

The Social Construction of Neurodivergence in Colonial Education

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Colonial Definition and Neurodivergent Discrimination

Modern Western education systems are deeply flawed. They do not adequately accommodate children who are “neurodivergent,” with many students who fall outside the category of “neurotypical” struggling to succeed within an educational structure that is not designed for them. Neurodivergence is often viewed as a problem in children; behavioral differences that manifest as “symptoms,” such as attention issues, sensory processing differences, hyperactivity, or other behaviors that occur in a learning environment. These “symptoms” are seen as issues that need to be addressed, “cured,” or otherwise corrected so students can succeed in classrooms built around standardized pacing, assessments, and expectations. Framing minds within a binary system labeled as “typical” and “atypical” is a colonial construct that is inherently discriminatory, disadvantaging children, regardless of whether they receive treatment or not.

When neurodivergence is portrayed as an illness or deficiency, it unjustly simplifies the problem to an individual issue, and the “solution” is wrongly sought through “normalization.” This forces children to adopt methods of assimilation into the neurotypical status quo, such as through therapy, pharmaceutical remedies, or segregated educational environments, allowing educational institutions to avoid a much more difficult and equitable solution: systematic change. When neurodivergence is instead confronted honestly, an inevitable and beautiful demonstration of human variation, the responsibility shifts: educational and societal institutions alike must

account for, and accommodate, diverse ways of sensing, communicating, and learning, rather than forcing students into an unnatural, narrow cognitive ideal (Doyle, 2020).

Prevalence of Neurodivergence

While universal, equal accommodation for all people is a utopian ideal that is far from feasible, in the case of neurodivergence, systemic change is necessary for one simple reason: neurodivergent conditions are not rare. While accurate estimates depend on what is included under the neurodiversity umbrella, research has shown that “neurominorities” comprise roughly 15–20% of the population (Doyle, 2020). That broad estimate aligns with the reality that multiple neurodevelopmental diagnoses, like those of Attention-Deficit/Hyperactivity Disorder (ADHD), Autism Spectrum Disorder (ASD), and dyslexia, are commonplace in both scholastic and workplace environments, shaping these spaces in many positive ways; meanwhile, individuals are left with the task of conformity. It is undeniable that the failure of these societal systems to accommodate the neurodivergent population is not a marginal issue. Instead, it is a central feature of American society to decide which types of minds will be supported and favored, and which will be ignored or corrected.

Eurocentrism and Scope

The institutional practices that define, measure, and manage “normal,” neurotypical education are deeply entangled with American history and politics. The standardization of education is linked to coloniality, or systems that privilege Eurocentric “ways of knowing.” This Eurocentric partiality dictates what is acceptable in terms of communication, behavior, and education as a whole. This sets a precedent, particularly instilled through standardized sectors of teaching, that treats other ways of being as deviant or deficient (Meekosha, 2011). Due to the

insurmountable nature of attacking this problem in its entirety, for this essay, the scope will be narrowed to address one specific sector of neurodivergence in education: students with ADHD.

A Socially Constructed Definition of ADHD

Conditions such as ADHD are biomedically characterized as neurodevelopmental disorders determined by functional impairments (American Psychiatric Association, n.d.). Adopting an inclusive, neurodiversity-focused perspective, however, repositions the definition of these “conditions” as simply representative of naturally occurring variations in cognitive processing. Recognizing the tension between these two ideological frameworks makes the nature of these diagnoses as socially constructed overtly apparent. Many institutions celebrate neurodiversity as an inseparable aspect of identity while simultaneously critiquing the narrow focus on causation and normalization by the medical model (Kapp et al., 2013). This celebration of neurodiversity, along with the advocacy for the abolition of a binary “neurotypical” and “neurodivergent” categorization, does *not* implicitly entail the denial of disability or support needs. It instead reframes disability as *relational*: impairment is absolutely a reality, but many of the barriers that dictate that impairment are a product of the environments and expectations built by these colonial institutions, namely the education system (Doyle, 2020). This distinction is critical in education, as cognitive differences can serve as disruptions and distractions. This dual relationship, unless systemic change is implemented, is unavoidable. Neurodivergent students are constantly positioned as problems to be managed, rather than learners to be taught, when classroom settings, for example, require students to sit still, focus, and engage for extended periods of time.

The dictation of “normalcy” is unnatural, instead existing as a product of measurement and institutional repetition, and the very language of “neurodivergence” implies a deviation from

this normalcy. Our capitalist society utilizes educational systems as a means to continually enforce norms through structural methods such as school bells, pacing guides, and standardized testing. Over time, “good students” are established as those who cognitively blend in by abiding by the system’s design. Conversely, students whose cognitive nature is not conducive to participating in these systems are noticed and thus adorn the label of “divergent.” Inevitably, instead of recognising these differences as an incongruity of *needs*, these students are diagnosed as needing disciplining, medicating, or otherwise *fixing*. Disability scholars highlight that dominant institutions, particularly in the West, often universalize their own assumptions about bodies and minds, marginalizing the experiences and epistemologies of others (Meekosha, 2011). In education, those assumptions can converge with racialization, as Dis/ability Critical Race Studies argues that racism and ableism operate as mutually reinforcing “normalizing processes,” both of which can appear naturally embedded in everyday institutional routines (Annamma et al., 2013). Thus, what is categorized as behavioral or learning problems, or otherwise described as “noncompliance,” is not solely determined by a child’s neurology. Instead, countless environmental factors, including racialized expectations, ultimately form the cognitive determination of behavior.

Diagnoses and Prescriptions

The systemic forces driving students to an overreliance on psychopharmaceuticals, particularly stimulants such as Ritalin, Adderall, and Vyvanse, at young ages, are a product of nonconformity. A recent CDC survey analyzed the prevalence of diagnoses across the country, estimating an astounding 12% of elementary and middle school children to have an ADHD diagnosis, with that number growing closer to 20% for teenage boys alone. Far more revealing, however, is analyzing regional discrepancies in diagnosis rates; for example, children in

Kentucky are three times more likely to receive an ADHD diagnosis than children in Nevada, and children who are actively taking medication for their diagnosis are five times more prevalent in Louisiana than in the Western state. University of California, Berkeley colleagues Stephen Hinshaw, a clinical psychologist, and Richard Scheffler, a health economist, performed extensive research to identify the root cause of these state-to-state discrepancies, as well as a higher trend, generally, in diagnoses in Southern states. They found a correlation between these states with higher diagnosis rates and laws that financially penalize school districts with lower passing rates on standardized tests (Miller, 2016). This blatant use of political leverage to enforce neurotypical conformity and educational standardization is a source of clear, empirical evidence against the systemic drivers that seek to perpetuate the avoidance of any equitable systemic change.

Racialized Patterns of Diagnosis and Medication

Another level of unjust, blatant systemic bias is made clear through the analysis of the racial demographics of those who are diagnosed. With political and socioeconomic pressures applied to educational institutions, deeming “results” from one-dimensional, neurotypically biased standardized testing necessary to justify funding, it is unsurprising that since 1997, the estimated prevalence of diagnosed ADHD in American children and adolescents has more than doubled (Xu et al., 2018). More concerning, however, as of 2019, 62% of all children ages 2-17 with ADHD take stimulant medications. This includes methylphenidates such as Ritalin and amphetamines such as Adderall. Of this 62%, the disparity in racial demographics diagnosed is drastic, with 1.8% of Hispanic, 2.5% of black, and a staggering 4.5% of white children on medication (Lehman, 2023). These data provide further credence to the argument that racism and ableism operate as mutually reinforcing, continuously perpetuating our colonial education system that is designed to propel the next metaphorical cog of capitalism. Coupled with the

highly genetic nature of ADHD, which is considered one of the most heritable psychiatric conditions with a heritability of 74%, our profit-first, result-oriented society will inevitably drive these statistics to a perpetual state of increase until a systemic change is deemed *critical* (Faraone & Larsson, 2019).

Early Childhood Treatment and Access Barriers

While an ADHD diagnosis at a young age can be crucial for a student's academic success, a study led by Stanford Medicine has identified a concerning trend in parents opting for prescription-based treatment soon after diagnosis in preschool-aged children. While identifying young cases of neurodivergence is an important measure in allowing students to have the best chance of success in our incredibly unaccommodating education system, treatment guidelines endorsed by the American Academy of Pediatrics strongly advocate for the exploration of behavioral therapy to precede any prescription written for the 3-5 age demographic. As stated by the article from Stanford Medicine, "But pediatricians often prescribe medication immediately upon diagnosis, according to an analysis of medical records from nearly 10,000 young children with ADHD who received care in eight pediatric health networks in the United States." At ages preceding 6, the human body is incapable of metabolizing these prescribed stimulants, with a high likelihood of both treatment failure and the manifestation of side effects such as irritability and aggressive behaviors. The study found that within a sample of 9,708 children aged 3-5, 42.2% were prescribed medication within a month of their ADHD diagnosis, and only 14.1% received their first medication more than six months after diagnosis (Digitale, 2025). Justified by the lens in which American medicine views neurodivergence, what appears to be medical malpractice is justified as a suboptimal, yet necessary, remedy.

Access to behavioral therapy is an unfortunate barrier that heavily influences the decision to prescribe medication to children at such a young age, as one physician articulated, “[W]eighing the benefits and risks, we think it’s better to give medication than not to offer any treatment at all...” (Digitale, 2025). Exemplified by this quotation, the vast majority of research on ADHD, including this study, approaches neurodivergent behavior through its medical classification: a disorder. Therefore, each diagnosis and research conclusion is skewed to fit the framing of cognitive differences existing as problems to be solved, perpetuating the vicious cycle that reinforces the systemic establishment of what is “normal.” Adhering to this ideology that pushes children closer to the neurotypical ideal through preschool stimulant prescriptions, despite the better judgment of licensed medical professionals, is utterly dismissive of the inherent tradeoffs that come with prescribing children, especially those as young as three. These systemic blinders allow research conclusions to be reached on the adverse effects of unprescribed drugs on young cognitive development, yet studying the effects of long-term, prescribed exposure to stimulants ends in inconclusive data or is outright ignored.

Epistemic Gaps in Stimulant Effects on Developing Brains

Failing to acknowledge changes in the neurochemistry of developing brains due to prescribed stimulant use, or dismissing changes as a form of “normalization,” is yet another poorly hidden reinforcement of the American educational agenda. One journal article published in Science Direct that analyzed adolescent drug exposure highlighted, “Adolescent exposure to drugs induces drug-specific consequences.” The authors go on to state in their conclusion, “[E]xposure to drugs during adolescence have drug-specific neural, cognitive, affective and behavioral consequences. Indeed, drugs like nicotine, cocaine, cannabinoids, morphine, amphetamine and alcohol during adolescence can induce long-lasting effects on brain functions.

Mature neural systems might undergo limited neuroadaptations after moderate consumption, whereas immature developing systems appear to incorporate these changes into a more permanent repertoire of cellular responsiveness. The overall outcome is impaired brain function that can last into adulthood...” (Salmanzadeh et al., 2020). Each drug analyzed, from nicotine to morphine, has vastly different chemical structures, methods of ingestion, and relative strength. Yet, each one was identified as containing significant implications for long-term effects when exposed to adolescent brains, *including* amphetamines. It must be acknowledged, however, that there may be some incongruities between the specific amphetamines used in the study and the effect of amphetamines prescribed for ADHD to children as young as three, despite the sweeping conclusion derived from the aforementioned array of drugs. Thankfully, studies have been performed on these very stimulants.

An academic literature review from 2016 analyzed 44 studies identified and selected as reporting changes in behavior stemming from methylphenidate (Ritalin) treatment. The review immediately criticized the quality of every study conducted, stating, “It would therefore be desirable if future studies were to meet the required quality criteria as determined by study design....” The authors continued the use of this slightly snide prose in their conclusion: “While there is some evidence to suggest that methylphenidate causes changes in behavior, the majority of the studies reviewed paid little or no attention to this issue. Based on the available data, it is impossible to determine the point at which such behavioral effects occur. The frequency of occurrence of behavioral effects is also impossible to determine with certainty. Based on the available data, it is not possible to rule out whether behavioral effects may persist or not persist once treatment is discontinued... In conclusion, despite countless publications and extensive administration, especially to children, we have insufficient data to judge the long-term effects

and risks of taking methylphenidate...” (Konrad-Bindl et al., 2016). As amphetamine-based stimulants like dextroamphetamine-amphetamine (Adderall) are generally considered to be stronger in effect and potency than methylphenidate, the inconclusive nature of these results raises even more pressing concerns about the widespread use and endorsement of both categories of stimulants.

A 2018 peer-reviewed study analyzing the effects of amphetamine exposure during adolescence and its impact on both behavior and prefrontal cortex neuron activity in adulthood failed, again, to provide any conclusive evidence for or against stimulant impact on neurological development. Following a trend of citing an inadequate aspect of the study and calling for further research, the authors state, “Because AMPH is used in the treatment of attention deficit hyperactivity disorder (ADHD) in children and adolescents, there is obvious concern about the potential for early-life drug exposure to induce long lasting changes in brain function and behavior. The current study does not address this issue, however, as the exposure dose used here (3 mg/kg/day injected i.p.) is likely to be beyond what would be used therapeutically. Future studies that use more clinically relevant dosing of AMPH are clearly warranted...” (Sherrill & Gulley, 2018). Evidently, as there has yet to be a change in regulating the minimum age for stimulant prescription, no studies have been conducted that would produce sufficient evidence to warrant doing so.

ADHD Pharmaceutical Market Profitability

Neurodivergence’s circular structure reaffirms colonial educational standards, such as the sustained, subversive implementation of racist and ableist practices. One deeply entrenched explanatory factor for why research has avoided the exploration of detrimental cognitive alteration in children via stimulants acts as the very foundation for this colonial, capitalist

system: money. Market analysis conducted by Grand View Research states, “The global attention deficit hyperactivity disorder market size was estimated at USD 14.3 billion in 2023 and is expected to reach USD 18.6 billion by 2030... growth can be attributed to the escalating demand for [ADHD] drugs, driven by the rising global prevalence of ADHD.” This suspiciously underresearched and underregulated, politically leveraged, and widely promoted stimulant market segment is ridiculously profitable, dominating the market and accounting for the largest share of drug type at 70.9% in 2023 (Grand View Research, n.d.). Maintaining a standard of individualistic responsibility to conform, through pharmaceutical means, to a Eurocentric societal model is not simply an exercise in preventing systemic change; it’s the commodification of neurodivergence. A strategy that, after diagnoses have more than doubled in less than 30 years, is far too profitable to be stopped without a seismic societal shift.

Adolescent Stimulant Misuse

Sitting next to substances such as cocaine and methamphetamine, Adderall and Ritalin find themselves categorized by the Drug Enforcement Administration as Schedule II substances labeled as: “Drugs with a high potential for abuse, with use potentially leading to severe psychological or physical dependence [and] are considered dangerous...” (United States Drug Enforcement Administration, n.d.). With diagnoses and thus sales on the rise, stimulant misuse is becoming a prevalent area of concern, particularly within educational institutions. An article from the National Institutes of Health states, “[N]on-medical use of prescription stimulants among teens remains more prevalent than misuse of any other prescription drug, including opioids and benzodiazepines.” The massive influx of stimulant availability, resulting from the unprecedented increase in prescriptions, has led to alarming levels of redistribution and unregulated consumption rapidly approaching epidemic magnitudes, as the article states,

“Prolonged stimulant misuse can lead to several detrimental health effects including cardiovascular conditions, depressed mood, overdoses, psychosis, anxiety, seizures, and stimulant use disorder.” Lacking regulation, “medications – bought online or shared among friends or family members – can contain fentanyl or other potent illicit substances that can result in overdoses” (National Institutes of Health, 2023). Capitalistic greed has, yet again, found a new demographic of young victims.

Emerging Research and Alternative Treatments

Thankfully, brand-new studies are beginning to identify the pitfalls of prescribing stimulants to children. A peer-reviewed study from June 2025 on how psychostimulant treatment changes the brain morphometry in adults with ADHD concluded, “This study demonstrated that stimulant medication use in adults with ADHD was associated with significant alterations in cortical morphology, including changes in gyrification index, sulcal depth, and fractal dimension, but not with gray matter volume differences...” (Ghozy et al., 2025). Even more recently, a study published on Christmas Eve, 2025, made a breakthrough discovery that has completely changed our understanding of how stimulants affect the brains of people with ADHD. The article states, “Stimulant medications have long been thought to treat ADHD by acting upon regions of the brain that control attention, but a new study by researchers at Washington University School of Medicine in St. Louis casts doubt on that thinking... it shows for the first time that these drugs act primarily on the brain’s reward and wakefulness centers, rather than on its attention circuitry.... The findings... suggest that prescription stimulants enhance performance by making individuals with ADHD more alert and interested in tasks, rather than directly improving their ability to focus. The researchers also found that stimulant medications produced patterns of brain activity that mimicked the effect of good sleep, negating the effects of sleep deprivation on brain

activity...” (Kopf, 2025). While the first study justifies further funding and exploration into neurological alterations from stimulant use, the second completely reshapes how we think about what ADHD is and the functionality of medications.

Stimulant ADHD medications are not inherently evil. When used correctly, they can be extremely effective resources for adults, individuals nearing adulthood, and children who are outliers who would truly benefit most from prescribed stimulant use. For the majority of diagnosed children, however, even the *risk* of detrimental, permanent alteration in neurochemistry is worth seeking alternative measures of treatment. Thanks to modern medicine, there are many different non-stimulant medications available, with more in development. There are many holistic approaches to explore, such as ADHD coaching, organizational skills training, executive function training, regular aerobic exercise, dieting, cognition-supporting supplements, consistent sleep scheduling, and limiting activities like excessive screen time that cause poor dopamine regulation (Budur et al., 2005). Academically, despite their intrinsically unjust, neurotypically biased structure, modern education systems are more accommodating than ever. Most importantly, there is no replacement for behavioral development from the nurturing of a parental figure. As stated by Stanford Medicine, “The evidence-based behavioral treatment recommended by the American Academy of Pediatrics is called parent training in behavior management. The training helps parents build strong, positive relationships with their children; offers guidance in rewarding a child’s good behaviors and ignoring negative behaviors; and recommends tools that help kids with ADHD, such as making visual schedules to help them stay organized...” (Digitale, 2025).

ADHD is *NOT* a Disease or Disorder

Attention-Deficit/Hyperactivity Disorder is a multifaceted, incomprehensibly complicated entity that is wildly misunderstood and grossly mistreated as a disease or a disorder. Instead, it is a label describing a difference in cognitive abilities that ushers in both strengths and weaknesses, entirely dependent on the environment in which one is placed. With struggles come superpowers: resilience and adaptability, exceptional creativity, energy and drive, emotional hyperawareness, and the ability to hyperfocus on passionate interests, to name a few. We *must* stop treating ADHD as an ailment, reliant on a cure, and begin to accept children for who they are. Our ableist, socially unjust actions are forcing children into conformity and, in return, creating a less diverse, less interesting world. In a Radiological Society of North America press release from 2019, Dr. Liesbeth Reneman, M.D., Ph.D. from the Department of Radiology and Nuclear Medicine at the Academic Medical Center, University of Amsterdam, the Netherlands, stated, “The results show that ADHD medications can have different effects on the development of brain structure in children versus adults... [w]hat our data already underscore is that the use of ADHD medications in children must be carefully considered until more is known about the long-term consequences of prescribing methylphenidate at a young age... [t]he drug should only be prescribed to children who actually have ADHD and are significantly affected by it...” (Brooks, 2019). Forcing bright, joyful children to conform to the neurotypical norm, neutered by psychopharmaceuticals administered before kindergarten, is a sickening, Orwellian dystopia manufactured by powers hidden in the dark, shadowy recesses of our society, and we must work collectively to put an end to this perpetual cycle of tyranny.

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