

Restless temperament

On the rise of the ADHD Industrial Complex

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Alan Schwarz

ADHD NATION

The disorder. The drugs. The inside story
338pp. Little, Brown. Paperback, £14.99.
978 1 4087 0657 2

Leo Tolstoy displayed early on the wildness he would later come to regard as the Tolstoy family trait. As the household sat down to table, the boy took a running jump headfirst through the first-floor window above them, explaining, when he regained consciousness, that he had wanted to surprise everyone.

Jean-Jacques Rousseau, whom Tolstoy admired, was, if anything, even more impulsive. Aged fifteen, he ran away from his family, city and country, changing the entire course of his life, simply because he had missed a curfew and didn't want to get a beating from the engraver to whom he was apprenticed.

What Tolstoy called *dikost*, or "wildness", Rousseau called his "restless temperament". The Russian word carries connotations of foolishness, eccentricity and shyness, and both men found polite conversation agonizing. They were prone to crankish obsessions, and struggled to keep to resolutions. "My mind is so wavering that the least circumstance destroys all good intentions", Tolstoy complained in his diary. "A mere nothing frequently calls me off from what I appear the most attached to", Rousseau wrote in his *Confessions*. "I give in to the new idea; it becomes a passion, and immediately every former desire is forgotten."

As the *New York Times* reporter Alan Schwarz makes clear in *ADHD Nation*, his account of the epidemic that today is called Attention Deficit Hyperactivity Disorder (ADHD), the combination of hyperactivity, impulsivity and distractibility that characterizes the condition is nothing new. In 1775, the German physician Melchior Adam Weikard ruminated on how to treat "the inattentive person", and the Scottish doctor Sir Alexander Crichton, in his *Inquiry into the Nature and Origin of Mental Derangement* (1798), devoted an entire chapter to "Attention, and Its Diseases", while hinting obliquely that he might veer that way himself.

ADHD Nation attempts to chronicle how one in seven young Americans came to be diagnosed with a supposedly serious mental

disorder, with most of them going on to be put on the stimulants methylphenidate (Ritalin or Concerta) or dexamfetamine (Adderall). "It's the story of how we, as a society, have allowed what could have been a legitimate medical condition to be diluted beyond all recognition, and beneficial medication to become a serious drug problem", he writes. For him, the answer largely lies with what he calls "The ADHD industrial complex", the circle of pharmaceutical companies, pharma-funded researchers and psychiatrists, together with authors who have so ruthlessly promoted the disorder.

Keith Conners, whose diagnostic interviews did so much to legitimize ADHD, tells Schwarz how, shortly after he and his mentor Leon Eisenberg published the very first paper demonstrating the calming effects of Ritalin on disturbed children, in 1963, an executive from Ciba, the drug's manufacturer, came into Eisenberg's office and passed him a cheque for \$5,000. So five years before ADHD made its first appearance in the American Psychiatric Institute's diagnostic manual under the name "hyperkinetic reaction of childhood", the company with the supposed cure was making undisclosed payments to prominent researchers in the field.

The early influence of the marketing men may explain why the label Attention Hyperac-

tivity Deficit Disorder so poorly fits the condition. ADHD is not only, or even mainly, about attention. It brings problems with scheduling tasks, social difficulties, and a tendency to be swept up by enthusiasms. It is not really a deficit: if something engages them, people with the condition can become deeply absorbed for hours.

Schwarz describes how the pharmaceutical industry paid prominent psychiatrists and psychologists to do research that painted a baleful picture of the consequences of the condition, using it to warn parents that their children, if left irresponsibly unmedicated, risked dropping out of school, bullying their classmates, getting in trouble with the law, and taking drugs. "Parents got the message", he writes. "Give your child Adderall or else he could become a car-crashing, felonious psychopath."

Yet the opposing idea, advanced by the child psychiatrist Ned Hallowell, that ADHD might be a "good news diagnosis", characteristic of creative, maverick minds is, for Schwarz, even less credible; it is simply the soft sell of the ADHD Industrial Complex. "No science had even remotely indicated that kids who do get diagnosed wind up as novelists or transcendent composers as a result", he writes of such claims in Hallowell's bestseller *Driven to Distraction*. "But at its core, *Driven to Distraction* was not science. It was marketing." Hallowell, who himself suffers from ADHD, advocates medication for his patients – he once described Ritalin as "safer than aspirin" – but does not take any himself.

Hallowell's list of putative ADHD geniuses is certainly far-fetched – it claims Einstein, Mozart, Thomas Edison and Abraham Lin-

coln. But no one who knows about ADHD, either as a clinician or a patient, can read *Confessions*, Rousseau's detailed description of his personality and life history, without recognizing the traits. "My mind, impatient of any constraint, refuses to subject itself to the discipline of the moment", he complains. "Even the fear of not learning makes me inattentive. Anxious not to irritate my teacher, I pretend to understand; he continues and I understand nothing. My mind insists on moving at its own pace, and will not submit to anyone else's."

Tolstoy similarly resisted all rote-learning as a child. He dropped out of university after three wasted years, and then proceeded to run up such enormous gambling debts that he was forced to sell the main house of his family mansion. But both men saw their unruly temperaments as intimately linked to their talent. Tolstoy believed *dikost* brought passion, daring, originality and independence of thought, as well as the impulsivity which led a scandalous ancestor to cover his body in ink on a trip to the South Seas. "You've got the Tolstoyan *dikost* that we all have", he wrote to his great-aunt Alexandra Andreyevna, a member of the Russian court. "It was not for nothing that Fyodor Ivanovich got himself tattooed".

Rousseau believed that works produced by people with temperaments such as his gained a rare quality, simply because they were only able to write when passionately engaged. "When they do write, they have to be forced to do so by a stimulus stronger than interest or even glory", he declares in his *Dialogues*. "This stimulus, difficult to contain, impossible to counterfeit, makes itself felt in everything it produces."

Alan Schwarz's book is an absorbing, well-researched corrective to decades of pharma industry marketing. He is probably right to target the extreme overdiagnosis, which Conners rightly describes as "a national disaster of dangerous proportions". But by accepting the framing of extreme hyperactivity, impulsivity and distractibility as an illness best treated with medication, he only goes half of the way.

Physical objects like the Rosetta Stone form a concrete and tangible record of humankind's cultural legacy. The intangible ephemera that define the intensely personal and subjective landscape of our thoughts, memories, emotions and associations, however, can only be glimpsed tangentially and opaquely through the artefacts that survive human existence. The exact record of individual conscious existence – trapped, as it is, within the private mental universe that each of us inhabits – evaporates and is lost forever at the moment of our death.

In *A Day in the Life of the Brain*, the neuroscientist Susan Greenfield engages the reader in her personal quest to define a new and spe-

See what you think

An attempt to map consciousness

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Susan Greenfield

A DAY IN THE LIFE OF THE BRAIN
273pp. Allen Lane. £20.
978 0 241 25667 1

cial type of Rosetta Stone. She does not pretend to have solved the problem, preferring instead to allow us to savour it with her, and to explore some of her ideas, which she believes may form the foundations for this new and particular type of tablet. Her hypothetical device would act as an interlocutor between the private and subjective world of individual conscious experience, and the functional activities of the human brain that facilitate it. This would resolve a fundamental question that continues to haunt the natural sciences, namely the relationship between subjective mental states and the objective, physical

events in the human brain. It would enable minds to be read, thoughts to be captured like autumn leaves falling from trees, and for the minds of humans to be preserved before their demise. It would facilitate the artificial construction of new and qualitatively different types of consciousness quite different to any with which we are familiar, and support projects such as the development of self-aware machines.

The crucial step in decoding the Rosetta Stone was the realization that the oval-shaped loops enclosing hieroglyph characters, known as cartouches, donated proper names. Greenfield, in turn, pins her hopes onto neuronal assemblies to explain the mechanics of conscious experience. These transient collections of large numbers of interconnected neurons acting in concert for less than a second – ripples of activity in the sea of brain activity – have until recently been invisible owing to the lack of an appropriate device for mapping them.

This changed, however, with the invention of a technology in the 1990s known as voltage sensitive dye imaging (VSDI). This allowed the voltages across brain cells to be tracked in real time, and the flickering activity of the neuronal networks – anticipated many decades earlier by the Canadian psychologist Donald Hebb – to be visualized. While the method cannot itself be used in humans, another technique, functional electrical impedance tomography by evoked response (fEITER), offers the possibility of dynamically visualizing neuronal assemblies in conscious humans.

Greenfield embeds her exploration of neuronal assemblies into an easily flowing narrative that guides the reader through a selection of significant moments in her day. At no point, however, is the most important issue substantially addressed: how a collection of sensory information, associations, intrinsic arousal systems, neural networks, specialized brain regions and a sea of pulsating neurotransmitters are able to generate subjective states. The book is curiously devoid of even the most rudimentary mention of genetics, and parsimonious with its use of experimental data. It nevertheless provides an entertaining and compelling introduction for the uninitiated to the secret world of consciousness and brain function.

THE EDWIN MELLEN PRESS

Toward an Aesthetic Language
of Social Justice:

A Theory of Black Arts

by

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ISBN 978-1-4955-0413-6

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