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Ralph James Savarese and Lisa Zunshine



The Critic as Neurocosmopolite; Or, What Cognitive Approaches to Literature Can Learn from Disability Studies: Lisa Zunshine in Conversation with Ralph James Savarese

This conversation began at MLA in 2012 when we recognized that cognitive approaches to literature and disability studies, two rapidly and independently developing fields, must start talking to one another. The subject is autism: how it has been divergently understood and deployed and how it can be convergently understood and deployed. Kept apart, the two fields seem vulnerable to caricature. The former sometimes applies scientific and medical insights uncritically (such as the assertion that autistics have no theory of mind and, thus, cannot read fiction); the latter sometimes advances a completely social-constructionist understanding of physiological distinction (as if stigma were the entire story of alternative embodiment). Scholars in cognitive approaches to literature need the insights of disability studies to think about mind, narrative, and agency in neurodiverse ways; scholars in disability studies need the insights of cognitive approaches to literature to give the concept of neurodiversity,

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which is quickly becoming a kind of platitude, some actual neuroscientific content. Talking across conventional disciplinary divides has precipitated questions that we would never have thought to ask. It has also made us hope that an ongoing conversation between cognitive approaches to literature and disability studies will transform both fields. We cannot foresee the exact shape of this transformation, but the formerly distinct trajectories already feel more intertwined.

A Postcolonial Neurology

Lisa Zunshine (LZ): In her recent contribution to *Disability Studies Quarterly*, Paula C. Durbin-Westby, an autistic disability rights activist, builds on Gayatri Chakravorty Spivak's "Can the Subaltern Speak?" to stress the importance of the "inclusion of autistics as active collaborators in research, rather than mere research subjects to be studied and then written about, often in language that many autistic people find demeaning. We must insist," she writes, "on being 'speaking subjects,' with our participation and input used in meaningful ways, rather than being 'spoken subjects,' a position which can lead to misinterpretation of research results and to uninformed experiments." Would you comment on the ramifications of this practice of adapting the rhetoric of postcolonial studies to disability studies?

Ralph James Savarese (RJS): The postcolonial analogy can be traced back to a number of scholars, including Arthur Frank, who in *The Wounded Storyteller* likens medical patients to colonized peoples: the former's bodies have been rationally conquered and their indigenous experience of illness or disability has been haughtily disregarded. In its place, an official narrative, in something like a foreign language, has prevailed, leaving patients feeling both alienated and disempowered. But over the last thirty years or so, patients, like postcolonial subjects, have begun to write back to this kind of empire. According to Frank, "Postcolonialism in its most generalized form is the demand to speak rather than to be spoken for . . . or, in the worst cases, rather than being effaced entirely" (13). The rhetoric of postcolonial studies thus helps us to think about the historical circumstances of the neurological other: the subaltern has not only learned to speak, it has also begun to organize, as the neurodiversity movement and organizations such as the Autistic Self-Advocacy Network make clear. Insisting on the right to self-determination and advancing a notion of autism as neurological difference, not pathology, ASAN has agitated for progress on a range of issues: from better education, employment, and housing opportunities to better, more respectful medical care and scientific research.

The difference between the privileged outsider view and the newly empowered insider one is, however, considerable, and because the scientific community often has trouble with what autistic writer Dawn Prince calls "the superior part of speaking" ("The Silence Between")—namely, listening—it continues to cause

damage. Think, for instance, of the common claim that autistics don't experience empathy, which popular novels such as *The Curious Incident of the Dog in the Nighttime* have only further promulgated. This claim is prevalent in the many fields that make up cognitive aesthetics.¹ If one actually listens to autistics, one hears a different story. Stephen Shore, for example, distinguishes between being able to feel the pain of another, which he does so well that he almost "fuses" with it, and being able to perform this venerated emotion in a conspicuously neurotypical manner.² By moving too quickly from a failure to normatively perform empathy to a sweeping contention about innate empathetic inadequacy, experts have not only disseminated faulty science about autism but they have also denigrated the subjectivity of a minority population.

And yet, some scientists do seek the input of autistics in their research endeavors and actively adopt a postcolonial perspective. At the University of Montreal, Laurent Mottron has assembled a neurodiverse team, believing autistic participation essential for doing first-rate science on autism. One of the autistic researchers, Michelle Dawson, served as the lead author for a groundbreaking study, "The Level and Nature of Autistic Intelligence," which showed that the rate of mental retardation in the autistic population was much lower than previously thought.³ Other studies by the team have established the presence of perceptual acuities, 3-D drawing and pattern-recognition skills, simultaneous global and local processing strengths, and enhanced pure-tone pitch discrimination, leading Mottron to remark that autistics are "just of another kind" (Wolman).

In general, autistics evince comparatively more activity in the temporal, occipital, and parietal regions and less activity in the frontal cortex than nonautistics. As a recent meta-analysis by Mottron's team reports, "A stronger engagement of sensory processing mechanisms . . . may facilitate an atypically prominent role for perceptual mechanisms in supporting cognition" (Samson et al. 1553). Autistics, in other words, disproportionately recruit lower-order regions for higher-order tasks—Temple Grandin has famously called this tendency "thinking in pictures." In Mottron's model of "enhanced perceptual functioning," autism "is more accurately described as an entirely different processing system, rather than as a collection of negative cascade effects resulting from one or many major impairments (excesses or deficits) . . ." (Mottron, Dawson, and Soulieres 1385). Such a perspective understands *each* neurotype as a particular set of cognitive strengths and weaknesses, and it explores the extent to which a given task might be performed in divergent ways.⁴

But let me extend the postcolonial analogy a bit further by mentioning a term I have coined for the spirit behind such collaboration. The term is neurocosmopolitanism, and I first used it in an essay about Tito Mukhopadhyay, a twenty-five-year-old writer whom the medical community would describe as "severely autistic" and someone I have been mentoring for the last half-decade. In my essay about his work—he has published four books, the first at age eleven—I referred to Mukhopadhyay as a "cross-cultural, cross-sensorial migrant: a neurocosmopolite armed with metaphor in a world quite hostile to the neurological other" ("Toward a Postcolonial" 276). I wanted to evoke the strenuous journeying of

classical autistics, a group that Oliver Sacks once derided as “creatures for whom very little future lies in store” (246). I wanted to emphasize their efforts in learning the cognitive and cultural habits of neurotypicals, and I implicitly called for an equivalent commitment on the part of the neuromajority.

If cosmopolitanism is the idea of a trans-national community, the feeling of being respectfully at home everywhere in the world, then neurocosmopolitanism is the idea of a trans-neurocommunity, the feeling of being respectfully at home with all manner of neurologies. By “neurocosmopolitan” I mean not just an openness to neurological difference but, rather, a denaturalization, even a dethronement, of privileged neurotypicality. In *Postcolonial Melancholia*, Paul Gilroy advocates “methodic[ally] cultivati[ng] . . . a degree of estrangement from one’s own culture and history” (67) so as to forestall unfavorable judgments about the Other. Traveling to autism, we must do the same. By “neurocosmopolitan” I mean as well the effect on autistics of the journeying I mentioned—what might be termed neurohybridity or mobility.

We can see such journeying in a passage from Mukhopadhyay’s third book, *How Can I Talk If My Lips Don’t Move?* In it he reveals not only his prosopagnosia and synesthesia but also his complex adaptation to these differences—both as a person and as a writer:

In the beginning, Deepa’s presence was just the sound of her voice, which tasted like a tamarind pickle. As days passed, her presence became a peacock blue, dipped in the taste of tamarind pickle. A month later . . . I began to feel confident enough to look at her . . . perfect beautiful face, which I . . . [now] feel honored to dream about, even though I am . . . many thousand miles away in the United States. (110)

Once Mukhopadhyay has grown used to a face, he often has trouble recalling it, however; as a result, he purposely stores faces as idiosyncratic symbols. For example, his teacher’s face in Austin “is represented as a yellow plastic bowl with a wide circumference” (111).

Here, the need to circumvent neurological incapacity paradoxically facilitates the production of figurative language. Disability, we might say, found the accommodation of creative writing, which in turn drew Mukhopadhyay ever more deeply into the social—to the extent that he can now expertly address and captivate an audience. So significant are his sensory integration, proprioception, facial-recognition, and memory challenges that his writing seems a marvel of aesthetic defamiliarization—and it is! “Every time I have to hear Mr. Blake’s voice, I recognize it by a squished tomato smell. After that, I know that there ought to be Mr. Blake somewhere around carrying his voice with him” (R. Savarese, “More Than a Thing”). One thinks of Arthur Rimbaud’s description of poetry as: “a systematic derangement of the senses.” By learning to translate the experience of alternative embodiment into evocative language and by acquainting himself with a range of world literatures, Mukhopadhyay has become an admirable literary neurocosmopolite.

What if scholars in the field of cognitive approaches to literature engaged with autism as neurocosmopolitan possibility? What might they learn, for example, about narrative? Visually impaired writers have taught disability studies scholars just how optocentric conventional narrative is. Once typical vision and its influence on narrative practice have been deposed, a very different organism appears on the page. For instance, a book like Stephen Kuusisto's *Eavesdropping: A Memoir of Blindness and Listening* reveals the strangest of narrative worlds. Might the sensory dislocations of autism do the same for cognitive scholars? A postcolonial neurology can tell us much about literary forms while also modeling a dynamic and mutually transformative embrace of difference.

Mindblindness and Essentialism

LZ: Let's talk about theory of mind, also known as mindreading, that is, the evolved cognitive adaptation that prompts us to explain observable behavior as caused by unobservable mental states, such as thoughts, feelings, and intentions. Cognitive-psychological studies in theory of mind have provided useful research tools for literary critics whose research interests range from emotion and empathy to narrative theory and history of imagination. Yet in exploring how theory of mind structures cultural representations, one should not lose sight of the dark side of mindreading. Because mindreading is not telepathy but merely a far-from-perfect adaptation (they might as well have called it mind misreading), more often than not it actually *limits* our perception and interpretation and lures us into insidious cognitive traps. For instance, it is vulnerable to essentialist thinking (e.g., just consider how easy it is for us to slide into believing that the capacity for complex mental states is what makes us "essentially" human),⁵ and as such can be used as an effective "trope of dehumanization" (Vermeule 87). Blakey Vermeule has described the phenomenon of "literary mind blindness"—that is, a strategic refusal to see a body as animated by mind—in the work of satirists from Jonathan Swift to Auberon Waugh. The "situational mind blindness" practiced by such writers is a "tool of emotional dominance"; it denies "other people the perspective of rational agency by turning them into animals, machines, or anything without a mind" (87). Similarly, I've demonstrated elsewhere that writers of fiction make some characters seem capable of more complex mental states than others and intuitively employ these hierarchies of "sociocognitive complexity" for a variety of ideological agendas (Zunshine, "1700–1775").

To the extent that cognitive biases are inseparable from mindreading, the effect of these biases on the popular and scientific perception of autism is both deeply ironic and tragic. Because the functioning of their theory of mind prompts neurotypicals to correlate observable body language with underlying mental states (e.g., "she is looking at me so she must be paying attention to what I am saying"), when faced with body language that does not yield itself to an interpretation in terms of familiar/conventional mental states, a neurotypical

observer is quick to assume that the mental state behind the behavior is either absent or intentionally asocial. And given the difficulties that many autistics have with proprioception (i.e., awareness of their body) and the ability to control their body language, particularly in an environment containing sensory and/or social stressors, their observable behavior simply does not fit the neurotypical idea of a suitable “performance” of recognizable mental states. The profound irony of this situation is that it is the neurotypical observer who is “mindblind” (i.e., incapable of reading the other person’s mind) yet the label of mindblindness or “impaired” theory of mind is firmly attached to the individual exhibiting the unconventional behavior.

Consider this description by Lucy Blackman (a non-speaking autistic writer) of how her body would spiral into a ritualistic response during a social interaction in public. (Note, too, that some might interpret Blackman’s use of the word “ridiculous” as indicative of her having internalized the dominant neurotypical assumption that what is typical is superior.)

The strange thing was that I could see the ridiculous and comic scenario in my mind’s eye, but I could not alter the behavior. As the other person got more and more embarrassed, I became more and more “autistic.” Once when I was eighteen I was walking home from school. An elderly lady stood next to me at the pedestrian crossing. I assume she was concerned at my odd movements. She asked me if I were all right. Confused by the fact that she expected me to respond, I started running in a little circle. When Jay came to find me nearly half an hour later, I was still describing ritualistic circles, and my would-be benefactor was standing aghast, with an attitude of an affable bird mesmerized by a newly hatched snake. (*Lucy’s Story* 41)

As Douglas Biklen puts it in his collaborative study *Autism and the Myth of the Person Alone*, “physical actions” of people with autism “do not necessarily reveal [their] thinking abilities.” For instance, if one merely observes Blackman “from a normate/outsider perspective, her actions can mislead.” Her “complex social thinking . . . might seem unimaginable if we had seen only that she paced in the school hallway, seemingly unable to speak, and walked away from social interactions.” But this failure in empathetic imagination is the neurotypical observer’s and not the autistic’s: when Blackman walks away from a conversation, this “may reflect [her] excitement or a desire to manage excitement, not indifference to the conversation” (53–54).

What feels, from the inside, like a body that refuses to cooperate with its brain is interpreted, from the outside, as evidence that the “mind is incapable of thinking” (Biklen 136). As Mukhopadhyay explains, “I had been labeled as mentally retarded when I had my first encounter with the psychologist. I was three years old then. The proof for my retardation was that I could not follow basic commands. I was not able to apply my knowledge although I could understand perfectly well what was being asked (“Questions” 136). Commenting on

this mind-body disconnect as a persistent feature of her son's autism, Mukhopadhyay's mother, Soma, says that "it is her dream that [Tito] will be able to talk about picking up a cup, for example, and then do it" (Biklen 273). Jamie Burke reports that when he "was growing up, speaking was so frustrating. I could see the words in my brain but when I realized that making my mouth move would get those letters to come alive, they died as soon as they were born. What made me feel angry was to know that I knew exactly what I was to say and my brain was retreating in defeat" (250–51). Your son, DJ Savarese, explains that the reason his responses are delayed is that "stress and excitement cause [his] sympathetic autonomic system to engage." Hence his suggestions to people who talk with him:

First, ignore my involuntary gestures, including my signs for "done" and "break." They fearfully hear years of negative fear and try to keep me locked into a cycle of autonomic impulses. Remember these gestures are not voluntary. They are just my body's way of responding to stimuli. If you respond to them as meaningful, they fearfully rev my heart more, but if you wait patiently and wordlessly, you free me to finally respond voluntarily. Once I've freed my body to respond, I can skip over the autonomic responses and give faster motor replies as the conversation continues. ("Communicate With Me")

Learning to type, write, or point to letters or words, on their own or with the gradually-decreasing help of facilitators,⁶ can make a tremendous difference in the non-verbal autistic person's ability to reveal his or her complex social thinking, yet so far this "inside-out" perspective of autism seems to have made little difference in the mainstream "outside-in" view of autism as mindblindness (Williams, *Autism—An Inside-Out* 7–17).

Reflecting on the laboratory settings in which this outside-in view is constructed, Blackman observes,

It may be that the social deficits which are the cornerstone of an autism spectrum diagnosis tell us far more about the person who made them markers for such a diagnosis than about the child whom she observes. . . . That is, the whole testing procedure is somehow actually constructed on whether the tester observed the person to socialize in a way that the tester understood to be socialization. . . . We often use the term "communication" when really we mean that we have observed in another human being a behavior from which we derive meaning. ("Reflections" 149, 153)

If only it were possible to be constantly aware of the "metaphorical nature" (Biklen 38) of the concept of mindblindness when applied to autism, this concept might be less insidious. Imagine that, upon encountering a person who strikes you as "mindblind"—a person apparently unaware of your intentions to communicate with her and thus walking off in the middle of the conversation (as Blackman

does above)—you were to assume that it is *you* who is mindblind right now, that it is *you* who doesn't know how to read the person's behavior. You would either make an extra effort to understand what's going on or, failing that, conclude that your mindreading abilities are not sufficient for this situation. Note that when the charge of mindblindness is thus reversed and applied to *you*, it's very easy to see it as a metaphor: an indication of a specific communication failure that can be resolved. All pragmatics, no essentialism.

At present, however, the refusal to acknowledge autistic mindblindness as a metaphor feeds essentialist thinking. We have seen before the potency of mindblindness as a "trope of dehumanization" (Vermeule 87). Ascribing an impoverished mental state to a person is a step necessary for imagining him or her as the Other. In *AIDS and Its Metaphors*, Susan Sontag notes that the "enduring Eurocentric presumptions about others [depend on] the fantasy that peoples with little reason to expect exemption from misfortune have a lessened capacity to *feel* misfortune. Thus it is believed that Asians (or the poor, or blacks, or Africans, or Muslims) don't suffer or don't grieve as Europeans (or whites) do" (51). Asserting that autistics lack theory of mind assumes that they would not be able to feel the meaning of this assertion and suffer. That they themselves beg to differ, finding this description of their condition "vague, misleading, and inaccurate," is ignored.⁷

It's only fitting, too, that as mindblindness, autism terrifies. Perceiving a person as lacking an essential quality that makes him or her fully human nurtures what Ari Ne'eman, a co-founder of ASAN, calls "the rhetoric of pity and despair" ("The Future"). Moreover, if autistics themselves are imagined as lacking the thoughts and feelings that we were ready to project onto them, those thoughts and feelings don't just disappear. Instead (inveterate mind-readers that we are), we transfer them onto autism itself, personified as the enemy, bursting with intentions and emotions. For instance, autism delights in the misery it causes—not to people on the spectrum (for *they*, of course, "can't feel")—but to those around them. Emily Thornton Savarese and you present this portrait of autism personified in your critique of the video released in 2009 by Autism Speaks, which was "designed to raise money for scientific research and . . . employed the organization's characteristic scare tactics in the push for a cure":

"I am autism," the sound-track declares. "I am visible in your children, but if I can help it, I am invisible to you until it's too late. . . . I work faster than pediatric aids, cancer, and diabetes combined." Upping the terror ante, it remarks snidely, "If you're happily married, I will make sure your marriage fails. Your money will fall into my hands, and I will bankrupt you for my own self-gain." The video then references the plight of underfunded scientists, the heroes in this implied drama between good and evil. "Your scientists don't have the resources," it says, "and I relish their desperation." Sounding like Satan himself, autism concludes, "I derive great pleasure out of your loneliness. I will fight to take away your hope.

I will plot to rob you of your children and your dreams.” (“The Superior Half”)

As someone well familiar with the practice of treating mindblindness as an actual descriptor of autism instead of a metaphor, would you comment on the staying power of this concept? Do the diagnostic benefits of retaining this concept outweigh or at least balance out the very real danger of dehumanizing people described as mindblind? Who will lose out if this concept is abandoned altogether?

RJS: Our profession, like the medical or science profession, isn’t particularly good at admitting, “I was wrong” or “There’s a better way of proceeding.” And so, like a weed with deep roots, the notion of autistic mindblindness will be difficult to eradicate. Too many neurotypicals—from scientists to doctors to psychologists to teachers to service professionals to consumers of our popular culture—seem wedded to this stereoconcept. And we know from Thomas Kuhn that defenders of a prevailing paradigm rarely abandon what has served them well professionally until the paradigm has all but crumbled.

At the same time, we must recognize that autism is heterogeneous and that some autistics, including any number with Asperger syndrome—the people you cite would be labeled “classical” or “low-functioning” autistics and may be very different from other groups on the spectrum—buy into mindblindness. Think of Temple Grandin, for example. But even here we need to be cautious. For one thing, we have extrapolated too much from Grandin: not all, maybe not even a majority of, so-called high-functioning autistics or Aspies believe that they have difficulty reading other minds. For another, Grandin explicitly states that she has gotten better at this activity, which suggests that such a deficit is anything but strictly innate or hardwired. Finally, discussions of Grandin’s mindreading abilities almost never acknowledge how well she reads the minds of animals—indeed how much better she is at this skill than most neurotypicals. Such a glaring omission reveals the bias that is built into a purportedly neutral test of mindreading: what a theory of mind test actually gauges is the ability to read a highly particular kind of mind, a mind that has put itself at the center of the universe—above all other organisms and entities.

Of course, we don’t speak of neurotypical deficits with respect to theory of mind and animals because we don’t tend to prize this sort of skill and, even more important, because we don’t tend to think of ourselves as having deficits: we, after all, are the norm. But as you point out, theory of mind ought to work in two directions: if we’re going to judge autistics on their ability to read neurotypical minds, then we must be judged on our ability to read autistic ones. The obvious politics of mindreading—how well do white Americans read black Americans, or rich Americans poor Americans, or Americans generally and the rest of the world?—should give pause to anyone wanting to hold forth on autistic deficits.

In addition to the above problems, a classic test of theory of mind, the “Sally-Anne” task, which uses false beliefs to measure a person’s awareness of other

minds, turns out to be formally inhospitable. When the test's verbal instructions and answers were replaced with drawings, autistic children actually did *better* than nonautistic ones, which again shows the danger of confusing difference—in this case a preference for visual over verbal processing—with deficit.⁸ As in the “Level and Nature of Autistic Intelligence” study, adapting or changing the testing vehicle proved decisive.

Must the explanatory power of theory of mind be derived from pathologizing autistics? I think you would say, “No.” What I'd like to see is a humble, neurocosmopolitan theory of mind that doesn't test for the performance of a central emotion in a normative or naturalized way.

LZ: In your recent work, you emphasize that it is not enough to acknowledge the neurotypical problem of presuming that classical autistics must not have theory of mind because they don't comport themselves in ways that neurotypicals recognize as socially meaningful and acceptable. You argue that it's also important to address autism as a set of actual neurological differences. I understand that this is a controversial issue in your own field of disability studies. What are the assumptions that make it controversial and what are the payoffs of introducing this complicating factor into the discussion?

RJS: As it was developing, the field of disability studies did not know what to do with cognitive disability—largely because it did not seem to fit the model of social construction to which it was so committed. That model had proven tremendously effective in exposing the negative cultural meanings that had become attached to disability, but it seemed a good deal more credible when the disability involved a leg or an eye or an immune system than when it involved the very organ of thought. With respect to autism, the question becomes: how to attend to the history of damaging assumptions about the disorder while also acknowledging the actual neurological differences that underpin it? Such differences are themselves culturally shaped and interpreted, to be sure, but they cannot be neatly managed by a pure social-constructionist perspective.

I've already referenced prosopagnosia and synesthesia; let me mention another difference in autism: the processing of speech sounds. A study from 2008 found that autistics exhibit “superior perceptual processing of speech relative to controls” (Jarvinen-Pasley et al. 103), meaning that they actually hear speech sounds more precisely and robustly than nonautistics, but inferior semantic processing, meaning that they do not interpret those sounds as well symbolically. Interestingly, for nonautistics “increased attention to content information result[ed] in poorer perceptual than comprehension performance” (117). In other words, the instrumental use of language depends on ignoring, at least to a degree, the sensuous materiality of the signifiers. Nonautistics don't fully listen to what they hear: they convert the auditory stream into something useful, which is to say symbolic. In fact, the very basis of semantic decoding, phonemic generalization, requires active distortion: perceived sound does not match the shape of the actual sound wave.

Are there settings in which a perceptual relation to speech sounds might constitute a strength? How about literary language—poetry in particular? While poetry cannot function without some meaning, the non-semantic patterning of perceptual details is central to the art; indeed, such patterning in the form of alliteration, consonance, assonance, and rhythm musically subordinates ordinary linguistic function.

Consider the following passage by Mukhopadhyay. In it he is trying to prove his competence to a researcher who doubts that the “severely” autistic can master language. He has been asked to listen to something being read aloud by an aide, but he finds himself focusing on the sound of what the man says, not the meaning of his words:

Claude read. . . . I saw the voice transform into long apple green and yellow strings, searching under the table for who knows what? Threads like raw silk forming from Claude’s voice.

Claude read. I watched those strings vibrate with different amplitudes as Claude tried to impress the silent beholders and serious researchers of autism with the varying tones of a near-to-perfection performance.

Claude read. I watched those strings with stresses and strains, reaching their own elastic limits and snapping every now and then, when his voice reached a certain pitch. I saw those snapped strings form knots like entangled silk, the color of apple green and yellow. (*How Can I Talk*, 200–201)

When the neurologist asks, “So, what was he reading?” Mukhopadhyay responds with a sentence about “the beauty of the color green, when yellow sunshine melts its way through newly grown leaves” (201). The expert interprets his answer exclusively as a failure to understand what was read to him—not as a lucid and indeed artful description of the voice’s alternative (and alternatively narrative) registration. Mukhopadhyay has had to teach himself not to process spoken language in this manner, but when anxiety runs high, typical comprehension proves exceedingly difficult.

What Mukhopadhyay offers the reader is a linguistically meaningful, yet highly patterned, account of perceptual awareness. (Notice the anaphora—“Claude read,” “Claude read,” “Claude read”—and the varied yet resolved internal repetition—“I saw,” “I watched,” “I watched,” “I saw.”) Moreover, he uses visual images to convey the auditory stream emanating from Claude’s mouth. As if confirming what V. S. Ramachandran and David Brang have proposed—that a sensory phenomenon (synesthesia) may have given rise in our species to a linguistic one (figurative language)—metaphor emerges from his body: his ears see acoustical vibrations as silky strings. That the processing of both metaphor and concrete language involves sensory cortices, in addition to the brain’s traditional language centers, only underscores the way that poetry, as a heightened form of literary language, brings semantics and perception into closer relation.⁹ Like

autistics, poets “live in the sensory” (*Autism and Sensing* 17), in Donna Williams’s phrase.

While Mukhopadhyay’s account reveals a significant problem in autism, it also reveals one in neurotypicality: the reduction of language to mere meaning. Of course, this problem goes unrecognized, though I see it frequently at Grinnell in my creative writing classes: bright neurotypical students are generally too plugged into semantics. Their language is abstract; their ears, unmusical. They do not attend to the business of fashioning acoustical textures and fabrics. In Mukhopadhyay’s retrospective response to the good doctor’s test of oral comprehension, a perceptual intelligence has found a home in semantics—this is the essence of neurocosmopolitanism. Might a semantic intelligence find a home in perception? Might we coax each neurotype out of its respective comfort area—toward what Reuven Tsur calls a blended “third poetic mode” of speech processing? Might we recognize, in short, complementary cognitive strengths and weaknesses, so long as we understand those strengths and weaknesses as anything but fixed and strictly “natural”?

Writers and Readers on the Spectrum

LZ: Once one has read books by autistic writers, such as Mukhopadhyay, Prince, and Donna Williams, it becomes impossible to think of autism as a condition characterized by “mindblindness” and “a lack of imagination.” Yet the conventional thinking about autism dismisses such writers as anomalies—the outliers of the autistic spectrum. A “typical” autist, after all, doesn’t write the way Mukhopadhyay, Williams, and Prince do. The last I checked, however, a typical neurotypical doesn’t write the way Henry James, Shakespeare, and Austen do either. Yet as we admire James’s, Shakespeare’s, and Austen’s genius, we do not say that they are anomalies and outliers on the neurotypical spectrum. Instead we feel that they are “like us,” only more intensely so, glorifying the community of “us,” by showing “us” what “we” are capable of. Can you comment on the conceptual sleight-of-hand that goes into sustaining this biased view of the autistic vs. neurotypical achievement? What institutional and ideological practices depend on and nurture this view?

RJS: A couple of years ago I wrote to the authors of a study on metaphoric comprehension in Asperger syndrome, which claimed to have confirmed a significant deficit, and asked if they had controlled for exposure to metaphor instruction. Students with AS tend to be tracked into math and science courses and thus do not have a chance to get comfortable with novel metaphors. But even before such specific instruction, more generalized language instruction might be needed. After all, what has been described as a nonverbal intelligence has to find its way in an alien medium. I asked further if the authors had controlled for test anxiety—*anxiety, as I have intimated, is a huge component of autism generally—and al-*

lowed participants to take the test multiple times. Ignoring these questions, one of the authors zeroed in on my reference to prominent Aspies who seem to have a gift for metaphor, commenting that the study proved a probabilistic deficit—meaning that, on average, Aspies were less able to understand novel metaphors than neurotypicals.

So, at the very least, scientists need to be consistent: either Shakespeare is an outlier, as you suggest, and neurotypicals have a monumental probabilistic deficit, or he is not! But there's something else going on here, too, and it has a lot to do with your previous concerns about essentialism. Why is it inappropriate to claim that African Americans or women are inferior to Caucasians and men at science but perfectly acceptable to claim that people with AS or autism generally are inferior to neurotypicals at reading literature? What prevents a responsible person from saying the former is precisely a recognition of the many social factors that condition competence. Why should these factors not be at play when we're talking about neurodiverse brains? Any generalizations about this minority population must wait until we see how purportedly immune it is to instruction.¹⁰ In the case of so-called "classical" or "low-functioning" autistics, the labor involved in remediating embodiment challenges, curbing anxiety, and teaching literacy and communication is so prodigious—I know this personally—as to threaten rendering the relatively few who do get what they need, outliers forever.

LZ: In your essay "River of Words, Raft of Our Conjoined Neurologies," you talk about the experience of reading *Huckleberry Finn* with your son. Would you also speak of the experience of reading *Moby-Dick* with Tito Mukhopadhyay? It seems to me that this would be relevant to researchers in a variety of fields, including, but not limited to, developmental psychologists studying reading preferences in autism, as well as narrative theorists.

RJS: Unlike my son, DJ, who is Oberlin College's first nonspeaking autistic student, Mukhopadhyay has never been allowed in a regular school—despite authoring four books, as I noted, and serving as the subject of a *60 Minutes* profile. That he has been denied a formal education has been a source of great sadness for him. In fact, Mukhopadhyay once responded to an interviewer's question about the essential attributes of a welcoming school by erupting into rhythmic and rhymed despair:

My school is that open dream
my words find hard to say.
My school is the doubt in your eyes
and my withdrawing away.

My school is the summer dust grain
I saw coming through my window,
trying to find a way to my room
then disappearing in an obscure shadow. (Biklen 135)

And so I have been Skyping Mukhopadhyay into my classes at Grinnell College and conducting private tutorials with him. This past year, while I was on fellowship at Duke University's Institute for Brain Sciences, we read *Moby-Dick* together by Skype, two chapters a week—I spoke, and Mukhopadhyay used the sidebar to type his comments. In addition to preparing notes on the chapters, Mukhopadhyay also wrote verse, using a line from one of the two chapters as an epigraph.

For example, in the following poem, Mukhopadhyay takes up a matter already discussed, ingenuously recasting Ishmael's failure to look for whales on the mast-head of the *Pequod* as a metaphor for his own failure to listen for meaning on the mast-head of human speech. If you recall, at one point in *Moby-Dick*, Ishmael reflects on his "lean brown and hollow eye; given to unseasonable meditateness" (153), which hardly suit him for a job in "your vigilant fisheries" (153). "Let me . . . frankly admit that I kept but sorry guard," he exclaims. "With the problem of the universe revolving around in me, how could I . . . but lightly hold my obligations to observe all whale-ships' standing orders, 'Keep your weather eye open, and sing out every time'" (153).

I Kept But Sorry Guard

There might have been shoals of them in the far horizon.

—Herman Melville, *Moby-Dick*

His voice was a mere frequency of sound.
Like any other voice, it carried a wave in sound.
I saw the wave come bouncing around.

There might have been words moving along that wave,
Moving past me, sailing down that wave,
Lingering a little before they escaped.

The voice before me—its frequency was blue.
Light as the light, the spreading of that blue.
Lulled into listlessness, I was lulled into blue.

He asked me questions—maybe one or two—
as I manned the mast-head but failed to pursue
those shoals of meaning in a far away blue.

In Mukhopadhyay's redeployment, the phrase "keep[ing] sorry guard" memorably expresses the cost of each orientation to language—each form of whale hunt.

It also invites us to think of narrative less semantically. In a recent article, Melba Cuddy-Keane explores how literary narrative makes visible—or stages—

a kind of “visceral thinking . . . [that] depends on a disconnection from abstract conceptual thought” (693). Alluding to the work of William James, she argues that “concepts, . . . in substituting truth for reality, selectively map and reductively circumscribe the fullness of our experience” (687), and she hypothesizes that percepts, or “phenomenal-consciousness,” in Ned Block’s term, play a crucial, if invisible, role in generating conceptual change. “Literary narrative’s fascination with phenomenal experience, with the connotative dimensions of language, and with the dynamics of psychological processes,” writes Cuddy-Keane, “make it a fertile site for tracking the fuzzy and imprecisely understood area of non-conscious thought and, perhaps most distinctively, the dynamic and transformative function that phenomenal-consciousness might serve” (688).

Cuddy-Keane pays particular attention to novels that hinge on what Ian Watt has called “delayed decoding,” “as when [in *Heart of Darkness*] it gradually dawns on Marlow that what appear to be flying sticks are murderous spears” (690). According to Bruce Johnson, such moments strive “to return to the most aboriginal sensation before concepts and rational categories are brought to bear” (qtd. in Cuddy-Keane 690). For Cuddy-Keane these moments are not “moments of ‘truth’ but moments when any truth claims are of necessity suspended, and the delay activates a positive hiatus of consciousness, a withholding of logical explanation, to clear a space for unmediated, non-conscious sensory response” (690). Or as she puts it at the end of her article, “The impression, rather than crystallizing the object, breaks up the habit of crystallization, immersing us in the profusion, and confusion, of the sensory whole” (695).

Autistics, as Mukhopadhyay and others make clear, accomplish this state all too easily and, at least in retrospect, all too consciously. Indeed, they often struggle to generate the conceptual certainty against which literary narrative is said to rail. With its story of horrific disaster, a novel like *Moby-Dick* very much concerns itself with phenomenal-consciousness. Down-regulating the left-hemisphere’s traditional language centers and areas of executive control, particularly the dorsal lateral pre-frontal cortex, while up-regulating the right hemisphere’s limbic regions, trauma violently frees perceptual input from conceptual subordination or mastery.¹¹ Put simply, it lodges at the pre-categorical level. It leaves the victim flailing in an affective bath, unable to organize the past or to live with his own body—his own senses—in the present.

Mukhopadhyay and I talked extensively about what the survivor Ishmael is up to with his narrativizing, especially since we had each read the novel before, though never this slowly and with this much focused attention. Why is the story so jumbled? Why does it constantly shift modes? Why is the language so palpably embodied and metaphorical? I familiarized Mukhopadhyay with recent works on trauma, including a masters thesis by a Spanish graduate student, which carefully applies insights from trauma theory to show that the novel’s form is the clearest expression of Ishmael’s unresolved psychic injury. With that form, Pilar Martinez argues, he is simultaneously “acting out and working through.” In one of our Skype chats, Mukhopadhyay remarked, “It is nice to go back to some chap-

ters and read again because it is as if we are watching Ishmael digesting the story as a therapy.”

At first, he found the “Ceteology” chapter “exhausting.” “It reminds me of autism,” he wrote, “when someone is obsessed with something and expects others to find the same interest in it.” “I think of my own obsessions,” he added, “and want everyone to be as passionate as I am.” Later, he remarked, “Little did I realize how much I had missed when I read [the novel] for the first time. Back then, I did not recognize that the information on whales and whaling provided by Ishmael was no fog.” “The second reading of the book was different,” he typed emphatically. “I wasn’t hunting any story. One must know what one should be looking for in a book.”

After setting up the idea that Ishmael might still be traumatized, we then discussed a fundamental paradox of traumatic recovery: the restoration of narrative control—or in neurobiological terms, the return to subjugating perceptual input through top-down processing. Together, we decided that by cultivating a formal uneasiness in *Moby-Dick*, Melville gives voice to an insoluble problem: to move forward in time, Ishmael must forget the past; conversely, to truly remember his comrades, in particular Queequeg, he must court psychological impairment. As a Vietnam veteran once remarked, “I do not want to take drugs for my nightmares because I must remain a memorial to my dead friends” (Caruth vii).

In technical terms, a flashback consists of “sensory-perceptual, visuospatial mental images” (Holmes et al.); importantly, it uses a delivery system similar to literature’s. As Alan Richardson contends, leaning on the work of Elaine Scarry, “The ‘great sensory writers’ endow their visual images with the vivacity of live perception. . . . Readers mentally produce images ‘under the instruction’ of the writer.” And yet, literature, unlike a flashback, obviously requires vigorous activity in the left frontal lobe, even as it atypically recruits posterior regions for linguistic activity. In sum, literature gives to phenomenal-consciousness a guiding, if sometimes purposefully shaky, conceptual hand.

When, at the beginning of chapter four, Ishmael reports, “Upon waking next morning about daylight, I found Queequeg’s arm thrown over me in the most loving and affectionate manner” (41), we should not forget that Queequeg has already perished. Indeed, Ishmael retrospectively offers us an image, one that now haunts the present tense of his writing. Nor should we forget Ishmael’s original conceptual confusion, as he mistook his bedmate’s tattooed arm for the patchwork quilt on top of them. “It was only by the sense of weight and pressure that I could tell that Queequeg was hugging me” (41), Ishmael explains. Having temporarily lost the colonizing prowess of sight, he could feel in his body the unmediated presence of Queequeg’s arm, the absence of which he now grieves. Learning to love the Pacific Islander, we might say, was precisely a matter of moving underneath the stable concept of “savage.” Delayed decoding, to once again borrow Cuddy-Keane’s wording, “br[oke] up the habit of crystallization, immersing [Ishmael] in the profusion, and confusion, of the sensory whole” (695). This, Mukhopadhyay reminded me, is how classical autistics consistently take in the world.

When we turned finally to the issue of Melville's relentless analogizing, we both saw our "matrimonial" (43) couple as a kind of metaphor for metaphor, that yoking together of disparate things. Grief, along with a considerable amount of survivor guilt, seems to motivate Ishmael's frantic, "bridegroom clasp" (42) in words. As he figuratively reaches for Queequeg everywhere, he literally unmakes the world. He undermines the basis upon which any concept can be said to be discrete, at once overwhelmed by the violence of what happened to him and profoundly attracted to the phenomenal realm as a site of faithful, because affectively palpable, memory. At the same time, he makes meaning; he jerry-rigs a narrative. Queequeg becomes Queequeg, not just that "sense of weight and pressure" on his chest. To allow his former bedfellow to dissolve into pure sensory remembrance would be to embrace the nullifying whiteness of the whale. And yet, to allow him to become an easily managed concept would be to blithely move on.

Analyzing just one of the many analogies in the chapter entitled "Squid"—the Pequod's "three tall tapering masts mildly waved to the languid breeze, as three mild palms on a plain" (249)—Mukhopadhyay commented, "For Ishmael the synthesis of land and sea, masts and palms, reflects his understanding of the duality of every aspect of this world—mind and body, sensation and pain." This duality shows up in literature as a negotiated interaction of concepts and percepts, and it thus renders literature an ideal site for performing the stalemate of partially worked through trauma. As Mukhopadhyay helped me to see, it also renders literature an ideal site for exploring different relationships to language and for advancing a notion of fluid neurocosmopolitanism.

Autism and the Future of Literary Studies

LZ: In the last couple of years it has become a convention among literary scholars, especially those working with cognitive approaches to literature, to mention autism briefly in their essays and calls for papers as a locus of "lack" (most often associated with "mindblindness") and as such, a ready point of contrast to this or that neurotypical feature. Having, to my regret, contributed to that convention myself, I know that it came about by following an apparent consensus in cognitive science. The problem with this consensus, however, is that whereas cognitive scientists often point out that no two individuals on the spectrum are alike in their cognitive profiles and social abilities, at present there seems to be no room in their publications for acknowledging and integrating the insights of autistic writers and disability activists. Scholars who make these insights a cornerstone of their research program, such as Douglas Biklen, are considered highly controversial. It is altogether possible to keep up with the up-to-date research on autism in various branches of cognitive science without so much as suspecting that this perspective exists.

How then do we talk about autism now that we realize we cannot simply rely on mainstream scientific discourse and echo its impersonal "outside-in" view

of the condition? As more literary scholars discover the profoundly philosophic and poetical body of writing by autistic authors, I believe we will see an upsurge in literary analysis of this writing. Your book, *Reasonable People*, which is based on your experience as the adoptive father of a nonspeaking autistic, documents a struggle to engage the “meaning of family and the politics of neurological difference.” Would you comment on ways of writing about autism without romanticizing it on the one hand, and without constructing, on the other, what James T. Fisher has called the autism “conversion narrative” (51), that is, a “record of the quest for a transformed or redeemed self,” in which the “enigma that is fictional autistic presence still operates, as in the classic prosthetic disability narrative, to inform the non-autistic majority and leave it supposedly wiser” (Murray, “Autism Functions”)?

RJS: I would need many pages to adequately discuss what makes Biklen controversial.¹² Some researchers believe, as I pointed out earlier, that partnering with autistics is the only way to do first-rate science on autism, so it’s not simply a matter of choosing, once one is aware of a choice, between progressive qualitative and stigmatizing quantitative research by neurotypicals. Eventually there will be a rich body of neurocosmopolitan research that will prevent exactly the problem you mention. One of ASAN’s projects, the Academic Autistic Spectrum Partnership in Research and Education (AASPIRE), upholds the idea of community-based participatory research, “whereby researchers and community members serve as equal partners throughout the research process.”¹³ In the humanities and social sciences, I think it’s possible to practice this approach as well. Of the forty-some contributors to “Autism and the Concept of Neurodiversity,” a special issue of *Disability Studies Quarterly* that my wife and I co-edited, half are on the spectrum. *Reasonable People* concludes with a chapter written by my then twelve-year-old son, a chapter in which he tells me all sorts of things that I got wrong! Instead of writing exclusively “about” autistics, let’s imagine writing “with” them—even if that “with” is simply a matter of engaging their words and even if, as imperfect neurocosmopolitan allies, we sometimes make mistakes. In the meantime, cognitive literary scholars really ought to drop their passing references to autistic dysfunction and begin to acquaint themselves with both the minority view of autism and the central tenets of disability studies. This will only help their research. The human brain is so much more interesting than what the normal/abnormal binary allows.

I certainly hope that “as more literary scholars discover the profoundly philosophic and poetical body of writing by autistic authors, . . . we will see an upsurge in literary analysis of this writing.” There is already some terrific work by Bruce Mills, Kristina Chew, Stuart Murray, Julia Rodas, and Chris Foss, to mention just a few scholars—I especially like the work of Melanie Yergeau. As you point out, Fisher demarcates the dangers of writing about autism: romanticizing autistic difference, especially super abilities, without acknowledging the considerable challenges that it brings or promoting a kind of one-sided apprenticeship, which is to say the reduction of autistic difference to a less than adequate, but nonethe-

less commendably learned, performance of the non-autistic norm. In either case, autism exists largely for neurotypicals as a self-aggrandizing mirror, for even the narrow superiority of the savant turns out to be a tragic expression of core human abilities. With so much pathological thinking about autism, I would rather be guilty of the former sin; at least it begins to respectfully acknowledge difference. In fact, the charge of romanticization seems to be leveled at anyone who briefly suspends the all-negative, all-the-time approach to this condition.

How to see the neurological other without always seeing ourselves? This is the key question. If we can practice Gilroy's ethic of defamiliarization, something like actual savantism might appear to be just a form of life and not the basis for a *Rain Man* movie.

LZ: It is profoundly ironic that by focusing on “lacks” conventionally associated with autism, literary critics have remained unaware of the significance of the insights into perception offered by writers on the spectrum. For instance, you've mentioned defamiliarization several times. By submerging her readers into a rich “sensory-perceptual experience” of the autistic person, Donna Williams develops nothing less than a neurological foundation for the feature of poetic language that literary critics have tried to grasp and explain using that term.¹⁴ When Liane Holliday Willey, a writer and researcher with Asperger Syndrome, describes how her “aspie” daughter’s “ability to pick up the most minute details makes her especially strong at figuring out the answer to who dun-it in mystery novels” (151), one realizes that detective stories must exploit a particular cognitive vulnerability of neurotypical readers, i.e., their tendency to skip over details in their quest for a larger picture. One begins to wonder how different genres adapt themselves to various traits in the cognitive profiles of their reader populations. Moreover, Willey's vivid description of “sensory assemblies” that “take the thoughts to spots only aspies can really relate to” (152) offers a glimpse into the secret of human creativity and begins to explain why “success in science and art,” as researchers have long observed, is not possible without a “dash of autism” (Snyder 83). Would you comment on your work teaching nonspeaking autistics to write poetry? What it might it tell us about the genre?

RJS: Let me return to the issue of pattern, which I mentioned earlier. In her wonderful new book, *Always More Than One: Individuation's Dance*, Erin Manning, philosopher and co-founder of the Sense Lab at Concordia University, argues, “What autistics have access to that is usually backgrounded for neurotypicals is the direct experience of the relational field's morphing into subjects and objects” (219).¹⁵ In this respect—and only in this respect, I must emphasize—they are like very young children. “Sensory knowing starts with the recognition of patterns [that] are less accessible to conscious . . . rational thought” (68), writes Olga Bogdashina. “Memories of very early experiences (before the appearance of verbal language) become stored and expressed as sensations rather than in highly elaborate form” (68). “With maturation,” Bogdashina continues, “there is a strategy to suppress [‘raw sensory data’]. The maturing mind becomes increas-

ingly aware only of concepts to the exclusion of the details that comprise these concepts” (84).¹⁶

As I’ve tried to demonstrate with Cuddy-Keané’s work on phenomenal consciousness, novels can provide neurotypicals with a glimpse of what classical autistics regularly experience. But if any genre seems especially suited to capturing “the world in its emergence” or the “ecology of what is unfolding around [us]” (Manning 152), it is poetry, specifically formal poetry. In this kind of verbal vessel, pattern is everything. Indeed, the symbolic function of language almost seems hitched to the palpable design, as it does in this recent poem by Mukhopadhyay entitled “Orange”:

It was orange as always, when I heard the wind.
Orange it is—the sound of the wind in spring.
It made the branches swing. It colored every little thing.

It smelled in orange—that sound of wind in spring.
Orange it is—as always—the sudden wind.
It kept getting wilder—its orange on everything. (*I Am Not a Poet* 10)

Such a form seems to present itself as a linguistic translation of a nonlinguistic propensity: “a type of attunement,” according to Bogdashina, “in which incoming information is translated from one sensory modality into another while preserving the underlying pattern” (68). To the pre-verbal child, perceptions “are not sights and sounds and touches and nameable objects, but rather shapes, intensities and temporal patterns” (51), Daniel Stern reminds us. If an infant could write poetry, it would sound a lot like this poem: higher-order thinking as pure synesthetic relation.

Pattern, let me suggest, is what attracts classical autistics to poetry. Although Mukhopadhyay obviously learned how to use language symbolically, he still thinks of poetry as “an ambition to please the ear” (R. Savarese, “More Than a Thing”). “Designs can be visual,” he has remarked, “and designs can be formed in sound”—the pattern makes it “more than a thing to ignore” (R. Savarese, “More Than a Thing”). When teaching poetry writing workshops to classical autistics, I invariably ask them to write a villanelle. The first time I did so, I was astonished at how quickly and effectively they managed the task; in the same amount of time, my “control group” of nonautistic education professors managed maybe six or seven of the required nineteen lines. One autistic claimed that the form itself was autistic—its perseverative, morphing refrains were “like the patterns of light on her front lawn,” she typed.¹⁷

A remark by Donna Williams offers further instruction. It recalls the moment in *Moby-Dick* when Ishmael recognizes Queequeg’s arm not by sight but by the “sense of weight and pressure,” and it suggests a way of thinking about poetry—how it depends on the meaning of words yet seeks a fuller and more dynamically embodied investigation of experience. Referring to herself as a sensing, rather than an interpretive, creature, Williams recounts,

I developed physically-based mapping, which involved knowing things not through their visual shape but through their shape experienced through my own physical movement. So, for example, if I felt a glass with my hands or gripped it in my teeth, my concept of that glass had nothing to do with the word 'glass' or with how it looked or what it was used for, it had to do with the pattern of movement involved in feeling its form. (*Autism and Sensing* 62)

The pattern of movement involved in feeling its form—I can't think of a better definition of a poem, especially if we conceive of said movement as rhythm and said form as the shape of the carefully strung together—one might even say the mesmerizingly strung together—words. Poetry offers classical autistics a deeply homologous experience of "physically-based mapping," a fact increasingly borne out by neuroscientific explorations of the genre.¹⁸

I want to say a few words about the relationship of a patterning intelligence to narrative. We've already seen in the "apple green and yellow" passage how Mukhopadhyay redirects attention to the drama of perception. While he carefully establishes a social context in that passage—he must prove to a skeptical neurologist that he is intelligent—the focus remains squarely on his body's response to speech sounds. Let me now present another passage by Mukhopadhyay in which he listens to a news report about a coal mining disaster. As you read the passage, notice the gap between what is actually going on inside of Mukhopadhyay and what an observer would likely conclude about his behavior: that he is oblivious to the suffering of others. Notice, too, how his senses—in particular, their synesthetic interaction—once again give birth to analogy. What follows isn't a narrative with sensory details; it's a sensory-driven, affect-laden, visuospatial approximation of teleological thought, one perhaps reflecting, as already discussed, "an atypically prominent role for perceptual mechanisms in supporting cognition":

I see these stories, sometimes in vermilion or indigo, the richness depending upon the intensity of the stories. Sometimes they smell like vitriol and sometimes they smell like boiling starch in a pot of clay. And sometimes they have the essence of the twilight sky.

As I feel my worries for the trapped coal miners, I can smell the boiling starch, frothing on the brim of the clay pot, then spilling out with the smell of burning rice. My worries grow as the voice of the newsreader continues to say that the miners are still trapped. I smell burning rice spread across the room as more starch spills out. . . .

My body begins to itch as though tiny black tickle ants have been set free from a box. They can smell the burning rice from the spilling starch, and they rush around to find the source with a collective ant hunger. My worry now accumulates in and across my itching skin, as the voice of the newsreader comes from far away, like a blue floating balloon. I have no hold on it because it floats away, leaving me with itchy skin. (*How Can I Talk* 114)

Here, too, Mukhopadhyay keeps but sorry guard of meaning, though in the context of trying to manage his concern for the miners, which is clearly overwhelming. At first, the auditory stimuli register as a visual and then as an olfactory tableau. Once he has the analogy of the boiling starch and the related smell of burning rice, his account can begin to move. The addition of the ants, another analogical entity, allows him to connect the frothing starch to his itchy skin. It is as if he were crossing a creek, stone by associative stone; call it narrative by other means. A final analogy—the blue, floating balloon—conveys the breakdown of ordinary consciousness, including the loss of receptive language. With exquisite skill, Mukhopadhyay captures what psychologists call emotional contagion: his concern for the miners bubbles over the brim of its natural container, spills, then completely incapacitates him—to the extent that he loses track of all distinctions and boundaries. Once again, his body is the site of narrative development, but it is also the measure of his extraordinary solicitude.

LZ: It seems to me that, though coming from a different field (i.e., disability studies), you are, in fact, doing precisely the kind of work that cognitive approaches to literature, at their best, are meant to do, that is, bring together cognitive science and literary studies in ways that transform both disciplines instead of merely applying insights from cognitive sciences to literary criticism. If cognitive scientists currently committed to the “mindblindness” paradigm will listen to a researcher such as yourself, versed both in cognitive science and literary criticism, what you say may have a very real impact. Also, speaking of real impact, I know that you’ve been thinking about establishing an arts program for students with significant disabilities. How might such a program affect entrenched assumptions about disability?

RJS: If cognitive science frequently overemphasizes the deterministic effects of human physiology, then disability studies frequently overemphasizes the deterministic effects of human culture. The former corrects for a kind of material obliviousness; the latter, for a kind of haughty reductionism. When it comes to embodied literary endeavors, I don’t favor the rigid “application” of either. What is needed is exactly what you propose: a transformation of both disciplines. Without such a transformation, the concept of neurodiversity risks becoming, on the one hand, just a derided form of political correctness (what newscaster Diane Sawyer, after interviewing an autistic self-advocate, dismissively called “a beautiful way of justifying heartbreak”) and, on the other, just a liberal shibboleth, where cognitive difference is paradoxically managed, even brushed aside, by superficial respect. From forms of life come forms of writing and reading—let us devote ourselves unhierarchically to this proposition.

I am trying to establish a program for young people with significant disabilities that foregrounds the relationship between difference and creativity. Alternative forms of embodiment can produce alternative epistemologies and even potential aesthetic advantages. The idea would be to give a population that is dramatically under-represented in higher education (not to mention the workforce)

a chance to develop a particular craft. The program would affirm disabled difference precisely by showing how it might be exploited to think and to create in new ways. Imagine some very talented young people working with well-known disability artists and allies—the result would likely be as salutary for these young people as for the culture at large.

And imagine, with more autistic writers and artists, how the field of cognitive aesthetics might evolve by allowing difference to further complicate the normal/abnormal binary and by discovering the full import of neuroplasticity in both the neurotypical and neuroatypical populations. As autistics continue to develop a literary tradition, one inexorably entwined with the dominant tradition, only a concept like neurocosmopolitanism will be up to the task of fully understanding the dynamic, neurocultural habits of different readers and writers.

Endnotes

The authors are grateful to Jim Phelan for his insightful suggestions.

1. See, for example, Herbert Lindenberger, “Arts and the Brain.”
2. See E. Savarese, “What We Have to Tell You: A Roundtable with Self-Advocates from the Autism National Committee.” Interestingly, a study from 2005 comparing autistics and psychopaths and dividing empathy into its component parts appears to confirm Shore’s view. It found that autistics struggle with cognitive and motor empathy while psychopaths struggle with emotional empathy. However “lower-order” emotional empathy may be, it not only serves as essential fuel for “higher-order” propositions and bodily enactments, but it also rescues empathy from strictly intellectual or performative expressions, as the case of psychopaths makes clear. See Blair, “Responding to the Emotions of Others” (2005).
3. Dawson, M., I. Soulières, M. A. Gernsbacher, L. Mottron. By using the Ravens Progressive Matrices test, which is considered the gold standard of fluid intelligence, instead of the more common Wechsler Scale, a very different picture of autistic intelligence emerged.
4. A study comparing how autistics and non-autistics process high- and low-imagery sentences found that the former activated parietal and occipital brain regions for *both* kinds of sentences whereas the latter did so only for the high-imagery ones. (An example of a high-imagery sentence, to which subjects were asked to respond “true” or “false”: “The number eight, when rotated 90 degrees, looks like a pair of glasses” [2484]). Although the authors interpreted this difference as a sign of underconnectivity in autistic brains, there was no difference between the two groups in error rate or reaction time. See Kana et al., “Sentence Comprehension in Autism” (2006). It should be noted that this study used so called “high-functioning” autistic subjects. Because classical or “low-functioning” autistics have great difficulty remaining still, they are rarely, if ever, used in neuroimaging studies.
5. See Zunshine, *Strange Concepts* 6–14, 63. The same book, unfortunately, still adheres to the dominant view of autism as mindblindness, a view corrected in everything Zunshine has published after her first conversation with Ralph James Savarese at MLA in 2012.
6. See Soma Mukhopadhyay, *Understanding Autism*.
7. See Biklen 39. See also Dinishak and Akhtar for a related discussion of mindblindness as metaphor.
8. See Gernsbacher and Frymiare.

9. In a recent study, sentences containing textual metaphors—"I had a rough day"—activated the parietal operculum, a region responsible for sensing texture, whereas literal sentences matched for meaning—"I had a bad day"—did not. See Lacey, Stilla, and Sathian. In another study, "neuroimaging data support[ed] a greater involvement of sensory (e.g. visual) areas in concrete word processing . . . and a more focal activation of perisylvian 'language' areas for function words as well as abstract nouns" (456). See Martensson et al.
10. Persicke et al. found that "multiple exemplar training is effective for teaching children with autism to understand metaphors. Furthermore, generalization to untrained metaphors was found for all participants" (913).
11. For an excellent overview of post-traumatic stress disorder, see Bessel van der Kolk, "Clinical Implications" (2006).
12. Biklen is controversial because he has devoted himself to autistics on the so-called low-functioning end of the spectrum, claiming that they have none of autism's typical impairments. He came to this conclusion after witnessing a technique called facilitated communication (or supported typing) enable the most severely autistic to express their thoughts and feelings. Over the last twenty years, the technique's efficacy has been disproven in studies as frequently as it has been proven. These mixed results, along with the technique becoming embroiled in the recovered memory controversy, have not helped to bring clarity to the nature of classical autism. While the autistics cited in the section on mindblindness once required facilitation, they all learned, after many years, to type independently—and still they encounter skepticism. The consensus view, derived largely from observed behavior, generalizes about incompetence while Biklen and others generalize about potential competence, believing that experts should practice what Anne Donnellan calls "the least dangerous assumption." We really don't know what the capabilities of classical autistics are as a group or just how many individuals might profit from literacy training and occupational therapy—the motor impairment in classical autism is so severe that much effort must be extended before even semi-independent communication can emerge. Some researchers believe that autism may actually be many different disorders that more or less look the same at particular points on the spectrum.
13. See <<http://aaspire.org/?p=about&c=cbpr>>.
14. See Williams, *Autism and Sensing* 117.
15. Here is how a door becomes a door for Mukhopadhyay: "When I enter a new room, which I am entering for the first time and look at a door, I recognize it as a door, only after a few stages. The first thing I see is its color. If I do not get into a deeper cogitation of its color by defining it as 'yellow,' and mentally lining up all the yellow things I know of, including one of my yellow tennis balls when I was seven years old, I move on to the shape of the door. And if I lay my eyes on the door hinge, I might get distracted by the functions of the levers. However, I pull my attention from there and wonder about the function of that yellow, large rectangular object, with levers of the first order, called a hinge. 'Why is that yellow, large rectangular object with levers there?' I mentally answer the question, 'It has allowed me to come inside that room, and can be opened or closed. And what else can that be, other than a door?' My labeling is complete. And I move on to the next object in the room to find its characteristics, then define and label that object. Does this happen for all circumstances? No, when I am used to situations, and have labeled the objects included in that situation many times, I do not need to follow these steps" (*How Can I Talk* 94–95).
16. It is important to underscore, in the words of Manning, that "autistic perception is a tendency in perception on a continuum with all perception, not a definition of autism. . . . Given the quickness of the morphing from the relational field into the objects and subjects of our perceptions, many of us neurotypicals feel as though the world is 'pre-chunked' into species, into bodies and individuals. This is the shortcoming, as autistics might say, of neurotypical perception (that we are simply too quick to chunk)" (218–19).

17. Mukhopadhyay's most recent book of poems, *I Am Not a Poet, But I Write Poetry*, contains three villanelles and a number of pantoums. The villanelles can be seen here: <<http://dsq-sds.org/article/view/1192/1256>> (T. Mukhopadhyay, "Five Poems").
18. Researchers, for example, have shown that the perception of metrical stress activates our motor systems (Aleman and Van't Wout). See Starr: "As parts of the brain . . . that coordinate motion are also recruited by metrical writing, it makes all the more sense that poems may make us wish to keep time, move and imagine motion" (280).

Works Cited

- Aleman, Andre, and Mascha Van't Wout. "Subvocalization in Auditory Verbal Imagery: Just a Form of Motor Imagery?" *Cognitive Processing* 5 (2004): 228–31.
- Biklen, Douglas, with Richard Attfield, Larry Bissonnette, Lucy Blackman, Jamie Burke, Alberto Frugone, Tito Rajarshi Mukhopadhyay, and Sue Rubin. *Autism and the Myth of Person Alone*. New York: New York Univ. Press, 2005.
- Blackman, Lucy. *Lucy's Story: Autism and Other Adventures*. Redcliffe, Queensland, Australia: Book in Hand, 1999.
- . "Reflections on Language." In *Autism and the Myth of Person Alone*, by Douglas Biklen with Richard Attfield, Larry Bissonnette, Lucy Blackman, Jamie Burke, Alberto Frugone, Tito Rajarshi Mukhopadhyay, and Sue Rubin, 146–67. New York: New York Univ. Press, 2005.
- Blair, R. J. R. "Responding to the Emotions of Others: Dissociating Forms of Empathy through the Study of Typical and Psychiatric Populations." *Consciousness and Cognition* 14.4 (2005): 698–718.
- Bogdashina, Olga. *Autism and the Edges of the Known World*. London: Jessica Kingsley Publishers, 2010.
- Burke, Jamie. "The World as I'd Like It to Be." In *Autism and the Myth of Person Alone*, by Douglas Biklen with Richard Attfield, Larry Bissonnette, Lucy Blackman, Jamie Burke, Alberto Frugone, Tito Rajarshi Mukhopadhyay, and Sue Rubin, 249–53. New York: New York Univ. Press, 2005.
- Caruth, Cathy, ed. *Trauma: Explorations in Memory*. Baltimore: Johns Hopkins Univ. Press, 1995.
- Cuddy-Keane, Melba. "Narration, Navigation, and Non-conscious Thought: Neuroscientific and Literary Approaches to the Thinking Body." *University of Toronto Quarterly* 79.2 (2010): 680–701.
- Dawson M., I. Soulières, M. A. Gernsbacher, and L. Mottron. "The Level and Nature of Autistic Intelligence." *Psychological Science* 18 (2007): 657–62.
- Dinishak, Janette, and Nameera Akhtar. "A Critical Examination of Mindblindness as a Metaphor for Autism." *Child Development Perspectives* 7.2 (2013): 110–14.
- Durbin-Westby, Paula C. "'Public Law 109–416 Is Not Just about Scientific Research': Speaking Truth to Power at Interagency Autism Coordinating Committee Meetings." *Disability Studies Quarterly* 30.1 (2010). <http://dsq-sds.org/issue/view/43> (accessed 15 June, 2013).
- Fisher, James T. "No Search, No Subject? Autism and the American Conversion Narrative." In *Autism and Representation*, edited by Mark Osteen. 51–64. New York: Routledge, 2008.
- Frank, Arthur. *The Wounded Storyteller*. Chicago: Univ. of Chicago Press, 1995.
- Gernsbacher, M. A., and J. L. Frymiare. "Does the Autistic Brain Lack Core Modules?" *Journal of Developmental and Learning Disorders* 9 (2005): 3–16. http://psych.wisc.edu/lang/pdf/Gernsbacher_autistic_modules.pdf (accessed 15 June, 2013).

- Gilroy, Paul. *Postcolonial Melancholia*. New York: Columbia Univ. Press, 2006.
- Holmes, Emily, Ella L. James, Thomas Coode-Bate, and Catherine Deeptree. "Can Playing the Computer Game 'Tetris' Reduce the Build-up of Flashbacks for Trauma?" *PloS One* 4.1 (2009). <http://www.plosone.org/article/info:doi/10.1371/journal.pone.0004153> (accessed 15 June 2013).
- Jarvinen-Pasley, Anna, G. L. Wallace, F. Ramus, F. Happe, and P. Heaton. "Enhanced Perceptual Processing of Speech in Autism." *Developmental Science* 11.1 (2008): 109–21.
- Kana, Rajesh, T. A. Keller, V. L. Cherkassky, N. Minshew, and M. Just. "Sentence Comprehension in Autism: Thinking in Pictures with Decreased Functional Connectivity." *Brain* 129 (2006): 2484–93.
- Kuusisto, Stephen. *Eavesdropping: A Memoir of Blindness and Listening*. New York: Norton, 2006.
- Lacey, Simon, R. Stilla, and K. Sathian. "Metaphorically Feeling: Comprehending Textual Metaphors Activates Somatosensory Cortex." *Brain and Language* 120.3 (2012): 416–21.
- Lindenberger, Herbert. "Arts in the Brain; or, What Might Neuroscience Tell Us?" In *Toward a Cognitive Theory of Narrative Acts*, edited by Frederick Luis Aldama, 13–35. Austin: Univ. of Texas Press, 2010.
- Manning, Erin. *Always More Than One: Individuation's Dance*. Durham: Duke Univ. Press, 2012.
- Martinez, Maria Pilar. "The Witness of the Whale: Trauma, Witnessing, and the Enigma of Survival." Master's Thesis, Univ. of Rome, Sapienza, 2012.
- Martensson, Frida, M. Roll, P. Apt, and M. Horne. "Modeling the Meaning of Words: Neural Correlates of Abstract and Concrete Noun Processing." *ACTA Neurobiologiae Experimentalis* 71 (2011): 455–78.
- Melville, Herman, John Bryant, and Haskell S. Springer. *Moby-Dick: A Longman Critical Edition*. New York: Pearson Longman, 2007.
- Mottron, Laurent, M. Dawson, and I. Soulières. "Enhanced Perception in Savant Syndrome: Patterns, Structure and Creativity." *Philosophical Transactions of the Royal Society B* 364.1522 (2009): 1385–91.
- Mukhopadhyay, Soma. *Understanding Autism Through Rapid Prompting Method*. Denver: Outskirts Press, 2008.
- Mukhopadhyay, Tito Rajarshi. "Five Poems." *Disability Studies Quarterly* 30.1 (2010). <http://dsq-sds.org/issue/view/43> (accessed 15 June 2013).
- . *How Can I Talk If My Lips Don't Move? Inside My Autistic Mind*. New York: Arcade Publishing, 2008.
- . *I Am Not a Poet, But I Write Poetry: Poems From My Autistic Mind*. Bloomington: Xlibris Corporation, 2012.
- . *The Mind Tree: A Miraculous Child Breaks the Silence of Autism*. New York: Arcade Publishing, 2000.
- Mukhopadhyay, Tito Rajarshi, and Douglas Biklen. "Questions and Answers." In *Autism and the Myth of Person Alone*, by Douglas Biklen with Richard Attfield, Larry Bissonnette, Lucy Blackman, Jamie Burke, Alberto Frugone, Tito Rajarshi Mukhopadhyay, and Sue Rubin, 117–43. New York: New York Univ. Press, 2005.
- Murray, Stuart. "Autism Functions/The Function of Autism." *Disability Studies Quarterly* 30.1 (2010). <http://dsq-sds.org/issue/view/43> (accessed 15 June 2013).
- Ne'eman, Ari. "The Future (and the Past) of Autism Advocacy, Or Why the ASA's Magazine, *The Advocate*, Wouldn't Publish This Piece." *Disability Studies Quarterly* 30.1 (2010). <http://dsq-sds.org/issue/view/43> (accessed 15 June 2013).

- Persicke, Angela, Johnathan Tarbox, Jennifer Ranick, and Megan St. Clair. "Establishing Metaphorical Reasoning in Children with Autism." *Research in Autism Spectrum Disorders* 6.2 (2012): 913–20.
- Prince, Dawn. "The Silence Between: An Autoethnographic Examination of the Language Prejudice and Its Impact on the Assessment of Autistic and Animal Intelligence." *Disability Studies Quarterly* 30.1 (2010). <http://dsq-sds.org/issue/view/43> (accessed 15 June 2013).
- Prince-Hughes, Dawn. *Songs of the Gorilla Nation: My Journey Through Autism*. New York: Three Rivers Press, 2005.
- Ramachandran, V. S., and David Brang. *Scholarpedia* 3.6 (2008). <http://www.scholarpedia.org/article/Synesthesia> (accessed 15 June 2013).
- Richardson, Alan. "Imagination: Literary and Cognitive Intersections." In *The Oxford Handbook of Cognitive Literary Studies*, edited by Lisa Zunshine. Oxford: Oxford Univ. Press, forthcoming in 2015.
- Sacks, Oliver. *An Anthropologist on Mars*. New York: Knopf, 1995.
- Samson, Fabienne, Laurent Mottron, Isabelle Soulières, and Thomas A. Zeffiro. "Enhanced Visual Functioning in Autism: An ALE Meta-Analysis." *Human Brain Mapping* 33.7 (2012): 1553–81.
- Savarese, DJ. "Communicate With Me." *Disability Studies Quarterly* 30.1 (2010). <http://dsq-sds.org/issue/view/43> (accessed 15 June 2013).
- Savarese, Emily Thornton. "What We Have to Tell You: A Roundtable with Self-Advocates from AutCom." *Disability Studies Quarterly* 30.1 (2010). <http://dsq-sds.org/issue/view/43> (accessed 15 June 2013).
- Savarese, Emily Thornton, and Ralph James Savarese. "'The Superior Half of Speaking': An Introduction." *Disability Studies Quarterly* 30.1 (2010): <http://dsq-sds.org/issue/view/43> (accessed 15 June 2013).
- Savarese, Ralph James. "More Than a Thing to Ignore: An Interview with Tito Mukhopadhyay." *Disability Studies Quarterly* 30.1 (2010): <http://dsq-sds.org/issue/view/43> (accessed 15 June 2013).
- . *Reasonable People: A Memoir of Autism and Adoption*. New York: Other Press, 2007.
- . "River of Words, Raft of Our Conjoined Neurologies." *Fourth Genre* 14.1 (2012): 43–52.
- . "Toward a Postcolonial Neurology: Autism, Tito Mukhopadhyay, and a New Geo-Poetics of the Body." *The Journal of Literary and Cultural Disability Studies* 4.3 (2010): 273–89.
- . "What Some Autistics Can Teach Us about Poetry: A Neurocosmopolitan Approach." In *The Oxford Handbook of Cognitive Literary Studies*, edited by Lisa Zunshine. Oxford: Oxford Univ. Press, forthcoming in 2015.
- Snyder, Alan. "Explaining and Inducing Savant Skills: Privileged Access to Lower Level, Less-Processed Information." In *Autism and Talent*, edited by Francesca Happé and Uta Frith, 75–88. New York: Oxford Univ. Press, 2010.
- Sontag, Susan. *AIDS and Its Metaphors*. New York: Farrar, Straus and Giroux, 1988.
- Starr, Gabrielle. "Multisensory Imagery." In *Introduction to Cognitive Cultural Studies*, edited by Lisa Zunshine, 275–91. Baltimore: Johns Hopkins Univ. Press, 2010.
- Stern, Daniel. *The Interpersonal World of the Infant: A View from Psychoanalysis and Developmental Psychology*. London: Karnac Books, 1985.
- Tsur, Reuven. "Rhyme and Cognitive Poetics." http://cogprints.org/735/1/rhymegestalt_2.html (accessed 13 June 2013).
- Van der Kolk, Bessel. "Clinical Implications of Neuroscience Research in PTSD." *Annals of the New York Academy of Sciences* 1071 (2006): 277–93.

- Vermeule, Blakey. "Satirical Mind Blindness." *Classical and Modern Literature* 22.2 (2002): 85–101.
- Willey, Liane Holliday. *Asperger Syndrome in the Family: Redefining Normal*. London: Jessica Kingsley Publishers, 2002.
- Williams, Donna. *Autism—An Inside-Out Approach: An Innovative Look at the Mechanics of "Autism" and its Developmental "Cousins"*. London, Jessica Kingsley Publishers, 1996.
- . *Autism and Sensing: The Unlost Instinct*. London: Jessica Kingsley Publishers, 1998.
- . *Nobody Nowhere: The Extraordinary Autobiography of an Autistic*. New York: Times Books, 1992.
- Wolman, David. "The Truth about Autism: Scientists Reconsider What They *Think* They Know." *Wired Magazine*, February 2008. http://www.wired.com/medtech/health/magazine/16-03/ff_autism?currentPage=all (accessed 13 June 2013).
- Zunshine, Lisa. "1700–1775: Theory of Mind, Social Hierarchy, and the Emergence of Narrative Subjectivity." In *The Emergence of Mind: Representations of Consciousness in Narrative Discourse in English*, edited by David Herman, 161–86. Lincoln: Univ. of Nebraska Press, 2011.
- . *Strange Concepts and the Stories They Make Possible: Cognition, Culture, Narrative*. Baltimore: Johns Hopkins Univ. Press, 2008.