Take an Aisle Seat

December 23, 2019



Much of the world has just ushered in a new year and is busily engaged in the aspirational activity called "making New Year's resolutions." You know, exercise more and eat less. Save more and spend less. And so, I humbly submit for your consideration, "discuss more and dismiss less" — that is, let's engage with our critics.

Behind every scientific success you can always find a chorus of critics, and I mean that in a good way. Part of the scientific process is dealing with conflicting data and mistakes, and yet it's tempting to find fault with the criticisms or even the critics themselves. But if you accept that being wrong is an opportunity for discovery, then the people who disagree with you should become your best friends. Call it "taking an aisle seat," after the metaphor of reaching across the political aisle. If you're sitting near the aisle, it's easier to reach across. Your view of the world depends on where you sit.

Recently, four of my colleagues and I camped out for more than 2 years, tents and all, in the middle of the aisle to ask whether there are universal facial expressions of emotion. My partners in crime were APS Fellows Ralph Adolphs, a neuroscientist at the California Institute of Technology, and Seth Pollack, a developmental psychologist at the University of Wisconsin-Madison; Northeastern University

computer scientist Stacy Marsella; and computer vision engineer Aleix Martinez of The Ohio State University. We did not know each other well and began with deeply opposing views on this topic. We were aware that we were wading into a contentious debate that has raged for more than a century. And we were facing a mountain of research findings that are open to multiple interpretations. My compatriots and I did our best to set aside the ideological battle, focus on the data, and attempt to come to consensus on what the data show.

We decided at the outset not to forge an adversarial collaboration. Our goal wasn't for one of us to be right, but for all of us to understand how things work. To stay loyal to that goal, we agreed on a few ground rules at the outset:

- **Define success up front**. We formally agreed on the criteria for universal facial expressions of emotion. The evidence needed to show reliability (e.g., when angry, do people scowl often enough for scowls to be considered a reliable signal of anger?), specificity (e.g., are scowls specific to anger, or do they frequently have other meanings?), and generalizability (across different ages, cultures, and so on).
- **Keep the goal in sight.** We agreed to examine the evidence and determine the soundest interpretation of the data, not try to win a debate.
- Follow the data. To settle disagreements, we'd reread the source material and seek additional evidence from other sources.
- **Be curious.** We reminded ourselves explicitly in the moments of greatest frustration to be curious instead of defensive. This was sometimes *very* difficult.
- **Mistakes are part of the job.** Each time one of us admitted we were wrong about something, even something we'd published, the rest of us agreed that we'd offer the person our admiration and esteem for their bravery.
- Have a contingency plan. In the end, if we didn't come to agreement on what the data show, we would write companion papers in dialogue with one another. At the very least, we'd create a good example for readers about how science works.

Once we began the project, we stewed in the evidence for 6 months before we wrote even a single bullet point. Our initial draft manuscript was like ink soup, with each scientist using a different colored highlighter. We sometimes discussed sentences down to the word. We imagined that our process was sort of like drafting a bill in the US Congress.

After the paper was written, we asked 40 of our scientific colleagues to read it and comment. From the responses, it was pretty obvious which scientists were eager to follow the data with us and which ones preferred to remain comfortably entrenched in their beliefs. Two and a half years later, after dissecting more than a thousand papers during almost a hundred lengthy videoconferences — and even more time reading, writing, and revising — we published our findings in <u>Psychological Science in the Public Interest</u>.

This collaborative project was one of the most rewarding experiences of my scientific career. Scientific practice is full of opportunities for people to tell you that you are wrong — journal reviews, grant application reviews, social media — but rarely do we create the conditions to actually *hear* the criticism and do something productive with it. In addition to *PSPI*, several other journals invite scientists to take

an aisle seat. <u>Behavioral and Brain Sciences</u> (*BBS*) asks scholars to write commentaries on target articles (and the original authors get to respond), as do <u>Psychological Inquiry</u> and <u>Physics of Life Reviews</u>.

APS Past President Susan Fiske of Princeton University and her social psychology colleagues, APS Fellows Naomi Ellemers (Utrecht University, the Netherlands), Andrea Abele (University of Erlangen-Nuremberg in Germany), and Vincent Yzerbyt (Catholic University of Leuven, Belguim), and Alex Koch (University of Chicago) selected some aisle seats recently. They met in a hotel to confront their differences about the fundamental dimensions of social evaluation, using what they describe as a process of *adversarial alignment* (although to me it sounds more like constructive alignment). Where my colleagues and I began with the data and tried to figure out what they mean, Fiske and colleagues began with five conflicting, conceptual viewpoints and tried to reconcile them. Their aim was to identify common theoretical ground, acknowledge disagreements, and compromise where possible, using strategies reminiscent of conflict negotiation. Like our *PSPI* working group, Fiske and her colleagues shared a commitment to curiosity, shared values, and trust. They actively read together, debated, and ultimately drafted two papers: one detailing their results, and a second that describes their constructive alignment process itself.

Most recently, my local coffee shop offered some aisle seating when I invited evolutionary psychologist Max Krasnow to discuss his views on my October 2019 presidential column about "zombie ideas" in science (long-disproven ideas that refuse to die). Max penned a vigorous online critique of several of my zombie nominations. Even though we had never met, we live just a few miles from one another, so I asked him to join me for coffee and pastries while we chatted about his concerns. After some lively discussion, we determined that our disagreements on most topics hinged on different vocabulary and semantics, except for one: waist-to-hip ratio in human females and its alleged relationship to reproductive success. In fact, when I wrote, "There should be a special place in hell, filled with mirrors, reserved for people who suggest that waist or hip size predicts anything important about a woman!", some young scientists who study evolutionary psychology experienced my words as mean-spirited. I had meant them as a joking commentary on being a woman in a culture that is preoccupied with looks and dress size. Taking an aisle seat sometimes means acknowledging that the message you intend is different from the one received. I offer a deeply felt apology to those who were offended by my ill-fated attempt at humor. Look for more about my discussion with Max in a future column, along with an *Observer* article highlighting the recent developments in research on waist-to-hip ratio.

One thing I've learned over the past 25 years of doing science is that lack of criticism means I'm playing it too safe. I don't always have time to take an aisle seat the way that I would like, but when I do, I almost always learn something, even if it's occasionally something I don't particularly want to know.

So this year, let's all make a resolution to cultivate new opportunities for discovery and progress in our scientific work. Reach out to someone whose research ideas are different from or even conflict with your own. Instead of bickering with them in your head as you have your morning shower, blasting them on Twitter, or eviscerating them as an anonymous reviewer of their manuscripts or grant applications — options that can prevent meaningful discussion and, correspondingly, scientific progress — why not invite them out for tea or have a video chat? Transform your adversaries into your greatest resource, scientifically speaking. You might think you don't have the stomach for tackling conflict head on. But then again, you might surprise yourself. And if you want to debate, offer to switch sides so that you each

argue the other person's perspective. Cultivate more inquiry and less advocacy.

If your adversaries are reluctant to engage in discussion about scientific disagreements, you can always offer to change the topic to something less controversial, like the 2020 U.S. presidential election.

Have you ever "taken an aisle seat" and learned something new? Please share your story by commenting on this column.

References

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