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Going in Many Right Directions, All at Once

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Abstract

Invited to assess whether the field is going in the right direction, this essay answers yes, mostly. Policymakers' respect and the public's interest put us in the spotlight for our intrinsic strengths, but also draw attention to our weaknesses such as the replication crisis, about which reasonable opinions differ. Civility and mutual tolerance have sometimes been an issue in these debates. As an example of constructive debate, our lab's recent experience with mutually respectful engagement has advanced solving one scientific puzzle. Principles facilitating this collaboration include: using our respective tribes as secure bases for exploration, sharing agreed-upon rigorous standards, and establishing mutual trust. The author summarizes how her career has oriented her to these directions that rely on perseverance, flexibility, tolerance, and optimism for the field.

Somebody just published a paper disputing our favorite model, contesting nearly 20 years of our data. What does this illustrate for our field? Psychology is definitely going in the right direction: Scientific give-and-take makes progress. The field has never seen more active involvement in proposals and counter-proposals—not just in journals. I'll come back to our particular dispute, but first consider it in context of the field's lively debates more generally.

Mostly the Right Direction

Many observers apparently think we are going in good directions. As a field, we are everywhere in policy advice and popular culture; consider some examples. In terms of policy, within the National Academy of Sciences' report-generating arm, its most psychological board—namely, the Board of Behavioral, Cognitive, and Sensory Sciences—has never been busier organizing expert panels to offer evidence-based advice to the government. Examples include reports on the human subjects Common Rule applied to behavioral and social science; an update on how people learn; encouraging sun-safety behavior; social and behavioral sciences in national security; changing behavioral health norms; social aspects of Alzheimer's; and reducing counterfeiting. (See <http://sites.nationalacademies.org/DBASSE/BBCSS/index.htm>; truth in citation: I know this because I chair this Board.)

What's more, the Obama White House listened to a Social and Behavioral Sciences Team (<https://sbst.gov/>). The Presidential debates mentioned the psychological concept of implicit bias as relevant to police shootings (<https://www.washingtonpost.com/video/politics/clinton->

[on-implicit-bias-in-policing/2016/09/26/46e1e88c-8441-11e6-b57d-dd49277af02f_video.html](https://www.nytimes.com/2016/09/26/46e1e88c-8441-11e6-b57d-dd49277af02f_video.html)). At least some Washington policymakers respect our field. Of course, many do not (see below).

Beyond policy, psychological science appears regularly in the *New York Times* (<http://www.nytimes.com/topic/subject/psychology-and-psychologists>), best-selling books (e.g., Lewis, 2017), Ted talks (e.g., <https://imotions.com/blog/ted-talks-human-behavior/>), and social media. Consumers of popular culture cannot get enough of our field.

Partly because of all this attention, we are also in crisis about credibility—both outside and inside the field. Congress has for decades singled out behavioral sciences for ridicule, from Senator Proxmire's Golden Fleece Awards (https://en.wikipedia.org/wiki/Golden_Fleece_Award) to Senator Flake's *Wastebook* (2015). The National Academy of Sciences (2016) has countered with *From Research to Reward* (<http://www.nasonline.org/publications/from-research-to-reward/>). Likewise, the National Science Foundation (2013) has issued a defense of social, behavioral, and economic research.

What's more, like other sciences, not all our effects replicate, and this casts a shadow. This dilemma has provoked different interpretations (e.g., Open Science, 2016; versus Gilbert, 2016). The debate on the whole is healthy. Of course, scientists are human and can always improve.

Even the harshest scientific critique is painful, but it need not necessarily be personal or destructive. But some critics go beyond scientific argument and counterargument, to imply that the entire field is inept and misguided (e.g., Gelman, 2014; Shimmack, 2014). Personally, I would not go so far as to see rampant incompetence or carelessness. Even if initially resistant, we as a field eventually welcome new methodological insights that improve our standards (e.g., our current adoption of much that was suggested earlier by Cohen, 1992; Rosnow & Rosenthal, 1989). The recent methodological advances, changing norms, and renewed scrutiny can benefit our science. Many proposals are constructive: posting of methods and data, emphasizing statistical power, vetting commentaries and author responses, moving away from one-shot studies, and being explicit about exploratory analyses, among others (e.g., Eich, 2014; Lindsay, 2015).

On the other hand, the crisis sometimes reflects less healthy trends toward mistrust, infighting, shaming, and bullying—especially on uncurated social media, as I have suggested elsewhere (Fiske, 2016). Again, we can separate methodological criticism from personal attack. Even if only a few critics cross the line to inappropriate bullying, their effect creates a chilling, hostile work environment. My call for civility in tone has been mistaken for a rejection of improved methods of open science. That interpretation is wrong, often going hand-in-hand with impugning my (and other people's) motives (search the Gelman or Shimmack blogs for my name; I prefer not to rehash the disrespectful personal attacks).

Another mistaken—and troubling—interpretation of my column is that I was trying to use my seniority in the field to silence more junior people (Reviewer 3, 2016; Schmidt, 2016). Apparently, the interpretation is that more established people and journal editors have a vested interest in the problematic status quo and are trying to shut down dissent. As someone

who has studied power dynamics and subordinated groups, I find this accusation of my motives to be ironic. But I understand it: Our own research suggests that when powerless people find that a powerful, cohesive outgroup controls their outcomes, they tend to stereotype them because they see they cannot influence them (Dépret & Fiske, 1999). Moreover, inter-generational tensions are fueled by older people's control over resources (North & Fiske, 2012, 2013). If some younger scientists believe that their only available professional outlets are in social media, then something is wrong with the field's opportunities, and we should address the problem. Shutting down scientific criticism is not my motive.

Another possible source of misinterpretation may come from a different power dynamic, namely that many junior people feel too vulnerable to object to the tone of the on-line discussions because then they would attract attention and become their target (Reviewer 3, 2016). Indeed, I have received nearly 100 emails from people supporting the APS Observer column, many voicing their relief that someone less vulnerable would raise the issue of tone. Many have also expressed feeling threatened by cyber-bullying. As a result, the voices most able to object to on-line personal attacks are the more senior ones, so some observers mistakenly infer that this biased sample reflects the underlying age distribution instead of contextual pressures. Again, none of these calls for civility object to online methods forums but to attacks on individuals' motives, persons, or reputation. Character assassination is not scientific criticism. Ad hominem attack is a practice I (and others) reject as unconstructive and not advancing our science (see petition at Promoting open, critical, civil, and inclusive scientific discourse in Psychology).

Many of the current debates are lively and stimulating for the field of psychological science, a sign we are going in many of the right directions, though the tone could improve. My lab has recently had a constructive debate that gives me hope and may suggest some models for going forward.

Constructive Debate: Our Experience with Mutually Respectful Engagement

Background

Our Stereotype Content Model (Fiske, Cuddy, Glick, & Xu, 2002) proposed that societies sort social groups along two basic dimensions of social cognition: warmth (how friendly, trustworthy) and competence (how capable, effective). We are not the first to suggest these or similar dimensions, which turn out to be robust over time, place, and methods (Fiske, 2015). And we have reasonable theory of why warmth and competence matter. We thought we had achieved some consensus.

Along come some researchers with what they call a more data-driven approach (Koch et al., 2016): They generate the to-be-rated groups in a different way and then submit them to multi-dimensional scaling, which we had not yet used. Imagine our surprise—and evidently theirs—when they generated other dimensions: agency (dominance), which relates to our competence/status dimension, and beliefs (progressive-conservative), which does not relate to our findings at all. Searching for warmth/communion, which is supposedly the primary

dimension, they find it only in the Goldilocks middle—warm groups are not too dominant or subordinate, not too progressive or conservative.

We were dismayed. But not offended. Throughout their research project, the other authors consulted us, often took our advice, cited us as appropriate, and communicated respectfully. After their paper appeared, one of their team visited my lab—and science progressed.

Together we solved the puzzle in several ways, discovering analysis methods that produce their effect (aggregate) and ours (individual). As well, we discovered framing manipulations that favor their effect (sociological, distal) and ours (psychological, proximal). Indeed, these teams have joined forces to propose presenting these research projects at an international meeting, hoping to illustrate an adversarial collaboration with an outcome that advanced our corner of the science. For the record, lest this positive experience seem unrepresentative and somehow destined to work (Reviewer 2), our lab previously engaged in another adversarial collaboration, to good effect (Harris et al., 2007; van den Bos et al., 2007).

What It Illustrates about Good Directions: Tribes, Rigor, and Trust

Three notions explain our positive experiences. First, we used our tribes to good advantage, as both defining our respective interests and providing a secure base for exploration. Scientific tribes—whether department areas, national groups, or competing labs—can be divisive, to be sure. When groups split off, defending their turf, these divides can stifle progress, confine research, and suppress debate. But tribes can also accumulate knowledge, provide affinity, monitor standards, and protect loyal mavericks who want to push the boundaries. To the extent that our respective labs balanced these loyalties and strengths, we could all take risks that paid off.

Rigor is a second principle that aided our adversarial collaboration. Four teams (American, Belgian, two German ones) critiqued every design, method, analysis, and result. We were open with each other, shared our hypotheses, and replicated out results; it was open science in miniature among the adversarial collaborators. We balanced this rigor with flexibility that allowed creative ideas, risk-taking, and varying methods.

Finally, we built mutual respect and trust. We are all in it to solve the puzzle of discrepancy, not to destroy each other. Trust in other scientists requires the right tone of civility and tolerance, as well as some faith that errors will be self-correcting. Well-placed trust minimizes communication delays, wasted effort at excessive verification, and risking one's career on unreliable findings.

Takeaways

Balance requires flexibility, tolerance, and optimism. And perseverance furthers.

At the Editor's Request: Where I'm Coming From

My own career illustrates these goals, I hope. My doctorate is from Harvard University, where I worked with Shelley Taylor, who taught me that the best science is collaborative and

fun. My methods teachers were Bob Rosenthal, who taught me that effect sizes matter, and Dave Kenny, who taught me that credible methods are not a rulebook but a toolkit.

My own lab began in the crisis of the late 1970s (bad job market, flashy studies, public criticism—sound familiar?). But I was excited by the then-new social cognition, and I braved criticism from both sides (too social, not social enough; too cognitive, not cognitive enough). During that era, Shelley Taylor and I wrote the first edition of *Social Cognition* (1984), which helped define the field and derail my career. (Writing a pretenure book is not generally considered a good idea.)

Eventually, with the support of collaborators both national and international, my lab developed a research focus especially on cognitive stereotypes and emotional prejudices, at cultural, interpersonal, and neuro-scientific levels. More than 300 publications and many arcane processes later, I was elected to the National Academy of Sciences. My most-cited work—besides that precocious book—includes the continuum model of impression formation, from categories to individuation; the role of power in stereotyping; the discovery of ambivalent sexism; and the battered but robust stereotype content model.

Because I enjoy promoting our field and other people's work, I've always done a lot of editing. I aim to promote cumulative science, the integrative synthesis of progress in the *Annual Review of Psychology*. In FABBS's *Policy Insights from Behavioral and Brain Sciences*, we aim to promote the usefulness of our science. And at *PNAS*, we the psychologist editorial board members aim to promote the best psychological science of interest to a general audience. All this editorial overview convinces me we have many right directions.

My graduate students arranged for me to win the University's Mentoring Award; international advisees arranged for me to win the Mentoring Award from the Association for Psychological Science. The feeling is mutual; my students are my proudest scientific accomplishment, and along with trustworthy adversarial collaborators, I believe they will lead the field in the right directions.

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