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The Hyperactive State: ADHD in Historical Perspective

Introduction: Opening a Black Box

What causes Attention Deficit Hyperactivity Disorder (ADHD)? The conventional answer to this question is that the hyperactivity, inattentiveness, impulsivity, defiance and aggression that characterize ADHD are caused by neurological dysfunction rooted primarily in genetics and, in a small fraction of cases, brain injury. Such thinking has been predominant in North America since the late 1960s and is now prevalent throughout the world (Smith, 2008; Smith, 2012).

Going hand in glove with such neurological explanations are the pharmaceutical treatments, such as Ritalin, Adderall, and Strattera, which have similarly dominated the treatment of children with ADHD since that time. Although such explanations and medications for ADHD have always been controversial, the worldwide escalation of both ADHD diagnoses and prescriptions of ADHD drugs suggests that most of the global medical community are perfectly satisfied with how the disorder is conceptualized and are happy to continue prescribing psychoactive drugs to treat it (International Narcotics Control Board, 2009; Polanczyk et al, 2007).

According to the increasing number of reports which have surfaced in recent years, however, such confidence might be misplaced. While some well-publicized research has provided support for the genetic/neurological model (Dreaper, 2010; Thapar et al, 2010), stories hypothesizing about other explanations for ADHD indicate that cracks might be appearing in the biomedical paradigm that has served as the framework for understanding the disorder for half a century. Some of the alternative explanations appear so simple that one wonders why they have not been considered before. For instance, one group of Canadian researchers found that ADHD was disproportionately diagnosed in the youngest children in each grade cohort, suggesting that many children so-diagnosed might not be neurologically disabled, but simply more immature than their classmates (Morrow et al, 2012). Similarly, an American study examined the correlation between

obstructive sleep apnoea (OSA) and ADHD symptoms in children (Youssef et al, 2011). In this case, children with OSA, who often suffered from sleep deprivation due to their condition, were found to be much more likely to present symptoms of ADHD. Instead of receiving drugs to treat their supposed ADHD, often stimulants which can increase the risk of insomnia, the researchers suggested that such children should be treated for their OSA. Others have speculated that lack of exercise and not enough exposure to the outdoors, too much television and video games, lead poisoning and malnutrition (ranging from nutritional deficits to reactions to food additives) have also contributed to the behavioural problems that are corralled in the ADHD diagnosis (Feingold, 1974; Christiakis, 2004; Louv, 2005; Nigg et al, 2010; Smith, 2011-a).

For those concerned about reductionist biomedical explanations for childhood behavioural problems and the overuse of ADHD drugs, such stories might prove to be a breath of fresh air. They highlight that, despite assurances from the so-called experts that ADHD is simply a genetic neurological abnormality that can be corrected with the right prescription, childhood misbehaviour is a much more complicated and multifarious issue, the understanding of which requires pluralistic, creative and curious thinking rather than simplistic, narrow-minded and dogmatic opinions. Examining ADHD from a variety of perspectives not only creates the possibility for more comprehensive, sophisticated approaches, but it also lowers the risk of children being subject to unnecessary medical interventions, including the prospect of a lifetime on stimulant medication.

But, while innovative explanations for ADHD should be admired and encouraged, they do not, perhaps, go far enough in revealing what French sociologist of science Bruno Latour might call the 'black box' that is ADHD (1987). Borrowing the term from cybernetics, where black boxes are used in modelling to depict sets of commands which are too complex to describe in detail,

but are nevertheless essential to a particular programme, Latour describes black boxes as concepts, technologies or systems which are central to the production of scientific knowledge, but are not scrutinized, analyzed or questioned by those who use them. One of the examples of a black box provided by Latour is the famous double helix shape of DNA. Although the double helix is the cornerstone of genetic knowledge and the starting point for genetic research, little consideration is given to the emergence of the concept and how alternative ways of describing the shape of DNA could have been envisioned. For those who use black boxes, such as DNA or, as I will argue, ADHD, such aspects remain hidden and unexplored because ‘no matter how controversial their history, how complex their inner workings, how large the commercial or academic networks that hold them in place, only their input and output count’ (1987: 2).

For most medical professionals, educators, parents and even those diagnosed with the disorder, ADHD fits Latour’s description of a black box. On the input side of the equation are the behaviours identified with ADHD and the assessment tools used to measure them, for example, Conners rating scales and the most up-to-date version of the *DSM* or *ICD*. On the output side are the treatments for ADHD, most commonly drugs such as Ritalin. As the black box that is situated between the input of identification and the output of medication, ADHD represents a way of thinking that pathologizes such behaviours, transforming them into manifestations of neurological dysfunction and making them worthy of pharmaceutical intervention. Those who see ADHD in this way – as a black box - expend little effort questioning their conceptualization of ADHD or trying to understand how it emerged in the first place. Alternative explanations of ADHD, such as those described above, help to shed light on some dusty corners of the black box, particularly those closer to the output (treatment) side, but do not go further in attempting to understand some of the more basic questions about ADHD, such as, why did behaviours like hyperactivity, impulsivity and inattention become pathological in the minds of so many in the first place? In order to address this issue, and illuminate some of the deeper recesses of the

black box that is conventional biomedical understanding of ADHD, this chapter turns to the disorder's history where, as Latour indicates, many answers about the hidden aspects of ADHD exist. When the origins of ADHD are examined, it becomes clear that a wide range of social, educational, political, and technological factors have contributed to making behaviours once seen as fairly normal transform into the most commonly diagnosed childhood psychiatric disorder of the modern era.

Before ADHD

It is fairly easy to identify when physicians, along with educators, politicians, and parents, became alarmed about children who had the symptoms of what we now call ADHD, and started to believe that such behaviour was the manifestation of an underlying pathology and warranted medical intervention. A quick look at any medical database suggests that such concerns reached momentum during the late 1950s and, particularly, in 1957 when, amongst other events, a group of child psychiatrists at Emma Pendleton Bradley Home in Rhode Island, USA, coined the term 'hyperkinetic impulse disorder' to describe such children (Laufer and Denhoff, 1957; Laufer, Denhoff, and Solomons 1957). After 1957, the number of medical articles about children with the symptoms of ADHD escalated exponentially in the United States, although other countries, such as Canada, the UK, and elsewhere were slower to echo this trend (Smith, 2012).

This is not to say, however, that similar behaviours were never recognized by physicians prior to the 1950s, or seen as unproblematic. Earlier physicians did deem such behaviours to be clinically significant, but only when they were particularly severe (Clouston, 1899; Still, 1902; Ebaugh, 1923). They also associated such behaviours with brain injury, caused by perinatal trauma, blows to the head, and infectious diseases, such as encephalitis, or food allergy (Alvarez, 1946; Clarke, 1950; Ebaugh, 1923; Kahn and Cohen, 1934; Rafalovich, 2001; Randolph, 1947; Shannon, 1922;

Still, 1902; Strauss and Werner, 1942). Indeed, Laufer, Denhoff, and Solomons began one of their articles by stating that: 'It has long been recognized and accepted that a persistent disturbance of behaviour of a characteristic kind may be noted after severe head injury, epidemic encephalitis and communicable disease encephalopathies, such as measles, in children' (1957: 38). Although the authors mentioned that such behaviour was also present in children without such a history, it is very difficult to find such accounts in the medical literature, and when they are found, the children described tend to be significantly disturbed, either confined to mental institutions or believed to be headed in that direction (Still, 1902). In contrast, the children Laufer, Denhoff, and Solomons described as having hyperkinetic impulse disorder had much less profound behavioural problems, were not all that much different than 'normal' schoolchildren, and, as such, could be found in great numbers throughout the USA.

The intense interest in hyperactive children in the late 1950s is made all the more stark when compared to the sort of children that concerned psychiatrists, paediatricians, and other physicians in previous decades. That is because for the first half of the twentieth century, medical interest tended to focus on withdrawn, shy, and nervous children, rather than those who were boisterous, extroverted, and impulsive (Bender and Yarnell, 1941; Evans, 1920; Jones, 1999; Michaels and Secunda, 1944; Reiser, 1963; Schneersohn, 1955; Stewart, 2009; Topp, 1950; Warren, 1948). As historian Sarah Hayes has argued with respect to the British context, 'the concept of a maladjusted "rabbit" developed following longstanding concerns with children who were considered to be overly nervous or emotionally "delicate"' which dated back to the nineteenth century (2007: 142). In the American context, the focus on neurotic children was also foreshadowed by the notion of neurasthenia, or nervous exhaustion, espoused by American neurologist George Beard (1839-1883), and concerns about study fatigue in children (Johnston, 1906; Schuster, 2012).

Although children who exhibited delinquent, sexually inappropriate, violent, and generally anti-social behaviour were certainly identified by child guidance experts as being troublesome (Horn, 1989; Richardson, 1989), psychiatrists, particularly those influenced by Sigmund Freud and psychoanalytical theory, were more likely to single out neurotic children as being particularly problematic. Or, as columnist and New York University professor of Education, Alice Keliher (1902-1995), remarked in 1957 in the American education journal, *Grade Teacher*: ‘Mental hygienists are more troubled about withdrawing, shy, really sick children’ (1957: 143). Such sentiments were reflected in contemporary textbooks on child psychiatry, such as those written by pioneering child psychiatrist, Leo Kanner (1904-1981), which focussed a great deal on nervous children, and made few references to those presenting the characteristics of ADHD (1935, 1949, 1957). Another columnist in *Grade Teacher*, Cornell University’s Child and Family Studies professor Katherine Reeves (1899-1963), whose ‘The Children We Teach’ column often highlighted troubled children, similarly tended to focus on introverted children, although this emphasis changed during the late 1950s (1956). Just as today there are journals dedicated to ADHD, such as the *Journal of Attention Disorders*, interest in neurotic children was also made evident by journals such as *The Nervous Child*, which ran from 1941 to 1956.

The Problem of Our Schools

By the late 1950s, however, the attention of American educators, politicians, and physicians had migrated from nervous, withdrawn children to those whose characteristics were completely different, specifically, hyperactive, impulsive, inattentive, and aggressive children. How can this remarkable shift be explained? Of the many factors emanating from many changes in American society that can be called into account, possibly the most important was the fear, reified in the Soviet launching of the *Sputnik* satellites in the autumn of 1957, that the US was falling behind the USSR in the race for scientific, technological, and military superiority, and if changes were

not made to the American school system to redress the situation, they might lose the Cold War altogether (Smith, 2011-b; Smith, 2012). Although on first blush it might seem odd to link birth of the space race in 1957 with the emergence of a new childhood psychiatric disorder in that same year, a great deal of historical evidence suggests that the connection is much more than mere coincidence.

For many contemporary observers, *Sputnik* provided clear evidence for something that they had suspected for quite some time, namely, that American schools were not producing students capable of competing with their Soviet counterparts in the fields of science, engineering, and technology. As New York paediatrician Julius B. Richmond (1916-2008), who would go on to be the first director of the Head Start programme, asserted in 1960: 'While the launching of Sputnik I by the Russians set off public anxiety concerning education in this country, it is well to note that educators and thoughtful citizens generally were concerned about the quality of our educational programs for a considerably longer period of time' (1960: 689). Although he questioned how well teachers were trained, the financing of education, and the prevailing educational philosophy of the time, progressive education, Richmond was especially critical about the lack of high standards in American schools and the 'inadequate intellectual standards and excessive permissiveness in connection with basic academic subjects' (691). Crucially, Richmond also noted that the greatest 'difficulties in implementing a "tougher" education system are related to the uneven capacities of students' (691).

Richmond's comments were typical of many education critics, who emerged from every corner of the American intellectual and political establishment. Among the most prominent were chemist, ambassador to West Germany, and president of Harvard University, James B. Conant (1893-1978); admiral and so-called 'Father of the Nuclear Navy', Hyman Rickover (1900-1986); English professor Arthur S. Trace, Jr. (1922-2005); and journalist, editor, and author Palmer

Hoyt (1923-2005), amongst many others (Conant, 1959; Conant, 1961; Ehrenreich and English, 1979; Hoyt, 1958; Knowles, 1958; Rafferty, 1963; Ravitch, 1983; Rickover, 1963; Spring, 1976; Trace, Jr., 1961). Despite their different backgrounds, the education critics all called for a series of fundamental changes to the school system to ensure that American children could compete with their Soviet counterparts. These included the following: 1) an increased focus on core subjects, such as science, mathematics, and languages; 2) higher standards and rates for achievement for all students; 3) increased capacity to identify students who struggled and implement measures to help them improve. Such demands were heard in Washington, D.C., and resulted in federal legislation such as the National Defense Education Act (NDEA) of 1958 and the Elementary and Secondary Education Act (ESEA) of 1965. Whereas the NDEA invested \$1billion to improve the teaching of core subjects and to hire guidance counsellors to identify potential drop-outs, the ESEA provided funding for schools in deprived areas, proving to be one of the most enduring legacies of President Lyndon Johnson's 'War on Poverty' and Great Society agenda. Both pieces of legislation also helped to create the environment in which characteristics associated with underachievement, especially those now linked to ADHD, were not only identified as being harmful to education success, but also seen as a threat to national security and, as such, worthy of pathologization and medical treatment.

Regressive Education?

It is also important to situate the demands of the education critics, and, therefore, increased concerns about hyperactive children, into the broader historical context. The cries for a return to a more subject-centred curriculum, focused on science, mathematics, and languages, was not only a reaction to *Sputnik*, but also an attack on progressive education, the educational philosophy which had dominated pedagogical thinking in the US for a number of decades.

Inspired by the views philosopher John Dewey (1859-1952), progressive education was a child-

centred approach to education which stressed learning by doing. By tending to a garden, or selling vegetables at a market, children would not only learn about biology, arithmetic and economics, but they would also encounter – and have to solve – the sort of problems that would face them in later life. Given the active, individualized, and hands-on nature of such an approach, the difficulties of children who struggled to sit still and focus on more abstract, subject-centred lessons were hidden; indeed such children could thrive.

Unfortunately, the realities of progressive education were somewhat different than what Dewey had intended. Dewey believed that:

Education ... must begin with a psychological insight in the child's capacities, interests, and habits. It must be controlled at every point by reference to these same considerations. These powers, interests, and habits must be continually interpreted ... They must be translated into terms of their social equivalents – into terms of what they are capable in the way of social service (Dewey quoted in Ryan, 1998: 397).

In other words, and much like the tutor in Jean-Jacques Rousseau's *Emile*, teachers had to be extremely adept at recognizing and acting upon each student's needs and finding educational opportunities to ensure that their abilities could be harnessed for the benefit of society.

Moreover, when children were set to tasks that were suited to them, they were expected to work hard and succeed (Keliher, 1958). Ironically, such an agenda was not so far removed from the utilitarian goals of the education critics. In practice, however, the progressive education Dewey envisioned was often seen to deteriorate into chaotic, aimless activities where students were not really learning, but merely having fun.

Making matters worse was the fact that not only had schools been under-funded for a number of decades, due to the Great Depression and the Second World War, but they were also facing teacher shortages, as female teachers left the profession to start families, and the largest cohort

of children in American history, the Baby Boom generation, crowded classrooms (Bernstein, 1991; May, 1999; Owram, 1996). This was not the first time that demographic factors involving children had impacted upon perceptions of child mental health. Conversely, the opposite demographic changes in the 1920s, specifically, decline in family size and a decrease in the proportion of young people in the overall population, ‘democratized’ families, and helped to create a ‘crisis of family life’, according to the historian Margo Horn (1989: 36). Given the fact that young people represented a smaller proportion of the general population, there was:

less pressure on adolescents to take on the responsibilities of adulthood. This paved the way for more leisured youth, and greater investment in the proper nurture of children and adolescents. ... The decline in the number of children per family made strict discipline and hierarchically defined relationships between parents and children both unnecessary and undesirable. Moreover, fewer children allowed each child to receive more individual attention and provided opportunities for greater self-expression (Horn, 1989:37).

Although adult-child relationships during the post-war period was similarly child-centred, even ‘filiarchal’ or dominated by children, according to some historians, there was much more pressure on the baby boom generation to succeed, particularly after *Sputnik*, and the education system, through legislation such as NDEA, was reformed to reflect these heightened expectations (Mintz and Kellogg, 1988).

With NDEA also came the greater emphasis on core subjects and the return to a more rigid, structured, and standardized pedagogical approach that the education critics advocated. The change was not only evident in the subjects and the manner in which the students were taught, the physical environment of the classroom was also markedly different. Whereas progressive classrooms allowed students to stand up, walk around, manipulate objects, use tools – in other words, be active – the new, more subject-centred classrooms required students to remain seated

in their desks, which were arranged in a grid pattern, facing the teacher. Not only did this prevent active children from gaining the stimuli that helped to keep them focused, teachers could easily identify those who fidgeted, got out of their seats, bothered other children, day-dreamed, or otherwise acted out. Moreover, when educators began to research which behaviours seemed to interfere with scholastic achievement, it tended to be these types of characteristics, now associated with ADHD, that were singled out. One study, comparing underachieving students with those attending a summer space camp, concluded that the 'future scientists' were much more equipped to control both their impulses and their motor behaviour, this being the key distinction between the two groups of students and a vital predictor of future success (Davids and Sidman, 1962-1963).

Can We Salvage the Dropouts?

To an considerable extent, legislation such as NDEA was geared towards identifying 'future scientists' and providing them with the opportunities to thrive. Equally vital to national security in the minds of the education reformers, however, was improving the academic and career prospects of 'underachievers' and, crucially, preventing young people from dropping out of school (Snepp, 1956-1957). The desire to promote achievement and higher standards throughout the school system, and across class and race lines, emanated from a great number of sources; the fears sparked by *Sputnik* were but one, albeit potent, factor. Nevertheless, one of the other prominent impetuses for the increase in academic expectation also had a military connection, specifically the Serviceman's Readjustment Act of 1944, better known as the GI Bill. The GI Bill, which would eventually apply to both Second World War servicemen and Korean War veterans, provided funding for education and training and by 1956, 7.8 million servicemen, or half of the 16 million who had participated in the Second World War, had participated (United States Department of Veterans Affairs, 2007). Although sociologists Evan Schofer and

John W. Meyer have called the addition of these students a 'blip' in the overall twentieth-century trend towards higher education, the re-education of such veterans, many of whom were likely the first in their family to achieve a post-secondary education, instilled an expectation that their own children, the baby boomers, would also attain post-secondary education (2005: 899).

The millions of servicemen completing high school and going onto college also came at a point when the vocational environment was changing. As resource extraction, manufacturing, and services became more automated, it was believed that the typical American worker would have to more skilled, requiring higher levels of education. The unskilled jobs that a previous generation of students would have dropped out of school to start in their mid-teens were simply thought to be a thing of the past (Tyler, 1966). As one educator described, 'the disappearance of whole categories of jobs is of course a major consequence, and a hard one, of the almost fantastic development of automation and technology', meaning that school drop-outs were becoming a 'national problem' (Schreiber, 1965: 247). Politicians, including both Presidents John F. Kennedy and Lyndon Johnson also highlighted the problem of drop-outs in their messages to Congress in 1963 and 1965, Johnson noting that jobs filled by high school graduates had increased by 40 per cent in the last ten years, while jobs filled by drop-outs decreased by 10 per cent (Kennedy, 1964; Warren, 1964; Schreiber, 1965). Somewhat bizarrely, given what we now know about the capacity of information technology to create even more work, many leading psychiatrists were concerned that automation would not only lead to a skills shortage, but also increased mental illness, as the perceived increase in leisure time would lead to existential angst in those who worked fewer hours (Rome et al, 1966).

Worries about the pathological effects of leisure notwithstanding, the primary consequence of encouraging more students to graduate high school and proceed to college was that the difficulties of those who struggled were increasingly identified and medicalized. Given the

justifiable ambition of many education critics, most notably Conant, that students from slums as well as suburbs should attain higher levels of academic achievement, in addition to the anti-poverty initiatives of President Johnson's Great Society programme, children from disadvantaged backgrounds were disproportionately labelled as having learning and behavioural problems (1961; Berlin, 1975)). It did not take long for sceptics, particularly those who supported the egalitarian and preventive tenets of social psychiatry, to question this particular development and other aspects. The Canadian-born special education expert Lloyd M. Dunn (1917-2006), for example, argued that the focus should be on 'doing something better for children who live in slum conditions', immersing 'ourselves in the total environment of our children from inadequate homes' rather than saddling them disabilities (1968-1969: 6, 20). Others argued that teachers used new categories, such as hyperkinetic impulse disorder, to compensate for their own pedagogical shortcomings, or 'programming inadequacies', as one educator described it (Adelman, 1970-1971; Lovitt, 1967-1968: 234). Although such concerns would continue to be expressed, they did little to quell the overall increase in identifying, labelling, and medicating the behaviours associated with educational underachievement.

From Education to Medication

Thus far, I have focussed on the political and educational circumstances that, combined with demographic factors and historical developments, created a situation in which the characteristics now associated with ADHD were increasingly seen as disruptive to scholastic achievement and, consequently, a threat to national security. Health professionals, such as paediatricians, psychiatrists, and psychologists, certainly weighed in on these issues, typically adding fuel to the concerns about educational underachievement and poor school completion rates, but there was nothing inherently medical about these problems; such behaviours could be interpreted as being

'naughty' just as easily as they were later seen as being pathological (Lezak and Dixon, Jr., 1963-1964). What transformed these educational issues, therefore, into medical ones?

The answer to this question have much to do with developments within the psychiatric profession and with how psychiatry was perceived during the post-war period. The first thing to say about the state of psychiatry in the post-war period is that it was in a period of flux, alternating between opportunity and crisis. Following the Second World War, most Americans, certainly most psychiatrists, believed that mental illness was on the rise in the US. One of the reasons for this was the revelation that millions of Americans had been rejected for military service during the war on psychiatric grounds. Leaders within the psychiatric community, such as Robert Felix (1904-1985) and William Menninger (1899-1966) believed not only that the perceived crisis in mental health posed a grave threat to American society, but also that it offered an opportunity for the profession of psychiatry, long a beleaguered and criticized medical discipline to demonstrate its worth. Such ambitions were reflected in the National Health Act (1946) and the subsequent foundation of the National Institutes of Mental Health (NIMH), headed by Felix.

But what type of psychiatry would be at the centre of such initiatives? The history of American psychiatry had often been dominated by biological psychiatrists, physicians who believed that mental illness was rooted in neurological dysfunction. Such thinking had contributed not only to the use of psychoactive drugs, an active area of research during the post-war period, but also electro-convulsive therapy, insulin shock treatment, and most controversially, lobotomy. On the opposite side of the psychiatric spectrum were psychoanalysts, many of whom had emigrated from Central Europe during the 1930s and 1940s in the face of Nazi Germany. Despite the fact that biological psychiatry often dominated the thinking of psychiatric hospital superintendents, following the Second World War, clinical and academic psychiatry was being dominated by

psychoanalysts, who believed that unresolved psychic conflict was at the root of mental illness and that psychotherapy was the key to resolving such problems. Despite the dominance of these two influential disciplines, however, another way of perceiving mental illness was central to the foundation of NIMH and the evolution of psychiatry during the post-war period, namely social psychiatry.

Unlike biological psychiatry and psychoanalysis, which were chiefly reactive approaches to mental illness, social psychiatry branded itself as a preventive psychiatry, focussing on addressing the socioeconomic issues, such as homelessness, overcrowding, exposure to violence, poverty and general stress, believed to cause mental health problems. Felix, Menninger and many other leading American psychiatrists were firm believers in the tenets of social psychiatry and, as such, preventing mental illness, rather than just treatment, became a key theme in developing a national strategy to tackle the burgeoning crisis in mental health. Following the foundation of NIMH, a series of commissions and reports were launched with the intent of providing ‘an objective, thorough, nationwide analysis and re-evaluation of the human and economic problems of mental health’ (Grob, 1994: 485). Among these were the Joint Commission on Mental Health and Illness, which published its report, *Action for Mental Health* in 1961, and the Joint Commission on the Mental Health of Children, which published its final report, *Crisis in Child Mental Health: Challenge for the 1970s* in 1970.

Among those who were influenced by the newly preventive approach to mental illness were none other than Presidents John F. Kennedy (1917-1963) and Lyndon B. Johnson (1908-1973), whose New Frontier and Great Society policy programmes instituted social psychiatry as legislative priority. Kennedy’s 1963 ‘Message to Congress on Mental Illness and Mental Retardation’, for example, emphasized that eradicating mental illness through prevention was just as important as eliminating infectious diseases (1964). Kennedy’s ‘dramatic and heart-

warming' interest in mental health resulted in the 1963 Community Mental Health Centers Construction Act, which not only earmarked funds for preventing mental illness, but also shifted mental health care from psychiatric institutions to the community (Branch, 1963: 2).

The emphasis social psychiatrists placed on preventing mental illness not only meant that mental health professionals had to be political actors, lobbying for greater socioeconomic equality, but it also inferred that early intervention was a critical element of prophylaxis. Just as the crisis in education caused by *Sputnik* spurred school counsellors to 'be on the lookout for the bright boy or girl whose high ability has been demonstrated by the results of aptitude tests. . . but whose achievement, as measured by grades in courses, has been low' (Conant, 1959: 44-5), the NIMH reports encouraged psychiatrists to identify children whose behaviour suggested that they might be future victims of mental health problems. Indeed counsellors often played the role of lynch pin between the academic sphere, where the characteristics associated with underachieving children were singled out, and the medical sphere, where such behaviours classified as symptomatic of mental disorders. The combination of counsellors searching for underachieving youth in the educational sphere and mental health professionals looking out for troubled children in community mental centres and clinics put the academic and psychiatric problems of young people under the spotlight to an unprecedented extent. The marrying of educational and psychiatric concern for children also meant that behaviours seen to be problematic in both arenas were of particular interest. Increasingly, the most notable of these were behaviours associated with ADHD – hyperactivity, impulsivity and inattention – and by the mid-1960s, 'mere mention of the term "hyperkinetic syndrome" [one of the contemporary terms for ADHD] is guaranteed to stir up vigorous discussion in medical, psychological, educational, and social work circles' (Schrager et al 1966: 528).

The social and preventive ambitions of psychiatry during the 1950s and 1960s might have fomented increased concern about children's mental health problems, which, alongside the crisis in education due to *Sputnik*, placed the symptoms of ADHD under the spotlight, but that did not necessarily mean that the medical response to children with such characteristics would be particularly social in nature. After Kennedy's assassination and the turbulence of the Johnson administration, characterized by race riots and the escalation of the war in Vietnam, there were fewer funds and less enthusiasm for the socially transformative legislation envisioned by social psychiatrists. Although the principles of social psychiatry were reiterated by leading psychiatrists throughout the 1960s, developments in pharmacology began convincing many American mental health professionals that the answer to the crisis in mental health was not political action, and least of all psychoanalysis, but better psychiatric drugs and a greater emphasis on the neurological aspects of mental illness. Among the miracle drugs touted by biological psychiatrists during the 1950s and 1960s were anxiolytics, such as Miltown and Valium, but arguably the most successful, enduring and controversial was Ritalin.

Brother's Little Helper

Long before there was ADHD or even hyperkinetic impulse disorder, there was Ritalin. Developed during the mid-1940s and first used to treat depressed and fatigued patients in both institutional and clinical settings in the 1950s, Ciba's Ritalin (now made by Novartis) is an excellent example of a drug that took many years to find its ideal patient group, despite the fact that amphetamines had been used previously to treat educational problems in children (Bradley 1937). Never particularly successful as an anti-depressant or pep-pill for depressed geriatrics or fatigued housewives, two of its original targets, the stimulant drug paradoxically found its success doing the opposite, calming children down. Permitted for use in children in 1961, Ritalin soon

became a best-seller for Ciba, who not only marketed it aggressively, but also the disorder it was meant to treat.

It is tempting to imagine whether there would be ADHD if it had not been for the pre-existence of Ritalin. Although such fanciful flights of the historical imagination are typically frowned upon by serious historians, one could likely make a good case for the claim. Ritalin transformed hyperactivity, impulsivity and inattention from undesirable characteristics to medical symptoms which could be treated. By doing so, the drug's usage effectively served as the final stage in a long process of pathologizing behaviours that could have otherwise remained in the educational sphere, as they have done in most other countries until the past few decades.

It is also tempting to blame Ritalin's success on the muscular manner in which it was advertised by Ciba, who clearly wanted to market the notion of ADHD as much as the drug itself (Schrag and Divoky 1975; Singh 2007). But in Ritalin, many psychiatrists, educators and parents found not only a solution for the problem of underachieving, misbehaving children, they also found an explanation for their behaviour that was attractive. For psychiatrists, Ritalin offered 'one of the few situations in which you can do something quickly for people' (Laufer quoted in Reinhold 1970, 96). In other words, the drug helped calm down hyperactive children in a matter of minutes, indicating not only its efficacy, but also suggesting that what lay beneath such behaviour was a neurological dysfunction. It is not surprising that many American psychiatrists, struggling with providing or even understanding psychoanalysis, saw drugs such as Ritalin as a positive, cost-effective and scientifically-sophisticated development. Of course, Ritalin did not prevent or cure such behaviour, did not treat all those diagnosed and also resulted in a range of frightening side effects, including anorexia, insomnia, hallucinations and cardiovascular problems, but it did give biologically-minded psychiatrists who had struggled with providing or were suspicious of psychotherapy a chance to 'do something'. According to many psychiatrists who believed that

the symptoms of ADHD could also be a precursor to even more serious mental health issues, Ritalin could also be seen as a form of prophylaxis.

For teachers and especially parents, Ritalin not only helped them access the ‘good kid’ hidden beneath the troubling behaviour, by providing a neurochemical solution, it also suggested that the root of the problem was not poor teaching or parenting, but neurological dysfunction. In other words, it absolved them of the blame that everyone from education critics to psychoanalysts were all too ready to heap upon their shoulders. Regardless of whether or not it really helped hyperactive, impulsive, inattentive children, Ritalin could be seen as a magic bullet by many of the adults enveloped in the challenge of raising and educating children in difficult times. Whether it served as a magic bullet for the children to whom it was prescribed, however, is another question.

Conclusion

There are countless nooks and crannies in the black box that is ADHD. In this chapter a few of them have been illuminated, but much more work remains to be done if we are serious about understanding, let alone contesting, ADHD and what it means about childhood – and increasingly adulthood. In recent decades, as rates of ADHD have exploded both in the US and throughout the globe, the black box of ADHD has expanded, becoming a little like Dr. Who’s Tardis or Snoopy’s doghouse. From a myopic point of view, ADHD can look much like a simple neurological abnormality, a base Foucauldian plot, or an mere economic power-play, but the more we explore the concept, its origins and its implications, the more we realize that it is much more complicated than that. The more we look, the more we find that all simplistic explanations for ADHD rest on shaky foundations.

Certainly ADHD has been a boon to pharmaceutical manufacturers, and will increasingly be so as the disorder spreads across the globe to places such as China and India. But we should also think about why people, in differing cultures and contexts, decide to embrace or reject biomedical notions of ADHD and the pharmaceutical treatments provided for the disorder. It is clearly important to question the validity of ADHD as a medical disorder, particularly when the ratio between symptoms presented and medication prescribed is unbalanced or there seems to be a disproportional desire to control child behaviour to meet unrealistic educational goals. But that is not to say that there are many children who have profound deficits in their ability to concentrate and control their impulses, deficits that might be caused by a wide range of factors, including stress, malnutrition, brain damage or even a visual or hearing impairment. The more light we shed on ADHD, the more we prise open the black box, the more we discover that it – or perhaps simply childhood behaviour – is an astonishingly complex issue, demanding creative, holistic and sophisticated thinking.

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