

CHAPTER 8

The Strength of Stereotype Threat: The Role of Cues

1.

On June 23, 2003, the U.S. Supreme Court announced its decisions in two landmark affirmative action cases in which the University of Michigan defended its right to consider the race of an applicant in admissions to its undergraduate school (*Gratz v. Bollinger*) and its law school (*Grutter v. Bollinger*). Weeks before the June 23 announcement, though, I was confident I knew what the decisions would be. I'd heard an interview of Justice Sandra Day O'Connor by Nina Totenberg on National Public Radio's *All Things Considered* on May 13. The common wisdom at the time was that the other eight Supreme Court justices would split evenly on these two decisions, leaving O'Connor's as the deciding vote on both.

Affirmative action was never mentioned in the interview. It focused on O'Connor's recently published memoir, *The Majesty of the Law*, which began with her youth on the Lazy B Ranch in Arizona and proceeded all the way through her time on the Supreme Court. When Totenberg asked O'Connor about her early years on the Court as its only woman, O'Connor said the experience was "asphyxiating." "Everywhere that Sandra went, the press was sure to go," she said, and noted that after each decision "there would be a little add on: What did Justice O'Connor do in the case?" Questions hung over her appointment: Was she good enough? Did she have feminist leanings? Was she insufficiently feminist? Hyper-scrutiny from all camps.

Then Totenberg asked O'Connor, "When Justice Ginsburg (the second woman appointed to the Court) arrived, it made things better?" O'Connor replied, "Oh, it was just night and day. The minute Justice Ginsburg arrived, the pressure was off. . . . We just became two of the nine Justices. . . . It was just such a welcome change." On hearing this as I drove along in my car, I felt I knew how the affirmative action decisions would go. I felt I knew because this statement revealed that O'Connor understood the concept of "critical mass," the basis of Michigan's defense.

The term "critical mass" refers to the point at which there are enough minorities in a setting, like a school or a workplace, that individual minorities no longer feel uncomfortable there because they are minorities—in our terms, they no longer feel an interfering level of identity threat. When Justice O'Connor was alone on the Court, she lacked critical mass. She was stressed, burdened with extra scrutiny, pressured to be the Jackie Robinson of women in the law. When Ginsburg arrived, she had critical mass. The stress and sense of burden subsided. The change was more than psychological. Her actual contingencies changed. The press sought fewer interviews with her after each Court decision; they asked

her less about the "woman's perspective" in relation to decisions; they no longer followed her into restaurants. Her work environment now included someone who shared the experience and perspectives of being a woman. She could worry less about being seen stereotypically.

When O'Connor retired and left Ginsburg as the sole woman on the Court, Ginsburg lost critical mass, and her contingencies began to resemble those O'Connor had faced earlier. "I didn't realize how much I would miss her until she was gone," Ginsburg said recently of O'Connor's departure. "We divide on a lot of important questions, but we have had an experience growing up women and we have certain sensibilities that our male colleagues lack." Nor, she said, did she want the Court to signal that a woman justice is just a "one-at-a-time curiosity, not a normal thing." With O'Connor's retirement, Ginsburg's contingencies worsened. She had gone from being a "normal thing" to being not a "normal thing."

"Critical mass" is not a precise term. It's difficult to peg it to a precise number. O'Connor, for example, enjoyed a sense of critical mass with only one additional woman on the Court. Few colleges, however, would ever consider two minority students a critical mass. What's at play here? One possibility is that the number of minorities in a setting has to be large enough to improve the contingencies of individual minorities. Just two black students on a typical college campus would be just too few to affect the society of the school—the prevailing styles, who had status, who could be a student leader, the likelihood of being stereotyped, and so on. For example, would even 100 or 500 blacks be enough to achieve a critical mass on the University of Michigan campus of over 36,000 students? Yet adding one additional woman to a Supreme Court of nine justices changed O'Connor's contingencies dramatically.

The well-known Harvard organizational psychologist Richard Hackman and his colleague Jutta Allmendinger looked at this

question in relation to the incorporation of women into symphony orchestras throughout the world. His findings were fascinating. In orchestras with a small percentage of women—in the 1 to 10 percent range—women musicians felt a lot like Sandra Day O'Connor on the pre-Ginsburg Supreme Court. They felt intense pressure to prove themselves and to fit a male model of what a good orchestra member is. Orchestras in which the percentage of women approached 20 percent or so—some degree of critical mass—still had problems, problems that were different from those when women were only tokens in the orchestra—greater gender fractiousness, for example—but problems nonetheless. It wasn't until the percentage of women in an orchestra reached about 40 percent that men and women alike began to report more satisfying experiences.

So it's hard to be precise about critical mass. Still, listening to the car radio that day in 2003, I knew that Sandra Day O'Connor understood that critical mass is real and important, despite its imprecision as a concept. She had lived its absence and its presence.

Justice O'Connor might have wished that the world was simpler: that we were all just individuals, that a given school or workplace was essentially the same situation for everyone regardless of her or his identity. She might have wished that being a lone woman on the Supreme Court was the same as being a man on the Supreme Court. She might have preferred an interpretation of the law that rigorously considered only the individual perspective, that recognized no contingencies of group identity. She was, after all, raised in the postfrontier West, a region known for its individualism. But she also knew her own experience. And in the end, on the Michigan decisions, she went with that. With O'Connor's as the deciding vote, Michigan lost the undergraduate school case (for using practices deemed too close to strict quotas) but won the law school case, which preserved universities' right to consider race

as one of several relevant factors in the admissions decision—a signal from the Court that it considered a critical mass of minority students essential to these students' ability to function and learn in a university environment.

2.

Sandra Day O'Connor experienced intense identity threat in settings of great importance to her, such as the Supreme Court. The central question of this chapter is what makes this threat felt, and what determines how much a person is affected by it?

My first guess, as I've already confessed, followed my psychologist's inclinations. It must be something psychological, a trait perhaps, that makes one susceptible to the threat—a lack of confidence, an oversensitivity to the possibility of discrimination, a low capacity for dealing with frustration. But our early research had pointed in a different direction. The people most affected by this threat were people like Sandra Day O'Connor, Ruth Bader Ginsburg, and minority and women students at the achievement vanguard of their group. If still greater achievement skills were required to overcome this threat, then doing so could be next to impossible.

We therefore began to explore the role of circumstance. That's how we got to the idea of identity contingencies, those particular circumstances that went with a person's identity in specific situations. That led to the next idea: that what determines how much identity threat a person feels in a setting are the cues in the setting that might signal these contingencies—cues such as, in O'Connor's case, the greater attention her decisions received compared with the attention given to those of the other justices, the questions she got that seemed guided by gender stereotypes, and so forth. This became our working hypothesis about what makes identity threat

felt, and what gives it the impact it has: more than individual traits, it is cues, contingency-signaling cues in a setting.

While we were thinking about this, I had an experience that vividly illustrated this idea to me. I visited a Silicon Valley start-up firm. Age cues were everywhere. The CEO was twenty-six years old, and the other employees were younger than he. Bicycles were hanging from hooks over employee's work cubicles. Music was playing that I had never heard before. I felt old. I imagined how I might feel if I worked there. I imagined worrying about my co-workers. They might have no general prejudice against older people, but in that situation they might see me stereotypically—as an “older person with no computer savvy.” They might meet me with patronizingly low expectations or devalue my contributions. They might view me as being of little interest, or even worry that associating with me would cost them status, not sitting next to me in the cafeteria or at meetings. I could worry about all of these possible contingencies even if no person in the firm ever said a word. The bicycles hanging over the cubicles, or the kind of music in the air, the cues, would be enough.

This idea became our chief research question: Could it be that these cues—often innocent-appearing cues that seemed to be natural, unavoidable ingredients of a situation—regulate how much identity threat a person feels?

There are good reasons to think so. If you are “identity integrating” a setting—as O'Connor did on the Supreme Court, as Ted did in his African American political science class—then vigilance to possible contingencies is a central focus. And what more relevant information is there than features of the setting itself? You've often got nothing else to go on. It's no easy task. Any particular cue could tell you everything you need to know, or nothing at all. You have to keep delving, using multiple cues sometimes to triangulate on meanings. The number of phone messages Justice

O'Connor received from reporters after a Court decision could be telling her that her role in the decision is under special scrutiny—a contingency of her identity on the Court. Or an arguing attorney's tendency to make eye contact with only the male justices could be telling her that her sex detracts from her stature in the courtroom—another contingency. She wouldn't know for sure. These details could be telling her nothing. But at some level, explicitly or implicitly, she'd likely be sorting through them, trying to figure them out, and using valuable cognitive resources to do it.

We came to a simple working rule: if cues in a setting that point in an unsettling direction mount up, a sense of identity threat is likely to emerge. But if such cues are sparse in a setting and/or point in a benign direction, then a sense of identity threat should not arise or should subside. Rules are nice—if they work. In the chapters that follow, I hope this one will be useful in showing how to diminish identity threat, especially in places where its effects are deleterious. But for now, to convey the scope of the detective work that goes into figuring out contingencies, let me give a few examples of the cues I am talking about, a few of the major types.

Cues implicating one's marginality have to be high on this list. And the number one such cue is the number of other people in a setting with the same identity—the "critical mass cue." As Arthur Ashe, the African American tennis star of a generation ago once put it, "Like many other blacks, when I find myself in a new public situation, I will count. I always count. I count the number of black and brown faces present . . ." (p. 144). Ted counted the faces like his in his African American political science class, as did Ruth Bader Ginsburg on the Supreme Court. Virtually everyone has counted. Why? Because it tells us whether there are enough identity mates around that we won't be marginalized on the basis of that identity. It answers the "critical mass" question. A low count signals bad possibilities: that we might have trouble being accepted, that we

might lack associates who share our sensibilities, that we might lack status and influence in the setting. It doesn't confirm these contingencies. It raises their possibility, which keeps us using our mental resources assessing likelihoods. Ted's being one of only two whites in his African American political science class, kept his vigilance on the boil all the time he was there.

Other cues, too, speak to marginality. If no powerful people in a setting have your identity, it tells you something. Perhaps your aspirations will be frustrated there. Perhaps you'll be pressured into marginal roles. An important thing about the presidential candidacies of Hillary Clinton and Barack Obama is that they helped politically demarginalize people of two major identities—women and blacks. No longer do these identities prevent access, in a categorical way, to the highest level of national leadership.

As a contingency detective, you may also notice how a setting is organized by identity. Is my cafeteria segregated by race? Are friendships at my school grouped by social class? Do the male professors get paid more than the female professors? Are most of the principals in my school district men? Is my access to resources—from the local swimming pool to knowledge of how to go about getting into college—affected by my family's wealth?

And then there are cues about a setting's inclusiveness. Does my school value the experiencing of group diversity as integral, or as marginal, to one's education? Is the school's leadership on the same page, or is there disagreement over this issue? Answers to such questions are contingency cues: they tell you what you may have to deal with in the setting.

And, of course, there are cues that signal prejudice in a setting. Is the expression of prejudice common, normative? Are some groups disdained in my workplace? Are people from different groups competitive with each other—on a group basis?

Several things about detecting identity contingencies are impor-

tant to remember. First, you probably wouldn't do it unless you are "identity integrating" a setting. There may be some exceptions to this rule. Minority students in an all-minority school, for example, might read the school's dilapidation as a cue that the larger society devalues them. But, for the most part, it's the act of identity integration that occasions this detective work, that lights up the whole setting as a source of clues as to what identity contingencies you will have to deal with.

Second, this detective work isn't all about detecting prejudice. As I hope this list of "integration concerns" illustrates, not every identity threat comes from prejudiced people. Think about O'Connor on the Supreme Court before Ginsburg. Many of the contingencies she dealt with had little to do with prejudice among her fellow justices or her staff. Some of them may have been prejudiced, but her problems went beyond that: a Court that was dominated by male sensibilities and referents and that was less sensitive, in its functioning, to the perspectives of women; no critical mass of women with which to give her a sense of belonging on the Court; negative stereotypes about women in the larger society and in the legal world that were available for use in judging her work; the fact that her being the only woman on the Court made her the sole representative of her sex in each Court decision; and so on. O'Connor would have had to deal with these things even if there hadn't been an iota of sexism in any of the people she worked with.

It's sad, but true: identity threat is not the threat of prejudice alone; it's the threat of contingencies.

3.

As we did, you might have questions. Can a few cues in a setting really undermine a person's sense of belonging? Are people so

attuned to the details of their social environments? We'd gotten to our ideas reasonably enough. When we stood back, though, our claim about the impact of situational cues looked strong. Would it hold up to an empirical test?

In developing these ideas, I worked primarily with two colleagues, Valerie Purdie-Vaughns and Mary Murphy. Although Valerie and Mary come from different backgrounds—Valerie, African American from New York City, and Mary, part Latina from Texas—their different backgrounds seemed to produce a shared talent: both had great psychological insight, and both were fascinated with how one's social identity affected one's everyday experience in workplaces and schools. We were joined sometimes by Paul Davies, an incisive, quick postdoctoral fellow from the University of Waterloo in Canada (currently a professor at the University of British Columbia, at Kelowna), and by Jennifer Randall Crosby, another smart, young social psychologist strongly interested in how identity shapes educational experience. Our team was excited by a question that might be called the "no man is an island" question: Can something as basic as our sense of belonging in a setting actually be affected by incidental cues in the setting—bicycles hanging from the ceiling, phone messages from reporters, being one of only two white students in a political science class—that only ambiguously signal identity contingencies? Our guts said yes, but we knew it was just as reasonable to assume that people can easily overcome the influence of such cues—if they want to, if, for example, the setting is important to them.

Our gut feeling was bolstered by new research findings. Michael Inzlicht and Avi Ben-Zeev did a study in which women took a difficult math test in groups of three test takers. In groups with no men, women did better than women in groups with one man; and in groups with one man, women did better than women in groups with two men. As the number of women in these groups

went down—an incidental and ambiguous cue—so did their performance. These women were not “islands.” They were affected by context; a background cue they might have been expected to overcome.

Our own Paul Davies, along with Steve Spencer, published another demonstration of the power of cues. They had men and women college students watch a set of six television commercials, ostensibly as part of a media study. For half of these students, two of the commercials included women depicted in silly gender-stereotypical ways—as a coed extolling the party life at her university, for example—and for the other half the commercials had no gender content. After viewing the commercials, each student was taken across the hall to an ostensibly different study where, to help a graduate, they could work on as many verbal and math items as they wanted to. The results were clear. The women who had seen the stereotypical images of women in the earlier commercials chose fewer math problems to work on, performed worse on the ones they did choose, and reported being less interested in math-related college majors and careers than women who had not seen these commercials. A completely incidental, passing cue—operating probably by evoking images of women that these women did not want to confirm—not only impaired their math performance but lowered their interest in math and math-related college majors and careers.

When I first saw these results, I wondered how well they would generalize to real life. Surely such passing cues could have only minor and passing effects. Then I remembered that in real-life situations like O'Connor's pre-Ginsburg Supreme Court, or Ted's African American political science class, or being a woman in a computer science class, the cues that cause these effects aren't passing, they're ongoing elements of the situation. As such, they might well cause major and lasting effects. We aren't islands: our

life-shaping choices and critical performances can be affected by incidental features of our environments, even as we have little awareness of those features.

So now we had evidence that these cues, and the threat they caused, could impair performance and even make a person less interested in a career path. But we lacked direct evidence that incidental cues could make people feel they didn't belong in an actual setting, or that they couldn't trust the setting. Was this so?

Valerie Purdie-Vaughns and I came up with a simple experiment to find out. We gave samples of black and white respondents a lifelike newsletter ostensibly from a Silicon Valley company and asked them, after they'd read it thoroughly, to rate how much they felt they would belong in a company like that, and how much they would trust it. To see whether incidental features of the company, presumably by signaling possible identity contingencies in this workplace, would affect people's sense of belonging and trust there, we made up different newsletters—newsletters that included different company features—and then compared their effect on people's sense of belonging and trust.

Some of the newsletters included photographs of daily life that depicted a small number of minorities (blacks, Latinos, and Asians) in the company. In other newsletters these photographs depicted a larger number of minorities in the company. We wanted to learn the effect of another cue as well: the company's stated policy toward diversity. Some of the newsletters therefore included a prominent article stating that the company was strongly committed to “color-blindness”—defined as treating people, and trying to foster their welfare, as individuals. And some of the newsletters included a prominent article stating that the company was strongly committed to “valuing diversity”—defined as valuing the different perspectives and resources that people from different backgrounds bring to the workplace.

It was a simple procedure, and portable, too. We could hand out the newsletters to different samples of black and white respondents—to college students in the laboratory for sure, but also to business school students in a cafeteria, to an organization of black professionals at a TGIF mixer, and to perfectly innocent people riding the commuter train between Palo Alto and San Francisco. We used all of these different samples, and for all of them we examined the effect of the same two cues—critical mass of minorities and diversity policy—on how much they felt they would belong in the company and trust it.

The results were strong for virtually every sample we studied. White respondents (depicted as the majority group in our newsletters) felt they would belong in the company and trusted the company no matter what cues the newsletter contained—regardless of whether it depicted a small or moderate number of minorities in the company (the highest percentage of minorities we depicted was 33 percent) and of whether the company had a color-blind or valuing-diversity policy. Majority status, inside and outside the company, allowed a sense of belonging.

Black respondents, however, behaved a lot like Arthur Ashe: they counted. When the company was depicted as having a moderate number of minorities, they trusted it and felt they would belong in it as much as white respondents did. And they felt this way regardless of the company's diversity policy. Critical mass laid their vigilance to rest.

But when the company was depicted as having a low number of minorities, blacks' trust and sense of belonging were more conditional. Diversity policy became critical. Interestingly, the color-blind policy—perhaps America's dominant approach to these matters—didn't work. It engendered less trust and belonging. It was as if blacks couldn't take color-blindness at face value when the number of minorities in the company was small. But impor-

tantly, and just as interestingly, blacks did not mistrust the company when it espoused a valuing-diversity policy. With that policy in place, they trusted the company and believed they could belong in it, even when it had few minorities. The practical lesson here is that both critical mass and an approach that values what diversity can bring to a setting may go some distance in making minority identities feel more comfortable there.

The findings also reveal something more general: when people are appraising identity threat, one cue can shape the interpretation of another. A policy that explicitly valued diversity led black respondents to overlook the low number of minorities in the company, a cue that otherwise bothered them considerably. And depicting a larger number of minorities in the company led them to overlook concerns they would otherwise have had about a color-blind diversity policy. The meaning of one cue, then, depended on what other cues were also present.

Herein may lie a principle of remedy: if enough cues in a setting can lead members of a group to feel "identity safe," it might neutralize the impact of other cues in the setting that could otherwise threaten them. Once Ginsburg joined the Supreme Court, many of the cues in that setting that had made O'Connor feel such identity threat were still there—cues like the male-dominated culture and sensibility of the Court, the Court's history of all male justices, cultural suspicions about a woman's ability to be a good justice, and so on. But with Ginsburg there, O'Connor had enough identity safety—enough change in critical identity contingencies—that these other cues didn't bother her as much. She knew she was safer.

The studies Valerie and I did opened a possibility: to make a setting identity safe, perhaps you don't need to change everything, eradicate every possible identity-threatening cue, for example. Perhaps you could do it with a few critical changes, which by assuring

a critical degree of identity safety could reduce the threatening meaning of the other cues. This is a point to which the next chapter returns.

But before exploring this idea, Mary Murphy wanted to take a deeper look at the impact of these cues. She had joined our lab with an interest in the mind-body relationship, the connection between psychological and physiological functioning. Her question was similar to the John Henry question: What was the *physiological* cost of identity threat? Did Sandra Day O'Connor and Ted pay a physical cost for enduring the cue-provoked threats they faced? Could incidental situational cues like the ones in the experiments that Valerie and I had done actually have physiological effects—that is, cause accelerated heart rate, elevated blood pressure, increased sweating as a sign of stress? We knew by then (see chapter 8) that experiencing stereotype threat while taking a test had such effects. But test taking is intense. Mary's question was about the physiological cost of identity threat in ordinary, everyday situations. If I had actually begun working at the Silicon Valley start-up firm, would the bicycles hanging from the ceiling have affected me *physiologically*? Did Ted have a physiological reaction to sitting in his African American political science class?

We needed help with this research. Mary went upstairs in our building and asked James Gross, one of the nation's leading researchers in the psychology and physiology of human emotions, to join the project. He's a very busy man, but he graciously agreed. Our little team was off, addressing the central question: Do incidental situational cues—cues that might signal threatening identity contingencies but that are completely incidental to the setting—actually affect people physiologically? To this question, we added another: Do these cues also make people more vigilant in the environment, more on the lookout for trouble? We could test their vigilance in the setting by testing their memory for

its incidental features—the numbers of women and men there, where they were sitting, where the door was, and so on. The more vigilant they'd been, the more such features they should remember.

We brought men and women math and science majors at Stanford into the lab one at a time. Our stated purpose was to have them evaluate a video that advertised a math, science, and engineering (MSE) leadership conference scheduled to happen at Stanford the following summer. We were also interested in their physiological reactions to the video, we explained, and asked their permission to attach physiological sensors to their wrists while they watched it. The video presented photographs ostensibly taken at the preceding summer's conference. Some participants saw a "balanced" video, in which each photo contained one man for every woman. Others saw an "unbalanced" video in which each photo contained three men for every one woman, the cue that we thought might cause identity threat for the women viewers. After the video, via questionnaire, we measured all participants' memory for incidental features in the video and the experimental room—ending the experiment.

What happened? Not much for the men math and science majors. Their physiological reactions were unaffected by the gender ratio in the videos. They were calm throughout. Their memory for incidental features of the video and the setting were uniformly poor. Not so for the women math and science majors who watched the three-to-one video. Compared with the women who watched the one-to-one video and with the men, these women had dramatically elevated heart rates, blood pressure, and sweating, and they remembered more incidental features of both the video and the experimental room. They were aroused and paid more attention, presumably looking for contingency-signaling cues about the "leadership conference." A mere increase in the ratio of men to

women was enough to strongly affect their physiological reactions, their vigilance in the setting and ultimately their memory.

Sandra Day O'Connor and Ruth Bader Ginsburg may not have realized it, but during their solo periods on the Supreme Court they likely carried an extra physiological burden, an unseen cost of the extra identity vigilance they were pressured into at the time. What Mary and I discovered is that it doesn't take much to cause this. It happens under very ordinary of circumstances. The difference between the three-to-one and one-to-one videos, if you weren't a woman in this experimental situation, would hardly be noticeable. Yet the three-to-one video was enough to quicken the pulse, elevate the blood pressure, and increase the stress of our women participants, as well as make them comb the video and experimental room for clues about things they might have to deal with as women in the world of math, science, and engineering.

Mary and I did other, similar experiments. They also showed the power of incidental, ordinary cues to cause identity threat. And they showed that the cues did this by making people worry about bad things they might have to deal with in situations on the basis of who they were. As important, these experiments reproduced the hopeful finding that Valerie and I had seen earlier: cues that signaled identity safety often quelled participants' identity threat, even when other cues in the setting still posed it.

We'd begun this research—Valerie, Mary, and I—looking for what determines the strength of identity threat. I think we found the answer. It is cues, features of a setting that signal bad identity contingencies. The more such cues there are, the worse the threats they portend, and the greater the chance the threats have of being realized, the more identity threat we feel. Sandra Day O'Connor's early days on the Supreme Court were saturated with these cues—not hate speech, not overt prejudice from her colleagues, just ordinary features of the Court and its context that

signaled contingencies based on her gender—everything from the paucity of women's restrooms to stereotype-laden questions from reporters.*

So we had a working answer, one I liked because cues and contingencies are things that, at least some of the time, you can change. You can get your hands on them, and you can shape how people think about them. If identity threat were rooted in an internal psychological trait, a vulnerability of some sort, then it would be harder to remedy. Would there be enough therapists to go around? But environments, at least some of the time, can be changed. And the degree to which they are perceived as threatening can be changed as well. So I liked the answer we were getting. It offered insight into how identity threat, and its ill effects in important places, might be reduced. It gave us a clue as to how to think about remedy. It said focus on settings—their critical features and arrangements, their “inconveniences,” as Bert Williams put it—and on how they are perceived.

With this understanding, I felt we had something that could improve the experience of identity integration in real-life settings. I hoped this was so, because that is the challenge we turned to next.

*To illustrate this reasoning in relation to minority schooling, one might expect stereotype threat to be more present for minority students at schools and colleges with more identity-threatening cues (small numbers of minority students, an intensely elite academic atmosphere, few minority faculty, etc.) than it is at schools and colleges with fewer identity-threatening cues (ample critical mass, a variety of ways of being successful, visible minority leadership, etc.).