Naoki Higashida was fifteen years old when he published his memoir *The Reason I Jump: The Inner Voice of a Thirteen Year Old Boy with Autism* (2007 / 2013) in Japan and twenty-one when it was translated into English. Tito Rajarshi Mukhopadhyay was eleven when he published his first two memoirs, *Beyond The Silence: My Life, the World, and Autism* (2000) and *The Mind Tree: A Miraculous Child Breaks the Silence of Autism* (2000); he was nineteen when he published his third memoir, *How Can I Talk If My Lips Don't Move?: Inside My Autistic Mind* (2008). Higashida and Mukhopadhyay write with pedagogical purpose: They write to make their experience legible for others, to explain what it feels like to be Higashida or Mukhopadhyay. Like all the authors of all brain memoirs—autobiographies that foreground the brain’s roles in the making of self—these writers experiment with narrative forms that enable speculation about—and even simulation of—relations between physiology and phenomenology. The particular narrative form of any brain memoir varies, but a dual impetus for the experiments is common to most of them: 1.) The search for a form that enables the expression of the writer’s particular subjective experience and 2.) A vital need to represent relations between brain, body, and world that resist simple or reductive cause-and-effect models.

Autistic and other neuro-atypical readers may recognize or identify with many of these writers’ sensory and cognitive experiences and notice the differences that demonstrate how varied autistic experience is. For these readers, Higashida and Mukhopadhyay take on the much-needed role of public figures in whom members of the autistic community may recognize their own experience. Higashida and Mukhopadhyay both address so-called neurotypical readers with the aim of offering detailed accounts of the phenomenology that motivates autistic behaviors these readers
are likely to find perplexing—stimming, repetitive actions, unusual vocal patterns, unexpected responses in social situations. At first glance, these memoirs might seem to suggest a firm divide—or fixed binary—between autistic and neurotypical experience. But so-called neurotypical readers will find plenty to identify with in these books. In their representation of the interplay of physiology and phenomenology, Higashida and Mukhopadhyay call on all readers to examine the particularity of their mind styles, blurring the line between neurotypical and neurodivergent experience.

Higashida titles his chapters with questions he imagines neurotypical readers might ask:

“Why don’t you make eye-contact when you’re talking?,” “Is it true you hate being touched?,” “Do you have a sense of time?,” “Why can you never stay still?” In a chapter entitled “Why do you repeat actions again and again?,” Higashida’s answer offers a characteristic account of his general portrayal of the relationship between physiology—specifically, the brain—and personhood:

I do some action or other that I’m not allowed to do; then I get told off for it; and last, my impulse to re-create this sequence trumps the knowledge that I’ve been told not to do it, and I end up doing it again. The next thing I know, I feel a sort of electrical buzz in my brain, which is very pleasant—no other sensation is quite the same. Perhaps the closest thing is watching your favorite scene on a DVD, looping on auto-repeat, over and over. (99)

That electrical buzz “trumps” social norms. His description is reminiscent of drug users whose will to alter consciousness overrides social imperatives. Higashida is seeking a phenomenological pleasure he describes as “a sort of electrical buzz in my brain.” Repetitive actions—rocking, lining up toys or objects, a certain sequence of movements—induce feelings. Higashida’s electrical buzz may be a metaphor, or he may feel it as located in his brain. Either way, he represents his brain as a vehicle for manipulating consciousness—or mediating the relationship between environmental stimulus and subjective feelings.
Compare Higashida’s account of repetitive behavior with Mukhopadhyay’s account of obsessions:

An obsession begins in the caudate nucleus, the impulse passes to the prefrontal cortex. From the prefrontal cortex, the impulse goes to the cingulate cortex. The impulse from the cingulate cortex goes back to the caudate nucleus, then completing a cycle. The cycle repeats again and again inside the mind. So an obsessive impulse is not easy to distract.

Why does it bring an extreme manifestation of behavior? That is because the caudate nucleus is so close to the amygdala region of the brain, which is responsible for all our primeval emotions, like fear and anger. When the caudate nucleus is stimulated, the amygdala is also affected. (187)

Mukhopadhyay presents hypotheses about the brain as fact—e.g., “the amygdala . . . is responsible for all our primeval emotions” and he reduces complex behaviors to a fairly simple account of brain physiology—e.g., “An obsession begins in the caudate nucleus.”

At moments like these, he seems to equate personhood with what historian Francisco Varela has called “brainhood.” Those first couple of paragraphs seem to suggest that Mukhopadhyay is his brain. But such a reading oversimplifies the relationship between physiology and personhood depicted in How Do I Talk If My Lips Don’t Move?—and in many other brain memoirs.

Mukhopadhyay elaborates his account of the brain physiology involved in obsession with the social and phenomenological contexts that give it meaning:

My extreme obsession with train rides was beyond my reason and control, although I understood that I was being irrational about it. It is the same process that goes on in the mind of perhaps a chain-smoker, who, although he knows and understands completely well that he is not supposed to smoke, is still compelled to.
During the day, while still in school, I mentally took many trips on the metro bus and the metro train. I had to spend several hours in that special school in Los Angeles, with a pair of scissors and colored paper because I was supposed to make some decorative cards for one of those holidays when you are supposed to give cards to one another. I was never a good planner of making cards, and I knew that my aide Arnel would help me to complete it.

So why bother? Why not keep my mind occupied with some better entertainment? (187)

When Mukhopadhyay compares his obsessive behavior to the “process that goes on in the mind of a chain-smoker,” he is offering a pretty similar explanation to Higashida’s. The obsessive behavior changes his state of mind. It allows him to manipulate environmental stimulus in order to change the way the world makes him feel. Mukhopadhay is more detailed and confident about the brain’s role in the process. He goes so far as to suggest that it’s the brain alone that produces his altered consciousness.

In his article “Brainhood, Anthropological Figure of Modernity,” historian Fernando Vidal coins the term “cerebral subject” to describe accounts of the self that suggest “the brain is the only part of the body we need in order to be ourselves” (6). Vidal traces a history of neuroscience’s influence on popular culture and the emergence of a vigorous—and I would argue, false—debate about whether or not brainhood equals personhood. The inflammatory titles of two controversial books illustrate this debate: Dick Swaab’s We Are Our Brains: From the Womb to Alzheimer’s (2010) and Alva Noë’s Out of Our Heads: Why You Are Not Your Brain and Other Lessons from the Biology of Consciousness (2011).

The “you are your brain” / “you are not your brain” debate is possible because of the paradox created by rapid advances in the neurosciences that raise more questions than answers. In this presentation, I am arguing that brain memoirs—and autism memoirs, in particular—demonstrate an urgent need to move beyond this debate. Brain research and neurological medicine
are vital to the lives of brain memoirists. It’s common for brain memoirists to express frustration with the medical establishment or aims of brain research that are too far removed from the experience of living people’s needs. Nonetheless, authors of brain memoirs make it clear that they don’t have the luxury of eschewing neuroscience on philosophical grounds. Often, autism memoirs are direct appeals to medical researchers, practicing physicians, and educators—asking these professionals to attend to the unique combination of phenomenological experiences that shape the author’s autistic experience.

Joseph Strauss identifies three qualities of autistic thinking that become characteristic of autistic writing: “a propensity to perceive the world in parts rather than as a connected whole”; “a preference for orderliness, system, and ritual”; and the development of a system “of private meanings” composed of “rich networks of association” rather than “a chain of logical coherence” (467-469). These qualities in Higashida’s and Mukhopadhyay’s writing—attention to parts disconnected from the whole, systems of private meanings, and what Strauss calls “rich networks of association” result in some formal similarities, with some significant difference. Higashida’s structure design to focused on parts of his experience: Each chapter addresses a question about sensory or cognitive experience, resulting in an anti-chronological narrative. Mukhopadhyay’s chapters are similar, each addressing an aspect of his mental experience, but they build chronologically geographically, beginning with childhood in Mysore and Bangalore, India and moving through adolescence in Los Angeles and Austin, Texas. In both cases, narrative structure resists synthesis, invites readers to learn the writer’s “system of private meanings,” which develop associatively, rather than through cause-and-effect. By design, they are narratives that preclude binary thinking, so it’s not surprising that they don’t duplicate or engage in the “you are your brain” / “you are not your brain” binary. Their brains are a central thread of their stories, but they don’t ask whether their brains are the whole story or explain everything. As memoirists, they speculate about their brains’
roles in manifesting phenomenological experience; they emphasize the fact that we must attend to physiology and phenomenology if we want to understand neurological difference.

In general, brain memoirs are chronicles of the push-pull between their selves and their brains, their suffering and their selves. The relations between self and brain they chronicle aren’t simply changed by brain disease or injury, but are continuously changing in response reaction to altered brain function and the writers’ living responses to their physiological conditions—including, crucially, writing about them. Brain memoirs do not let their writers—or readers—forget that they are organisms whose lives are shaped to a large degree by accidents of physiology, culture, family, and circumstance. A few notable examples include Kay Redfield Jamison’s *An Unquiet Mind: A Memoir of Moods and Madness* (1995), Jean-Dominique Bauby’s *The Diving Bell and the Butterfly* (1998), David B’s *Epileptic* (2006), and Siri Hustvedt’s *The Shaking Woman: A History of My Nerves* (2009). They confront accidents by crafting a sense of agency that’s nuanced enough to account for what’s beyond their control. This is where their distinctive cultural work begins. Of course, brain memoirs come in a broad spectrum of forms and with a wide variety of agendas. Nonetheless, there are some common denominators. Broadly speaking, brain memoirs make at least five significant contributions to culture—in varying degrees for each particular memoir: (1) they enable their writers to gain a sense of agency or control in the face of the “accidents” that shape lives, including the accidents of genes, disease, or physical injury; (2) they offer much-needed solace and information to readers who suffer in ways similar to the writer as well as the loved ones and caretakers who support them; (3) they provide detailed, first-person accounts of neurological difference that have the potential to inform and influence brain research and clinical practice; (4) they renew and invigorate philosophical debates about mind and body, qualia, memory, and relationships between self and narrative; (5) they develop narrative strategies for representing the complexities of the minds and bodies of their authors.
Like other brain memoirists, many autistic memoirists offer a way out of the false binary installed by the myopic attention to whether or now we are all just “cerebral subjects” now (6). A few notable examples include Clara Claiborne Park’s *[Siege: A Family’s Journey into the World of an Autistic Child](https://books.google.com/books?id=Z8XvCwAAQBAJ)* (1982), Temple Grandin’s *[Thinking in Pictures](https://books.google.com/books?id=Z8XvCwAAQBAJ)* (1996) and *[Emergence](https://books.google.com/books?id=Z8XvCwAAQBAJ)* (1996), and John Elder Robinson’s *[Look Me in the Eye: My Life with Asperger’s](https://books.google.com/books?id=Z8XvCwAAQBAJ)* (2008), and Tim Page’s *[Parallel Play](https://books.google.com/books?id=Z8XvCwAAQBAJ)* (2009). Of course, the writers of these memoirs have varying motives and methods for making brains central to their literary experiments, but nearly all of them use narrative to ask a set of questions the laboratory sciences are not equipped to answer: *What roles might the brain play in the making of identity, the experience of embodiment, and the shaping of social relations?*

I want to examine the ways Higashida and Mukhopadhyay ask versions of this question by examining hypotheses about the physiology of particular phenomenological experiences they describe. Higashida introduces questions about the brain’s role in autistic experience, but quickly moves from physiology to phenomenology—a pattern repeated throughout the book. For example, he writes,

> So is there something wrong with the circuitry of our brains? Life’s been tough for people with autism, pretty much forever, yet nobody’s been able to identify the causes of autism. For sure, it takes us ages to respond to what the other person has just said. The reason we need so much time isn’t necessarily because we haven’t understood, but because by the time it’s our turn to speak, the reply we wanted to make has often upped and vanished from our heads.

> I don’t know if this is making a lot of sense to you. Once our reply has disappeared, we can never get it back again. What did he say again? How was I going to answer her
question? . . . Search me! And all the while, we’re being bombarded by yet more questions. I end up thinking, This is just hopeless. It’s as if I’m drowning in a flood of words. (18)

Higashida’s physiological question quickly becomes a phenomenological one. When he writes, “For sure, it takes us ages to respond to what the other person has just said,” he is addressing his own question about the brain circuitry of autistic people. Science can’t explain what the link between that circuitry and autistic conversational styles, but Higashida offers an account that’s consistent with most autobiographical writing about autism. What seems like simple conversation to neurotypicals involves a flood of sensory and cognitive stimulus for him. He’s “drowning in a flood of words.”

Mukhopadhyay offers more elaborate engagement with both neurological medicine and theoretical neuroscience. In a chapter entitled “Exposure Helps Shape Visual Perception,” he tells the story of an encounter with Bill Hirnstein, “one of the scientists who first tested me when I came to the United States.” Hirnstein showed him a picture and said, “Tito, name this object.” In Mukhopadhyay’s words, “I began to search all the names that were associated with that object, like carnivore, stripe ferocious, forest, hunt, etc. All those names appeared in my mind except the word tiger was getting desperate. I was getting desperate because I felt trapped in the focal points of the waiting eyes of those scientists who were ready to prove ‘Who knows what.’ (115). Mukhopadhyay aces the test when he realizes that if he starts with a definition—“a striped animal, which is not a zebra, is a TIGER” (116), he can name the objects Hirnstein shows him. Mukhopadhyay turns to the work of neurologist and theoretical neuroscientist Antonio Damasio to speculate about the physiology involved in the cognitive experience he describes:

In his book Descartes’ Error, Antonio Damasio talks about the “converging zones” in the brain, which oversee the recollection of nouns and interactions between different nouns, like fan and air, bus and driver. These converging zones are also responsible for storing images of faces, in general and in particular. Like the faces of Tibetan monks and the face of the
Dalai Lama. In his book Damasio mentions two types of converging zones, the lower converging zone and the higher converging zone. The lower converging zone is responsible for storing a general image of faces, with two eyes, a nose, and a mouth below the nose. The higher converging zone is responsible for storing images of one particular face and recalling that face at the right moment from some past experience.

After reading that, I made my own hypothesis. I might have trouble with the higher converging zone regions of my brain. That may lead me to find it difficult to recall a person’s name based on his face, although I can recognize who he is from his voice or his personality traits, which are usually stored as a symbolic representation or combination of different sensory stories. That is my hypothesis. (117)

It’s an untested—and perhaps untestable—hypothesis. Damasio’s convergence zones involve multiple systems of brain physiology through which neural connections proceed via what he calls “feed forward loops” that enable “knowledge retrieval” through “relatively simultaneous, attended activity in many early cortical regions, engendered over several iterations of such reactivation cycles” (Self 148). Freud’s concept of overdetermination—the idea that a psychological effect has multiple causes—can help describe the complexity involved. The meaning of a simple image is triply overdetermined. That tiger is physiologically, cognitively, and socially overdetermined. Mukhopadhyay’s ability to match a word with an image is shaped by the stress of the clinical encounter, his metacognitive response to that stress and the demands of the test, and the brain physiology involved in the emotional and cognitive demands of the situation.

In his essay “Autism and Culture,” Joseph Strauss proposes a biocultural model of autism that would account for the overdetermination of body, self, and world Mukhopadhyay describes:
Instead of thinking of autism as a disease, with apprehensible cause, a determinate diagnosis, and a possible cure, it might be more productive to think of it as a “disease entity,” which, according to [Lennard] Davis 2008, “allows us to move away from the positivist kind of descriptive categories of disease and to think of diseases not as discrete objects but as ranges of bodily differences and reaction” (22). Along similar lines, we might begin to think of autism in light of what Morris 1998 calls a biocultural model, one that discusses illness and disease as emerging from a complex interaction of biology and culture. (465)

Most autistic memoirists eschew the term disease entirely. In the afterword to The Reason I Jump, Higashida asks, “What am I going to be, if my autism isn't cured?” He acknowledges that “When I was little, this question was always a big, big worry”—but swiftly turns the tables:

I hope that by reading my explanations about autism and its mysteries, you can come to understand all the obstacles that present themselves don’t come from selfishness or from ego. If all of you can grasp this truth about us, we are handed a ray of hope. However hard an autistic life is, however sad it can be, so long as there’s hope we can stick at it.

And when the light of hope shines on this world, then our future will be connected with your future. That’s what I want, above all. (175)

Higashida’s question about a cure implies his autism is a disease, but he casts that question as belonging to his kid self. (Keep in mind he was thirteen when he wrote the book.) His older self, the writer, images a world when “our future will be connected to your future.” Implicit in that is a biocultural model of autism that accounts for physiology without seeking reductive cause-and-effect relations between the brain, body, and world. In their book Neuro: The New Brain Sciences and the Management of the Mind (2013), Rose and Abi-Rached argue that the neurosciences “at their most sophisticated . . . are struggling toward a way of thinking in which our corporeality is in constant
transaction with its milieu” (2-3). This is a fair description of what brain memoirists are doing. My hope is for a future in which the future of neuroscience will be connected to the future of literature—in concerted but multifarious endeavors to find explanations for the mysteries of autism and for neurological experience in its many, overdetermined forms.
Works Cited


