred the distinction between organic and adaptive problems in childhood.

⁴¹ Though I will continually refer to Bradley's writings in this chapter, many of his papers included co-authors and Bradley worked alongside colleagues and a large staff at the home. Because my interest in this dissertation is focused on what is thinkable at a given time, I'll request a pardon from my readers in not exploring the biographical origins of these ideas.

Mixed Company at The Bradley Home: Scientific Medicine, The Guidance Movement, and Pragmatism

Most of Bradley's published work resulted from his time at the Emma Pendleton Bradley Home, which he designated the first hospital "planned and equipped especially for the care of children with neurologic and behavior disorders."⁴² This guiding vision of the Bradley Home figured prominently in Bradley's writing and represented ideals that drew from a number of intellectual tributaries in order to meet the needs of children. Bradley's descriptions of the Home reflected the struggles of doctors, working in the early decades of the twentieth century, to carve out a distinct practice of child psychiatry. His writings on his work and vision for the Home demonstrate an interdisciplinary approach responsive to three currents of thought popular in the first half of the 20th century: traditional medicine, the child guidance movement, and pragmatism.

Five years after its 1931 opening, Bradley declared the Emma Pendleton Bradley Home (hereinafter referred to as the "Home") to be the first hospital planned and equipped to care for children with neurological and behavior disorders and outlined the reasoning behind several of its key features:

A semirural location was judiciously selected for the site of the project. The hospital itself occupies an attractive colonial brick building of generous capacity constructed for the purpose and situated in the midst of a 40-acre tract of land largely wooded. Ample playing fields provide natural facilities for children's at all sports seasons, and the absence of close neighbors has eliminated many problems that might arise in congested quarters. Provision for equipment and staff to supply every need of normal child life, as well as the more orthodox clinical and laboratory requirements of a fifty-bed hospital, have made the institution virtually a complete children's community. Special features have been the inclusion of a psychologic laboratory adapted to the investigation of children's problems and a school staffed with specially trained teachers.⁴³

42 Bradley, C. A Children's Hospital for Neurologic and Behavior Disorders. *The Journal of the American Medical Association*. (1936) August 29: 650-53

⁴³ *Ibid*, p. 650.

The Home was not the first hospital to care for children with neurological and behavior disorders. Nor was it the first community designed to supply every need of normal child life. Yet, as his own description reveals, there was something about the blending of hospital and residential facilities for children with known neurological disorders that Bradley felt should be distinguished. By 1936, 269 patients had been admitted: eighty presented behavior problems, sixty-four convulsive disorders, forty birth injuries of the central nervous system, thirty-seven were classified as mentally deficient, and the remainder a variety of disorders such as chorea, specific reading disability, postencephalitic syndrome, and muscular dystrophy. The Bradley Home would admit poor and needy children first, with Rhode Island residents given preference to those coming from outside the state. Since the Home was committed to treatment of maladies beyond of the accepted domain of medicine, Bradley worked to expand the physician's understanding of disease and its implications for a growing child. The Home's design was tailored to his unique patient population. "Playing fields" provided "natural facilities" for sports, "orthodox clinical and laboratory" equipment for traditional medicine, and "special features" including a psychologic laboratory and "specially trained teachers" for the children. Such design features were a way to visibly manifest assumptions of childhood previously taken for granted.

The Home also brought the symbolic beliefs of traditional medicine and a progressive social movement into collision. Bradley's description of the Home is explicitly sensitive to "normal child life." In addition, the Home's therapeutic mission to treat the biological component with "orthodox" facilities and the psychological component with "special" laboratories tells us a great deal about the traditions from which he drew: scientific medicine, child guidance, and pragmatism.

Scientific Medicine and the Bradley Laboratory

Adequate medical care for childhood disease was the initial *raison d'être* behind the creation of the Bradley Home. George and Helen Bradley, Charles' grand-uncle and his wife, set aside funding for the home so long as the Home was dedicated to their deceased daughter Emma who suffered a myriad of childhood maladies. In light of George and Helen's personal experience, the Home would have to be outfitted with the best medical care available.

Around the turn of the century, this meant that a hospital and laboratory would be necessary to study and treat children like Emma. Born in 1879, Emma was stricken with an infection of unknown origin. Left "epileptic, retarded, and afflicted with cerebral palsy,"⁴⁴ Emma remained in her parents' home after multiple failed attempts to locate long-term residential treatment for her care. Existing medical and psychiatric institutions catered mostly to adult patients and offered little in the way of treatment for children. The eventual design of the Home was the direct result of George and Helen's experience trying to care for Emma.

George died in 1906. Emma died one year later, at the age of 27 of what later would be recognized as encephalitis lethargica. In their wills, George and Helen left plans for their estate to be converted into a treatment facility for children. George insisted that his estate be dedicated to "the care, treatment, relief and support of poor and needy persons afflicted with nervous or other chronic diseases."⁴⁵ Respecting the wish of the donor, The Home's founders prioritized care for children with convulsive disorders such as epilepsy, behavior disorders following epidemic encephalitis, cerebral palsy resulting from brain injury, and severe behavior problems. Emma Pendleton Bradley affliction with what later would be

⁴⁴ I place this diagnosis in parenthesis because in some accounts of the Bradley's, there was no clear diagnosis made at the time of Emma's illness. It seems, according to other accounts, that the diagnosis was retroactively assumed some time during the early part of the 20th century.

⁴⁵ Michelle Dally Johnston, *Out of Sorrow and into Hope: The History of the Emma Pendleton Bradley Hospital* (Providence, RI: Bradley Hospital, 1991).

understood as encephalitis lethargica highlighted both the relationship between neurologic and behavioral problems and the deep divide at the turn of the century between treatment for neurologic and behavioral issues in children.

Virtually unknown to medicine at its outbreak during Emma's lifetime, the illness caused extreme sluggishness, hallucinations, and fever. Between 1915 and 1926, however, numerous reports of the disease emerged from around the world. Full remission often promised hope only to be followed by full relapse, and often death. Originally thought by some to be an acute infection, encephalitis eventually demonstrated itself to be chronic. A year or more after acute infection had subsided, neurologists began reporting on physical symptoms present: tremors and irregular involuntary movements, disturbances in gait, reflexes, and muscle tone, abnormal eye control, muscular stiffness, pain, and epileptic tremors.⁴⁶ Patients would return to hospitals after recovery with a wide variety of symptoms (as many as 27 different symptoms were reported). In some cases, patients entered a waking coma-like state (like that portrayed in the 1990 film *Awakenings*).⁴⁷ Not all patients survived.

Since many children were left with sometimes severe and chronic physical disabilities, the appropriate environment for their study and care became a question of central concern. Epilepsy and encephalitis were accepted by neurologists and psychiatrists of that era as organic conditions. Therefore, a hospital with a laboratory provided an environment for blood tests, physical exams, and encephalography (eventually electroencephalography or EEG). The Bradley Home was not the first hospital to provide physical care for children with

⁴⁶ Morris Grossman, "Late Results in Epidemic Encephalitis," *Archives of Neurology and Psychiatry* 5, no. 5 (1921), 580.; Morris Grossman, "Sequels of Acute Epidemic Encephalitis: Study of Ninety-Two Cases from One to Three Years After Recovery," *Journal of the American Medical Association* 78, no. 13 (1922), 959-962.

⁴⁷ The movie was based on the best-selling book by neurologist Oliver Sachs, who has popularized a number of studies beginning in 1970 in which various aspects of human experience and identity is transformed by brain damage or direct manipulation of the brain. I would wager a guess that many people who accept the stories of Sachs remain ambivalent about the validity many mental disorders.

such conditions. As a result of the outbreak, a number of institutions, mostly hospitals, opened special units to care for post-encephalitic children. These cases mingled with others in which mental and physical deterioration had been present from birth. Medical researchers, by the end of the 19th century, concerned themselves primarily with physiological functioning and a search for scientific cures. In the cases of epilepsy and encephalitis, however, doctors were observing patterns of psychic changes in their patients as well and Charles Bradley designed the Home accordingly.

While studying the symptoms of encephalitis lethargica, neurologists and psychiatrists developed interests in the distinct patterns of mood and behavior that accompanied the epileptic episodes. Symptoms such as erratic variability of mood or behavior, gross motor activity, irritability, short and vacillating attention span, and cognitive challenges with problem solving were documented. Psychiatrists became interested in what they described as a postencephalitic behavior disorder. Following recovery from what first appeared as an acute infection of encephalitis, patients displayed a wide variety of symptoms characterized most easily as a “total change in the patient’s character and disposition.”⁴⁸ As no clear profession of child psychiatry had been established, doctors studied the organic conditions while simultaneously exploring the psychic changes that accompanied these diagnoses. Due to the perceived changes in personality and behavior of “normal” children, workers were busy reclassifying these cases as appropriate for psychiatric care.

Prior to the designation of child psychiatric services, cases of encephalitis may have ended up at institutions for mental defectives or epileptics. Alternately, they may have entered training schools for delinquent or dependent children.

⁴⁸ Adam Rafalovich. The conceptual history of attention deficit hyperactivity disorder: idiocy, imbecility, encephalitis and the child deviant, 1877-1929. *Deviant Behavior: An Interdisciplinary Journal*, 22: 93-115. 2001.

Hospitals began to devote wards for the care of post-encephalitic children as early as 1924. Near the turn of the century, hospitals became the center of medical care and research. As Bradley explained, psychiatric hospitals, to date, had been planned around adult care, with little attention paid to the unique emotional needs of children. Additionally, hospitals attending to acute care had little capacity beyond diagnosis when it came to the long-term treatment of chronic neurological ailments of children who were active, yet required sustained treatment of behavioral issues.⁴⁹ Some patients could be cared for in their homes, but others required more care. Many families found the patients too difficult to manage, not only due to their physical handicaps but also as a result of their emotional and mental transformations.

Many histories of ADHD have returned to the example of encephalitis lethargica, either to demonstrate that symptoms were similar to ADHD (antisocial behavior, irritability, impulsiveness, severe emotional swings, and hyperactivity) or to demonstrate that these symptoms were tied to a clear disease process. Ignored, however, is the critical point that doctors were not solely concerned with these psychic qualities. Amid growing interest among doctors about the intersection of neurological and behavioral problems of children, Bradley was surprised that none had thought to create the blend of a hospital (to treat chronic disorders) with a home-like environment (to ensure guidance principles could be met). Recognizing this conceptual gap in how children with both physical and physical symptoms were cared for, Bradley set out a new therapeutic vision embodied in the design and practice at the Home.

49 Charles Bradley, "Children's Hospital for Neurologic and Behavior Disorders," *Journal of the American Medical Association* 107, no. 9 (1936a), 650-653.; L. Bender, "Clinical Research from Inpatient Services for Children, 1920-1957," *Psychiatric Quarterly* 35, no. 1 (1961), 88.

Children Unfit for the Guidance Movement

After Helen's death in 1919, a twelve-year process would lead to the opening of the Emma Pendleton Bradley Home in 1931. The opening of the Home was delayed, in part, because an initial assessment determined that the Home's patient base would extend beyond the scope of Helen and George's criteria outlined in their will. The first superintendent of the Bradley home, Arthur Ruggles, exemplified the second major influence in the design of a new home.⁵⁰ Ruggles was deeply involved in the developing child guidance movement and the National Committee for Mental Hygiene. The child guidance movement was composed of a variety of practitioners with diverse perspectives and theoretical orientations, however, certain tenets were deemed central to their work. Of central conceptual importance, the movement insisted on the care of the "total human being" in his community, because they believed that proper developmental care of children in their "natural setting" could prevent mental illness and juvenile delinquency.⁵¹ Inherent in this conviction was the belief that mental illness and juvenile delinquency could be prevented through the scientific promotion of well being in childhood. When combined with the commitment of the Home to the long term care of children with chronic conditions, a hospital model presented a challenge to cultivating child development.

Touted by Bradley as the first of its kind, the Home embodied a hybrid vision drawing from the medical and child guidance traditions. It combined the modern amenities of a psychological laboratory and 50-bed hospital with a school with specially trained

⁵⁰ Dally Johnston, *Out of Sorrow and into Hope: The History of the Emma Pendleton Bradley Hospital* (Providence, RI: Bradley Hospital, 1991).

⁵¹ Ellen Key, *The Century of the Child* (New York: GP Putnam's Sons, 1909).; Theresa R. Richardson, *The Century of the Child: The Mental Hygiene Movement and Social Policy in the United States and Canada* (Albany: SUNY Press, 1989).

teachers.⁵² Due to the nature of treatment, children would be expected to stay at the home for a minimum of six months and up to a few years. This extended length of residency, adopted from a child guidance perspective, required components lacking in the traditional medical environment. Bradley considered it insufficient to treat the visible physical malady of the child at the expense of their mental and emotional reactions. Children could not be expected to miss out on the influences of homes, schools, and communities, which served integral roles in development. Exposing dominant cultural expectations of children, Bradley wrote:

It is easy to forget how conventional we expect the so-called “well-adjusted” child to be in the community. He must attend school; he is expected to be reasonably obedient to and considerate of his elders; unless he shows a certain amount of interest and skill in some of the recreational activities of his community, he is apt to be considered ‘queer’ by his fellow children. The very fact that he lives in a home and attends a school and plays with other children stimulates mental and emotional growth and development. In child guidance clinic practice the child continues to live in the community and to be exposed to these various influences, the clinic itself concentrating more or less on direct therapy and at most only modifying the external surroundings. The child who is a patient in a hospital should not miss these same external influences, and a program concentrating on direct therapy alone, without regard for a child’s general training, his schooling, and leisure time activities, is grossly neglectful of the youngster’s welfare.”⁵³

Due to the child’s unique developmental needs, a hospital setting based upon care for adults missed necessary ingredients for the treatment of a child, and Bradley insisted that a children’s psychiatric hospital should be more like a school than a setting for adult care. Because childhood (at least in American culture) represented a period of dependence, Bradley emphasized the important emotional relationships between a growing child and those upon whom he depends to be considered “normal.” If doctors focused solely on the seizures of the epileptic or the degenerative motor skills of the post-encephalitic, then they

52 Bradley, *Children's Hospital for Neurologic and Behavior Disorders*, Vol. 107 American Medical Association, 1936a), 650-653.

53 Charles Bradley, "Education in a Children's Psychiatric Hospital," *Nervous Child* 3, no. 4 (July, 1944), 327-335.

failed to address the mental, symbolic, and ritualistic expectations of childhood. Bradley certainly didn't invent this idea.

Bradley, The Pragmatist

Throughout his career writings, Bradley appeared as a pragmatic specialist, guided by a commitment to combine medical and guidance traditions in ways that could be useful, accessible, and intuitive to the general practitioner. With regard to his patients, Bradley's interpretation of pragmatism demonstrated his awareness of its philosophical origins as well as the features that made pragmatism such an appealing and democratic term. Since its introduction into the American public imagination, pragmatism has taken on growing and diverse meanings. Pragmatism, both the school of thought and the practitioners advancing it (especially William James and John Dewey), made important contributions to the ideas of child guidance. Demonstrating the great democratic appeal of pragmatism, Bradley employed his own "pragmatic" strategies to engage the general practitioner.

In the 21st century, it is often difficult to know what is meant exactly by philosophy. More narrowly, with regard to the administration of stimulants to children, medical researchers and historians may be most familiar with a specific practice of medical ethics. Questions like "when and under what circumstances is it ethical to prescribe psychotropic medications to children?" often prescribe ethical boundaries based on logical thinking.⁵⁴ Although "philosophy" isn't technically a four-letter word, it is often treated as such and subjected to anti-intellectual attacks – especially (and ironically) in our current era of

⁵⁴ Henry Greely et al., "Towards Responsible use of Cognitive-Enhancing Drugs by the Healthy," *Nature* 456, no. 7223 (2008), 702-705.; D. M. Foreman, "Attention Deficit Hyperactivity Disorder: Legal and Ethical Aspects," *Archives of Disease in Childhood* 91, no. 2 (Feb, 2006), 192-194.; Ilina Singh, "Beyond Polemics: Science and Ethics of ADHD," *Nature Reviews Neuroscience* 9, no. 12 (DEC, 2008b), 957-964.

“pragmatism” (a concept that also maintains a good deal of ambiguity).⁵⁵ Pragmatism, as it is today most currently understood, implies a practical attitude focused on the utility of actions. Someone who is pragmatic is attuned to facts and reality rather than opinions, ideals, or emotion. To be pragmatic is to confront social and political problems through practical methods as opposed to ideological or idealistic principles.⁵⁶ Pragmatism, however, began as an ideology, a philosophical school of thought.

First introduced publicly by William James, considered the father of American psychology, pragmatism as a philosophy attempted to understand the function of thought. James drew from Charles Darwin the conviction that mind was a biological product of natural selection. As James wrote in 1875:

Taking a purely naturalistic view of the matter, it seems reasonable to suppose that, unless consciousness served some useful purpose, it would not have been superadded to life. Assuming hypothetically that this is so, there results an important problem for psycho-physicists to find out, namely, how consciousness helps an animal, how much complication of machinery may be saved in the nervous centres, for instance, if consciousness accompany their action...⁵⁷

This particular interpretation of Darwin’s theory is teleological insofar as it assumes a purpose of survival.⁵⁸ What, we might ask, are useful purposes? Utility implies a desired outcome - perhaps survival. Yet without the support of metaphysics, James and others were left with the challenge of negotiating between relativistic interpretations (what is useful to

⁵⁵ Adding a personal anecdote, at my school of public health, I was asked by students, faculty, and staff why I would come to study public health after having studied philosophy. Further, I’ve heard a version of the following refrain more than once in my time as a student: “I’m not as theoretical as you. I’m much more practical,” which tends to involve a distancing and implicit dismissal of theory as a practical activity. Of course, such statements assume some sort of pragmatic assumptions (whether explicitly stated or not).

⁵⁶ Oxford English Dictionary, *OED Online*, Vol. 20 vols. (Oxford: Oxford University Press, 2014).

⁵⁷ William James, "3.--Grundzuge Der Physiologischen Psychologie," *The North American Review* (1821-1940), Jul 1875, 1875, 195.; Robert J. Richards, *Darwin and the Emergence of Evolutionary Theories of Mind and Behavior* (Chicago: University of Chicago Press, 1989).

⁵⁸ Louis Menand, *The Metaphysical Club: A Story of Ideas in America* (New York, NY: Farrar, Straus, and Giroux, 2001).p. 364.

one man may prove useless to another, based on their goals) and the desire to find truth that transcends the diversity of patterns within the human mind.

John Dewey, another major figure in American Pragmatism, advanced a functionalist view of the mind. Dewey is perhaps best remembered as an educational reformer, however, his vision for education grew from his philosophical convictions and his belief in democracy as the end in mind. Dewey advanced the thesis that learning is a social process and schools ideally should be a place to learn how to live and think in a democratic society. Dewey acknowledged the religious quality of this belief. However “scientific” he believed his work to be, he acknowledged the leap of faith or religious quality inherent in selecting a truth to work towards.⁵⁹ In his bestselling book, *The School and Society*, (first published in 1900, it has never been out of print) Dewey argued that schools were social institutions that should develop children’s capacity to participate and flourish in society. As he put it, “democracy has to be born anew every generation, and education is its midwife.”⁶⁰ Both James and Dewey, in considering the mind a biological aspect of the human organism, had to contend with the problem of will. If mind was to be “useful” to humans in adapting, mental willpower was an aid in reorganizing action. James simply asserted that his will was free. “My first act of free will shall be to believe in free will.”⁶¹ A belief in free will is useful if it

⁵⁹ Lawrence Arthur Cremin, *American Education: The Metropolitan Experience, 1876-1980* (New York: Harper & Row, 1988).

⁶⁰ John Dewey, *The School and Society*, 1st ed. (Chicago, IL: The University of Chicago, 1900). Dewey’s ideas along with those of Charles Sanders Pierce (who invented the term pragmatism) and William James (who popularized the term) can be read about in Louis Menand’s history. Menand, *The Metaphysical Club: A Story of Ideas in America* (New York, NY: Farrar, Straus, and Giroux, 2001). James has been christened the father of American psychology, so there were multiple tributaries through which pragmatist ideas made their way into work with child psychiatry.

⁶¹ William James, *The Will to Believe and Other Essays in Popular Philosophy*, Vol. 6 (Cambridge: Harvard University Press, 1979).p. xxvi It is interesting to note here that George Still, credited by many as the first to discover ADHD, quoted James in his lectures on the defects of moral control, writing that “the effort of the attention is the essential phenomenon of will.” Still’s lectures are filled with clear references to pragmatist and Darwinian concepts. For more on this, see: George F. Still, “The Goulstonian Lectures: Some Abnormal Psychological Conditions in Children,” *The Lancet* (1902), 1008-1012.; A. Lakoff, “Adaptive Will: The Evolution

promotes the freedom of individual control over their action. The habit of thought would create a discipline of free will. Dewey also believed that will was a habit that required training. In contrast to modern perceptions, thought was, for Dewey and James, considered an active participant in the creation of truths. Their thought suffused both American and international thought through a number of tributaries, including psychiatry.

The work of Adolf Meyer in the first half of the twentieth century, considered by many to be the most influential American psychiatrist, should be considered in relationship with these early American Pragmatists, James and Dewey.⁶² Trained as a pathologist, Meyer, like James and Dewey, was unsatisfied with the prevalent consensus in medicine that phenomena of the mind could not be studied scientifically. He developed a theory, psychobiology, in which he described the mind and body as a single organic unit, with the mind involved in the biological struggle to adapt. From this belief, Meyers described mental illness as a functional maladjustment of an individual to his whole environment. Alongside physiological methods, he advocated for the use of the case history to gather the life history of the individual. Most relevant to the present study of this paper, Meyers argued that abnormal habits of thought and behavior in early childhood produced insufficient adaptations, or what he called abnormal “reaction types” to one’s environment. In contrast to an understanding of specific mental diseases, Meyer’s conception expanded the domain of psychiatry to everyday problems. To define normal and abnormal reaction types, one must use common sense.

of Attention Deficit Disorder," *Journal of the History of the Behavioral Sciences* 36, no. 2 (SPR, 2000), 149-169.

⁶² Susan D. Lamb, "Pathologist of the Mind: Adolf Meyer, Psychobiology and the Phipps Psychiatric Clinic at the Johns Hopkins Hospital, 1908--1917" (PhD, The Johns Hopkins University), 1-355.; Ruth Leys, "Meyer, Watson, and the Dangers of Behaviorism." *Journal of the History of the Behavioral Sciences* (1984).

Historian Susan Lamb argues that Meyer defined common sense specifically. However, his use of the term was democratic and easily appropriated in much the same way as usefulness was adapted popularly from pragmatic thought.⁶³ Meyers is credited with supplying the child guidance movement with the conceptual fuel necessary to study the child in their total environment. One guidance worker wrote, “His point of view was less theoretical than the others and put much stress upon the ‘common sense’—a fact that may account for the more ready acceptance which his work received.”⁶⁴ Dogmatic only in his opposition to dogmatism, Meyer encouraged facts from any discipline relevant to developing the field of psychiatry. Like Meyer, who conceived of life inside of the clinic as treatment, Bradley conceptualized the Home itself as a laboratory. His uses and adaptations of pragmatic ideals demonstrate the “looseness” of pragmatism.

With no professional training in child psychiatry, Bradley identified with the practicing physician, who “can afford little time for academic quibbling.”⁶⁵ As philosophers and psychologists debated endlessly, Bradley would provide practical advice to the general physician. For Bradley, the greatest challenge for child psychiatry lay in the fact that concepts developed from work with adults had been applied to children without regard to distinctions between the two groups. Those interested in developing a scientific understanding of the mental diseases and disorders of childhood sought to develop observations and formulations based in work with children. Even in the hospital setting, much of the equipment had been designed for adults. Bradley, therefore took it upon himself

⁶³ One year after James’s influential 1907 lecture on pragmatism, Arthur Lovejoy discriminated thirteen different definitions for the term. Arthur O. Lovejoy, “The Thirteen Pragmatisms. I,” *The Journal of Philosophy, Psychology and Scientific Methods* (1908), 5-12.

⁶⁴ Helen Witmer, *Psychiatric Clinics for Children* (New York: The Commonwealth Fund, 1940).; Ethel Kavin, “The Contribution of Adolf Meyer and Psychobiology to Child Guidance,” *Mental Hygiene* 29, no. 4 (1945), 575-590.

⁶⁵ Charles Bradley, “The Family Physician and the Feeble-minded Child,” *The Rhode Island Medical Journal* 20, no. 12 (December, 1937b), 189-193.

to supply practical advice and tools (both physical and instrumental) for those exploring the neurological and behavioral problems of children. In order to perform encephalography on children, Bradley designed a new chair to accommodate the “extremes of size and body variation met with in children.”⁶⁶ Recognizing that no consistent definition of childhood was used among psychiatrists writing about children, Bradley supplied a solution:

Any single criterion of the term “childhood” must, if it is to be readily and widely accepted, have the virtues of simplicity and clarity... This age level had best be that which most nearly coincides with the onset of physiological puberty and both tradition and experience suggest the thirteenth birthday.⁶⁷

Bradley’s pragmatism, then, demonstrated a commitment to useful information just as he recognized that these concepts may be replaced when more sufficient conceptions could be spread democratically. Bradley’s writings from the Home, therefore, avoided challenging vocabulary because he sought to make his discoveries accessible to both child psychiatrists and classically trained physicians.

The Bradley Home was actually one of the first medical facilities to blend the scientific hospital with prominent ideas about the role of education and guidance in child development. Direct therapy, both psychological and medical, would provide only one of four necessary components of treatment, and *all* aspects of care should emphasize the child’s behavior and social adjustment. The therapeutic aim, therefore, was to traverse all aspects of what Bradley described as the “fourfold basis of children’s psychiatric hospital care,” with no one aspect less important than the others.⁶⁸ Training in care of the self and social expectations, academic schooling, and recreational play would all provide opportunities to

⁶⁶ Charles Bradley, "An Encephalography Chair for Children," *Journal of Pediatrics* 7 (JUL-DEC, 1935), 512-515.

⁶⁷ Charles Bradley, "Definition of Childhood in Psychiatric Literature," *American Journal of Psychiatry* 94 (1937a), 33-36.

⁶⁸ Bradley, *Education in a Children's Psychiatric Hospital*, Vol. 3, 1944), 327-335.

ensure that each child would thrive when returned to his community. He distinguished a children's psychiatric hospital from other types of institutional schools for children by its unique capacity to care for children with a broader range of behavioral issues, with *medical* treatment serving as adjuncts to the psychological and education strategies more commonly employed in regular schools and summer camps. The home could provide an ideal setting for research only insofar as it mimicked the 'natural' environment of children, allowing staff to observe children in their total interactions with the world. In this way, the Home was not unlike the Phipps Clinic of Adolf Meyer, who considered life inside the clinic to be central to therapy and retraining. The key difference was that the Bradley Home was constructed specifically for children.

Now You See It, Now You Don't: Making Epileptic and Mentally Deficient Children Visible

As Bradley saw it, medical training emphasizing significant physical findings was insufficient. Over-emphasis on physical findings made it difficult for the practicing physician to identify problems that, at that time, could only be identified through subtle patterns in demeanor and behavior. This is in line with the beliefs of William James, John Dewey, and Adolf Meyer, who insisted that the relationship between mental and behavioral phenomena could not be ignored. Dismayed by the lack of available training on these ailments for family practitioners and pediatricians, Bradley sought to educate his peers about the important role they could play in facilitating a family's adjustment to best care for their children.⁶⁹ In his view, the great challenge to caring for convulsive and mentally deficient

⁶⁹ Bradley, *The Family Physician and the Feeble-minded Child*, Vol. 20, 1937b), 189-193.; Charles Bradley, "Medical Education in Mental Deficiency," *American Journal of Mental Deficiency* 58, no. 2 (1953), 310-315.; Charles Bradley, "Pediatrics, Mental Retardation, and Delinquency," *Journal of the American Medical Association* 157, no. 2 (1955a), 101-108.

children involved what was visible (and invisible) to the physician, family, and community. On the one hand, the visibility of seizures encouraged the popular belief in a single specific disease. In contrast, the average physician struggled to engage with mentally deficient patients in whom clear physical findings of cause remained elusive.

As seizures supported the faulty assumption of a common cause, a search for visible patterns proved an impediment to diagnosing the mentally deficient child. For example, physicians could see, and therefore differentiate, between the microencephalic or hydroencephalic child, whose head shape and size provided accessible proof of physical deformity. Cases such as these affirmed the over-emphasis on searching for physical bases for disease. Likewise, promising research and treatments aided in the gradual acceptance of cretinism and mongolism, yet these cases represented a very small percentage of mentally deficient children. Bradley, against this trend, actually encouraged primary care doctors to accept deficiencies lacking clear systems of physical classification:

Since mental defectives vary in personality just as do their more brilliant fellows, some are placid, some active; some are physically attractive, some plain and uninteresting; some are likeable and some aggravating. It is well to remember that the clean, well groomed, neatly dressed, quietly obedient child always presents a far better clinical impression than the unkempt and disarranged urchin who actively pries into every nook and cranny of the office despite the noisy remonstrances and hectic pursuit of his exasperated mother. Yet very dull children may be neatly groomed and obedient, whereas many a brilliant but poorly trained youngster may leave havoc and curses behind him wherever he goes. One must not judge intelligence by appearance and social behavior alone.⁷⁰

Bradley turned to various laboratory tools and tests to correlate distinct visible organic patterns with clinical observations. His aim was to combat assumptions that all psychological and mental problems were solely psychogenic in origin (moral failings on the part of the parents or child) and to differentiate between different types of conditions and their causes.

⁷⁰ Bradley, *The Family Physician and the Feeble-minded Child*, 190.

Again displaying his pragmatism, Bradley presented accessible and useful definitions to encourage the general physician's engagement with mentally retarded patients. As he saw it, "the nature of feeble-mindedness might be more comprehensible and therefore more interesting to most physicians, if its definition were not clouded by that 'certain' vagueness' unfortunately so often associated with mental disorders."⁷¹ Frustrated by the ongoing debates of academic philosophers and psychologists who had yet to agree on the meaning of intelligence, Bradley offered clarity and specificity to support the busy physician's engagement with mental and emotional problems. "We might discuss intelligence as a combination of one's abilities to be keenly aware of his present surroundings, to recall readily what he has experienced in the past, and to apply both to the solution of whatever problems may confront him."⁷² Bradley was clear that normal development was no abstract concept but was derived from comparisons with other children. Therefore, a detailed history of a child's early response to his environment and developmental functions as compared to his peers was a central tool in assessing the degree of impairment in a particular environment.

Bradley seemed most concerned with supplying a family with "realistic" expectations of development. Some children, born mentally deficient, would develop at a continually slower rate than siblings and peers. If a child was slow to crawl, walk, talk and his motor skills limited his engagement with toys and other stimulus, then it was most important to understand the degree of impairment in order to predict future development. Impairment in only one or a few of these areas required further investigation. A physician had to be careful when employing psychomotor and intelligence tests. Bradley noted a common mistake among physicians of posing questions of general information, "the answers to which a child

⁷¹ Bradley, *The Family Physician and the Feeble-minded Child*, 189.

⁷² Ibid.

could only have learned if taught in school or at home.”⁷³ This was crucial insight by Bradley because many of his patients, who demonstrated ample capacity to learn, would likely test poorly as a result of their unequal treatment in the community. Moreover, it is important to note that Bradley’s concern about unequal treatment in the community evidences a recognition of both the cultural/social influences on disease and treatment, as well as the physical. As opposed to current debate around ADHD and other childhood disorders, Bradley did not privilege a biological perspective over an environmental one, or vice-versa. His concern was with the relationship between the two and how understanding that relationship could result in the most useful treatment.

Electroencephalographic (EEG) analysis enabled Bradley and his colleagues to further correlate visible patterns in brain activity to clinical observations in ways that were more familiar to the general physician. Bradley expressed deep concern that child psychiatry focused too often on emotional conflicts and strictly psychological mechanisms as causing all children’s personal difficulties. In response to this concern, he presented findings from EEGs to suggest that the origins of some behavioral problems lie in “poorly integrated, poorly stabilized, or immature central nervous symptoms which proves a handicap in social adjustment just as would poor vision, faulty muscular coordination, or a similar constitutional defect.”⁷⁴

In the case of the “epileptic” or convulsive child, EEGs provided an invaluable, if imperfect, political tool to combat the assumptions that all behavioral problems resulted

⁷³ Ibid.

⁷⁴ Herbert H. Jasper, Philip Solomon and Charles Bradley, "Electroencephalographic Analyses of Behavior Problem Children," *American Journal of Psychiatry* 95, no. 3 (1938), 641-658.; Charles Bradley, "Problem Children; Electroencephalographic Diagnosis and Treatment," *Connecticut State Medical Journal* 6 (October, 1942a), 773-777.

solely from immorality in the child or faulty handling on the part of the parents.⁷⁵ In a clear rebuke to those strictly adhering to the guidance model, Bradley commented, “If one suspects that a child’s problem is entirely the result of faulty handling on the part of his parents or teachers or the result of some emotional trauma, the electroencephalogram may be of definitive value in establishing or disestablishing the likelihood of this.”⁷⁶ Like the electrocardiogram (EKG), the EEG provided a graphic record of electrical activity in the brain. In many cases where seizures were present, abnormal physiological and behavioral activity consistently paralleled distortions in the EEG. While there was little need to convince physicians that seizures resulted from some sort of physiological process, it was more difficult to demonstrate that accompanying changes in behavior could result from the same disordered nervous system.

In the case of the “epileptic” child, most clinicians were encouraged to focus on controlling the most dramatic symptoms, the seizures. Yet this left important behavioral and social aspects out of the picture. As clinicians were learning to differentiate between different types of seizures (grand mal, petit mal, and psychomotor attacks), they were less inclined to recognize consistent patterns of behavior changes that accompanied the convulsions.⁷⁷ Bradley classified many of these changes as primary, resulting from the same cerebral dysfunction causing the seizures, because most or all of these symptoms were visible in the child suffering from seizures. These symptoms included erratic variability of mood or behavior, gross motor activity, irritability, short and vacillating attention span, and particular challenges with mathematics and problem solving (in contrast to memorization) and, again,

⁷⁵ Charles Bradley, "Management of the Convulsive Child," *Rhode Island Medical Journal* 29, no. 11 (Nov, 1946), 823-828.

⁷⁶ Bradley, *Problem Children*, 774.

⁷⁷ Bradley, *Management of the Convulsive Child*.

correlated with variation in EEG records. Importantly, the same EEG variations were mapped for children who had experienced no seizures or clear physical illnesses, yet demonstrated the above symptoms of the “epileptic personality.” As Bradley concluded, “The electroencephalogram has succeeded in revealing a definite abnormality of brain function in over one half of a group of child behavior disorders which had been previously considered as largely psychogenic.”⁷⁸ Not only could this tool demonstrate the involvement of the central nervous system in behavior, it could make visible disordered brain physiology in cases where gross neurological signs proved invisible in clinical observation.

It is important to note that findings were imperfect, as one-to-one correlation between behavior and patterns in EEGs remained elusive. Still, the clinical relevance of these findings was significant. Children with abnormal EEGs were far less likely to improve without the involvement of medications and significant therapy than those with normal EEGs. Some children with abnormal EEGs could make a fair adjustment, indicating to Bradley that abnormalities in brain function could be compensated for in the proper environment. While noting that such findings might prove comforting to a parent who may have blamed herself or the child for the behavior, Bradley nonetheless maintained that an organic aspect of any problem would interact dynamically with an environment in which others found such a child intolerable, in turn treating him less competently in comparison to the “average well adjusted youngster.”⁷⁹ The identification of organic aspects of disorder, then, was intended to offer a useful pathway, rather than an excuse, to families and environments to better respond to the needs of such a child. By making the invisible influences visible, Bradley was able to offer a pragmatic approach to both diagnosis and treatment for practitioners and families. Bradley’s

⁷⁸ Jasper, Solomon and Bradley, *Electroencephalographic Analyses of Behavior Problem Children*, Vol. 95Am Psychiatric Assoc, 1938), 641-658.

⁷⁹ Bradley, *Problem Children*, 774.

difficulty in getting practioners to understand and treat the relationship between physical and mental aspects of disease should resonate to modern practioners who are often forced to choose sides in the deeply polarized debates around ADHD and stimulants.

Treating the Symbolic Expectations of Childhood

As important as it was to demonstrate how visibility influenced diagnosis, so too was it necessary for Bradley to make visible the hidden assumptions behind popular expectations of childhood that shaped responses of families, physicians, and communities to children who fell short (in this case, mentally deficient, epileptic, and schizophrenic children). The Bradley Home was constructed in a semi-rural location, providing some buffer to neighbors who worried that a psychiatric institution would bring violent and dangerous children to their neighborhood.⁸⁰ This was due, in part to the decision to admit epileptic and mentally deficient patients alongside children with behavior problems of unknown etiologies. Bradley argued against the common sense of his colleagues in child psychiatry and medicine, which expressed concerns that epileptic children should be kept apart from other children for fear that epileptic behavior should spread.⁸¹ He blamed stigma and superstitions for impeding the growth of children with known neurological and cognitive impairments. Insofar as “epilepsy” and feeble-mindedness were shrouded in mystery, viewed as a family disgrace, parents were driven to silence and were too often left to believe that their children could never lead happy

80 C. Bradley, "A Children's Hospital for Neurologic and Behavior Disorders," *Journal of the American Medical Association* 107 (JUL-DEC, 1936b), 650-652.; Dally Johnston, *Out of Sorrow and into Hope: The History of the Emma Pendleton Bradley Hospital* (Providence, RI: Bradley Hospital, 1991).

81 The only existing English textbook on child psychiatry, written by Leo Kanner, in 1935, endorsed a Meyerian approach to psychobiology. Still, it endorsed the belief that epileptics were best kept separate from other children, not for their own good, but for the protection of others. Leo Kanner, *Child Psychiatry*, Vol. 1 (Springfield: Baillière, Tindall & Cox, 1935). When Bradley presented on the Home, several responses from colleagues concerned a search for proof that mixing children of these types wouldn't cause damage to others. Bradley, *A Children's Hospital for Neurologic and Behavior Disorders*, Vol. 107, 1936b), 650-652.

nor productive lives.⁸² Bradley identified these concerns as impediments to the successful treatment of these patients. Bradley's vision of the Home was clearly as a place to bridge therapeutic traditions and patient populations. "The practical convenience of treating together all these patients with obviously similar needs for prolonged therapy, schooling and social development outweighs most theoretical objections to doing so."⁸³ Treatment focused on visible defects left far too many therapeutic and developmental needs unaddressed.

In the case of mentally defective children, state custodial schools, with limited funding and space, were more likely to accept the child identified as a nuisance in the community. This meant that little accommodation was made for retarded children who caused no disturbances. "Epileptic" children were often isolated in colonies or elsewhere in order to avoid upsetting others. The family physician, to be proficient in diagnosis and successful in treatment, would have to contend with his own prejudice, fear, and emotional conflicts as well as those of the patient and family.

In the case of the mentally defective child, a physician would have to learn to see the emotional conflicts that parents experienced as they interpreted their child's condition in order to stimulate a family's capacity to provide better care. In Bradley's observations, a child's intelligence was of highest concern to most parents, trailing closely behind severe physical illness. The successful physician, in Bradley's view, must treat the unmet expectations of the family as well as their effects on the child's care. For example, drawing from a case report, Bradley described the confession of one mother to a doctor who, after bursting into tears, expressed guilt resulting from the belief that her ineffective use of birth

⁸² Bradley, *The Family Physician and the Feeble-minded Child*, Vol. 20, 1937b), 189-193.; Bradley, *Management of the Convulsive Child*, Vol. 29 (Providence, RI: , 1946), 823-828.

⁸³ Bradley, *A Children's Hospital for Neurological and Behavior Disorders*, 652.

control (which went against her religious beliefs) was responsible for her child's defect.⁸⁴ Assurances that she was not to blame provided relief, which was soon followed by "an unusual capacity to deal with the special problems of this child's care in a practical, accepting, and constructive manner."⁸⁵ An accurate diagnosis delivered "without prejudice or uncertainty," could "lift the cloud of hopelessness" surrounding a patient, offering encouragement and opening pathways to new strategies of treatment. All but a few children seemed capable of continued development in intelligence throughout childhood. Physicians, families, and schools would need to embrace tactics not commonly found in schools and communities designed with the "normal" child in mind.

Bradley also recognized that social stigma provided another obstacle to treatment. Beyond cultural expectations of intelligence, Bradley addressed the fear "that the retarded child will have an unfavorable effect on other children at home or in school," suggesting that the opposite was more likely to be true.⁸⁶ Retarded children, in Bradley's observations, usually sought to imitate the actions of others in an effort to gain acceptance, even as they were often ridiculed and teased. Bradley employed statistical studies to fight off claims that mentally retarded children were more prone than other children towards delinquent behavior. At the same time, he insisted that mentally retarded children, who might struggle to understand social standards and be provoked by other children into delinquency, needed greater protection. Alternately, lack of success in schooling and other childhood activities that had been developed for the "normal" child could increase a mentally deficient child's frustration. Continual awareness by the mentally deficient child that he could not keep up

⁸⁴ Charles Bradley, "Pediatrics, Mental Retardation, and Delinquency," *Journal of the American Medical Association* 157, no. 2 (1955b), 101-108.

⁸⁵ Pediatrics, Mental Retardation, and Delinquency.

⁸⁶ Bradley, *Pediatrics, Mental Retardation, and Delinquency*, Vol. 157 American Medical Association, 1955a), 101-108.

with family or community standards provided additional blows. As most children would continue to develop intellectually, it was as important for parents to understand their child's potential as well as his limitations in order to plan care and training that would stimulate the child's unique capacities. This meant that love, patience, acceptance, support, and encouragement would have to match if not exceed that given to a child considered "normal." It also meant planning for early training of self-care, social and scholastic education, as well as vocational training. Institutional care or restriction of the child's engagement with the world around him only served to further deprive the patient of benefits granted to other children.

Similarly, the effects of epilepsy were not limited to the seizures or the primary behavioral patterns experienced by patients. Secondary symptoms, while more varied, represented a common issue – specifically, "the child's reaction to his convulsive disorder and the way his handicap is regarded by his family and others in the community."⁸⁷ In one child, anxiety might arise from the continual threat of an unexpected seizure. The child of an overprotective parent might become irritable when barred from activities. Beyond the family, "exclusion from school and other community activities that are accepted as the birthright of youngsters in a democracy may provoke despair or resentment."⁸⁸ These conditions disrupted the social and symbolic expectations of childhood that were taken for granted and left unarticulated, compounding the effects of the illness.

⁸⁷ Charles Bradley, "Behavior Disturbances in Epileptic Children," *Journal of the American Medical Association* 146, no. 5 (1951), 436-441.

⁸⁸ Behavior Disturbances in Epileptic Children.

Schizophrenia: A Total Withdrawal from Guidance Ideals of Childhood

Just as Bradley was gathering evidence to argue for an organic contribution to behavior, he faced a malady for which he could find no such conclusive findings: childhood schizophrenia.⁸⁹ The most common symptom of this disorder, a child's complete withdrawal from his environment, provided one of the greatest challenges to the requirements of childhood assumed necessary under the traditional guidance model. If the patient could not participate in "normal" children's activities, was he really a child at all? Childhood schizophrenia also shed light on the benefits that Bradley saw in Benzedrine, namely the ability to draw withdrawn children out into contact with their environment. By far the least common of any malady crossing into the Home's care (only four of 251 children in four and a half years met the Bradley's criteria at the time of publication), schizophrenia had become a topic around which a great deal of work had developed. Bradley reviewed the accumulating literature circulating mostly from Europe, Germany in particular, and attempted to synthesize existing clinical observations and research.⁹⁰ Most criteria for the condition had been extracted from adult observations, without an understanding of the unique forms it might take in the developing child. Dr. Emil Kraepelin, a leading German psychiatrist, had advanced the belief of a definite organic component but two subsequent contributors, Dr. Paul Eugen Blueier and Adolf Meyer, filled in the dynamic and developmental criteria necessary to distinguish childhood schizophrenia from the disorder in adults.

⁸⁹ Charles Bradley, *Schizophrenia in Childhood* (New York, NY: MacMillan, 1941).; Charles Bradley and Margaret Bowen, "Behavior Characteristics of Schizophrenic Children," *Psychiatric Quarterly* 15, no. 2 (APR, 1941), 296-315.; Charles Bradley, "Biography of a Schizophrenic Child," *Nervous Child* 1, no. 2-3 (SPR, 1942b), 141-171.

⁹⁰ Bradley, *Schizophrenia in Childhood* (New York, NY: MacMillan, 1941).

Kraepelin had attempted to introduce order into the classification of mental disease, expecting to describe a definite disease process.⁹¹ Implied in the name, dementia praecox, the onset of disease frequently took place in the early years of life. Following Kraepelin, Dr. Nolan Lewis described dementia praecox as “series of diseased pictures, the common feature of which is the termination in a special kind of state of mental weakness.”⁹² After long-term study of many patients, Kraepelin popularized the name concluding that patients displaying diverse symptoms over time ended up in a state of premature dementia. One patient may present as manic, another melancholic. Over time, however, they began to resemble one another. These observations led Kraepelin to distinguish between primary symptoms of dementia and secondary symptoms, which varied. As a disease entity, Kraepelin expected to see the same symptoms and course of illness in any subject at any point in life, the central outcome being the destruction of the personality. Although memory and abilities for perception seemed to remain intact, major symptoms included hallucinations, delusions, odd emotional expressions, disorders of attention, negativism, decreased productivity, poor judgment, and dilapidated thought processes.

From Bleuler, Bradley extracted the contribution of a new name, “schizophrenia,” to correct what he saw as an error in the fundamental nature of the disease.⁹³ Employing a psychodynamic view, Bleuler described a process of a splitting personality, not deterioration, as central to the disease. Primary symptoms expanded to include a dynamic process of the illogical, disorderly, dense, and vague combinations of ideas. In addition, a variety of secondary symptoms included many from Kraepelin’s list: limited responsiveness to others,

⁹¹ E. Kraepelin, "Dementia Praecox and Paraphrenia," in *Textbook of Psychiatry*, Eighth ed. (Edinburgh: E & S Livingstone, 1919).

⁹² Nolan Lewis, *Research in Dementia Praecox*. (New York: National Committee for Mental Hygiene, 1936).

⁹³ Eugen Bleuler, *Textbook of Psychiatry*, trans. Abraham Brill (New York: Macmillan, 1934).

hallucinations, delusions, odd emotional expression, problems of attention, lessened capacity for work, negativism, and catatonic signs.

Bradley also distinguished Meyer's "psychobiological" distinction, shifting focus to "the patient and what he does—not an impersonal disease process."⁹⁴ Meyer adapted the term to schizophrenic reaction form to fit his conviction that the condition resulted from an extreme reaction to life's circumstances. Though Meyer claimed that his theory of psychobiology saw mind and body as one unit, he continued to distinguish between diseases of the organs and maladaptive patterns of the mind.⁹⁵ Dr. Leo Kanner, who worked with Eisenberg and is discussed further later on, described Meyer's formulation of schizophrenia in the following way:

It is not a "disease" which, like scarlet fever or acute encephalitis, comes upon the patient regardless of his constitutional and biographical background, but an abnormal reaction form, which certain types of individuals may develop as an inadequate adaptation to the total life situation.⁹⁶

Meyer did not ignore the possibility of constitutional factors but rather, he argued that the classification of schizophrenia as a disease gave little hope. A properly documented life history brought the promise of prevention or mitigation through retraining.

For Bradley the most critical concern in understanding childhood schizophrenia its central symptom of withdrawal. These patients withdrew from contact with their surroundings, seeming indifferent to their environment. Even though the clinical observation of these patients was striking, there was as much or more disagreement than consensus on symptoms, prevalence, etiology, and prognosis. Bradley described the disease as "extremely

⁹⁴ Bradley, *Schizophrenia in childhood*, 21-4.

⁹⁵ Lamb, *Pathologist of the Mind: Adolf Meyer, Psychobiology and the Phipps Psychiatric Clinic at the Johns Hopkins Hospital, 1908--1917*, PhD ed. The Johns Hopkins University, 2010), 1-355. p. 157. This is also the case in Kanner's textbook, which in 1935 distinguishes between personality difficulties resulting from physical illness, involuntary part-dysfunctions, and whole-dysfunctions of the individual.

⁹⁶ Kanner, *Child Psychiatry*, Vol. 1 (Springfield: Baillière, Tindall & Cox, 1935).p. 485.

rare” with reports from child guidance homes, psychiatric clinics, and the author’s own observations of prevalence ranging from 0.1% to 2.8%. Acute and chronic cases circulated with no clear consensus for the frequency or degree of deterioration. Heredity was suspected as the leading probable cause of the disease, though no method of explaining transmission was available to Bradley and again, he reported no professional consensus. Bradley favored a hybrid concept politically appealing to a variety of medical, psychodynamic, psychoanalytic, and guidance concepts. A pre-psychotic personality would allow for a blending of organic and environmental causes. This type of personality represented “the soil, perhaps already prepared by heredity and constitution, out of which the psychosis grows.”⁹⁷

In Bradley’s experience, clinical tests provided little more than hope of future findings and provided no clear correlation to behaviors. Psychometric tests showed no deficits and diagnosed children often outperformed their peers in memory, orientation, and comprehension tests. EEG studies revealed no specific pattern for schizoid behavior or childhood schizophrenia. Anatomical investigations revealed no conclusive data regarding organic pathology. With so few cases available for study, Bradley saw little potential in statistical or laboratory studies. There was considerable disagreement among professionals on various symptoms and inconsistent reports of prognosis. In addition, schizophrenic children displayed a variety of emotional and motor disturbances, too diverse to summarize. Constantly acquiring new capacities and regularly changing behaviors, the child presented a unique subject for investigation. Hallucinations and delusions, cardinal symptoms of the disease in adults, were harder to delineate in childhood, when a vivid fantasy life and an active imagination were expected.

⁹⁷ Bradley. *Schizophrenia in Childhood*, 58.

The wide professional disagreements led Bradley to rely on case studies to illustrate the cardinal symptoms of the disorder in children: withdrawal from one's environment, and preoccupation with one's own thoughts. Schizophrenic children experienced "a generalized retraction of interests from the environment," "losing interest in the surroundings."⁹⁸ As most "normal" children displayed constant and lively engagement with the world around them, these observations were quite easy to spot yet it proved more difficult to allocate blame to the disease. Bradley was sure that many children might retreat into an active fantasy life if their environment failed to engage and challenge him. "No doubt this all depends somewhat on how stimulating and interesting the surroundings are by their very nature."⁹⁹ The withdrawal of the child was of utmost concern when viewed through guidance principles.

A "Natural" Staff and Environment to Stimulate Engagement, Growth, and Development

Bradley's concerns with his unique mix of patients provides a backdrop to the therapeutic milieu in which Benzedrine would become one of the many important stimulants in a child's development. The Home would require special control not only of the patient's behavioral environment, but of the staff as well. Bradley went as far to note that "the attitude of the hospitals staff in stimulating interest in routine tasks is all important."¹⁰⁰ After a decade's worth of experience at the Home, Bradley wrote that the greatest factor of concern in constructing the right environment was the careful selection and training of staff. "Probably in no other field can it be so aptly said that success or failure depends not so much

⁹⁸ Bradley, *Schizophrenia in Childhood*, 26-7.

⁹⁹ Bradley, *Schizophrenia in Childhood*, 74.

¹⁰⁰ Bradley, *Education in a Children's Psychiatric Hospital*, Vol. 3, 1944), 327-335.

on the treatment itself as on the personality of the physician who administers it.”¹⁰¹ Bradley insisted that no professional training program concentrating on technical skills had yet to articulate the type of training that he saw as essential to this type of work. Even specially selected staff would require at least three months training in the personal style Bradley saw necessary to maintaining a therapeutic environment. Ideally, each member of the treatment team would be free of personal idiosyncrasies, displaying equanimity and an ability to fit “unobtrusively into the general organization with a minimum of friction” with colleagues and patients.¹⁰² Since the child’s routine in the home was designed to promote full and normal development according to guidance principles, it was important that staff be encouraging and reward children with praise as they learned to take on new responsibilities and tasks. The assignment of responsibilities that a child could master provided security, confidence, and could serve to enhance any benefits from direct psychotherapy.

Teachers would have to be aware of the particular needs of each child and small class sizes or even one on one instruction might be necessary to meet the child’s needs. Those needs, as Bradley defined them, stretched beyond the need to communicate simple facts and skills to something much more necessary for successful treatment: the cultivation of a sense of enthusiasm, independence, initiative, and originality that children could carry back to their lives outside of the Home. Bradley believed that a child’s dislike of school resulted most often resulted from a lack of success. Bradley warned, “Unless the teacher can stimulate enthusiasm and attract cooperation, she will very likely be unsuccessful in the hospital school situation.”¹⁰³ When it came to recreational activities, Bradley re-emphasized the importance

101 Charles Bradley and Elizabeth S. Bosquet, "Uses of Books for Psychotherapy with Children." *American Journal of Orthopsychiatry* 6, no. 1 (1936), 23.

¹⁰² Bradley, *Education in a Children's Psychiatric Hospital*, Vol. 3, 1944), 327-335.

¹⁰³ Bradley, *Education in a children's psychiatric hospital*.

of the staff's attitude: "Enthusiasm, skill in leadership, and ability to make activities interesting...are more important than technical proficiency in any particular recreational activity...imagination, ingenuity, and willingness to change programs when interest lags are even more important than ample play space, which itself holds priority over specialized equipment and material."¹⁰⁴ Because the staff posed only as a temporary substitute for the family, Bradley advocated for active guidance of parents as well, and questioned the treatment of children whose caretakers could not be similarly trained.

Benzedrine was not the first "natural" stimulant promoted by Bradley to increase the interest of children in his care. Little appreciated for their therapeutic value, books, according to Bradley, provided an important adjunct to psychiatric treatment.¹⁰⁵ With free public libraries widely available, Bradley suggested that every physician should add reading lists to his treatment equipment. In doing so, the physician must choose selectively among the available options, "selecting literature which will primarily absorb the child's interest, and yet stimulate him along the lines which seem desirable for the individual psychiatric patient."¹⁰⁶ Appropriate selection required awareness of the child's interests, abilities, and maturity level. Books served the dual purposes of absorbing the child's attention, while *stimulating* him in a direction that might make him more amenable to treatment. Books might be read aloud to distract and overcome resistance in a resentful patient. They might develop interests and hobbies among patients who are too self-involved. A delinquent child, lacking appropriate social outlets, became an omnivorous and peacefully occupied child once matched with the right books. Lastly, reading offered a means of "enlarging an inadequate

104 Bradley, Education in a children's psychiatric hospital.

105 Bradley and Bosquet, *Uses of Books for Psychotherapy with Children.*, Vol. 6 American Orthopsychiatric Association, Inc., 1936), 23.

106 Bradley, Bosquet. Uses of books for psychotherapy with children.

social and cultural background” contributing to mature development for children who may struggle to stay in school.

Benzedrine: The Message in the Bottle

Bradley’s interest in Benzedrine involved its effects not only on school performance but also on a child’s ability to participate in his total environment. His hope for his epileptic, schizophrenic, and mentally deficient patients guided his aspirations for the drug as much as the commonly quoted discovery of its effects on school performance. Bradley highlighted the significance of his findings in the *Benzedrine Paper* by explicitly contrasting his methods with those of other researchers from another institution who focused solely on school performance.¹⁰⁷ One paper, published alongside Bradley’s 1937 paper in the *American Journal of Psychiatry*, reported the findings of an experiment in which Benzedrine was given to 93 inmates of the New Jersey State Home for Boys.¹⁰⁸ Another, by researchers Matthew Molitch and John Sullivan focused exclusively on the potential benefits of Benzedrine on psychological tests, school tests, and school progress. Molitch and Sullivan summarized previous studies reporting the following effects of Benzedrine on adults: increased energy and capacity for work, and improvements on intelligence tests. Administering the new Stanford Achievement Test, Molitch and his colleagues aimed at studying the effects of Benzedrine on test scores resulting from examinations in ten subjects. The authors reported significant increases in scores: the boys on Benzedrine, as a group, improved their score 63 points, while those on higher doses of the drug improved their score by 117 points.

107 Bradley, C., “Benzedrine and Dexedrine in the Treatment of Children’s Behavior Disorders,” 1950. *Pediatrics*, 5:p. 24-36

108 Matthew Molitch and John P. Sullivan, "The Effect of Benzedrine Sulfate on Children Taking the New Stanford Achievement Test," *American Journal of Orthopsychiatry* 7, no. 4 (1937), 519-522.

While Bradley acknowledged the clear social appeal of improved school performance, he didn't stop there. Bradley gathered similar findings from other published research with Benzedrine: "an increased 'drive to work,' 'drive for accomplishment', 'increase in attention span,' 'much better concentration,' and 'greater output of work.'"¹⁰⁹ Like the other researchers, Bradley worried that most studies of Benzedrine to date had focused solely on adults, with insufficient attention given to the effects on children. Like Molitch, Bradley noted astonishing improvements in school performance observed by all staff. Drawing on many of the same studies as Molitch, Bradley's paper also referenced studies testing the effects of Benzedrine on the self-absorbed individual, and those in catatonic stupors.¹¹⁰ Molitch and his team had not described the boys at the New Jersey State Home in any detail. Bradley, however, made clear that Benzedrine was administered to 30 children with a variety of conditions ranging from "specific educational disabilities, with secondarily disturbed school behavior, to the retiring schizoid child on the one hand and the aggressive, egocentric epileptic child on the other," all falling within "normal" levels of intelligence. Rather than limiting attention to the classroom, Bradley extolled the unique design of the Bradley Home in facilitating more nuanced observations of the drug's effects on the child's total interaction with his environment: including school work, play outside, daily rituals, routines, and social relationships. In other words, Bradley attempted to bridge medical and guidance understandings of children, seeking what some historians have described as a holistic approach.¹¹¹

109 Bradley, *The Behavior of Children Receiving Benzedrine*, Vol. 94, 1937c), 577-585.

110 Eugene Davidoff, "A Clinical Study of the Effect of Benzedrine Therapy on Self-Absorbed Patients," *Psychiatric Quarterly* 10, no. 4 (1936), 652-659.; CL Carlisle and CH Hecker, "Use of Benzedrine Sulfate in Catatonic Stupors: Case Reports," *Med.Bull.Vet.Admin.* 13 (1937), 224.

¹¹¹ Singh, *Bad Boys, Good Mothers, and the "Miracle" of Ritalin*, Vol. 15, 2002), 577-603.; Smith, *Hyperactive: The Controversial History of ADHD* (London, UK: Reaktion Books, 2013).

Benzedrine forced Bradley to reconsider the therapeutic vision for the Home. As described above, Bradley was sensitive to the child guidance movement and went to great lengths in creating all of the proper environmental conditions needed for a growing child at the Home. Administering Benzedrine to children introduced a surprising twist. As he described in his 1937 Benzedrine Paper:

To see a single daily dose of Benzedrine produce a greater improvement in school performance than the combined efforts of a capable staff working in a most favorable setting, would have been all but demoralizing to the teachers, had not the improvement been so gratifying from a practical point of view.”¹¹²

Benzedrine, read in this light, presented a challenge to the assumptions of the guidance tradition. Through a direct manipulation of psychic qualities, Benzedrine “worked” to produce results that interpersonal symbolic rituals could not.

Benzedrine also offered promise for the epileptic child, whose treatment was too often limited to controlling seizures. In the epileptic personality, Bradley had worried that attention to the specific causes and treatments of seizures were “certain to produce an atmosphere of invalidism and morbidity about any boy or girl.” Bradley advocated treatment to support the child, not only the seizures. Therefore overprotection, self-centered preoccupation on feelings of being abnormal, or deprivation of participation in childhood activities took away from the therapeutic goal: a happy, and full life. Behavior problems were understood as a primary symptom caused by seizures. Benzedrine achieved remarkable results not only on the seizures, but on the child’s general behavior and adjustment:

Its most striking results are reduction of the variability and impulsiveness so prominent in convulsive children, with increase in attention span for and application

112 Bradley, Charles. "The behavior of children receiving benzedrine." *The American Journal of Psychiatry* (1937): 577-585

to scheduled and planned activities, especially in the school situation. In one study notably improved efficiency in arithmetic was apparent in many children.¹¹³

Benzedrine's positive effects were not limited to the convulsing child. Those displaying the "epileptic personality" also benefited similarly from the drug. Over half of the children exhibiting the "schizoid personality" and some he diagnosed with schizophrenia responded remarkably under the influence of the drug by improving contact with others and engaging in more activities. In a description of one boy, Bradley articulated his greatest hope for Benzedrine on childhood schizophrenia: "[The boy] seemed aware of and interested in his surroundings and appeared cheerful and contented."¹¹⁴ One of the most remarkable effects of Benzedrine was that it subdued children in what Bradley distinguished as a social, rather than physical way:

The term "subdued" requires some explanation. By a subdued response is meant that in some conspicuous way a child became less active than before. The term is employed in a social rather than a physiological sense. Many children began to walk and move quietly in contrast to previous noisy running and rushing about. A number spoke in a normal or lowered tone of voice instead of shouting raucously. Some of these same children, instead of quarrelling and arguing boisterously, began to avoid expressing differences of opinion or conducted their discussions in tones that were not offensive. In certain instances children appeared subdued because they began to spend their leisure time playing quietly or reading, whereas formerly they had wandered aimlessly about antagonizing and annoying other children.¹¹⁵

This statement has been misrepresented to demonstrate that Bradley believed he was clearly treating a social problem rather than an organic one.¹¹⁶ Close attention to his writing, however, reveals a different meaning.¹¹⁷ Bradley recognized the behaviors subdued by

¹¹³ Bradley, The behavior of children receiving benedrine.

¹¹⁴ Bradley, The behavior of children receiving benedrine.

¹¹⁵ Bradley, C. Bowen, M. Amphetamine (Benzedrine) Therapy of Children's Behavior Disorders. 1941. American Journal of Orthopsychiatry. 11:1: pp.92-103.

¹¹⁶ Elizabeth Bromley, "Stimulating a Normal Adjustment: Misbehavior, Amphetamines, and the Electroencephalogram at the Bradley Home for Children," *Journal of the History of the Behavioral Sciences* 42, no. 4 (FAL, 2006), 379-398.

¹¹⁷ In Elizabeth Bromley's account, ... makes clear that he is using stimulants to treat social issues rather than organic ones – yet it was clear to Bradley that these "social issues" often resulted in part from organic causes....

Benzedrine matched those often seen in children with convulsive disorders or damage to the central nervous system (hyperactive, irritable, aggressive, destructive). As he clarified in his advice to physicians, drug treatment of seizures should be adequate to control the convulsions. Yet overtreatment resulting from a narrow focus on treating the visible convulsions could “produce irritability, fatigue, or poor coordination” therefore limiting the self-confidence, self-esteem, and feelings of security that participation in school and community activities could provide.¹¹⁸ What Bradley found so impressive about Benzedrine was that it treated behaviors that often resulted directly from seizures, without depleting mental alertness, causing drowsiness, sluggishness or “any of the retarded responses and the intellectual confusion sometimes noted following therapeutically effective doses of narcotic or sedative drugs.”¹¹⁹ Benzedrine worked unevenly, but across a range of behavioral problems, meaning Bradley could use it on any child in whom the effects were desirable, regardless of clear organic evidence.

In fact, EEGs taken of children on Benzedrine showed no evidence of changes in electrical brain activity. Bradley took this as evidence that the medication was not useful in treating seizures, for example, or other identifiable organic deficits, but instead helped children with their emotional adjustment to both primary and secondary symptoms. Children, under the drug’s influence, seemed to exert more conscious control over their activities and expression of emotions. Benzedrine, alongside the environmental work at the Bradley Home, presented a challenge to assumptions of childhood and what children could achieve on their own. As such, it challenged certain child guidance and psychiatric principles that looked for

¹¹⁸ Bradley, Bowen. Amphetamine (Benzedrine) Therapy of Children’s Behavior Disorders.

¹¹⁹ Bradley, Bowen. Amphetamine (Benzedrine) Therapy of Children’s Behavior Disorders.

the origins of behavioral problems in emotional conflicts. Benzedrine provided an alternative hypothesis to these accepted approaches:

Improvement in behavior implies a return toward accepted social standards and indicates that the causes of the problem are becoming non-operative...obviously the drug does not remove sources of conflict by altering the external circumstances which produced them. Likewise, it is inconceivable that its administration suddenly imparts to the child the insight into his difficulties which enables him to handle them competently (as occurs in the course of effective psychotherapy). However, amphetamine may well impart a sense of stimulation, well being, and confidence...to a degree that conflicts, though still present, are no longer irritating and distressing. It is only by such a hypothesis that we can understand how a drug, with presumably one type of pharmacologic action, subdues some children and stimulates others.¹²⁰

Bradley promoted the hypothesis that Benzedrine “stimulated higher levels of the central nervous system, thereby enhancing voluntary (cortical) control of psychomotor activity.” Still, he could find no physiological evidence to support his theory. The proof was visible for all to see and sufficient to promote further research. Benzedrine was not intended, in Bradley’s mind, to replace modifications to a child’s surroundings, which would continue to be a potential source of conflict, or psychotherapy, which would help a child develop different strategies to deal with future problems. It did, however, challenge the expectations of what a child achieved “naturally” through adaptive struggle. The modification of a stressful environment and offering of effective psychotherapy were often deemed by Bradley to be beyond the control of the physician. In such cases, Benzedrine, which could aid in social adjustment and school progress, could provide some real benefit.

Bradley went on to discuss emotional and other psychological effects of the drug. He described the subduing effects of the drug on children who had demonstrated conduct problems resulting from emotional maladjustment. Children who had appeared irritable,

¹²⁰ Bradley, Bowen. Amphetamine (Benzedrine) Therapy of Children’s Behavior Disorders.

noisy, aggressive and domineering became more subdued and easy going when treated with Benzedrine. He went on: “Coincidentally, they seemed to become more interested in their surroundings.”¹²¹ The significance of these observations cannot be understood outside of Bradley’s larger body of work at The Home, which illuminated aspects of child development commonly taken for granted. He promoted the Bradley Home as the first to combine the best available medical and neurological treatment in a therapeutic milieu that drew from principles of the growing guidance movement. This movement began with a progressive vision and a bold goal: the total prevention of juvenile delinquency and childhood mental illness. The guidance movement insisted that normal childhood could only be achieved through a healthy development in a supportive community. Combining such guidance principles with the long term care of children with known neurological deficits, as well as psychoses, did create a problem for Bradley. Namely, how could he assure that children in his care would receive the developmental benefits of growing up in a healthy environment during extended stay outside of their communities? The Bradley home accepted “epileptic” and mentally defective children, against the common wisdom of the time, which encouraged their isolation from other children and rendered them poor candidates for psychotherapy. Since child psychiatry was a small and secluded profession with no formally recognized certification, he was also concerned with making his findings accessible to pediatricians and general practitioners, who rarely received training in the mental and emotional aspects of development.

Subsequent researchers have ignored this critical piece of Bradley’s work with his patients whose symptoms did not fit neatly into organic or social and environmental understandings of his own time. Bradley employed neurological and somatic tests as a social

¹²¹ Bradley, *The Behavior of Children Receiving Benzedrine*, 579.

and political strategy to help the classically trained medical professional engage in mental and behavioral problems. As concerned as he was with changing cultural ideas and responses to children with accepted neurological and mental deficiencies, he found a great challenge in his studies of childhood schizophrenia, for which he could find no clear organic basis. Schizophrenia would present the greatest challenge to the principles of the guidance movement as well: a child's total withdrawal from his environment. Bradley seemed less concerned with distinguishing between "chemical" (Benzedrine) and "natural" stimulating forces (teachers, staff, books, and an engaging environment) than he did on the effects of these various interventions. In this light, Bradley's pragmatism won out. Bradley appeared most concerned with strategies, medical or environmental, that would make it easier for the patients in his care to successfully engage with the world around them, therefore realizing the symbolic expectations of childhood, which he believed were too often taken for granted. As Bradley worked to bridge the medical and guidance traditions in his home, Benzedrine exposed assumptions that neither tradition fully acknowledged. Unfortunately, these assumptions are still with us.

CHAPTER THREE

LEON EISENBERG: FROM CLINICAL OBSERVATIONS TO PHILOSOPHICAL REFLECTIONS

In the 1950s, leaders in the field of psychiatry lobbied to establish a board certified medical subspecialty in child psychiatry. The American Academy of Child Psychiatry, founded in 1952, succeeded in establishing a board certified medical subspecialty seven years later. By then, it was becoming more common for specialists to undergo training at university centers, where they would work to build ties to the related medical professions. Seven years later, in 1959, the American Board of Psychiatry and Neurology recognized child psychiatry as a board certified subspecialty.¹²² Over the following few decades, child psychiatrists exchanged visions for the profession and sought to improve standards for training. In this chapter, I will explore the concerns for the field of child psychiatry that Eisenberg presented to his colleagues as he challenged the dualistic view that sought to distinguish between organic and functional impairment. Like Kanner and Meyer before him, Eisenberg insisted on the total psychobiological nature of mental disorders.¹²³ Working under Leo Kanner at Johns Hopkins, Eisenberg studied children newly classified under the diagnosis of autistic disturbance of childhood. Writing about autism, maternal deprivation, and minimal brain damage, Eisenberg argued that organic, environmental, social, and conceptual always worked together to create disease and disorder. Drawing from evidence

¹²² "The History of the American Academy of Child Psychiatry." *Journal of the American Academy of Child Psychiatry* 1, no. 1 (January, 1962), 196-202.

¹²³ Leon Eisenberg and Leo Kanner, "Childhood Schizophrenia: Symposium, 1955: 6. Early Infantile Autism, 1943-55." *American Journal of Orthopsychiatry* 26, no. 3 (1956a), 556.

on each condition, he argued that the clean distinction between organic and adaptive diseases and disorders that had developed was no longer useful.

Eisenberg expressed frustration that existing psychiatric services rarely reached children in greatest need of services and argued that available knowledge and resources should be deployed strategically to reduce health disparities between middle and lower class children and families. Although Eisenberg argued for the use of scientific methods (in the form of the randomized control trial), his interpretations of his pharmacological randomized control trials (RCTs) with children read more like psychological studies than “objective” scientific research. He reported that milieu, treatment, and medications were more than objective tools. Each communicated messages both to the children and the staff in residential treatment facilities. Eisenberg concluded that study design and implementation demonstrated an impact of research on its participants (beyond any specific intervention) and questioned the use of RCTs for assessing the long-term effectiveness of behavior drugs. The administration of stimulants disrupted the common psychodynamic belief that insight should precede behavior change. Prescription of stimulants visibly changed behavior and modified assumptions about what children could achieve “naturally.”

Around the same time as the Bradley Home was preparing to open its doors in 1930, Kanner was invited by Adolf Meyer to create and direct the first academic department of child psychiatry at Johns Hopkins. Kanner and Meyer hoped to synthesize existing knowledge from previously isolated tributaries of practitioners into a single professional body of child psychiatric knowledge.¹²⁴ One of the results of this effort was Kanner’s textbook on child psychiatry, first published in 1935, which remained the sole synthesis of

124 Leo Kanner, "Centripetal Forces in Personality Development," *The American Journal of Psychoanalysis* 19, no. 2 (1959a), 123-133.; Leo Kanner, "The Thirty-Third Maudsley Lecture: Trends in Child-Psychiatry," *The Journal of Mental Science* 105 (Jul, 1959b), 581-593.

the profession's knowledge for over three decades.¹²⁵ These writings were deeply influenced by Meyer's psychobiology.

Beginning in 1952, Eisenberg undertook a two-year fellowship at Hopkins under Kanner's supervision. By then, it was becoming more common for specialists to undergo training at university centers, where they would work to build ties to the related medical professions. Critically, Eisenberg's work with Kanner fueled a career that would lead him to question previously understood relationships between the brain and behavior.

Conceptual Problems in Relating Brain to Behavior: Autism, Deprivation, and the Brain Damaged Child

Childhood Autism: The Rejecting Infant

Whereas Bradley had articulated emotional qualities necessary for successful learning, Eisenberg came to find existing distinctions between organic disorders of intelligence and those of affect increasingly difficult to justify.¹²⁶ One of the early bridges between Bradley and Eisenberg was a patient who appeared at the steps of the Children's Psychiatric Clinic of the Johns Hopkins University Hospital on February 5, 1941, more than a decade before Eisenberg arrived. His name was Herbert.¹²⁷ Herbert and others like him would prove instrumental to Eisenberg in illuminating cultural expectations of children and complicating existing distinctions between mental deficiency and certain forms of psychosis, specifically schizophrenia. Before arriving at Hopkins, Herbert had been admitted for a short time to the Bradley Home, where he was diagnosed as mentally retarded and deemed unsuitable for

¹²⁵ Kanner, *Child Psychiatry*, Vol. 1 (Springfield: Baillière, Tindall & Cox, 1935).

¹²⁶ Leon Eisenberg and Leo Kanner, "Childhood Schizophrenia: Symposium, 1955: 6. Early Infantile Autism, 1943–55." *American Journal of Orthopsychiatry* 26, no. 3 (1956b), 556-566.; L. Eisenberg and K. Glaser, "Maternal Deprivation," *Pediatrics* 18, no. 4 (October, 1956), 626-642.; Leon Eisenberg, "Psychiatric Implications of Brain Damage in Children," *Psychiatric Quarterly* 31, no. 1 (1957b), 72-92.

¹²⁷ Leo Kanner, "Autistic Disturbances of Affective Contact," *Nervous Child* 2, no. 3 (1943), 217-250.

long-term care. At Hopkins, he would meet the person providing a critical connection between Leon Eisenberg and Charles Bradley: Leo Kanner.

The details of Herbert's case matched with observations Kanner had made in ten other children and appeared unique from anything in existing reports. Presenting the case details to his peers in 1943, he recommended the designation of a distinct syndrome: autistic disturbances of affective contact. As Kanner examined the three-year old boy, he noticed a unique combination of characteristics:

There were no physical abnormalities except for undescended testicles. His electroencephalogram was normal...Herbert...showed a remarkably intelligent physiognomy and good motor coordination. Within certain limits, he displayed astounding purposefulness in the pursuit of self-selected goals. Among a group of blocks, he instantly recognized those that were glued to a board and those that were detachable. He could build a tower of blocks as skillfully and as high as an child of his age or even older. He could not be diverted from his self-chosen occupations. He was annoyed by any interference, shoving intruders away (without ever looking at them), or screaming when the shoving had no effect.¹²⁸

A medical history revealed that Herbert had held up his head at four months and sat up four months later. His mother noted that he had always been "slow and quiet," and confessed that she had believed for some time that he was deaf because he took no note of people coming through the room or addressing him directly. Herbert became very upset by small changes in patterns, whether to routines or the placement of familiar objects. Yet he would entertain himself for hours on end pulling blinds up and down or opening and closing the wings on a door.

At a 1955 symposium on Childhood Schizophrenia Eisenberg and Kanner presented this unique behavioral pattern which was gaining clinical interest and had earned a new

128 Leo Kanner, "Autistic Disturbances of Affective Contact," *Nervous Child* 2, no. 3 (1943), 217-250.

name: early infantile autism.¹²⁹ In the years between, Kanner had defined a central symptom of the syndrome as “the children’s inability to relate themselves in the ordinary way to people and to situations from the beginning of life.”¹³⁰ Compared to Bradley’s schizophrenic children who withdrew from previous engagement with others, these children appeared alone and withdrawn from the first years of life.

This seemingly innate difference frustrated parents. Eisenberg and Kanner noted that, parents, “initially pleased by the child’s “goodness”—that is, his ability to occupy himself for long periods without requiring attention— later became distressed by the persistence of this self-isolation and by their observation that their coming or going seemed a matter of complete indifference to the child.”¹³¹ The other primary symptom, designated after several years of follow up study, was described as an obsessive insistence on the preservation of sameness. These children relied heavily on rituals, which, once established, had to be ritualistically repeated. “Thus, a walk had always to follow the same prescribed course; bedtime to consist of a particular ritual of words and actions; and repetitive activities like spinning, turning on and off lights and spigots, or flushing toilets could preoccupy the child for long periods.”¹³² Interruption of these patterns resulted in bursts of rage or acute panic on the part of the child.

Other characteristics included a failure to use language for the purposes of communication, detailed attention to the arrangement of objects, and unusual capacities for certain types of learning. These children, demonstrated unusual facility in rote memory,

129 Eisenberg and Kanner, *Childhood Schizophrenia: Symposium, 1955: 6. Early Infantile Autism, 1943–55.*, Vol. 26 American Orthopsychiatric Association, Inc., 1956a), 556.

130 Leo Kanner and Leon Eisenberg, "Notes on the Follow-Up Studies of Autistic Children," *Proceedings of the Annual Meeting of the American Psychopathological Association* (-1955, 1954), 227-39; discussion, 285-9.

131 Eisenberg and Kanner, *Childhood Schizophrenia: Symposium, 1955: 6. Early Infantile Autism, 1943–55.*, Vol. 26 American Orthopsychiatric Association, Inc., 1956a), 556.

132 Leon Eisenberg and Leo Kanner, "Childhood Schizophrenia: Symposium, 1955: 6. Early Infantile Autism, 1943–55." *American Journal of Orthopsychiatry* 26, no. 3 (1956a), 556.

rattling off lists of names, rhymes, and other content, often parrot words without indicating a capacity to communicate meaning or feeling to others. In addition, they displayed a lack of awareness of the feelings of others. In one case, a mother shared a story of her son walking on a crowded beach with no apparent awareness of objects or others in his path. As she described, “he did not intentionally deviate from his course in order to walk on other—but neither did he make the slightest attempt to avoid them.”¹³³ Attention to the arrangement of objects seemed unusual compared to others. “So intense was this relationship,” Kanner and Eisenberg commented, “that minor alterations in objects or their arrangement, not ordinarily perceived by the average observer, were at once apparent to these children who might then fly into a rage until the change had been undone, whereupon tranquility was restored.”¹³⁴ Finally, as many of these children would end up placed in institutions for the feeble-minded, they nonetheless presented a confusing picture to those applying psychological tests. What appeared as a type of social imbecility coexisted with “isolated areas of unusual intellectual performance.”¹³⁵ Although these children were classified among those with schizophrenia, observations of 50 children followed over eight years revealed that none exhibited hallucinations (a key trait in schizophrenia). Having isolated the symptoms, Eisenberg and Kanner turned to an exploration of causes.

Deprivation: The Chemical Consequences of the Nonmaterial

If the symptoms of autism appeared from early in life, then how could one distinguish between the constitutional traits and the effect of environment on a child’s development?

Eisenberg considered one possible explanation to be a failure of the parents to develop an

¹³³ Eisenberg and Kanner, Early Infantile Autism.

¹³⁴ Ibid.

¹³⁵ Ibid.

emotional bond with their child. Kanner, in line with many psychoanalysts had proposed the possibility that autism resulted from the “emotional refrigeration” of the mothers of autistic children.¹³⁶ Eisenberg also noticed that parents of autistic parents were remarkably successful professionally but undemonstrative emotionally.¹³⁷ Perhaps the parents of autistic children were unable to connect to the children emotionally. Decades of research supported the notion that “maternal deprivation” could lead to arrested social and intellectual development.¹³⁸ Maternal deprivation, defined by psychiatrists, included deficiencies in emotional and intellectual stimulation. Pediatricians, familiar with the nutritional and other “physical” needs of children, applied findings to lessen neonatal morbidity and mortality. Growing bodies of evidence were demonstrating that emotional aspects of maternal care were also biological necessities.¹³⁹ Physicians struggled to accept that psychological processes regarded as “nonmaterial” could significantly alter one’s physiology. In addition, cultural practices associated with maternal care, such as gentle physical contact, emotional warmth, sounds of pleasant and varying tones of the human voice, visual stimulus, and play, rendered such stimulus invisible. The effects of such “nonmaterial” effects were difficult to perceive until they were absent.¹⁴⁰

Throughout the 1930s and 1940s, doctors synthesized observations of infants reared in institutional settings, where hygiene principles had long emphasized the isolation of infants to ward off cross-contamination. The American Pediatric Society discussed the high

¹³⁶ Leo Kanner, "Problems of Nosology and Psychodynamics of Early Infantile Autism," *American Journal of Orthopsychiatry* 19, no. 3 (07, 1949), 416-426.

¹³⁷ Leon Eisenberg, "The Fathers of Autistic Children." *American Journal of Orthopsychiatry* 27, no. 4 (1957a), 715.

¹³⁸ Eisenberg and Glaser, *Maternal Deprivation*, Vol. 18 (Not Available: , 1956), 626-642.

¹³⁹ Ibid.

¹⁴⁰ Eisenberg, *Psychiatric Implications of Brain Damage in Children*, Vol. 31 (Springer, 1957b), 72-92.; Leon Eisenberg, "Dynamic Considerations Underlying the Management of the Brain-Damaged Child," *GP* 14, no. 4 (October, 1956b), 101-106.

rate of institutional mortality of infants as early as 1915. Doctors began to take note of the physical effects of deprivation. Compared to other species, the human infant remained totally dependent on adult care for a much more prolonged period of time. Theories developed suggesting that there were key differences between institutionalized children and those reared in a home that could lead to physical, intellectual, and emotional differences. Ideally, the mother's role involved emotional warmth and the facilitation of attachment to other beings as well as a continual source of varying stimulus to promote intellectual growth.

Aware of a psychiatric culture focused on blaming the mother, Eisenberg drew from cross-cultural studies to show that it was not only the biological mother who could fulfill these needs. His study of the kibbutz in Israel, for example, demonstrated that group care could provide the same elements of care.¹⁴¹ Alternately, a biological mother may not be able to meet these emotional needs. A 1913 anecdote emerged from a children's ward in Dusseldorf, illustrating the importance of touch for a developing infant. "Old Anna," a nurse in one institution could always be relied upon to revive a malnourished baby's interest in eating by carrying him around on her hip. Observational research such as that reported by Dr. Harry Bakwin claimed that by the age of four months, institutionalized infants demonstrated physical effects such as "listlessness, lack of response to stimuli, lack of appetite, failure to gain weight, emaciation, pallor, and proneness to febrile episodes."¹⁴² Others reported that attractive babies, or "nurses' pets" often developed better than other children and theorized

¹⁴¹ Leon Eisenberg and Peter B. Neubauer, "Mental Health Issues in Israeli Collectives: Kibbutzim," *Journal of the American Academy of Child Psychiatry* 4, no. 3 (1965), 426-442.

¹⁴² Harry Bakwin, "Emotional Deprivation in Infants," *The Journal of Pediatrics* 35, no. 4 (10, 1949), 512-521.

that this was due to being handled more and with more positive interactions than their counterparts.¹⁴³

Multiple researchers agreed that the length of institutionalization correlated with decreasing developmental and intelligence quotients. This didn't mean that intelligence in institutionalized children was necessarily and irrevocably stunted. When Eisenberg considered these contrasts, he cautioned against conclusions about intellectual ability based on available tests, which were never culture-free. The Binet intelligence tests, for example, had been standardized on urban middle class children and were loaded with cultural references less common to rural and lower-class children. Regardless, a range of assessments of intelligence supported the conclusion that complex adaptive patterns were dependent on cultural stimulus (the particular content of which could and did vary).¹⁴⁴

A Clinician's Dilemma: Clinical Observations and Primary Causes

There was growing evidence and consensus then, that maternal deprivation could lead children to display traits also displayed by autistic children. Yet, the appearance of the defining traits of autism from birth suggested an alternate hypothesis in certain cases: that the behavioral patterns of the young infant might condition poor reactions on the part of the parent, who struggles to manage what is seen as an unresponsive child.¹⁴⁵ To Kanner and Eisenberg, these cases posed a challenge to the dualistic view that sought to distinguish

¹⁴³ Joseph Brennemann, "The Infant Ward," *Archives of Pediatrics & Adolescent Medicine* 43, no. 3 (1932), 577.

¹⁴⁴ William Goldfarb, "Pain Reactions in a Group of Institutionalized Schizophrenic Children," *American Journal of Orthopsychiatry* 28, no. 4 (1958), 777-785.; John Bowlby, *Child Care and the Growth of Love* (London, UK: , 1953).; R. A. Spitz, "Hospitalism; an Inquiry into the Genesis of Psychiatric Conditions in Early Childhood," *The Psychoanalytic Study of the Child* 1 (1945), 53-74.

¹⁴⁵ Those familiar with operant conditioning will recognize the influence of B.F. Skinner here. Burrhus Frederic Skinner, *Science and Human Behavior* (Simon and Schuster, 1953a).; James G. Holland and Burrhus Frederic Skinner, "The Analysis of Behavior: A Program for Self-Instruction." (1961).

between organic and functional impairment, and they insisted on the total psychobiological nature of the disorder.¹⁴⁶ While Meyer had insisted that the mind and body comprised a single unit, he continued to distinguish between organic diseases and adaptive failures of the mind. Eisenberg's studies of autism revealed behavior inconsistent with the prevailing developmental view that infants began life *tabula rasa*.¹⁴⁷ With the exception of a few accepted organic mental problems, too many psychiatrists continued to assume that affective disorders resulted solely from developmental maladjustment. Autism challenged an assumption about human nature that no longer seemed tenable. "The appealing helplessness of the infant and the limited repertoire of behavior he displays," Eisenberg noted, "may lead the fond observer to conclude that all babies are alike. But a number of lines of evidence suggest that babies are not alike in many respects that may be crucial for future development."¹⁴⁸ The case of the autistic child presented a challenge to what he saw as an overemphasis on the environmental role in determining a child's developmental success.

Instead of overemphasizing the environment role in child development, Eisenberg and Kanner suggested a dynamic model in which the child was more than a passive receiver of environmental stimulus. A portrait of the "rejecting" mother, who was responsible for her child's maladjustment, overlooked the possibility of its opposite: the "rejected mother."¹⁴⁹ The point, of course, was not that such a child intentionally turned away from the mother's stimulus, but rather the child inherently did not display certain affective reactions that had been assumed to be universal. Autism therefore presented an exemplar illustration of a total

¹⁴⁶ Eisenberg and Kanner, *Childhood Schizophrenia: Symposium, 1955: 6. Early Infantile Autism, 1943-55.*, Vol. 26 American Orthopsychiatric Association, Inc., 1956a), 556.

¹⁴⁷ To be clear, this was not a Meyerian belief. He believed that unique constitutions would adapt successfully to their environment or suffer as a result.

¹⁴⁸ Leon Eisenberg, "The Challenge of Change," *Child Welfare* 39, no. 4 (1960a), 11-18.

¹⁴⁹ Eisenberg and Kanner, *Childhood Schizophrenia: Symposium, 1955: 6. Early Infantile Autism, 1943-55.*, Vol. 26 American Orthopsychiatric Association, Inc., 1956a), 556.

psychobiological disorder. The initial affect existing in the child was not inherently problematic but became so in the realm of the social and symbolic interaction necessary for survival. In more common experience, a child who cried loudly might fare less well than one whom was always smiling, not because of an inherent flaw, but because he didn't meet existing cultural expectations.¹⁵⁰ The child, coming into the world with preset characteristics might encourage a frustrated caretaker to blame either herself or her child for "bad" behavior.

An additional twist would bring the issues of autism and maternal deprivation into collision with the brain-damaged child, and help to explain Eisenberg's difficulty distinguishing between physical, affective, and intellectual development. Autism, as a form of schizophrenia, fell within the category of psychosis, understood as a major disruption in personality organization and human relations. Yet, Herbert, like many other children who fit criteria for this newly reported diagnosis, previously had a diagnosis of mental deficiency.¹⁵¹ How could this be? After all, the children in Kanner's study had demonstrated particularly high capacities when it came to certain intellectual tasks. Eisenberg suggested that if signs of autism were present from birth, a child would likely prove difficult to teach or evaluate in an academic environment.

Dynamic Considerations in Emotional, Physical, and Intellectual Problems

The theory of autism as a total psychobiological disorder required future study to determine whether constitutional factors could explain the trigger for a parent's expectations. Eisenberg looked to research on the brain-damaged child which offered an excellent parallel

¹⁵⁰ Eisenberg, *The Challenge of Change*, Vol. 39, 1960a), 11-18.

¹⁵¹ Eisenberg and Kanner, *Childhood Schizophrenia: Symposium, 1955: 6. Early Infantile Autism, 1943-55.*, Vol. 26 American Orthopsychiatric Association, Inc., 1956a), 556.

case study.¹⁵² Further, comparisons between the two provided the practitioner with an important chicken or egg diagnostic dilemma when it came to distinguishing emotional and intellectual problems. Years of studies had failed to correlate the degree of brain damage to the amount of disorder observed in behavior. At the same time, decades of clinical observation had produced no reliable correlation between parental attitudes, environmental influences, and the specific personality development of any given child.¹⁵³

Eisenberg insisted that to understand the effects of brain damage upon a child's behavior reactions (hyperkinesis, short attention span, marked distractibility, lability of mood, antisocial behavior, intellectual deficit, and anxiety), one would have to integrate biologic, psychological, and social dynamics. Eisenberg outlined this integrated approach: "First of all, we see the effects of structural damage on brain function per se. Secondly, we observe how the patient reacts as a person to his functional loss. Thirdly, we note the way in which the patient's social environment influences the adequacy of his adjustment."¹⁵⁴

Neurophysiological studies upset a longstanding metaphorical understanding of the brain as a telephone switchboard, with each area connected to a particular function and manned by an operator.¹⁵⁵ Philosophers and scientists dating back to Plato had subscribed to variations on a similar theme of cerebral specialization. Too often, emotion and intelligence had been treated as independent faculties. Researchers from various schools of thought indicated that the brain functioned not simply as a combination of distinct areas of function but also as an interacting whole. From conception, "the organism responds as a whole, wherever a stimulus is applied. Growth is associated with the progressive differentiation of

¹⁵² Eisenberg, L. *Dynamic Considerations Underlying the Management of the Brain-Damaged Child*.

¹⁵³ Chess. *Methodology of a Study of Adaptive Functions of the Preschool Child*.

¹⁵⁴ Eisenberg, L. *Dynamic Considerations Underlying the Management of the Brain-Damaged Child*.

¹⁵⁵ Walther Riese, "A History of Neurology." (1959).

more and more delicately selective and appropriate responses to specific stimuli, both by facilitation of appropriate channels and inhibition of maladaptive ones.”¹⁵⁶ Eisenberg drew on the work of anatomists and neurologists who had demonstrated that if one area became damaged, the remaining structures would reorganize into new relationships in a more or less successful effort to compensate for the disturbance.¹⁵⁷ A conceptual understanding of the specific functional areas as subordinate to the total integration between all parts of the brain was needed to explain clinical observations in which a lesion in a “subordinate” center would have a minimal effect on behavior, while damage to the higher integrative mechanism paralleled marked loss of function.¹⁵⁸

The relevance of this distinction became clear in the case of the brain-damaged child placed in a learning atmosphere. As Eisenberg reasoned, learning involved inhibition, transmission capacity, alertness, emotional responses and intellectual functioning.¹⁵⁹ Inhibition was required in order for an individual to attend to any task. To hear a faint sound in the distance, not only would auditory sensations heighten, but also other sensations would have to be muted.¹⁶⁰ The brain-injured child seemed unable to exclude other stimulus,

¹⁵⁶ Eisenberg, L. *Dynamic Considerations Underlying the Management of the Brain-Damaged Child*.

¹⁵⁷ Eisenberg described this conception as “dedifferentiation” in Goldstein’s terminology and of “dissolution of function” in Hurler’s. George Ellett Coghill, *Anatomy and the Problem of Behavior*. (London: Cambridge University Press, 1929a).; Kurt Goldstein, *The Organism* (New York: American Book Company, 1939).; J. H. Jackson, *Selected Writings*, ed. J. Taylor (London: Holder & Stoughton, 1932).

¹⁵⁸ Eisenberg, *Dynamic Considerations Underlying the Management of the Brain-Damaged Child*, Vol. 14 (Not Available: , 1956b), 101-106.; Eisenberg, *Psychiatric Implications of Brain Damage in Children*, Vol. 31 (Springer, 1957b), 72-92.; *Anatomy and the Problem of Behavior*, directed by G. E. Coghill (Cambridge Eng.: The University Press, 1929b)

¹⁵⁹ Leon Eisenberg, "Emotional Determinants of Mental Deficiency," *AMA Archives of Neurology & Psychiatry* 80, no. 1 (1958b), 114-121. Here, Eisenberg was drawing on ideas from classical and operant conditioning. Whether he interpreted Pavlov or Skinner correctly, he believed that physiologists had already identified emotional components to intelligence. Ivan Petrovich Pavlov and W. Horsley Gantt, *Lectures on Conditioned Reflexes* (New York: Liveright, 1928), 414.; B. F. Skinner, *Science and Human Behavior* (New York: Macmillan, 1953b), 461.

¹⁶⁰ N. E. Miller, "Experiments on Motivation. Studies Combining Psychological, Physiological, and Pharmacological Techniques," *Science* 126, no. 3286 (December 20, 1957), 1271-1278.; L. Stein, "Secondary Reinforcement Established with Subcortical Stimulation," *Science* 127, no. 3296 (February 28, 1958), 466-467.

making focus difficult.¹⁶¹ The ability of undamaged areas of the brain to create new patterns of adjustment required communication, or transmission capacity between areas. Therefore, the volume of tissue lost or damaged seemed to correlate to the degree of impairment as well, limiting the overall number of pathways of connection between functioning tissues. Returning briefly to the communications metaphor, a brain-damaged child attempting to multitask might more frequently receive the “all circuits are busy” message.¹⁶² Perhaps, Eisenberg posited, this could explain why the brain-damaged child could attend to fewer tasks than other children and appeared to function better if extraneous stimuli was removed. Findings from neurophysiological studies suggested that behavior could be directly manipulated through damage to the brain in ways that could produce both specific effects (such as aphasia, and agnosias) and general effects (as manifest by poor integration of behavior).

These findings paired with the case of the autistic child posed an important dilemma to the clinician, with implications for treatment. A child with an inborn affective difference or emotional disturbance contributing to poor outcomes in intellectual performance had different needs than a child born with limited intellectual capacities with secondary emotional struggles, though the two might present a similar clinical picture of feeble-mindedness. A 1954 report by the joint expert committee of the World Health Organization (WHO) recommended a conceptual distinction between the terms mental deficiency and mentally retarded. According to the report, mental deficiency should be applied only to a case in which there was a known biological deficiency. Mental retardation on the other hand, should be used for children that were performing (both intellectually and

¹⁶¹ Eisenberg, *Psychiatric Implications of Brain Damage in Children*, Vol. 31Springer, 1957b), 72-92.

¹⁶² Eisenberg, *Emotional Determinants of Mental Deficiency*, Vol. 80American Medical Association, 1958b), 114-121.

socially) below inferred intellectual endowment. Drawing from this distinction, Eisenberg attempted to parse the term “feeble-minded.” If used as an adjective, feeble-mindedness signaled inferior intellectual performance (as revealed by psychometric measures). “In this sense, behavior is feeble-minded or not, never “pseudo.””¹⁶³ However, if used as a noun, feeble-minded could infer from clinical observations a cause for the deficit. The combination of findings on maternal deprivation, autism, and brain damage demonstrated that both brain and behavior could be modified not only by the scientist’s scalpel or in the social laboratory of the world, but through the dynamic interaction of both.

Consider intelligence in light of these findings. If a child scored poorly on a test, it could reflect a difference in innate capacity, maternal deprivation, or a cultural bias in the test. An intelligence test such as Binet’s had been standardized on urban middle class children. Yet, consistently, children raised in institutions with limited interactions with adults (often due to low staffing numbers or hygienic rules intended to prevent cross infection) tested lower on tests of intelligence. Eisenberg worked from an understanding that demonstrations of intelligence required motivation, which itself could be cultivated or stymied depending on the quality and type of interaction in one’s environment:

Lack of cultural stimulation results in a lowering of the functional ability of the deprived organism. This appears to account for the intellectual deficit displayed by institutionalized children. If the period of institutionalization is long enough and occurs early enough in life, the deficit would appear to be permanent, though, of course, subsequent cultural enrichment would prevent further degradation and enhance the development of remaining abilities.¹⁶⁴

The family unit, then, as a transmitter of cultural values, played a key role in intellectual development (or impairment). Similar trends had been observed around emotional development. Studies of institutionalized children often reported consistent types of

¹⁶³ Eisenberg, *Emotional Determinants of Mental Health*, p. 9.

¹⁶⁴ Eisenberg and Glaser, *Maternal Deprivation*, Vol. 18 (Not Available: , 1956), 626-642.

behavior: antisocial behavior, hostile aggression, lack of pattern for giving and receiving affection, inability to understand and accept limitations; insecurity in adapting to environment. John Bowlby, a British psychiatrist, hypothesized that a “following response” started in the first months of life and remained strong for 2-3 years. Separation before six months correlated with lags in physical and intellectual growth, and separation after six months seemed more likely to translate to changes in emotional patterns.¹⁶⁵

The importance of the psychobiological dynamic became increasingly clear in the case of the brain-damaged child. His internal mechanisms, which diminished his capacity to deal with his environment, could also be more vulnerable to psychosocial influences on his behavior than other children. The brain-damaged child, at home or at school, would exhibit behavior likely to promote rejection and poor handling insofar as parents and teachers believed that the child could control his behavior, making no allowances for his difficulties. An impatient attitude and blame by a teacher could heighten the child’s anxiety, resulting in a decreased ability to learn and more disturbed behavior. Alternately, a smothering parent might offer their child few opportunities to develop any self-sufficiency, attributing all behavior to an intrinsic disease.¹⁶⁶ Theories of operant conditioning suggested that behavior could be modified through continual reinforcement and conditioning. It wasn’t necessary to fully accept the theories of B.F Skinner, whose radical behaviorism left little to no room for thoughts, emotions, and perceptions in a causal account of behavior, and Eisenberg certainly did not. In fact, Eisenberg believed that ideas were capable of conditioning behavior.

Ideas had clear material consequences for a practice of psychiatry that remained stubbornly dedicated to psychogenic causes, even faced with unequivocal evidence of brain

¹⁶⁵ John Bowlby, *Child Care and the Growth of Love* (London, UK: Penguin Books, 1953b).

¹⁶⁶ Eisenberg, *Emotional Determinants of Mental Deficiency*, Vol. 80 American Medical Association, 1958b), 114-121.

damage. “Children with cerebral palsy, post-encephalitic and post-meningitic states, lead encephalopathy and even brain tumors,” Eisenberg noted, “have been appearing at our clinic in increasing numbers with the label “emotional block.””¹⁶⁷ The implications of this designation led to damaging prescriptive practices as well. A suggestion for parents to be “permissive” to the emotionally blocked child could prove detrimental.¹⁶⁸ If a child’s behavior resulted from a disability in inhibitory function, then greater environmental controls could serve as virtues rather than punishment and help the child to eventually learn greater control and therefore improve their concentration.

Confronting School Phobias Of Two Kinds

In order to demonstrate the material consequences of psychiatric theories and assumptions, Eisenberg addressed two versions of school phobia. The first phobia involved a child’s anxiety in being separated from their caregiver when attending school. The second phobia was an anxiety rooted in resistance to school desegregation. His work on both of these phobias reinforces my central argument that Eisenberg, unlike many contemporary professionals, embraced an understanding of disorders that incorporated social and environmental causes as well as biological.

Regarding the first, clinicians were seeing more children who were anxious about leaving their parents to attend school. Sigmund Freud had made clear that patients often proved poor communicators of the events that give rise to their conditions. Freud had

¹⁶⁷ Ibid.

¹⁶⁸ Eisenberg and Kanner, *Childhood Schizophrenia: Symposium, 1955: 6. Early Infantile Autism, 1943–55.*, Vol. 26 American Orthopsychiatric Association, Inc., 1956b), 556-566.; Leon Eisenberg, "The Autistic Child in Adolescence," *The American Journal of Psychiatry* 112, no. 8 (Feb, 1956a), 607-612.; Leon Eisenberg, "School Phobia: A Study in the Communication of Anxiety," *The American Journal of Psychiatry* 114, no. 8 (Feb, 1958c), 712-718.

concluded that the stories given by the analysand often reflected delusions or imaginary realities rather than true accounts of historical events or objective explanations for behavior. Given this, Eisenberg was frustrated with the reliance of psychiatrists on case histories to reconstruct the causes of this particular form of neurosis. Although children often rationalized their anxiety with stories of mean teachers or students, or fear of failure, a material change in any of these stimuli failed to resolve the anxiety. Eisenberg suggested that direct observation of parents and children could shed light on the patterns of behavior that might give rise to the patient's syndrome and potentially contradict their reconstruction after the fact. Through observations of children and their caretakers at the time of separation, "the drama could be seen as it unfolded rather than having to be reconstructed from the incomplete and colored versions offered by the actors in terms of their experience of it and their attitudes toward the auditor."¹⁶⁹

Drawing on a survey of the previous 4000 admissions over the previous eight years to the Hopkins clinic, Eisenberg acknowledged rising concern around this phobia in children of being separated from caregivers when at school. During that time, the number of children seen for this problem grew from 3 out of 1000 patients to 17 out of 1000. Of course, it wasn't clear if there were more children experiencing trouble separating from their parents or if reporting had increased. Symptoms of the syndrome appeared sometimes directly as a statement of fear or they took the somatic form of abdominal pain, nausea, vomiting, or fear of fainting. Previous studies indicated that it was rarely a fear of school, but separation from the parent that gave rise to the symptoms best categorized as separation anxiety.¹⁷⁰

¹⁶⁹ Leon Eisenberg, "School Phobia: A Study in the Communication of Anxiety," *The American Journal of Psychiatry* 114, no. 8 (Feb, 1958c), 712-718.

¹⁷⁰ Ibid.

Through direct observation of 26 groups of parents and children, Eisenberg hoped to discover the patterns of communication (both verbal and indirect) that gave rise to the patient's symptoms. He began by reporting observations of eleven children and parent pairs at the Children's Guild, a nursery school for emotionally disturbed children. While each family presented varying behavior patterns, in every case he noted ambivalence on the part of the parent as well as the child, joking that "the umbilical cord evidently pulled at both ends!" The parent, in most cases a mother, would intrude even after the child had entered into the classroom activities, finding it necessary to reassure the child of her early return or insist that they be brave and not cry. According to Eisenberg, this communication was successfully transmitted to the child, who would begin to cry only in reaction to the mother's suggestion. In another instance, a mother criticized another parent, whose children expressed no anguish as she departed. "How do you like that! She doesn't even seem to care!"¹⁷¹

As direct observation of older children leaving for school proved more challenging, the remaining fifteen patient pairs were studied in outpatient therapy, where similar patterns emerged. In one case, he watched a mother communicate a child's hesitation at separation to the physician. At the same time, she would tighten his grip on the child's hand or shoulder, suggesting a reinforcement of such concern. Without exception, the mothers displayed anxious and ambivalent tendencies and Eisenberg saw complex dynamic forces at play between the mother and child, in which mothers, while frustrated with the behavior, responded to the child's gradual independence with feelings of rejection and reactive hostility. In other words, as much as mothers expressed frustration at one level at their child's anxiety, they continued to send mixed messages to their children. Apprehension on the part of the parent seemed to contribute to the child's fears, rather than quell them. Children who were

¹⁷¹ Ibid.

allowed to stay home reported an increase in anxiety, and Eisenberg concluded that a quick return to school was the best strategy for success.

Recognizing the power of the dynamic being observed Eisenberg argued that, “at a time when the support of firm handling is needed, the child’s anxiety is multiplied by the sight of a distraught and decompensated parent.”¹⁷² A rapid return to school was described as successful in 21 of the 26 cases, while results among children in junior high or high school were less successful. From this, Eisenberg drew the conclusion that acceptance of the child’s hesitation to attend school served only to reinforce the behavior, while insistence on attendance conveyed confidence to the child that he could grow comfortable and confident in his new environment. This strategy contradicted what he deemed a stubborn insistence on the part of the analyst to insist that insight should precede change in behavior.

Eisenberg applied his logic from the problem of school phobia to a problem of greater concern to him: the desegregation of schools. A 1957 roundtable discussion brought psychologists and psychiatrists together in Chicago to “shed psychologic light on the segregation-integration issues in the United States.”¹⁷³ Like the analyst who required awareness to precede action, so too did many adhere to a philosophy of gradualism when it came to desegregation, “of awaiting a time when a community is “ready” for change.”

Against this, Eisenberg declared:

We need not—and I would add, we dare not—await the illusory “enlightenment” of the most backward and least educable members of society before proceeding toward integration....everyday clinical experience teaches us that change in patterns of behavior brought about by social redirection changes attitudes and values. Do we any longer argue that insight much precede improvement?...The indicated pattern of

¹⁷² Ibid.

¹⁷³ Leon Eisenberg, "Discussion: Symposium on Desegregation," *American Journal of Orthopsychiatry* 28 (1958a), 33-35.

therapeutic intervention is prompt and effective action for desegregation, carried out by executive leadership convinced of its moral and legal necessity.¹⁷⁴

Contrary to those who located prejudice in the unconscious, present in man throughout history, Eisenberg suggested that with strong personal conviction and leadership, active desegregation could lead to changes in attitudes. While others attributed the lack of integration in Southern states to a “cultural lag,” Eisenberg insisted that many Southern leaders, in order to maintain their position, relied on disenfranchisement. Further, Jim Crow laws were not the result of some inability to change, but instead served the social purposes of those in power. Just as the clinician should not wait for the phobic child to be ready to return to school, the informed citizen must confidently insist on desegregation as a means to bring about changes in attitude. Eisenberg’s perspective on this school phobia demonstrates a clear sensitivity to the real impacts of social and environmental factors on disorders.

Who Deserves Child Psychiatry? The Message of Psychotherapy

Just as Eisenberg was running into problems with the predominant emphasis in psychiatry on psychogenic origins of conflict and psychotherapy, he was simultaneously concerned with the ability of psychiatry to meet population needs for children’s mental health care. Conservative estimates of mental disease in 1957 suggested a need for psychiatric treatment grossly disproportionate to available work force.¹⁷⁵ A 1960 report by the U.S. Joint Commission on Mental Illness and Health assessed the mental health needs of adults in the United States. Child psychiatrists, while supportive of the findings, expressed concern that little attention had been given to the needs of children. The national gap in

¹⁷⁴ Ibid, 34.

¹⁷⁵ Eisenberg, L. An evaluation of a psychiatric consultation service for a public agency. *American Journal of Public Health*. 1958; 48: 742-49.

knowledge about the number of emotionally and mentally ill children, the types of problems they were experiencing, and the available services presented a major challenge to the growth of the field. Without this information, it would be difficult to develop a national strategy to recruit more child psychiatrists and other mental health professionals and plan for sufficient services for the country. As reports on the prevalence of children's mental illness drew from limited samples and were vulnerable to all sorts of bias, growing belief that mental problems in children correlated strongly to problems in adulthood suggested a need to deploy psychiatric forces strategically. Additionally, Eisenberg worried, the report dismissed possibilities for prevention and ignored the mental health needs of the mentally retarded.¹⁷⁶

Not only was Eisenberg suspicious of psychotherapy as the most effective therapy in many cases, but he was also concerned practitioners lacked interest in classification schemes that would allow for a national assessment of needs. Further, the intensive training requirements of psychoanalysis along with its methods led many into private practice rather than public service. The influence of psychoanalysis had grown tremendously in the United States throughout the middle of the 20th century. Psychoanalysis was banned from the Congress of Psychology in Munich as a "Jewish Science" in 1933.¹⁷⁷ In the following years, hundreds of European analysts migrated to the United States. Though the numbers were relatively small, enough practitioners migrated to double the American Psychoanalytic Society membership between 1936 and 1944. By the 1960s, more than half of the chairs of psychiatric departments held membership in psychoanalytic societies, even though only 10% of American psychiatrists were trained in analysis. Analysts in the 1950s and 1960s reported a two-class system of psychiatric care. Those who could pay out of pocket or had generous

¹⁷⁶ Leon Eisenberg, "If Not Now, when?" *American Journal of Orthopsychiatry* 32, no. 5 (1962a), 781.

¹⁷⁷ Leon Eisenberg and Laurence B. Guttmacher, "Were we all Asleep at the Switch? A Personal Reminiscence of Psychiatry from 1940 to 2010," *Acta Psychiatrica Scandinavica* 122, no. 2 (2010), 89-102.

insurance often sought psychoanalytically oriented psychotherapy with private practitioners. One survey of psychoanalysts found that, of the patients they had in treatment, all patients were middle and upper class and almost all were white.¹⁷⁸ The yearly cost of analysis was more than 80% of the median income of an American worker. As well educated, articulate patients provided ideal candidates for analysis, working class patients with serious psychoses were cared for at under-resourced state and county hospitals. To Eisenberg, the paradox that those in greatest need of help were cared for by the least well-trained physicians was great cause for concern.

Eisenberg was also dismayed by the lack of attention to prevention. The guidance tradition had promised the eradication of mental illness and delinquency in its beginnings. However, who would believe that all disease could be eradicated, especially if mental illness was not parsed apart? Eisenberg explicitly expressed this concern, noting that, “If we forswear the illusory goal of ‘total mental health,’ of ‘universal happiness,’ what can we hope to accomplish in the prevention of particular neuropsychiatric disorders in light of the current knowledge.”¹⁷⁹ Instead, Eisenberg suggested that one endemic psychiatric disorder provided a paradigm for preventive work: deprivation. Deprivation did not consist of one single restriction. Different children were denied different needs: food, protection, stimulation, reliable interpersonal relationships, or a structured environment.

While Eisenberg tugged at the assumptions of childhood, the idea of a “natural” family also came undone. Eisenberg argued that although the family played a central role in the transmission of culture to their children, the family was ultimately a function of the society in which it was a part. At midcentury in the United States, the modal family was

¹⁷⁸ Arnold A. Rogow, *The Psychiatrists*. (New York, NY: GP Putnam's Sons, 1970).

¹⁷⁹ Eisenberg, *If not now, when?* 783

growing smaller and limited to two generations. Further, the economic and political structure of the United States had changed dramatically over the past century:

We have become more and more industrialized. Whereas 100 years ago more than half of those gainfully employed were in agriculture, the corresponding figure for today is one tenth. We have become more and more urbanized. Whereas seventy years ago only one third of our population lived in communities of over twenty-five hundred, today two thirds do. More women are in the labor force: one in six in 1890 but one in three in 1960. More of our children are in school and more stay for a longer time. Whereas a half-century ago no more than 4 percent of those between nineteen and twenty-two were attending school, today the figure is 20 percent. We live longer. But as longevity increases and as the birth rate climbs again, the burden of potentially depended (those under eighteen and over sixty-five) increases in ratio to the potentially productive...The mobility of population demanded by an industrial civilization produces radical alterations in traditional family patterns.¹⁸⁰

Further, the “American” family was an artifice of statistics, concealing differences in family structure that varied by class, ethnicity, and geography, among other factors. Pointing to the central role of an economy in influencing family structure and function, Eisenberg highlighted the central role of work in defining the expectations and health of a family.

Deprivation could begin in vitro if the mother experienced poor health. Studies were linking many conditions, from cerebral palsy to behavior disorders, to problems during pregnancy and childbirth. Additionally, a significant association between maternal complications and socioeconomic status left the poor, the migrant, and the unmarried at greater risk than the middle and upper classes. Of course, deprivation happened across all classes of society, yet the differential rates between social classes were something that could be targeted. Among white and black infants who performed similarly at birth, developmental studies reported that the advantage for white babies grew over time and multiple studies confirmed positive correlations between intelligence test scores, academic performance, and

¹⁸⁰ Leon Eisenberg, "The Family in the Mid-Twentieth Century. in: New York: Columbia University Press, 1960:98-112." in *The Social Welfare Forum*. (New York, NY: , 1960b), 98-112., 101-2.

social class. Many studies suggested that behavioral problems and delinquent behavior were higher among deprived children. The causes of deprivation were clear to Eisenberg:

These youngsters receive little intellectual stimulation at home; they come to school poorly motivated; they attend overcrowded, understaffed, and unattractive schools, when they attend school at all. They live in decaying neighborhoods...rates for parental disease, death, and desertion are high, with the result that these children experience multiple losses and a multiplicity of living situations. Some of them, in tribute to the resiliency of the human organism, manage somehow to grow into functioning adults. Far too many contribute to statistics on delinquency and disease.¹⁸¹

At the same time, studies of early cultural enrichment demonstrated improvement in intelligence test performance. Though children across all classes could experience deprivation, the decks were stacked against the poor. In 1962, over two million children were supported by Aid to Dependent Children “at levels barely sufficient to glue body and soul together.”¹⁸² Existing evidence suggested that available family planning, good health care, decent housing, adequate employment compensation, job training for displaced workers, enriched school programs, recreational facilities, and vocational training were necessary to decrease the racial and class divide in deprivation.

These concerns led Eisenberg to question the assumptions of his colleagues around who should be targeted for psychiatric care. In a debate with colleagues, Eisenberg posed the question, who is a patient?

Is it he who comes to us for services or is it he who is troubled, whether he comes to us or not? Is it he who is not our clinical rolls or he who never got past intake? Is it he who is “suitable” for the method (i.e., intensive psychotherapy) or he who neither seeks nor responds to such maneuvers but who is ill nonetheless? The St. Louis follow-up studies by O’Neal and Robins indicated that, although neurotic child guidance patients are at somewhat greater risk for mental illness in adult life than controls, those with the greatest morbidity as adults were those children with

¹⁸¹ Leon Eisenberg, “The Sins of the Fathers: Urban Decay and Social Pathology.” *American Journal of Orthopsychiatry* 32, no. 1 (1962b), 5.

¹⁸² Ibid.

aggressive personality disorders and adjudicated delinquency. With notable exceptions, most child psychiatric clinics, (including, I regret to say, our own) have preferred to work with the former rather than the latter.¹⁸³

When considering mental health from a public health perspective, then, those most likely to seek psychiatric services and capable of meeting the expectations of the therapist were often the least in need of services. Further, the lack of esteem for medical contributions to child psychiatry could only be maintained so long as mental retardation, brain syndromes, the physical effects of psychological development, and similar issues remained outside the purview of the profession.

Of equal concern to Eisenberg was that psychologists and social workers were increasingly taking up the practice of psychotherapy.¹⁸⁴ He condemned some of his psychiatric colleagues who practiced solely psychotherapy and psychoanalysis. As a profession as many were wondering if social workers could deliver psychotherapy as well as psychiatrists, Eisenberg posed the question, “If social workers are to do psychotherapy, who is to do social work?”¹⁸⁵ His question reflected not a concern of professional encroachment, but a loss of conscience in the medical profession, and he called on social workers to revive a tradition in which they had served as society’s moral guide.

Eisenberg pointed to the disparities in life expectancy between the American Negro and his white peer as evidence that socioeconomic disparities were realized in specific changes to health. In the midst of racial injustice and segregation, Eisenberg came to define a view of “normal” childhood, which was decisive in determining the health of the masses: the

¹⁸³ Leon M. Eisenberg and D, "DISCUSSION OF DR. SOLNIT'S PAPER "WHO DESERVES CHILD PSYCHIATRY? A STUDY IN PRIORITIES", *Journal of the American Academy of Child Psychiatry* 5, no. 1 (1966), 17-23.

¹⁸⁴ Eisenberg, *The Challenge of Change*, Vol. 39, 1960a), 11-18.

¹⁸⁵ Ibid.

mobile middle class. This was not an ideal, but represented those who could most likely have their needs met in the United States. Eisenberg stressed that too many children, poor and often black, suffered disproportionately from deprivation. Yet as we learned from his studies of school phobia, ideas were important material determinants of development along with genetics and environment. When Eisenberg visited middle and lower class schools in Baltimore, he saw the effects of ideas on the process of education.¹⁸⁶

When presented with the offer of a prize for participating in tests studying learning abilities, the middle-class child were less concerned with the prize than getting the “right” answer on the test, even when no such answer existed. In contrast, he found that children in lower-class schools were not oriented towards tests and would often do or say what ever they could do to get out of being tested, and he saw teachers concluding all too often that such children were less intelligent. Poor black children believed that they couldn’t succeed in school.

The child’s sense of himself in relation to academic skills comes from repeated exposure to frustration and failure, and to the presence of a teacher who, all too frequently, reinforces his poor self-image by seeing him as the failure: not the system, not her inadequacies, not his slum environment, but the child himself.¹⁸⁷

Eisenberg reported further that Negroes, in comparison with their white compatriots, maintained a life span eight years shorter. Black children did less well in schools, black men and women were twice as likely to be unemployed and have less well paying jobs.

This was not, in his mind, a result of some genetic or moral defect, but of specific differences in the environment. A study from Chicago found that a black child was “two and a half times more likely to live in dilapidated housing units and three times more likely to be

¹⁸⁶ Leon Eisenberg, "Some Children are Convinced they can'T Win." *Southern Education Report* 2 (April, 1967), 19-23.

¹⁸⁷ Eisenberg. Some children are convinced they can’t win.

grossly overcrowded than whites who pay the same rent.”¹⁸⁸ Fewer books, fewer educational opportunities in communities, parents less able to prepare children for the expectations of schools all increased the chances that the poor and black children, upon entering school, would face greater obstacles. Even as the black family of 1968 could expect to live longer than his 1938 counterpart, the gap between infant mortality of blacks and whites had broadened along with the growing distance between rich and poor.

With these concerns in mind, Eisenberg promoted a particular challenge to the training of child psychiatrists. It seemed logical that as medical experts, child psychiatrists would best contribute their knowledge as physicians. Yet training in disease pathology was far from sufficient.

Human behavior is rooted in biology, but it is not determined by biology alone. Man is a social organism whose dreams, hopes and fears are molded by the cultural envelope which surrounds him. Culture is constituted by the shared beliefs and institutions of people. Culture does not “change;” people change it, as their reactions to one another are altered by natural forces, by industrial development, by the power of ideas, and so on. But at the same time, the very biology of the individual is altered by sociocultural forces.¹⁸⁹

Child psychiatrists, amid growing specialization, had access to knowledge that served as a call to action. Where direct engagement with individual patients proved insufficient, Eisenberg called on child psychiatrists as citizens to participate in a movement to ensure that available knowledge was being applied to improve health conditions. This necessary knowledge involved three critical components. First, that the growth of the brain is dependent on a healthy pregnancy, normal delivery, adequate nutrition, and protection from injury and infection. Second, that growth of the mind requires experiential nutrition in the form of experience, language, and ideas. Finally, that human existence is social. Thus he

¹⁸⁸ Eisenberg, L. *Racism, Family, and Society*.

¹⁸⁹ Eisenberg. *The Challenge of Change*, 12.

posited, “The values of society motivate the child, govern his behavior, and determine the man he is to become.”¹⁹⁰ He embraced genetic studies insofar as they could provide insights into the possibilities and limits of development, suggesting that a democratic belief of equal rights should not be confused with a biologically false doctrine of equal abilities and health. However, a psychiatry that hid behind genetics, psychotherapy, or limited engagement with any of these problems, failed its professional task, in Eisenberg’s mind.

His vision of democracy, too, grew out of a model of health. He found a flaw in the common interpretation of the relationship of the individual to society as a paradox, with the sacrifice of self-realization as payment for social membership. This represented, at best, a partial truth. To the contrary, Eisenberg posited that there could be no self-fulfillment outside of social interactions. If individuals could find no place contributing to society, delinquency would continue. History, he claimed, offered the insight that both man and society were continually changing and just as medical men would seek to understand biology and physiology, so too must they make room for the laws governing relations between men.

Stimulating Hope: The Chemical Idea and Delinquent Boys

Eisenberg addressed the prescription of stimulants in a publication about the effects of Ritalin on children at a training school for delinquent Negro boys. Eisenberg’s thinking about medications, interestingly enough, reflected his convictions around school phobias (of both kinds) and tied to his frustration with the beliefs of psychoanalytic and psychodynamic therapies. Segregationists and analysts shared something equally problematic. As Eisenberg said, “many are loathe to ‘manipulate,’” by insisting that change must come from within.”¹⁹¹

¹⁹⁰ Ibid.

¹⁹¹ Eisenberg, *School Phobia: A Study in the Communication of Anxiety*, Vol. 114 (Not Available: , 1958c), 712-718.

Studies at the time had suggested that delinquency in early life would breed criminality as well as mental illness.¹⁹² The characteristics of these children that were commonly reported included aggressivity, impulsiveness, overactivity, and neurotic symptomatology. These qualities also aligned with possible effects of deprivation. In line with serving the public's needs, psychiatrists were being called to guide the care of children in institutions and training schools. Very few controlled studies existed on such populations. Eisenberg could find no studies in which ataractic drugs (tranquilizers in particular) had been tested on this population, even as the set of traits were recognized indications for tranquilizing drugs.

The first challenge for Eisenberg was implementing such a study in an institutional setting. Wouldn't an institutional setting, a subculture of society, already alter the behavior of the child? Rather than disregard these details, Eisenberg included them in his analysis. The first study, published in 1960, tested the effects of tranquilizer drugs on institutionalized black boys living in two cottages.¹⁹³ The house parents of each cottage had selected 28 children displaying a range of reported behavioral problems: aggressivity, hostility, overactivity, withdrawn and neurotic behavior, and bedwetting/thumbsucking. House parents were asked to rate behavioral symptoms of each boy using a 61-item checklist on topics that paralleled the above behavior problems. Not only would they indicate when a particular symptom appeared, but note its frequency as well (numerical choices ranged from 0, "not at all" present to 4, "very much" present). The house parents completed the checklist several times over four months: five times during an initial control period of one month, once

¹⁹² Citation???

¹⁹³ P. A. Molling et al., "Committed Delinquent Boys - Impact of Perphenazine and of Placebo," *Archives of General Psychiatry* 7, no. 1 (1962), 70-&.

after three weeks of medication, again at the end of the experimental period of two months, and finally three weeks after treatment had ended.

A critical decision in the experimental design led to what Eisenberg found to be one of the most interesting and important findings of the study. In one cottage, every boy was given either a placebo or Perphenazine (a tranquilizer). The other cottage was designated as a control. In the treated cabinet, house parents reported improvements, not just in those children receiving tranquilizers, but those given a placebo as well. This suggested a possible “halo” effect. All participants in the treated cabin knew the children were receiving drugs (though they didn’t know which ones were receiving the tranquilizers). In effect, the knowledge of this fact may have led both to changes in the children’s behavior as well as the house parents. In addition, the house parents may have been more likely to look for signs of improvement. This theory held when compared with the control cabin. During the experimental period, the number and intensity of symptoms observed of boys in the control cabin grew. Eisenberg came to an easy explanation for this difference: “The cottage parents in the experimental cottage were enthusiastic about the program, as were the boys residing there, while the parents in the control cottage expressed a desire to receive “medication” for their disturbed boys.”¹⁹⁴

Was all of this reducible to shifting attitudes in the raters? One factor proved to complicate the picture. Among those in the treated cabin, he reported a striking decline in bedwetting. Out of 26 boys who had experienced bedwetting (thirteen in each cabin), eleven had stopped wetting during the experimental period. Ten of those boys resided in the experimental cabin. However, what was more surprising was that the boys who received placebo were as likely to stop wetting the bed as those receiving tranquilizers. In fact,

194 Molling et. al. 99

negative side effects during and after treatment led the researchers to declare the placebo as effective as tranquilizers. In addition, several boys reported side effects as they came off the tranquilizers, making the placebo preferable. In this case, “treatment” itself produced not only changes in possible rater effects, but also behavior changes in the boys.

Beyond the traditional goal of testing a drugs effect on a behavior (assuming a one-to-one correlation), this study attempted to take note of the symbolic and material effects of “treatment” beyond its particular form. Recognizing the profound dynamic in the study, Eisenberg concluded that “the training school has to overcome the despair and apathy that result from working under strenuous and often unrewarding conditions and to find ways of promoting the assets of rebellious youth who have lost hope.”¹⁹⁵

In 1963, Eisenberg and his team would attempt a second experiment at the same location, this time with dextroamphetamine (a stimulant).¹⁹⁶ Again, they selected boys from two different cabins, but this time, they would employ a double-blind design. Two cottages, which administrators claimed housed the most difficult boys, were selected for the study. The most troublesome 21 boys of each cottage, again as designated by the house parents, were chosen for the study. On the basis of symptom scores, the researchers matched three groups of seven children to receive dextroamphetamine, placebo, or no treatment. To minimize the effects on those given no treatment, children were not told that there was a treatment group and those receiving treatment were told that the medications they were receiving was for general health reasons.

A stronger study design couldn’t control for the fight that broke out between residents and staff members in one cottage midway through the treatment period. Four of the

¹⁹⁵ Ibid.

¹⁹⁶ Leon Eisenberg et al., "A Psychopharmacologic Experiment in a Training School for Delinquent Boys: Methods, Problems, Findings." *American Journal of Orthopsychiatry* 33, no. 3 (1963), 431.

experimental subjects (two on placebo, two on no treatment) joined ten other boys who left the facility, later to be retained in jail. Further, the relationship between cottage parents presented an unexpected variable:

“The house parents in cottage x appeared to have a harmonious relationship...they carried out their study with diligence and interest...in cottage Y, a different atmosphere prevailed. The cottage mother appeared to dominate her husband...she appeared hostile and indifferent both to the study and to the investigators.”¹⁹⁷

In addition to this unexpected variable, a significant difference between school and cottage raters could reflect differences in the boys’ behavior in different setting or different expectations of the raters.

Nevertheless, the effects of dextroamphetamine were significant in comparison to placebo. Dextroamphetane produced most notable effects on children who were distractable and overactive. However, the findings again pointed to the effect of stimulants on the entire population, children and workers. By producing visible changes in the child’s demeanor, stimulants offset the tendency of caregivers to believe that a child would act better if only he wanted to. Again recognizing the profound dynamic at play, Eisenberg concluded, “if the delinquent youngster can be helped to diminish his disturbing behavior in the institution, personnel may be enabled to respond to him in a more positive fashion.”¹⁹⁸ Stimulants, in this case, were a treatment not only for behavior but for expectations and attitudes as well. This led the research team to conclude that drugs, while potentially valuable, also pointed to a need for more and better trained personnel. The assumptions around what was driving behavior were as central to treatment as actual changes in the boys’ behavior.

¹⁹⁷ Leon Eisenberg et al., "A Psychopharmacologic Experiment in a Training School for Delinquent Boys: Methods, Problems, Findings." *American Journal of Orthopsychiatry* 33, no. 3 (1963), 431.

¹⁹⁸ Ibid.

After a few more studies, Eisenberg would abandon the RCT as a method for evaluating long-term behavior change.¹⁹⁹ Even in an institutional setting, control was difficult to obtain. Long-term evaluation of the effectiveness of stimulants on behavior change in an outpatient setting involved so many factors that it would be difficult to judge the long term benefits of stimulants to a child's success. A double blind study design couldn't mask the noticeable effects of stimulants and Eisenberg noted, "although the medication was coded and administered "blind," the raters might have been able to recognize those on active drugs."²⁰⁰ The same could be said for the children.

¹⁹⁹ In an interview later in life, Eisenberg expressed regret for contributing to the tradition of RCTs for evaluating behavior change.

²⁰⁰ C. Keith Conners and Leon Eisenberg, "The Effects of Methylphenidate on Symptomatology and Learning in Disturbed Children," *American Journal of Psychiatry* 120, no. 5 (1963), 458-464.

CHAPTER FOUR

CULTURES OF DISEASE AND ILLNESS

In this chapter, I will argue that critics in the 1960s and 1970s— both those who argued against the “medicalization” of hyperactive and inattentive children as well as those that defended genetic and biomedical explanations of mental illness — failed to contend with the arguments that Bradley and Eisenberg advanced. As the work of Bradley and Eisenberg moved beyond debates with their colleagues in child psychiatry and into broader circulation, they were mistakenly reinterpreted to align with diverse concerns. This is not to dismiss the subsequent arguments which raised concerns of vital importance to a broader discussion of stimulants and children. However, the failure of later arguments to contend with core aspects of Bradley and Eisenberg’s arguments has created a rift in modern discourse around... left in place beliefs that distinguish between natural and artificial means of modifying children’s behavior and rigid distinctions between organic disease and mental illness.

Child Psychiatry in An Age of Fracture

At the very beginning of child psychiatry’s existence as a board-certified subspecialty, the consensus of treating the child in his total environment began to deteriorate. The deterioration of consensus and increasing balkanization of professional knowledge are the context in which modern discourse around treatment became so polarized. The context of this modern era must be appreciated to understand exactly how this profound divide between organic and constructivist interpretations of disease materialized. An awareness of

this context also sheds new light on how we ended up with characterizations of Bradley and Eisenberg so far afield from the true focus of their work.

Historian Daniel Rodgers characterized the last quarter of the 20th century in the U.S. as an age dominated by the segmentation of ideas, interests, and American society.²⁰¹ If social structures and systems have continued to shape our lives as before, so Rogers reasoning goes, then the ideas and arguments that shape our times have fractured. According to Rodgers, we live in a deeply divided society when it comes to ideas. Mid-century thinkers, Rodgers argued, commonly thought of society in terms of relations, structures, contexts, and institutions. Specifically, Rodgers argued that the dominant reading of power in mid-twentieth century was pluralistic. Various interest groups—big business, big labor, and big government—among with many other interest groups all pursuing diverse social and economic interests were what made government work. As the U.S economy globalized and shifted from production to finance in the early 1970s, so too did cultural thought, which increasingly turned away from attempts to represent totalities. Instead dominant cultural thought trended towards highlighting flux, fragmentation, difference, and fluidity.²⁰² Rodgers argued that notions of power began to shift in the social and political conflicts of the 1960s:

As Americans of all sorts began to imagine that they were on the losing end of power struggles that had suddenly gone out of control, harder theories of domination flourished. Behind the overt processes of democratic politics, one now heard, lay hidden concentrations of power: cabals of backroom elites, webs of influence, an all-pervasive “system”...a parallel line of analysis focused on the power of the experts and professionals who increasingly dominated the twentieth-century “therapeutic state”: the doctors, psychiatrists, ccounselors, educators, and social relations experts.”²⁰³

²⁰¹ Daniel T. Rodgers, *Age of Fracture* (Cambridge, MA: Harvard University Press, 2011).

²⁰² Rodgers, building from the arguments of Frederic Jameson and David Harvey, argued that ideas began to shift prior to changes in the economic structure and may have played a role in that transformation. Fredric Jameson, *Postmodernism, Or, the Cultural Logic of Late Capitalism* (Durham: Duke University Press, 1991).; David Harvey, *The Condition of Postmodernity* (Cambridge, MA: Blackwell, 1990).

²⁰³ Rodgers, *Age of Fracture*, p. 82.

Growing skepticism towards experts came alongside debates over the role of higher education.

World War II triggered, among other things, a transformation of American Universities.²⁰⁴ It marked both the beginning of a federally funded expansion in research enterprises as well as a great popularization in post-secondary education. Federal grant universities emerged as the federal government infused large amounts of funding into research universities, particularly those in the natural and medical sciences.²⁰⁵ This surge in funding came with heightened expectation to support national interests during the war and to avoid an economic recession following the war. In other words, government funds came with the expectation that research align with national interests.

With federally funded research laboratories on the rise, political tension grew around the role of the university, with some students and faculty attacking the service of universities to federal departments, in particular the department of defense. The combination of cultural change, social unrest, and growing political opposition to the Vietnam War was reflected in the changing composition of the student body in higher education as well as the curriculum. As more men and eventually women represented a wider range of age, social, economic, racial and religious groups, a wider range of curricular options was carved out.²⁰⁶ Out of the popular and campus uprisings of the 1960s, African-American, Chicano, American, and Women's studies gained influence and staked out new disciplines. Over the following

²⁰⁴ Cremin, *American Education: The Metropolitan Experience, 1876-1980* (New York: Harper & Row, 1988).

²⁰⁵ Ibid. Lawrence Arthur Cremin, *American Education: The Metropolitan Experience, 1876-1980* (New York: Harper & Row, 1988). Lawrence Arthur Cremin, *American Education: The Metropolitan Experience, 1876-1980* (New York: Harper & Row, 1988). Lawrence Arthur Cremin, *American Education: The Metropolitan Experience, 1876-1980* (New York: Harper & Row, 1988). Lawrence Arthur Cremin, *American Education: The Metropolitan Experience, 1876-1980* (New York: Harper & Row, 1988).

²⁰⁶ Cremin p. 253

decades, history departments began to turn from economic, political, and intellectual history to social and cultural topics.²⁰⁷

Challenges to the medical and psychiatric professions in the post-World War II years were raised with increasing frequency as professional historians and sociologists (among others) developed critical perspectives on the role and nature of medicine in society. The publication of Thomas Kuhn's *Structure of Scientific Revolutions* in 1962 launched the development of new programs dedicated to studying science as a part of human culture, questioning previous accounts of science as a continually progressing body of knowledge.²⁰⁸ Kuhn questioned the conventional view of science as a progressively accumulating set of truths and argued that science had always been a human activity shaped by historical circumstance and choices among paradigms rather than by simple empiricism and consistent methodology. New academic programs studied the contingent nature of understandings of illness and social responses to disease alongside social histories and sociological studies of medicine.²⁰⁹ Whereas medical professionals had previously done the work of collecting historical archives focused on the development of medical knowledge, new bodies of professionals drawing from unique theoretical orientations and methodologies began to place the medical profession into broader social, cultural, and political context. New histories of science and medicine emerged as professional historians and others with advanced degrees began to revise accounts of the past compiled by doctors and scientists. The same was true for psychiatry.²¹⁰ This didn't stop scientists and physicians writing their own histories, but it

207 Ludmilla J. Jordanova, *History in Practice* (New York: Oxford University Press, 2000). 19-25.

208 Thomas S. Kuhn, *The Structure of Scientific Revolutions* (Chicago, IL: University of Chicago Press, 1962).

209 Jan Golinski, *Making Natural Knowledge: Constructivism and the History of Science, with A New Preface* (Chicago: University of Chicago Press, 2008).

210 Mark Micale and Roy Porter, eds., *Discovering the History of Psychiatry* (New York, NY: Oxford University Press, 1994).; Andrew Scull, "Psychiatry and its Historians." *History of Psychiatry* (1991).

opened up new markets for historians, sociologists, anthropologists and others to offer competing perspectives.

During these decades (1960s-70s), the field of psychiatry was particularly vulnerable to interrogation, even as it enjoyed a post-World War II surge in popular regard. It was a period in which magic bullets in the form of medications offered the promise to treat previously intractable cases of physical and mental illness. In the 1950s, even as psychodynamic and environmental orientations were in vogue nationally, biologically inclined practitioners were raising concerns about the hegemony of psychoanalytic and psychodynamic orientations. Additionally, new therapies in the form of psychotropic drugs, milieu therapy, electroshock, psychosurgery, and psychotherapy began to blur the line between psychological and biological interventions. In particular, excitement grew around psychotropic drugs such as Thorazine (to treat schizophrenic symptoms), tranquilizers, anti-depressants, and dozens more that would be introduced in the following decade. These findings were particularly popular as post war enthusiasm for community-based care grew, and with it the tenets that the mentally ill were best cared for in their “natural” environments (a belief and practice that many child mental health advocates had been advancing for decades). In 1956, a new center devoted to psychopharmacological research was created within the National Institute of Mental Health (NIMH) and, relevant to this history, awarded its first grant on child psychopharmacology in 1958 to Leon Eisenberg.

By the 1960s, as prestige for mental health work was peaking, a series of critiques were developing in the field of psychiatry and from beyond.²¹¹ Attempts by members of the psychiatric profession to represent the field historically proliferated in the 1930s, 1940s, and

211 Gerald N. Grob, *The Mad among Us: A History of the Care of America's Mentally Ill*. (New York, NY: Free Press, 1994).

1950s.²¹² By the 1960s, scholars within the profession and outside were amassing critical revisions to these early narratives, questioning the conventional picture of psychiatric progress and enlightenment and the quality of histories churned out by amateur historians (usually psychiatrists). Early histories were critiqued as “whiggish,” as tales of a drawn out struggle in which people of good will and rational-scientific principles battled the ignorance of the dark ages, gradually introducing humane and effective reform in the treatment of those afflicted with mental problems. Great heroes of the field were rewritten, often as villains, in new tomes that questioned the benefits of the profession and indicted psychiatric practices for doing more damage than good.²¹³

It was in this context that new narratives incorporated elements of of Bradley and Eisenberg’s work in a number of seemingly irreconcilable interpretations that shared the very distinction between organic and adaptive disease that Bradley and Eisenberg had been working to dismantle. I will first present the major arguments that emerged in the 1970s and then, return to Eisenberg’s later work, which attempted to correct a mistake common to each line of thought.

The Medical/Organic Revisions

A Neurocognitive Deficit

212 Porter and Micale, *Introduction: Reflections on Psychiatry and its Histories*, eds. Porter and Micale (New York: Oxford University Press, 1994), 3-36.

213 It is worth mentioning that the following list is often cited, yet each of these writers had a unique take on rewriting psychiatry and madness. In my readings relevant to this thesis, Goffman and Szasz made clear appearances. Obviously Foucault made his way into the United States academy and broader culture though, from what I can tell, his influence seemed to lag slightly. Now of course, a great many people taking up historical works on psychiatry draw from Foucault (examples include Ian Hacking and Nikolas Rose). Thomas S. Szasz, "The Myth of Mental Illness." *American Psychologist* 15, no. 2 (1960), 113.; Michael Foucault, *Histoire De La Folie a L'Age Classique* (Paris: Plon, 1961).; Erving Goffman, *Asylums: Essays on the Social Situation of Mental Patients and Other Inmates* (Garden City, NY: Anchor Books, 1961).; R. D. Laing, *The Divided Self: A Study of Sanity and Madness* (London, UK: Tavistock, 1960).

It wasn't until 1970 that national stories brought congressional and public scrutiny to the practice of administering stimulants to children with ADHD. Yet medical researchers in the 1960s had already become concerned about the "loose" conceptual boundaries of minimal brain damage (MBD), which is often considered a pre-cursor to ADHD. Critical reviews of the disorder from inside psychiatric pointed to a list of at least 99 recognized symptoms falling under the umbrella term MBD.²¹⁴ Adding to this conceptual confusion, MBD wasn't the only label used to identify hyperactive children. Hyperkinetic impulse disorder, hyperkinesis, and hyperactivity syndrome were also circulating, causing greater conceptual confusion. Cross-national assessments of mental illness prevalence showed striking discrepancies. Workers throughout the 1970s were busy parsing apart MBD into terms for more specific disorders based on observable behavior, rather than a theorized etiology. Clinical and scientific textbooks as well as special journals emerged devoted to hyperactive and inattentive children.²¹⁵ Researchers also developed tools to ensure more consistency across different diagnosticians domestically and globally.²¹⁶

As 1970s medical professionals responded to national media and legislative pressure as well as internal criticism around stimulants and definitions, research on the topic burgeoned. Over 2,000 published studies, clinical and scientific textbooks, special journals, scholarly reviews, and a handful of popular works directed to parents of hyperactivity emerged before 1980. These works, along with others, began to synthesize different histories

²¹⁴ Samuel D. Clements, "Task Force One: Minimal Brain Dysfunction in Children," *National Institute of Neurological Diseases and Blindness, Monograph*, no. 3 (1966).; M. Herbert, "The Concept and Testing of Brain-Damage in Children: A Review," *Journal of Child Psychology and Psychiatry, and Allied Disciplines* 5 (Dec, 1964), 197-216.; Barkley, *Attention-Deficit Hyperactivity Disorder: A Handbook for Diagnosis and Treatment*, Third ed. (New York, NY: Guilford Press, 2005).

²¹⁵ Russell A. Barkley, *Attention-Deficit Hyperactivity Disorder: A Handbook for Diagnosis and Treatment*, Third ed. (New York, NY: Guilford Press, 2005).

²¹⁶ C. Keith Conners, "A Teacher Rating Scale for use in Drug Studies with Children," *American Journal of Psychiatry* 126, no. 6 (1969), 884-888.

of the medical profession's attention to hyperactive children. These narratives have attempted to locate the disorder's medical discovery in different historical settings: an 1844 nursery rhyme written by German physician Heinrock Hoffmann; the lectures on abnormal psychical conditions of Frederic George Still to the Royal Academy of Physicians in 1901; ²¹⁷ more recently in a 1775 German medical textbook, the written descriptions of "mental restlessness" by Scottish physician Sir Alexander Crichton in 1798.²¹⁸ To a large extent, these histories have searched out historical examples that serve useful in constructing different theories of ADHD.

Currently, Russell Barkley is perhaps the most well recognized clinical expert on ADHD. Both his 1975 masters thesis in clinical psychology and his 1977 Ph.D. dissertation focused on hyperactive children and he has devoted most of his professional life to furthering scientific and popular understandings of the disorder. Barkley has drawn on neuropsychological, biological, behavioral genetics, anthropological and philosophical works to develop a theory of ADHD as a deficit in executive function.²¹⁹ More specifically, Barkley has identified poor behavioral inhibition as the central functional deficiency in ADHD.

In an effort to synthesize research in support of this theory, Barkley's selective histories of ADHD have focused on the medical discoveries that have proved useful in advancing a unified theory of the physiological mechanism involved in the disorder. In this light, it seems somewhat understandable that he found promise in the lectures of George Still, who linked issues of hyperactivity and sustained attention to the "moral control of behavior,"

217 Charles E. Gibbs, "Behavior Disorders in Chronic Epidemic Encephalitis: Clinical Course in Relation to Signs of Persisting Organic Pathology," *American Journal of Psychiatry* 86, no. 4 (1930), 619-636.

218 Erica D. Palmer and Stanley Finger, "An Early Description of ADHD (Inattentive Subtype): Dr Alexander Crichton and 'Mental Restlessness' (1798)," *Child & Adolescent Mental Health* 6, no. 2 (05, 2001), 66-73.

219 Russell Barkley, *Executive Functions: What they are, how they Work, and how they Evolved* (New York, NY: The Guilford Press, 2012).

and reported cases in which brain injuries accompanied an inability to control one's actions.

What eventually became critical to Barkley was the following observation:

Moral control was thought to arise out of a cognitive or conscious comparison of the individual's volitional activity with that of the good of all—a comparison he termed “moral consciousness”...it is important to realize here that to make such a comparison inherently involves the capacity to understand the consequences of one's actions over time and to hold in mind forms of information about oneself and one's actions, along with information on their context.²²⁰

Still's observations, according to recent works by Barkley, would later be validated by studies of self-awareness, working memory, and rule governed behavior. Barkley took note of Still's reference to William James, who had isolated attention as a key element involved in moral control, but did not explore the philosophical context of James's writings. In contrast to Still, who defined the individual's actions in light of “the good of all,” Barkley has focused on seeking a physiological mechanism to explain ADHD.

In the late 1970s, Barkley first referenced Bradley's 1937 study as he reviewed the effects of stimulant drug research with hyperactive children. Synthesizing historical findings from nearly 100 studies, Barkley wanted to answer the question, “which hyperkinetic children will respond favorably to stimulant drugs?”²²¹ Barkley reported that of 30 hyperkinetic children receiving Benzedrine under Bradley's care, 76% were judged by hospital staff as having improved, noting that there was wide variation in how improvement was measured in varying studies. In subsequent histories, he expanded on these observed improvements, noting that Bradley had noted improved academic performance, better self-

220 Barkley, *Attention-Deficit Hyperactivity Disorder: A Handbook for Diagnosis and Treatment*, Third ed. (New York, NY: Guilford Press, 2005). 4.

221 Barkley, R. Predicting the Response of Hyperkinetic Children to Stimulant Drugs: A Review. *Journal of Abnormal Child Psychology* 4.4 (1976): 327.

control, and improved attention to task.²²² Eisenberg, to Barkley, was credited with introducing a “much more rigorous scientific methodology in drug studies.”²²³ Hundreds of studies followed Eisenberg’s initial work, making stimulant treatment the most scientifically scrutinized therapy in child psychiatry.

Ignoring the philosophical questions that James was exploring and the changing symbolic expectations of childhood described by Bradley and Eisenberg, Barkley found the work of Still and Bradley useful to his developing theory of ADHD as a physiological disorder of executive function. Further, Eisenberg, along with those following, had brought “scientific rigor” to the study of stimulant therapy. In 2002, Barkley joined with others from the scientific community to put forth an international consensus statement on ADHD.²²⁴ These authors expressed concern over popular representations of ADHD, in which “the views of a handful of non-expert doctors that ADHD does not exist are contrasted against mainstream scientific views that it does, as if both views had equal merit.”²²⁵ They went on to describe ADHD as a real medical condition and asserted that there is no more disagreement over its validity than there is “over whether smoking causes cancer, for example, or whether a virus causes HIV/AIDS.”²²⁶ If Barkley’s theories about executive function demonstrate that individuals have different capacities for inhibition, a notion that seems easily enough observed, then why would these findings have proven so controversial?

In 1999, the popular journalist Malcolm Gladwell lent support to Barkley’s theories, while also suggesting an answer to this question. Gladwell suggested that the

222 Barkley, R., Murphey, K. *Attention Deficit Hyperactivity Disorder: A Clinical Workbook*. 2006. The Guilford Press: New York, NY.

223 Russell A. Barkley, *Attention-Deficit Hyperactivity Disorder: A Handbook for Diagnosis and Treatment*, Third ed. (New York, NY: Guilford Press, 2005). p.13

224 RA Barkley et al., "International Consensus Statement on ADHD - January 2002," *Clinical Child and Family Psychology Review* 5, no. 2 (JUN, 2002), 89-111.

225 Ibid. 90

226 Ibid. 91.

popular debate over ADHD centered on a problem without a coherent definition. “We’ve become obsessed with what ADHD means. Don’t we first have to figure out what it is?”²²⁷ Gladwell, like Barkley, missteps in retroactively applying a contemporary definition to a history of “loose” concepts.

Barkley and other researchers defending a biomedical view of ADHD have been particularly dismissive of the negative media that emerged beginning in 1970 and expanding in the 1990s. Barkley, for example, wrote, “despite the proven efficacy of stimulant medication, public and professional misgivings about its increasingly widespread use with children emerged.”²²⁸ Barkley dismissed the 1970 Washington Post article and other news reports that indicted schools and doctors for coercing families into giving their children stimulants as an instance of “the mass media’s penchant for hyperbole, sensation, and scandal...a penchant that seems to have only increased over subsequent years.”²²⁹ Another more recent history, also defending a biomedical view of ADHD, wrote the following about the growing objections to Ritalin in the 1990s: “The irony of the anti-Ritalin movement is that it occurred at a time when there was growing evidence that ADHD was a neurologically based disorder and left untreated, it had devastating effects on a person’s well being.”²³⁰ What is immediately confusing about each account is its timeline. According to Barkley, researchers and clinicians in the 1960s were internally debating the vagueness of minimal brain damage as a diagnostic category. It wasn’t until the mid-1970s that research, as he put

²²⁷ Malcolm Gladwell, “Running from Ritalin,” *The New Yorker* (1999), 80-84.

²²⁸ Barkley, *Attention-Deficit Hyperactivity Disorder: A Handbook for Diagnosis and Treatment*, Third ed. (New York, NY: Guilford Press, 2005). p. 13

²²⁹ Ibid. p. 14

²³⁰ Mayes, Bagwell and Erkulwater, *Medicating Children: ADHD and Pediatric Mental Health* (Harvard University Press, 2009).

it, “took a quantum leap forward.”²³¹ In the second example, the authors suggested that the 1990s delivered the clear evidence that ADHD was neurologically based. Yet the “Omaha Incident” surfaced in 1970.

Usurping the Experts

In 1973, Psychiatrist Lester Grinspoon and his colleague Susan Springer condemned, not the medical profession but the drug industry and educators for running away with a diagnosis that had yet to be thoroughly studied by the scientific community.²³² They accused drug companies of extending the use of stimulants in the 1970s through active educational campaigns aimed at professionals in various settings. According to these authors, there had been research on the use of amphetamines on children beginning with Bradley’s 1937. Though clinical researchers had accumulated a few decades worth of research, the authors pointed to evidence that by the 1950s, educators had learned about the psychopharmacological aspects of behavior modification and encouraged parents to seek medications from physicians. By the 1960s, a number of disciplines had become interested in the issue of hyperkinesis. Educational psychologists realized that many children were not amenable to psychotherapy. Educators became interested in the role of learning disabilities in causing behavior problems. A new diagnostic category in medicine, the hyperkinetic syndrome, increased interest in clinical research. Grinspoon and Singer, however, cautioned that these studies had so far raised more questions than they had answered. They accused

²³¹ Barkley, *Attention-Deficit Hyperactivity Disorder: A Handbook for Diagnosis and Treatment*, Third ed. (New York, NY: Guilford Press, 2005).Ibid. p. 9

²³² Lester Grinspoon and Susan B. Singer, "Amphetamines in the Treatment of Hyperkinetic Children," *Harvard Educational Review* 43, no. 4 (1973), 515-555.

educators of harassing and pressuring parents to put their children on medications with threats of dismissal from school if parents didn't comply.²³³

In line with this approach, Rick Mayes, Catherine Bagwell, and Jennifer Erkulwalter recently argued that, though ADHD is a real medical condition, multiple social and political factors drove the skyrocketing levels of ADHD diagnosis and stimulant treatment in the 1980s and 1990s.²³⁴ First, the publication of DSM-III presented no new insights into the etiology or treatment of ADHD. As attention towards children's mental health grew, so too did the rate of inpatient hospitalizations for youth. Inpatient psychiatric hospitals experienced the most rapid growth among corporate hospital chains in the 1980s and the number of children admitted between 1980 and 1986 increased fourfold. Third party insurance payers, unwilling to fund long-term psychiatric hospitalization, turned to managed care organizations to contain costs, which turned to medications as a cost control strategy. Over the course of the 1980s there was a clear shift in therapeutics. In 1980, only 25% of children diagnosed with an attention disorder were prescribed stimulants. By 1990, that percentage had grown to 86%.

Recognizing that the percentage of children being prescribed stimulants jumped in the 1980s, Mayes, Bagwell, and Erkulwalter credited three policy changes for the skyrocketing rates of ADHD diagnosis in the 1990s. In 1990, an estimated 900,000 children (ages 4-17) diagnosed with ADHD paled in comparison to the 3-4 million children who had received the diagnosis by decade's end, by which time the number of prescriptions for stimulant medications grew six-fold. First, a 1990 change in the Supplemental Social Security (SSI) program allowed families of low-income children with disorders such as ADHD to collect

²³³ Grinspoon and Singer, *Amphetamines in the Treatment of Hyperkinetic Children*.

²³⁴ Mayes, Bagwell and Erkulwalter, *Medicating Children: ADHD and Pediatric Mental Health* (Harvard University Press, 2009).

additional benefits. Second, the Individuals with Disability Education Act (IDEA), passed by Congress in 1991 gave children diagnosed with ADHD access to special educational accommodations. Finally, policymakers expanded the number of children eligible for Medicaid, expanding the pool of children who could access diagnostic and treatment services.

While this analysis goes some way in explaining how ADHD diagnosis and stimulant prescriptions have grown, the authors do little to address the broader limitations that were placed on the welfare state throughout the 1980s and 1990s. Further, addressing concerns that changes in schooling (testing, competition, etc.) could be contributing to diagnoses, the authors conclude that such a statement would be difficult to prove. Additionally, they suggest that whatever changes have occurred in the schools are unlikely to change anytime soon.

Social, Cultural, and Environmental Revisions to the History of Hyperactivity

The Therapeutic State

While Barkley was working on his PhD, two reporters interpreted Bradley and Eisenberg's work in quite a different light. Peter Schrag and Diane Divoky's 1975 expose *The Myth of the Hyperactive Child* depicted medical professionals as agents of social control who were using hyperactive diagnoses and drugs to tame the individual rather than the social system. Drawing on arguments first put forth by Dr. Thomas Szasz in *The Myth of Mental Illness*, Schrag and Divoky argued that stimulants and tranquilizing drugs served institutional desires to "maintain order and keep children still without physical restraint."²³⁵ They further observed that Bradley's work seemed to have been forgotten for many years. Others argued

235 Schrag and Divoky, *The Myth of the Hyperactive Child: And Other Means of Child Control* (Pantheon Books New York, 1975).

that Bradley, while open to medication therapy, was committed to manipulating environments for children as well.²³⁶

It wasn't until the 1960s, they argued, that a surge in government investment brought about a new era filled with grand plans of societal and structural changes to improve children's education and ended in new methods of child control with experts leading the charge. In 1957, Dr. Maurice Laufer (who worked under Bradley and eventually took over as director of the Bradley Home) and Dr. Eric Denhoff announced a new diagnosis: hyperkinetic impulse disorder.²³⁷ This new diagnosis centered on poor concentration, a short attention span, impulsivity, and visual-motor difficulty. Schrag and Divoky interpreted Laufer's diagnosis as appropriate for anyone who didn't do well in school. In other words, the term was "loose," but still not capable of capturing all of the nonconforming children:

Even the looseness of Laufer's definition did not permit the inclusion of all the childhood symptoms that annoyed teachers and parents: clumsiness, fidgetiness, awkwardness, poor speech, unreasonableness, or some inexplicable difficulty in reading, spelling or arithmetic. As a result, the definition was further extended, as new names were created to fit each form of social and academic nonconformity.²³⁸

Leon Eisenberg and his colleague C. Keith Connors, along with other medical professionals were characterized as agents of the state, turning a reaction to an unhealthy environment into a pathological symptom under an ideology of early intervention. Eisenberg and company were said to have doled out stimulant medications to institutionalized disturbed and delinquent children as early as 1963. The advocacy for minimal brain damage as a cause for

²³⁶ Singh, *Bad Boys, Good Mothers, and the "Miracle" of Ritalin*, Vol. 15, 2002), 577-603.

²³⁷ Interestingly, by the time Laufer had taken over the Bradley Home, Denhoff was running a separate facility in Providence to work with epileptic children. The original funding for the Bradley House had run out, and the composition of children at the Bradley House took a turn towards those who could pay. Laufer also described a shift in the patient population, with a shift from physiological to psychological problems. E. Denhoff, M. W. Laufer and G. Solomons, "Hyperkinetic Impulse Disorder in Children's Behavior Problems." *Psychosomatic Medicine* 19, no. 1 (1957, 1957), 38-49.

²³⁸ Schrag and Divoky, *The Myth of The Hyperactive Child*, 42-3.

hyperactivity encouraged by Eisenberg and others removed responsibility from parents or educators and replaced psychoanalytic designations of “emotional disturbances” that would define hyperactivity as a developmental maladjustment best treated with psychoanalysis or psychotherapy. The biological redefinition of hyperactivity provided a welcome alternative to mothers who had, under psychoanalytic and psychodynamic reign, been demonized as the cause of their son’s misbehavior.²³⁹

The Myth of Hyperactive Children argued that the concept of learning disorder was so “loose” that the only criteria for labeling children with learning disabilities relied on the complaints of another set of powerful experts, teachers. By 1967, studies had expanded to include schoolchildren that, according to Schrag and Divoky, had little in common besides being poor and black. Schrag and Divoky mourned the lost momentum of the educational reform movement of the 1960s:

By the 1960s...the problems of failure among particular groups of children had been absorbed in what became—in rhetoric, if not in fact—a nearly universal movement of reform. Spurred by pressure from minority groups, radical critics, parental uprisings and student revolt, and stimulated by a sudden flow of federal funds from the Elementary and Secondary Education Act (ESEA) and from the Office of Economic Opportunity, the entire educational establishment began to discuss experimentation and plan reform...most significantly, it was the system, not the individual, that was the target of remediation.²⁴⁰

By the end of the decade, federal money was drying up. School bond issues and tax increases were voted down. Pressure to maintain budgets and teach the basics took over without completely squashing the criticism of the previous decade.

²³⁹ Singh, *Bad Boys, Good Mothers, and the "Miracle" of Ritalin*, Vol. 15, 2002), 577-603.; Singh, *Not just Naughty: 50 Years of Stimulant Drug Advertising*, eds. Tone and Watkins (New York: NYU Press, 2007), 131-155.

²⁴⁰ Schrag and Divoky, *The Myth of the Hyperactive Child*, 38.

In place of systemic reform, attention was redirected in the early 1970s to learning disabilities. According to Schrag and Divoky, learning disorders provided a clever political tool to assuage criticisms of the previous decade and depoliticize children's school difficulties:

The designation of learning disabled appeared to be an almost ideal solution: it implied no stigma on either the child or his parents, carried no racial overtones, and suggested an ailment that was the metaphorical corollary of an electronic malfunction—faulty wiring in the cortex or central nervous system—and therefore as modern as Bell Labs.²⁴¹

Under this new banner, pseudo-scientific labels were being used to justify segregation in special classrooms, to erode privacy and expand surveillance under “an ideology which sees almost all nonconformity as sickness.”²⁴² Mobile and affluent parents could access support for their children through a new industry of private schools, diagnostic centers, summer camps, and literature to support their children under a label that distinguished their children from poor and black children. The authors raised important concerns around school reform that have expanded rather than resolved over the decades since their publication. As racial desegregation resulting from the 1954 *Brown v. Board of Education* followed a contentious road, states implemented varied and often limited strategies to comply with the expectations of integration.²⁴³ Arguments made successfully in court cases asserted that special education was being used to re-segregate schools. Litigators argued successfully that IQ tests and academic tracking served as mechanisms of institutionalized racism leading to the separation of racial and ethnic minority students into newly established special education classes.²⁴⁴

241 Schrag and Divoky, *The Myth of the Hyperactive Child*, 39.

242 Ibid.

243 Howell S. Baum, *Brown in Baltimore: School Desegregation and the Limits of Liberalism* (Ithaca, NY: Cornell University Press, 2010).

244 Connor and Ferri. Integration and Inclusion-A Troubling Nexus: Race, Disability, and Special education; (1970) *Diana v. State Board of Education* and (1971-9) *Larry P. v. Riles*

While one could only speculate on Bradley's perspective on these issues, Eisenberg was certainly as concerned with school reform and social justice as he was with distinguishing between different mechanisms through which children were falling into the cracks of society.

However, the idea from Schrag and Divoky's book that took hold with the public was that Ritalin placed normal children who didn't meet the expectations of society into a "chemical straightjacket."²⁴⁵ Although a broader critique of practices around learning disabilities drove their analysis, the image of children being drugged into submission offered the most dramatic and dangerous image of social control. This logic took metaphorical advantage of the growing resistance to institutionalization, equating medication with a new form of authoritative control. In particular, Schrag and Divoky argued that a pill with few or no clear effects (such as Ritalin) could facilitate behavior control most effectively:

From a political and social perspective, the most dangerous psychoactive drug is precisely the one that is medically the safest and psychologically the most effective...it is the ideology of drugging, the idea that people can and should be chemically managed, that represents the most pervasive imposition on personal liberty and the most dangerous extension of authority.²⁴⁶

This logic suggested a pill that made children more docile, better behaved, more attentive, less disruptive would "naturalize" methods of social control, making them more difficult to identify, and threaten personal autonomy and self-determination.

This notion of personal autonomy and self-determination borrowed from a critical literature exemplified by the work of Dr. Thomas Szasz, who, in 1961, declared mental illness to be a myth.²⁴⁷ Mobilizing libertarian ideals, Szasz defined psychiatry as a state tool to suppress nonconforming behavior. Central to his argument was the distinction between

245 Schrag and Divoky, *The Myth of the Hyperactive Child: And Other Means of Child Control* (Pantheon Books New York, 1975).

246 Schrag and Divoky, 105.

247 Thomas Stephen Szasz, *The Myth of Mental Illness: Foundations of a Theory of Personal Conduct* (New York, NY: Harper Collins, 1961).

diseases of the brain and so-called diseases of the mind. The former could be discerned through objective physiological tests and findings while the latter involved psychosocial and ethical problems of living. As Szasz explained, “My aim...is to suggest that the phenomena now called mental illnesses be removed from the category of illnesses, and that they be regarded as the expressions of man’s struggle with the problem of *how* he should live.”²⁴⁸ To Szasz, there was no symmetry between physical symptoms, which could be objectively studied and identified, and mental symptoms, which always involved the rendering of subjective judgment.

Medicalization

Peter Conrad, now a leading voice in medical sociology, began his career with a 1974 study building on the work of earlier sociologists of labeling theory, deviance studies, and medicalization. Conrad felt that sufficient research had established by this time that a sociological study of illness was not bound by the assumptions of medical science, but to the contrary, encouraged the questioning of definitions put forth by experts. Conrad explained how he had become interested in hyperactivity as a medical problem:

My interest in hyperactivity began largely because I found it curious that there were no “hyperactive children” in elementary schools when I was a child (in the middle 1950s) and wondered how the concept developed. This curiosity led to the more complex question: how do we know when a child is hyperactive, or, more specifically, how are children identified as hyperactive? As a sociologist, it was clear to me that hyperactivity could be studied as a form of deviant behavior. This led to the formulation of the sociological question: how does deviant behavior become defined as a medical problem?²⁴⁹

²⁴⁸ Szasz, *The Myth of Mental Illness*, Vol. 15 American Psychological Association, 1960), 113.

²⁴⁹ Conrad, Peter. *Identifying hyperactive children: The medicalization of deviant behavior*. 1976. Lexington, Massachusetts: Lexington Books.

Conrad, in step with Schrag and Divoky, assumed that the medical and public health fields had always acted as agents of social control, “especially in attempting to ‘normalize’ illness and return people to a functioning capacity in society.”²⁵⁰ Conrad’s history of hyperkinesis began in 1937 with Bradley’s observations “that amphetamine drugs had a spectacular effect in altering the behavior in a number of school children who exhibited behavior disorders or learning disabilities.”²⁵¹ To Conrad, it was the 1961 approval of Ritalin by the FDA that seemed to spark a surge in research on the use of Ritalin as it became known as the “treatment of choice for treating children with hyperkinesis.”²⁵² In summary, Conrad credited three historical forces for the discovery and expansion of the medical diagnosis of hyperkinesis. The pharmaceutical revolution, beginning in the 1930s, began to promote their medications through medical journals starting in the early 1960s. In a related trend, the great pharmacological revolution in mental health beginning in the 1950s contributed to increased confidence in the medical profession and the pharmaceutical approach to mental and behavioral problems. In addition, burgeoning interest in children’s mental health through the 1960s had led medical professionals to see new issues. Third, government action following the congressional investigation of 1970 gave increased power to doctors such as Eisenberg to make the diagnosis and prescribe treatment, rather than parents or educators. According to Conrad, this last factor “served as the blue-ribbon approval for treating hyperkinesis with psychoactive drugs.”²⁵³

This view is consistent with the refrain from sociologists who question the common medical assumption that an underlying biological dysfunction can explain ADHD. Even as

250 Conrad, *Identifying hyperactive children*, xv.

251 Conrad, *Identifying hyperactive children*, 19-37.

²⁵² Ibid.

253 Schrag and Divoky, *The Myth of the Hyperactive Child: And Other Means of Child Control* (Pantheon Books New York, 1975).

such evidence remains elusive, the discovery of organic differences doesn't resolve the question, “does difference mean disease?”²⁵⁴ Further, recent histories of medicalization by Conrad maintain the power of the medical profession in redefining ordinary or deviant behavior as medical problems prior to the 1980s. Given the critiques of psychiatry described earlier, it’s not clear that psychiatrists maintained as much power as Conrad and others have suggested.

Cognitive Enhancements

A further twist complicating the relationship between a medical label and stimulant medication came in 1978. Judith Rapoport, a researcher at NIMH reported findings from a study in which stimulants were found to have similar effects on “normal” boys as those considered hyperactive.²⁵⁵ This finding buttressed critiques that diagnosis involved a slippery slope between definitions of normal and pathological and suggested that no diagnostic significance could be inferred from a beneficial drug treatment. It also opened the doors to arguments around stimulants as cognitive enhancements.

From Szasz’s libertarian conception of the myth of mental illness to the Omaha mother’s insistence that children “learn the hard way,” critics of ADHD diagnoses and psychopharmacology have described the label and treatment with drug medications as a threat to autonomy, authentic development, and normal/natural childhood. Rather than

254 Conrad, P. The Changing Social Reality of ADHD. *Contemporary Sociology: A Journal of Reviews*. 2010. 39: pp. 525-526.

255 J. L. Rapoport et al., "Dextroamphetamine: Cognitive and Behavioral Effects in Normal Prepubertal Boys," *Science (New York, N.Y.)* 199, no. 4328 (Feb 3, 1978), 560-563.

contesting our understanding of disease, these criticisms have reinforced a distinction between objectively defined diseases and social constructions.

Whether one agrees that medicine or diet can decrease hyperactive behavior, medical models also maintained distinctions between our brains as mechanically alterable and our natural selves. What is most interesting about all of these politically opposed arguments that define a pill as either a mechanism of social control, an unfair means to achieve success, or a treatment for a genetic neurological disorder is that they all continue to distinguish between real diseases on the one hand, and normal human behavior (whatever fits with accepted ideas of human nature).

What if, following Bradley and Eisenberg, we took a different lesson from stimulants, anti-depressant, and other medications— tangible drugs with (perceived) limited side effects and notably visible effects on behavior? For both men, stimulants retroactively upset notions of behaviors that we credit as human, natural, normal, and inherent. Both Bradley and Eisenberg were almost singularly focused on exploring the relationship between organic and adaptive mechanism of disease as well what it meant to be a child. What if personal determination, autonomy, struggle, and self-control are not equally available to all because of genetic and biologic endowments as well as social inequalities? Although drugs may give us the perception of “the real thing” in terms of an experience of lessened anxiety, increased focus or improved mood, they deprive us of the shared cultural ceremonies and beliefs that allows us to take credit for a series of random and contingent factors (organic and environmental) as something deserved.²⁵⁶

²⁵⁶ Of course, this isn't to suggest that the chemical changes of these drugs is exactly the same as the chemical changes that occur through relationships. The point is that the subjective experience of self, as viewed by doctors, teachers, parents, and children, changes through the administration of these drugs.

The Social Construction of Disease and Mental Illness

While we cannot infer directly how Bradley would have responded to each of the positions stated above, Leon Eisenberg worked as each of these ideas came into circulation. Eisenberg's most popular work did not concern the effects of psycho-stimulants on children. Rather, it was a 1978 article, "Culture, Illness, and Care: Clinical Lessons from Anthropologic and Cross-Cultural Research," which has become a popular reference for those interested in bridging cultural differences between medical practitioners and patients.²⁵⁷ This article has been commonly employed to articulate a distinction between disease and illness:

Modern physicians diagnose and treat diseases (abnormalities in the structure and function of body organs and system), whereas patients suffer illnesses (experiences of disvalued changes in states of being and in social function; the human experience of sickness).²⁵⁸

In training health care workers to develop sensitivities to the different ways marginalized groups may communicate their experiences of illness, most appropriations of this article have supported a type of medical anthropology that leaves intact an understanding of disease as objective and experience as subjective. As such, doctors have been encouraged to improve diagnosis among groups that express their symptoms in different ways, while remaining confident in their objective understanding of underlying disease pathology.²⁵⁹

Eisenberg had a quite different problem in mind when he started to write about this distinction in 1960. Eisenberg argued that as doctors were encouraged to define disease as "abnormalities in the structure and function of body organs and systems," so too were they

²⁵⁷ Kleinman, A, Eisenberg, L, Good, B. "Culture, Illness, and Care Clinical Lessons from Anthropologic and Cross-Cultural Research." *Annals of Internal Medicine*. 1978 Feb;88(2):251-258.

²⁵⁸ Smedley, Brian D., Adrienne Y. Stith, and Alan R. Nelson, eds. *Unequal treatment: confronting racial and ethnic disparities in health care (with CD)*. National Academies Press, 2009.

²⁵⁹ Lupton, Deborah. *Medicine as culture: illness, disease and the body*. Sage, 2012.

trained to attend to particular data and derive “objective” conclusions that would limit the types of interventions designated as therapeutic.²⁶⁰ Technological achievements and medical cures had led too many medical professionals to look for the origins of disease in biology. Even in psychology, it was readily accepted that people could think themselves sick. What was more difficult to imagine was the inverse: somatopsychic illness. What if functions in the body could alter either temporarily or permanently one’s sense of self, one’s emotions and intellectual capacities?

Eisenberg wasn’t ready to accept the reduction of self to physiology. If psychiatrists paid too little heed to the influences of organic differences in shaping a child’s experience, traditional medicine suffered from the opposite limitations. The approach of the neuroanatomist to studying the brain was equally problematic as that of the psychiatrist. The classic experiments in which clinicians attempted to correlate the behavior of adults to discrete lesions in specific parts of the brain assumed a one-to-one relationship between tissue loss and behavior pathology. As Eisenberg articulated it, the doctor’s mechanical conception of disease was as much a social product as the patient’s subjective description of illness:

To state it flatly, patients suffer ‘illnesses’; physicians diagnose and treat ‘diseases.’ Let me make clear the distinction I intend: illnesses are experiences of disvalued changes in states of being and in social function; diseases, in the scientific paradigm of modern medicine, are abnormalities in the structure and function of body organs and systems...²⁶¹

²⁶⁰ Leon Eisenberg, "Disease and Illness Distinctions between Professional and Popular Ideas of Sickness," *Culture, Medicine and Psychiatry* 1, no. 1 (1977), 9-23.

²⁶¹ Leon Eisenberg, "Disease and Illness Distinctions between Professional and Popular Ideas of Sickness," 11.

In this statement, Eisenberg sought to challenge the idea promoted by some of his contemporaries that “mental illness” was a myth (i.e. that normal people were being labeled as sick).

As Eisenberg suggested, concepts of all disease were best understood as “constrained fictions.”²⁶² “Constrained” insofar as they would have to account for people’s experiences and observations of the phenomenon; “fictions” in that they never fully describe “the thing itself” and have to give way when new information disrupts existing explanations. Eisenberg held that all science involved constrained fictions. Yet the human sciences presented a particular problem. “Diseases as phenomena in the world would exist even if unrecognized by men. However, the concepts we invent to account for disease come to shape not only the observations we make and the remedies we prescribe, but the very manifestations of disease itself.”²⁶³ In simple terms, people come up with models to explain phenomena and plan interventions all of the time.

What worried Eisenberg most was that physicians and the general public had come to accept a definition of disease as an objectively defined entity. “Error is compounded when abstractions are reified and diseases are regarded as things.”²⁶⁴ If organ pathology is viewed as a relational concept, one might choose the easiest aspects of the relationship to modify. If the physician were to forget this relational definition instead focuses on disease as an entity to be treated through technologies, he would give up any engagement with the questions of what makes a good life. “Only when it is possible to delay death does it become meaningful to ask whether it should be delayed.”²⁶⁵ In other words, a belief in health as an objectively

²⁶² Leon Eisenberg, “The Social Construction of Mental Illness.” *Psychological Medicine* (1988).

²⁶³ Eisenberg, *Disease and Illness*, 18.

²⁶⁴ Eisenberg, *Disease and Illness*, 18-19.

²⁶⁵ Eisenberg, *Disease and Illness*, 19.

measurable thing eschews the values that determine which people become patients, what lives are worth saving and enhancing, and under what conditions. In the human sciences, models always do more than describe. They also influence the brain and behavior.

CONCLUSION

Both Bradley and Eisenberg worked with feebleminded children and childhood schizophrenia (autism being considered a variant), and both explored the dynamic nature of organic and environmental influences on the brain-damaged child. Both believed that nonmaterial ideas had chemical consequences and that stimulants were more than a chemical treatment for a specific disease entity. Like ideas, stimulants were also chemical treatments for attitudes, expectations, and behavioral responses of families, teachers, and others. Stimulants, like the many patients in Bradley and Eisenberg's care, challenged ideals of natural childhood. Stimulants challenged clean distinctions between physical, emotional, and intellectual development. They challenged models of disease that, like childhood, have changed over time. Childhood is always a social construction that changes with society, yet children are more than passive recipients of the social world. To Bradley, intelligence was the single most important quality to parents next to physical health. Eisenberg defined the normal family and child in terms of their position in society. Most importantly, both Bradley and Eisenberg attempted to study and explain the dynamic relationship of stimulants, biology, society, children and, critically, what interplay between these influences was needed for a child to successfully develop.

In 2012, the New York Times reported about the prescribing habits of a pediatrician in Cherokee County, Georgia. Faced with a low-income child struggling in school, he wrote a prescription for Adderall. Explaining his practice, Dr. Michael Anderson said, "We've decided as a society that it's too expensive to modify the kid's environment. So we have to

modify the kid.”²⁶⁶ Prescriptions for stimulants are covered for families on Medicaid. Tutoring and family counseling are not. The article cautioned that the prevalence of similar prescribing practices is unknown, but noted that ADHD diagnoses have risen as school funding has declined. Dr. William Graf, a neurologist in New Haven, Connecticut, suggested that a family should be able to determine whether stimulants benefit its child, though he worried that stimulants used in non-ADHD kids serves to threaten “the authenticity of development.” The main arc of the narrative echoed common refrains around ADHD diagnosis. Dr. Nancy Rappaport, interviewed for the article had this to say, “We are seeing this more and more. We are using a chemical straightjacket instead of doing things that are just as important to also do, sometimes more.”²⁶⁷ Almost as long as doctors have been prescribing stimulants to children, critics from diverse moral and political backgrounds have cited the emergence of ADHD and other conditions as symptomatic of greater societal woes. Since the 1960s, echoes of “the myth of mental illness,” “the myth of hyperactivity,” have pointed to a disturbing trend towards medicalizing behavior previously been considered deviant. Social conservatives and scientologists have characterized the diagnosis as an assault on boyhood, since boys are 2-3 times more likely to receive an ADHD diagnosis than girls. Rappaport, unlike these skeptics, supports the use of stimulants for “real” ADHD. Yet, we know from previous studies, especially Bradley and Eisenberg, that the positive effects of stimulants are not limited to those diagnosed with ADHD.

According to Dr. Anderson’s logic, patrolling the dispersal of stimulant medications makes little sense if we are unwilling to address unequal access of children to fulfilling the American Dream. There is, of course, an implicit assumption in Anderson’s approach. If we

²⁶⁶ Schwarz, A. 2012. “Attention disorder or not, pills to help in school.” New York Times

²⁶⁷ Ibid.

would fix our schools, we could remedy the problem of equal access to the American Dream. The arguments of Charles Bradley and Leon Eisenberg offer additional insight: that this dream, and all the assumptions that come with it about what people achieve on their own, may be in equal need of treatment.

In Baltimore City, Leon Eisenberg gave stimulants to young black boys over fifty years ago. A 2011 report demonstrated that residents living in the poorest neighborhood of Baltimore died more than 20 years younger than those in the wealthiest neighborhood.²⁶⁸ For the 2010-2011 school year, 89% of white students graduated from high school in Maryland, while only 76% percent of black students graduated. A national 2012 report examined trends in health disparities by race and educational attainment. In 2008, men and women with less than a high school degree had life expectancies similar to those of all adults living in the 1950s and 1960s.²⁶⁹ When race and education were combined, the disparity increases. Life expectancies among white men 16 or more years of schooling were over 14 years more than for black men with fewer than 12 years of schooling. Both Bradley and Eisenberg would find these statistics impossible to ignore.

When Charles Bradley and Leon Eisenberg explored stimulant treatment, their goal was to find ways for marginalized children to find a place in society. As we continue to debate who should and should not receive stimulant medication, we have to consider our current environment and ask whether ADHD belongs at the top of the Center for Disease Control's website for issues relevant to child health.²⁷⁰

²⁶⁸ A. Ames et al., *2011 Neighborhood Health Profile: Baltimore City* (Baltimore City: Baltimore City Health Department, [2011]).

²⁶⁹ S. Jay Olshansky et al., "Differences in Life Expectancy due to Race and Educational Differences are Widening, and Many may Not Catch Up," *Health Affairs* 31, no. 8 (August 01, 2012), 1803-1813.

²⁷⁰ The website for the Centers for Disease Control and Prevention lists ADHD alongside cancer, diabetes, heart disease, influenza, and sexually transmitted diseases as the diseases and conditions of interest on its main page. www.cdc.gov.

Childhood, health, democracy, the American Dream: these are all ideals towards which we strive. As the work of Bradley and Eisenberg—and its reception—illustrates, no ideals are objective. All involve beliefs and values. We build theories and strategies around how to achieve them. When we fall short, we have to be willing to evaluate the relationship between our expectations and our outcomes. Bradley and Eisenberg evaluated that relationship. However, in the time since their work was published, the professional discourse around childhood, stimulants, and society has balkanized. Researchers have acknowledged the influence of Eisenberg and Bradley, but have failed to appreciate their core arguments. We can no longer justify a belief in human nature that precedes social and symbolic systems or wait for enlightenment to give rise to social change.

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