Improving Prejudicial and Stigmatized Views towards Autistic People in the Weather Enterprise

Matthew J. Bolton¹ and Stacie H. Hanes²

¹College of Arts and Sciences, Saint Leo University, Saint Leo, FL

²National Weather Service, Gray, ME

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A hundred years ago, people with individual differences of the mind were labeled “mentally deficient.” For many, including autistic individuals—who have difficulties in social communication, unusually narrow interests, repetitive behavior, and sensory sensitivities—the outcome was involuntary institutionalization and even sterilization. As science advanced, so too did beliefs about helping such individuals. Treatment, however, typically of a medical nature, was often in the form of ice pick lobotomies and electro-shock therapy—little more than torture or, at worst, a death sentence. Now, with roughly 3.5 million Americans on the autism spectrum (Baxter et al. 2014) and as we mark Autism Awareness-Acceptance Month 2020, societal views towards the condition truly are changing. In light of the oft-observed finding that mental conditions are stigmatized much more often than those of a physical nature (e.g., Michaels et al. 2012), and that these biases extend to the workplace (Jans et al. 2012), is the weather enterprise keeping up?

Lest we be left behind, weather professionals must recognize that *diversity* encompasses many more variables than just race and gender; and must, furthermore, acknowledge and then work to change their own biases against autistic and other neurodiverse individuals. This starts with changing the terms we use to reference autism (e.g., using the less-stigmatizing autism spectrum condition instead of autism spectrum disorder; see Bolton 2018). Then, it is contact theory—not anti-bias training (which doesn't work; see, e.g., Belluz 2018)—that may provide the best framework for this endeavor. Psychologist Gordon Allport hypothesized (1954; see Everett, 2013, for detailed discussion) that outgroup-directed prejudice could be significantly reduced by motivated interpersonal contact. There is increasing evidence that even unstructured contact, sub-optimal outside Allport's framework, facilitates reduction of negative views. Even simply imagining the contact appears to help. Moreover, an emerging body of evidence suggests contact might reduce tendencies to pit one side against another; may increase perceptions of similarity; and induces empathy towards those from whom we feel different.

Differences in autistic neurology are not linear—the spectrum is not a sliding, left-right scale with clear delineations of severity or trait occurrence. Autistic individuals typically have strengths in one or several areas of functioning alongside co-occurring weaknesses elsewhere. Nevertheless, they can contribute greatly to the weather enterprise—and many already do, unbeknownst to their colleagues! There is ample research [evidence](#) of connections between autism and science, including the finding that meteorologists score highly on tests of autistic traits (Bolton et al. 2018). Further research (Bolton et al. 2020) on connections between autism, weather salience (psychological attention to weather), and weather interest suggest enhanced outreach efforts to autistic people may bring new faces into the meteorological field.

In meteorologists the ASC strength-weakness dichotomy may mean, to give just one specific example, skills in programming or weather map analysis at the expense of weaker social skills. The weather enterprise should note that autistic people are more often than not intelligent; many are detail-oriented and conscientious in their work, and possess the ability to readily find patterns and anomalies in data. With appropriate accommodations and training to assist their learning of the ins-and-outs of communicating within operational meteorology, many autistic people could be well-suited to forecaster positions in the government or private sectors.

How can autism-oriented stigma and prejudice in the meteorological workplace be ameliorated? Additional training on autism, ideally facilitated by autistic people, who can speak to and reflect on lived experiences rather than assumptions of the condition (Sarrett 2017), can go a long way towards increasing

knowledge for non-autistic co-workers and supervisors. For example, National Weather Service (NWS) forecaster Kevin Huyck, himself on the spectrum, [spoke](#) about the ways autism can affect communication, and also how it can be accommodated, in the NWS environment. It is important to respect these individuals, recognizing their workplace needs are as valid as any neurotypical person's, and embracing their voices is a strong step forward in that endeavor. Ultimately, the weather enterprise needs [all kinds of minds](#), and overcoming personal prejudices while embracing individuals with different strengths is important to realizing a more diverse, stronger weather enterprise.

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References

- Allport, G. W., 1954: *The nature of prejudice*. Addison-Wesley.
- Baxter, A. J., T. S. Brugha, H. E. Erskine, R. W. Scheurer, T. Vos, and J. G. Scott, 2014: The epidemiology and global burden of autism spectrum disorders. *Psychol. Med.*, **45**, 601–613, <https://doi.org/10.1017/s003329171400172x>
- Belluz, J., 2018, May 29: Companies like Starbucks love anti-bias training. But it doesn't work – and may backfire. Available at <https://www.vox.com/science-and-health/2018/4/19/17251752/philadelphia-starbucks-arrest-racial-bias-training>
- Bolton, M. J., 2018: With the silence of a thousand cries: Extremes of autistic advocacy. *Dis. Soc.*, **33**, 980–984. <https://doi.org/10.1080/09687599.2018.1454381>
- Bolton, M. J., L. K. Ault, D. M. Greenberg, and S. Baron-Cohen, 2018: Exploring the human side of meteorology: A brief report on the psychology of meteorologists. *J. Oper. Met.*, **6**, 23–32. <https://doi.org/10.1519/nwajom.2018.0603>
- Bolton, M. J., W. G. Blumberg, L. K. Ault, H. M. Mogil, and S. H. Hanes, 2020: Initial evidence for increased weather salience in autism spectrum conditions. In press. *Weat. Clim. Soc.* Preprint available at <https://doi.org/10.31234/osf.io/pbh4v>
- Everett, J. A. C., 2013: Intergroup contact theory: Past, present, and future. Available online at <https://www.in-mind.org/article/intergroup-contact-theory-past-present-and-future>
- Jans, L. H., H. S. Kaye, and E. C. Jones, 2012: Getting hired: Successfully employed people with disabilities offer advice on disclosure, interviewing, and job search. *J. Occ. Rehab.*, **22**, 155–165. <https://doi.org/10.1007/s10926-011-9336-y>
- Michaels, P. J., M. López, N. Rüsch, and P. W. Corrigan, 2012: Constructs and concepts comprising the stigma of mental illness. *Psychol. Soc. Ed.*, **4**, 183–194.
- Sarett, J., 2017: Interviews, disclosures, and misperceptions: Autistic adults' perspectives on employment related challenges. *Dis. Stud. Quart.*, **37**.