
Reflections on Autism, Ethnicity, and Equity

Posted on [June 14, 2018](#) by [Brian Katz](#)



Guest Post by [Michael Ortiz](#)

Sul Ross State University
Rio Grande College

I'm an associate professor of mathematics at Rio Grande College, a branch campus of Sul Ross State University consisting of three geographically separated units in the middle Rio Grande border region of Texas. I teach four or five (or six) courses each semester, all different, all at the junior, senior, or graduate level, and all through distance-learning equipment. Students transfer from the local community college. Roughly speaking, the student body is about 70 to 90 percent Hispanic, female, first-generation, and low-income, with an average age around 30.

I received my doctorate in 2009 and began work at Rio Grande College immediately thereafter. I'm of Puerto Rican descent, and my graduate work was supported partly by the Ford Foundation Predoctoral Fellowship for Minorities. I grew up on the south side of San Antonio, Texas, and, later, in a small town to the west, within the service region of my current institution.

I drafted these reflections while attending the recent National Inquiry-Based Learning Conference in Austin, Texas, much of which focused on inclusion and equity. I'm a member of an ethnic minority underrepresented in STEM fields; I also have an autism disorder, which went undiagnosed until I was midway through graduate school. Actually, it was grad school that prompted me to seek a clinical evaluation. I'm hoping that my account might be helpful to someone. It's impossible to tell whether a given effect might have been related to my ethnicity, my disorder, or my own shortcomings, so I'll leave it to the reader to connect the dots as they will.

I'll begin with my [autism disorder](#), which has had the greater impact.

First off, I have a hard time interacting with people. I hardly ever talk. That's not because I'm a misanthropist! I just have difficulty following what other people are saying and formulating my own responses. I'm worst at small talk, which requires a mental agility I don't have. I rely on memorized formulas, expressions, and anecdotes, but when these fail me, as they often do, I lapse into silence. If someone changes the subject rapidly or gives multiple directions, it sounds like gibberish, especially if there's background noise or movement. Under stress, I speak haltingly and with my eyes closed; sometimes I simply freeze, like a browser window with too many tabs open.

Like many people with autism, I don't make eye contact. It overloads my senses and makes me unable to think. Faces refuse to resolve themselves into recognizable composites: they remain mere assortments of features. Given two people of roughly the same appearance, I have as hard a time distinguishing between them as another person might have in telling apart two sheep. Sometimes I fail to recognize acquaintances, and sometimes I

mistake strangers for friends. I once recognized my wife's nose from a distance in a crowded public place, well before I realized that my wife was attached to it.

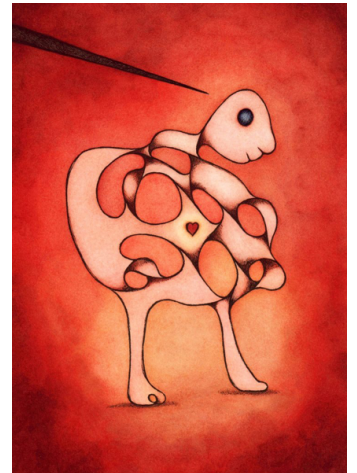
This *prosopagnosia*, or face-blindness, is related to other impairments. Facial expressions and body language can carry as much content as words. That content is lost on me. I easily get confused in casual conversations. On the other hand, I convey my meaning in words alone, as though I were texting. My speech tends to be formal and pedantic, and my lack of expressiveness is interpreted as apathy or coldness.

Most of my life has been made up of intense, narrowly focused interests. For instance, I became an expert in entomology when I was about nine, memorizing taxonomic tables and scientific names, collecting specimens, reading field guides cover to cover. I even received a personal tour of the entomology department at a research university. I later became interested in mythical genealogy, herpetology, medieval philosophy, Icelandic sagas, Greek history, and other things. Despite my poor conversational skills, I can easily launch into a monologue about my interests.

I seem to inhabit a parallel plane peculiar to myself, a maze with invisible walls. I live in a glass box, looking out through the wrong end of a telescope. I operate my body like a skill crane, and when I speak, it's like hearing someone else speak. I do still try to reach out to people: I study their mannerisms and speech, each new person being a new object of research. Some people are easy for me to "learn," but with most I can make no progress, and to them I'm a silent robot. I seem always to miss the end by taking the means to a literal and ridiculous extreme, saying and doing things that are eccentric or inappropriate.

As a child I spoke and acted like Mr. Spock; I ate my Froot Loops one color at a time in spectral order; I obsessively stacked and arranged things; I was hypersensitive to certain lights, colors, noises, music, and food textures. But I was happy. Things went downhill as I got older. I was eccentric, naïve, awkward, uncoordinated, eager to talk about my interests but unable to relate to others in any other way. This resulted in frequent bullying, verbal, physical, and sexual, to which I reacted with silence, though sometimes I secretly injured myself as a way of coping with the agitation I felt. It's humiliating to admit it, being as old as I am, but those experiences left a permanent mark that doubtless affected my grad school career.

With one exception, none of my grade school math teachers were particularly impressed with me. I got in trouble for things that other students seemed to do with impunity. Teachers would call me out and embarrass me in front of the class for fiddling with my pencil or doodling during math lessons. (I still draw during lectures: it's how I pay attention.) I became a solid C student in math. That began to turn around when my high school algebra teacher, an eccentric person himself, had me help him perform an experiment with satellite dishes. I initially went to college as an art student, but in a design class I was shown a film on geometry, and promptly switched to math.



It was in college that I lived outside of south Texas for the first time. I'd spent the first part of my life in San Antonio, in a neighborhood that was a fairly even mix of black and white and Hispanic. My best friend, who lived across the alley, was bilingual, and his mother spoke only Spanish; I grew up with a mere smattering of Spanish myself, but my dad was fluent, and I often heard it at my grandparents' house nearby. After we moved

to a small town, I experienced life in a place where things were still very segregated, where the white population lived on one side, the Mexican population on the other (the side with unpaved streets). The kids at my school would say things like, “We forget you’re Hispanic because you’re smart.” No longer was I the star pupil. Teachers had little patience for my quirks.

It was in college, however, that I became conscious of the fact that I had to prove myself before people in authority would treat me as though I were on the level. Interactions with police officers devolved into frightening ordeals; once, for instance, during a routine traffic stop, my (white) future wife was taken aside and questioned as to whether I was kidnapping her or transporting knives, guns, or drugs. That sort of thing occurred on campus as well, but in less obvious ways, beginning with the time I was accused of cheating in my freshman history class. (For the record, I have never cheated, smuggled, dealt drugs, or committed violent crimes. On the contrary, I’m an Eagle Scout, and was named Junior Citizen of the Year by the Chamber of Commerce during high school.)

I was accepted to a graduate program at a large university. My awareness of my social deficits made me apprehensive of getting lost in all those numbers. At my campus visit, I committed the *faux pas* of expressing this to my faculty host, who responded by contemptuously asking how old I was. When I went to a conference for Ford fellows that fall, I asked an elder mathematician what advice he might have about my situation. He thought for a moment, then asked if I played a musical instrument or knew any magic tricks. (I didn’t.) I was surprised at the conference by how many fellows were in fields directly related to their own race, ethnicity, or gender, and how few in STEM fields. I assume that’s why I was selected, despite my less-than-stellar academic record.

My thesis advisor, a brilliant researcher and expositor who devoted an unusual amount of time to his students, was also known for being intimidating. I would spend half of every week preparing for our hour-long meeting by forming mental tree diagrams and flowcharts intended to cover every possible route our “informal” discussion might take. Of course we would be in uncharted territory within the first two minutes, and I would be reduced to a stuttering wreck. That, or my mind would go blank. I’d be up at his board, presenting something I’d been working on, and he’d tell me I should have used alpha as a variable instead of beta, and my brain would reboot.

These experiences were painful, but I got used to them, and they ceased to make me nervous. The funny thing was that that didn’t change anything. As to my faculty relations in general, it seemed that I was continually speaking to the wrong person at the wrong time or asking the wrong kind of question.

My peer interactions were worse. I would sit in my office like a desk-troll, working on math all day, not talking to anyone. I wanted to talk, to interact, to work with people, to join in the camaraderie that makes up so much of grad school. I just wasn’t able to. I was a fish, looking out of my fish bowl at the two-legs walking about. Some officemates told me I reminded them of robot; others told me they often forgot I was in the room. One of the latter actually made a snide remark about me to a student of his when he didn’t realize I was sitting a few feet away. I never blamed anyone for these incidents. I was used to the discomfort I caused. I didn’t like it, but I understood it.

One good friend I had in the department happened to be of Mexican descent. Actually, we’re both of mixed ethnicity, and perhaps that liminality is part of what drew us to one another. Notwithstanding the large size of

our program, I can't remember many other Hispanic students. I mean Hispanic students educated in the United States, subject to conditions here. There were many students from Latin American countries, but their position seemed somewhat different. My friend and I were both very isolated. Most every day we ate lunch and went for a walk together.

My social problems had become so acute that I began wondering if there was something seriously wrong with me. All this time my disorder had gone undiagnosed, or misdiagnosed, treated with prescription medicine I didn't need. It had caused me trouble all my life, but for the first time I'd reached a point where my intelligence couldn't find a way around my limitations. Schizophrenia has occurred in my near family, and I wondered if I might be schizophrenic. The symptoms didn't seem to apply, however. Then, one day, I read in *Notices of the American Mathematical Society* about a professor who exhibited behavior similar to mine. A professor who had



an autism disorder. It took time to get the insurance straightened out and the copay scraped together, but eventually I was able to go to an assessment center to be evaluated by a licensed psychologist. The result was my diagnosis.

Autism can express itself in many ways. The causes and effects are far from clear. One person may be able to live and function on their own, with a few quirks, perhaps, but more or less like anyone else; another may need to live under constant supervision; yet another may be highly successful and independent in some areas while possessing severe deficits in others. Intelligence varies just as in the general population, but the intelligence of a person with autism may express itself in unexpected ways. When my own intelligence was tested during my evaluation, some measures indicated that I was above average, others below average. This

“spiky” IQ is common in persons with autism.

My advisor, after I told him about my diagnosis, modified his approach somewhat. I noticed and appreciated this, and it helped a lot. But that was during my last year of school, too late to make much difference. And it wasn't as though I could go around telling my peers. I had for some time abandoned my dream of being a research mathematician. I knew I couldn't handle the ladder of postdocs and all the transitions and interactions it would entail. I decided to pursue a career focused on teaching, which was something I enjoyed.

Soon after I defended, one of my committee members, a person I respected, told me that she understood my desire to get out of research, as she was doing the same thing. She said it was a shame that, in this day and age, the math community couldn't do better by people like me. I didn't know what she meant. She told me, in some surprise, that she was referring to Hispanics. She thought I would be a good role model, which I hope is true.

I'd like to pretend that I went to work at Rio Grande College like Mother Teresa going to serve the poorest of the poor. The truth is that I wanted to go far, far away. I applied all over the country, but, despite multiple interviews, some on site, I wasn't successful. When I interviewed at Rio Grande College, my message was simple and direct: this is where I'm from, I know the people here, I'll stay here to raise my family, and I'll take care of your students. They hired me on the spot. I confess that I was disappointed at first. Upon reflection, I knew I was where I belonged. Home again.

Now I divide my time between teaching evening and night classes and driving around south Texas brush

country. I go through Border Patrol checkpoints on a weekly basis, where I sometimes get questioned and accused of smuggling contraband and ushered over to the station while my vehicle is searched; if my wife is with me, she still gets asked if I'm kidnapping her. Late one night a while back, I asked an agent who'd questioned me why I had provoked his suspicion. He told me that my halting speech and lack of eye contact were "red flags." I have a rehearsed act now, and it gets me through every time.

My college rents its buildings; it is, truly, a *colegio sin paredes*. The faculty often work out of their vehicles, traveling from site to site. It's a region with a long and little-known history of civil rights issues in education; one federal case, which began with the south Texas school walk-outs and integration movements of the sixties and seventies, was finally resolved only a year or two ago. Right now, legislative cutbacks and other factors are starting to undo the advances made by my college's forty-year history. My students, who work full time, have children, and often support their parents as well, face adversity like I never did, but to them it isn't adversity. It's just life. It's amazing how grateful they are to me just for treating them like they're worth my time. They all think I'm a genius. I hope they don't ever discover what a failure I am. Then again, I doubt they would care.



I'll finish by saying that, while some approaches to inquiry-based teaching would have helped me, others would have (and did) cause me hardship. I hope it's obvious why. The cavalier attitude with which some professors grade students without formal assessments and disregard their own syllabi (which are contracts) is especially problematic. Some students need explicit guidance and consistent feedback. A professor may argue that a student in their course needs to have the "maturity" to know what progress they're making; that's fair, perhaps, but also highly exclusive. Academia is a culture with its own standards, and students who belong to underrepresented groups or come from disadvantaged communities may lack the background their professors tacitly assume.

What I personally care about more than anything else is the integrity of mathematics as a field of human endeavor. But I also care about the humans themselves. I believe that varying practices so as to make the field accessible to more groups and communities can only make the world a better place. I may not have been anyone's dream student, but I'm conscious of the debt I owe to my professors. The intellectual ethic I received from my thesis advisor informs everything I do to help my students improve their lives. And those students go out and affect other people. The trickle-down never ends.

I don't think it's possible to come up with an approach that's fully just to all people all of the time. But I hope at the very least that every teacher can learn that there are many forms of privilege, and that many of them are invisible, even to the most enlightened or progressive of minds.

[Editorial: The art is also by the author.]

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