# The End of Bias

## How We Change Our Minds

**Jessica Nordell**

'When it comes to prevention and cure, this powerful book is a breakthrough'

**Adam Grant, author of *Think Again***

CONTENTS

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# Introduction

Years after his cancer treatment, Ben Barres recalled how he'd phrased the request to his oncologist. While you're removing my breast, he'd asked, could you please take off the other one? Cancer ran in the family, so the doctor agreed, but the truth is Barres just wanted the breasts gone. Christened with a girl's name and raised as a girl, he'd never been at ease with that identity—not as a four-year-old, feeling he was a boy; not as a teenager, uncomfortable with the changes of puberty; not as an adult, squeezed into heels and a bridesmaid dress. This was 1995. It was before Laverne Cox and Caitlyn Jenner were household names, before a Google search for "transgender" provided legal advice, before Google. Barres didn't understand what being trans was. But the double mastectomy was an enormous relief. A year later, he read an article about a trans man, and the lights came on.[1]

Barres was eager to begin hormone treatment, but he had a major concern: his career. At forty-three, he was working as a neurobiologist at Stanford and had recently made a groundbreaking discovery about the significance of the glia, brain cells whose role had been previously underestimated. Others in the scientific community had always perceived him as a woman. He had no idea how they would respond to this change. Would students stop wanting to join the Barres lab? Would invitations to conferences disappear?[2]

The scientific community did react, but not in the ways Barres had feared. After his transition, people who did not know he was transgender started listening to Ben more carefully. They stopped questioning Ben's authority. Ben, middle-aged, White, and male, was no longer interrupted in meetings. He was, again and again, given the benefit of the doubt. He even received better service while shopping. At one conference, a scientist who didn't know Ben was transgender was overheard saying, "Ben gave a great seminar today—but then his work is so much better than his sister's."[3]

Barres was astonished. Before his transition, he had rarely detected sexism—even overt examples hadn't registered. Once, when Barres was an undergraduate at MIT, and the only person in a math class to solve a hard problem, the professor said, "Your boyfriend must have solved it for you." Barres was offended. He had solved it himself, of course. He didn't even have a boyfriend. But he didn't think of the comment as discriminatory because he thought sexism had ended. And even if it hadn't, he didn't identify enough as a woman to think sexism could apply to him—he was just furious to have been accused of cheating. Pre-transition, Barres assumed he had been treated like everyone else.[4]

Now he had stunning evidence to the contrary. It was almost a scientific experiment: he had the same education, same skills, same achievements, same capacity. All the variables had been held constant except one. Barres saw, with searing clarity, that his daily encounters, his scientific career, his life had all been shaped by the gender others saw, in ways that had been invisible even to him. Before transitioning, his ideas, contributions, and authority had all been devalued —not overtly, generally, but in a way that was noticeable when that devaluing suddenly vanished. Now, the differences in the ways men and women are treated were discernible, the way new patterns appear on flower petals under ultraviolet light.

So when, in 2005, the president of Harvard University, Larry Summers, famously opined that the dearth of women in science might be due to innate differences between their capabilities and those of men, Barres couldn't stay quiet. He penned a cri de coeur in *Nature* that demanded the scientific community pay attention to bias.[5]

"This is why women are not breaking into academic jobs at any appreciable rate," he said. "Not childcare. Not family responsibilities." After working in science as Ben, he added, "I have had the thought a million times: I am taken more seriously."[6]

It's not that Barres never encountered barriers and bias, he told me of his career before his transition. "It was just that I didn't see it."[7]

Many of us have experiences with others that lead us to wonder whether bias is playing a role. But those of us who have not lived through a dramatic discontinuity in how we appear to the outside world may not have the opportunity to confirm these hunches. We may be able to verify them to ourselves if we lose or gain significant weight or acquire a visible disability. We may see them if we travel to countries where our skin color carries a different meaning, like the Black student who told me about the strange sensation he felt while traveling in Italy, which he realized was the feeling of *not* being followed in stores by suspicious salespeople. People in heterosexual marriages whose spouses undergo a gender transition often come to recognize how much validation they'd previously received for being part of a heterosexual couple.[8] Eventually, many of us will feel the discrimination and disrespect that await the elderly. But often the bias we encounter remains difficult to pinpoint.

While it is challenging to know how much of a role bias is playing in any given interaction, a growing body of studies confirms that there are differences in treatment across nearly every realm of human experience and a dizzying variety of social groups. In the best of these studies, only one marker of identity is changed and all other variables remain constant. Studies have found that if you're a prospective graduate student with a name that sounds Indian, Chinese, Latino, Black, or female, you're less likely to hear back from faculty members than

if your name is Brad Anderson. If you're a same-sex couple, you're more likely to be denied a home loan than a heterosexual couple; you may also be charged higher fees. If you're a White job applicant with a criminal record, one study found, you're more likely to get a callback than if you are a Black job applicant with a criminal record—and without one.[9]

The list goes on. If you're Latino or Black, you're less likely to receive opioids for pain than a White patient; if you're Black, this is true even if you've sustained trauma or had surgery. If you are an obese child, your teacher is more likely to doubt your academic ability than if you are slim. If your hobbies and activities suggest you grew up rich, you're more likely to be called back by a law firm than if they imply a poor childhood, unless you're a woman, in which case you'll be seen as less committed than a wealthy man. If you are a Black student, you are more likely to be seen as a troublemaker than a White student behaving the same way. If you are a light-skinned basketball player, announcers will more likely comment on your mind; if you are dark-skinned, your body. If you're a woman, your medical symptoms will be taken less seriously; if you're a woman seeking a job in a lab, you will be seen as less competent and deserving of a lower salary than a man with an identical résumé. Pursuing an academic fellowship, one classic study found, you must be 2.5 times as productive as a man to be rated equally competent.[10]

Across communities of color, bias turns to horror. An analysis of more than six hundred shooting deaths by police found that, compared to White people, Black people posing little to no threat to officers are three times as likely to be killed. On July 17, 2014, a forty-three-year-old former horticulturist on Staten Island named Eric Garner was approached by police officers who suspected him of selling untaxed cigarettes. One of them put him in a choke hold, a maneuver the New York City Police Department prohibits. Garner died an hour later. According to the medical examiner, his death at the hands of an officer was a homicide.[11] While police officers in many cases argue that they acted appropriately, a pattern of disparate use of force bespeaks the fact that Garner, along with Michael Brown in Ferguson, Philando Castile in Falcon Heights, Atatiana Jefferson in Fort Worth, Tamir Rice in Cleveland, and many, many others died because a police officer reacted to these individuals—a father, an unarmed teenager, a Montessori nutrition supervisor, a pre-med major, a twelve-year-old child—differently than they would have had these individuals been White.

At this moment in history, if I'm a woman and you're a man, the words I write (these words, even) will be regarded differently than if you had written the same words. If I'm White and you're Black, we will be treated differently by others for no other reason than that our bodies have a meaning in this culture, and that meaning clings to us like a film that cannot be peeled away.

Of course, some people intend to demean or devalue other people because they belong to a particular group, a fact to which violent White nationalism attests.

Some people harbor overt prejudices, and mean to cause harm. Any advantages transgender men enjoy often depend on others not knowing they are trans, and they can disappear in an instant: trans people today face abysmal rates of physical and sexual violence, harassing experiences in health care, and rejection from workplaces, family, and faith communities. Transgender women of color in particular are often subject to a pernicious combination of anti-trans bigotry, misogyny, and racism. Unvarnished cruelty is real. The slow-motion murder of George Floyd by a Minneapolis police officer in the summer of 2020 revealed a casual savagery so dehumanizing and horrific it shook the world.

But most people do not go into their professions with the goal of hurting others or providing disparate treatment. And for those who intend and value fairness, it is still possible to act in discriminatory ways. That contradiction between values of fairness and the reality of real-world discrimination has come to be called "unconscious bias," "implicit bias," or sometimes "unintentional" or "unexamined bias." It describes the behavior of people who want to act one way but in fact act another. How we work to end it is the focus of this book.

Growing up in the 1980s and '90s, I'd been in many ways protected from understanding or even perceiving bias. Racialized as White in a majority-White town, and so undetectably Jewish that I was invited onstage at a Christmas pageant to share "What Jesus means to me," I moved through the racial landscape as most White people do: like a coddled, swaddled baby, never having to seriously contend with the problem of racism, always able to opt out of its consideration. I was also protected somewhat from gender bias by the structure of academia. If I aced a calculus test at my small Catholic high school, that was a hard, indisputable fact. It didn't matter that I ditched pep rallies to lounge with the stoners across the street, and it didn't appear to matter that I was a girl. Grades seemed to overshadow the specifics of my body, shielding me from gender-based discrimination. In college, I majored in physics. When at times my serious questions in classes in various fields were rebuffed or ignored, I, like Barres, did not routinely link these dismissals to sexism. I had been internalizing messages about women and about myself since childhood, but bias felt more like a background hum than a siren.

That changed. A handful of years out of college, I was struggling to break into journalism, pitching ideas to editors at national magazines and hearing only stony silence. Discouraged, I decided to try sending a story out under a man's name, conducting an experiment of my own. I created a new email address and pitched the same outlets again, this time as J.D. Within hours, a response showed up in my in-box—the piece was accepted. I had spent months trying to place this very same essay as Jessica. J.D. succeeded within a day.

That essay started my career. As J.D., not only was I more successful, but I also felt freer in my self-expression. I was more direct, less apologetic. I wrote one-line

emails without caveats or justifications. I saw up close how bias, and its flip side—advantage—are dynamic and penetrating forces, transforming their recipients from the inside just as they strike from the outside. As others changed how they treated me, I changed, too. But I'm a bad and anxious liar, and managing these dual identities became exhausting. After a few years, I said good-bye to my swaggering alter ego, and I started to write about bias. Along the way, I worked for many organizations, racking up a tidy collection of gendered workplace experiences, from having my ideas credited to others to being told my successes were due to luck.

People often enter into justice-related issues through a door swung open by their own experience. Gender bias cracked the door for me, before I understood its place within a massive, multidimensional phenomenon. It can be tempting to overlook ties between diverse forms of bias because the contexts and levels of severity are so different. As the Barbadian author George Lamming explained at the first International Conference of Negro Writers and Artists in 1956, when a person's own life has been deeply shaped by one kind of oppression, it is easy to lose sight of the connection between "the disaster which threatens to reduce him, and the wider context and condition of which that disaster is but the clearest example."[12] The differences between the expressions and virulence of unconscious bias experienced by people of various religions, races, ethnicities, abilities, sexual orientations, and genders are vast, ranging from lost job opportunities to lethal bodily harm. But in each instance, the brute mechanics are the same. The individual who acts with bias engages with an expectation instead of reality. That expectation is assembled from the artifacts of culture: headlines and history books, myths and statistics, encounters real and imagined, and selective interpretations of reality that confirm prior beliefs. Biased individuals do not see a person. They see a person-shaped daydream.

Over time, I came to see bias as a kind of soul violence, an attack not just on the material conditions of one's life—on one's choices and possibilities—but an assault on one's sense of self. This soul violence was there for all to see in what became known as the Clark Doll Study, which was used as evidence in the 1954 *Brown v. Board of Education* ruling to desegregate schools. In the study, psychologists Mamie and Kenneth Clark had shown Black children dolls that appeared to be Black or White. When asked to point to the nice or pretty doll, most children chose the White doll. When asked which doll "looks bad," they selected the Black doll. Then, asked which doll looked like them, the children again chose the Black doll. Some became so upset, they cried or ran out of the room. Decades later, Kenneth Clark told an interviewer that their findings had been so disturbing that they sat on the data for two years before publishing it.[13]

While there has been progress, Clark added, contemporary racism is more insidious. The racial bias of today, whether stealthy or overt, continues to alter

one's inner experience. Repression becomes, as poet Dawn Lundy Martin writes, "so much a part of you that you hardly feel it.... Your heart rate increases when you see the police drive by, but you feel relief the second the car turns the corner."[14] On cold currents, bias travels from the outside world into a person's deepest interior.

The more I studied the problem, the more I wondered what could be done about it. Advice has long abounded for people who encounter bias. (Women in the workplace: act less threatening and wear feminine silhouettes! Black men: keep your driver's license visible!) But these commands do not solve the problem, they simply trade responsibility for it. One series of studies in fact found that "Lean In"–type messages lead people to think workplace gender inequality is women's fault—and women's responsibility to solve.[15] These commands are insufficient: there will never be a smile wide enough, a sweater soft enough, a tone unassuming enough, or a license and registration visible enough to outmaneuver another person's misjudgments.

Yet, if those on the receiving end of bias can't stop it, who can? Can anything be done to lessen discrimination itself?

Journalism is usually concerned with discovering and probing problems, not solutions; optimism is left to public relations firms and self-help books. But this problem *has* been probed and proven. I wanted to discover how it can be overcome. In a quest to unearth remedies, I set off in search of people and places that have successfully reduced everyday bias and discrimination on the basis of race, gender, religion, ability, and beyond. I sought out settings as diverse as hospitals, preschools, and police precincts and drew on more than a thousand laboratory, field, and case studies. I conducted hundreds of interviews with researchers, practitioners, and everyday citizens, casting a wide net in terms of geography and approach. I looked for interventions that have transformed not just people's biased thinking but their real behavior, and that have reduced bias not in pristine experimental lab settings but in the messy, imperfect workplaces and schools and cities where we actually live.

As I shadowed trauma surgeons, attended police trainings, and met with social psychologists and neuroscientists, I found a hidden topography of interventions, a patchwork of scrappy, inventive organizations, researchers, and lay people rooting out discrimination through curiosity, creativity, and brute trial and error. Sometimes the approaches worked exactly as intended. Sometimes problem solvers backed into solutions by accident—intending to generally improve a process and inadvertently making it less biased as well.

I ran into obstacles, too. In science, we come to accept that something is true, like the existence of gravity and the efficacy of penicillin, through a preponderance of evidence. Since researchers have not been trying to change unconscious racism, sexism, or other forms of discrimination for very long, many

of the interventions I include here have not yet been replicated many times. It's important to view them as promising but not yet absolutely definitive.

Additionally, prejudice research is geared largely toward gender and racial bias, so this book focuses on these categories. There is less research about class and disability-related unconscious bias, and very little about age-related bias. Moreover, gender bias research assumes a male/female binary, and racial bias research in the United States mostly addresses bias against Black Americans. There is less rigorous data about the growing number of people with multiracial identities, or the way identities combine to generate new forms of discrimination.

Gender bias studies, for their part, have focused largely on White women's experiences, and racial bias research on that of Black men, inhibiting a full understanding. Black women, for instance, experience more workplace harassment, more penalties for error, and greater obstacles to promotion than White women or men of any race. They may also endure less backlash than White women for displaying dominant behavior, while Black men are seen more negatively than White men for acting dominant. As a tenured White professor with a masculine appearance who was able to choose whether to disclose his status as trans, Barres gained advantages after his transition that are far from universal among trans men. Black trans men after transition, for instance, are newly subject to the racism specific to Black men, including police harassment. One Black man reported being asked, at his blue-collar job, to now play the suspect in training exercises. He went from being seen as an "obnoxious Black woman" to a "scary Black man." Another was repeatedly told he was "threatening."[16] Biases aren't simply additive; they are unique to their intersection, the way blue and yellow glass overlap to create an entirely new color.

These gaps in our knowledge matter. The dearth of studies on bias faced by Indigenous people, people of Asian origin, and other groups echoes the ways these groups have been blotted from public consciousness more broadly. As psychologist Stephanie Fryberg of the Tulalip Tribes points out, any true understanding of prejudice must take into account not only actions but omissions. The discrimination Native Americans face, for instance, often takes the form of not being considered at all. This, too, is a form of bias. What isn't counted or even perceived remains outside the circle of attention and care. These omissions are even written into the history of prejudice research. I found, more than once, that observations and discoveries made by White social scientists had been articulated in the writings of Black women outside the academy decades prior. "Discoveries" are made by those with access to tools and institutions. All silence, wrote the poet Adrienne Rich, has meaning.[17]

Over the course of writing this book, I ran into my own silences, too—the way my own very specific knowledge determines the nuances I do and do not see, the

questions I do and do not know to ask. It's a challenge that mirrors the larger challenges of addressing bias at all: people in the majority, for instance, often see an entirely different reality from those in the minority. Social psychologist Evelyn Carter points out that members of the cultural majority may only see intentional acts of bias, while those in the minority may register unintended discrimination, too. White people might only notice a racist remark, while people of color might be aware of more subtle actions, such as someone scooting away slightly on a bus—behaviors White people may not even be aware they're doing.[18] Bias is woven through culture like a silver thread woven through cloth. In some lights, it's brightly visible; in others, it's hard to distinguish. And your position relative to that flashing thread determines whether you see it at all.

Of course, discrimination is more than the moment-by-moment distortions of individuals: it is also institutional and structural, and the past bleeds into the present—legalized oppression and prejudice against some groups, the compounding advantages of wealth and resources for others. Individual acts of bias are concentrations of a vast, diffuse legacy, like light rays focused through a lens into a single burning point. Any effort to reduce injustice and inequality requires foundational legal and policy solutions, as well. But laws and policies are not supernatural inventions: people support them, write them, pass them, and enforce them. As psychologist Jennifer Eberhardt's lab has shown, the biases in people's minds predict the policies they support—in one study, the "Blacker" a prison population was depicted as, the more punitive the policies White voters accepted. Moreover, laws and policies create guardrails, but they don't dictate what happens within those boundaries. As civil rights lawyer Connie Rice says, laws merely put a limit on how bad discrimination can get.[19] They don't change the more subtle, fleeting human interactions. Laws create a floor; people determine the ceiling.

In the space between floor and ceiling, the interpersonal moments matter. Their cumulative effect endangers individuals and societies. Bias in education can constrict student achievement; bias in medical providers can diminish health outcomes; bias in police officers can be lethal. Taken together, these encounters can drive people out of jobs and careers and undermine the health and safety of families and neighborhoods. In this way, bias not only robs individuals of their futures, it robs fields of talent, companies of ideas, and culture of progress. It robs science of breakthroughs, art and literature of wisdom, and politics of insight. By constricting the makeup of who asks questions, it shapes what questions are asked, compressing the scope of human knowledge. It is a habit that reduces the potential of individuals and undermines the gifts and resources of an entire society.

After he transitioned, Barres felt angry, really angry—not just about his own treatment, but about all the others who face unnecessary obstacles, like the Black

faculty he saw hired by his university only to leave a few years later. "We destroy them. These are the best of the best people, and we just destroy them."[20]

"These young scientists kill themselves for years to develop as a scientist," Barres said. "Just when they're most ready to contribute to society, they're facing barriers.... It's insane to put barriers in the way of half of the very best talent." While Barres's whiplash of privilege is not universal, when sociologist Kristen Schilt interviewed trans men about their work lives, many expressed disbelief and anger at the ways men and women are treated differently. "Do you know how smart I am?" said one interviewee about his life post-transition. "I'm right a lot more now." Others reported being asked for their input more frequently and given more support; one transgender man noted that when he opines in a meeting, everyone writes it down. Personality traits that had been viewed negatively before are now seen as positives. "I used to be considered aggressive," said one man. "Now people say, 'I love your take-charge attitude.'"[21]

Transgender women, by contrast, may run into a looking-glass version of what Barres encountered. Joan Roughgarden, a White biologist who transitioned in her early fifties, has said that any challenge she now presents to a mathematical idea is met with the assumption that she doesn't understand it. That never happened before. Likewise, Paula Stone Williams, a pastoral counselor who began her transition in her sixties, was stunned to have her expertise newly doubted. Her confidence wavered. "The more you're treated like you don't know what you're talking about," she says, "the more you begin to question whether you do in fact know what you're talking about."[22]

It can be alarming to face evidence of others' biases. It can also be deeply uncomfortable to see confirmation of one's own. Over the course of writing this book, my own flawed assumptions and reactions became increasingly visible to me, as though they'd been written in invisible ink and were now held over a decoding fire. Like many people, I initially rejected what I saw. When others pointed out paternalistic assumptions I'd made in an article I'd written, I reacted with denial. Then I felt angry. I justified, too: *If I had just been granted that one interview, I wouldn't have had to make assumptions.* Denial, anger, bargaining—the reactions were familiar. If I was grieving anything, perhaps it was the loss of my own innocence. When Elisabeth Kübler-Ross first developed the stages of grief, they were meant to describe the reactions not of the bereaved but of those who learned they were ill. Here, my illness was a cultural pathology so saturating it took me years to recognize. The writer Claudia Rankine distinguishes between *understanding* how contemporary imaginations are polluted by the bigotry of the past and *grasping* it. Before undertaking this project, I may have understood this, but I did not grasp it.[23]

The emotions that accompanied me on the journey mutated over the years from anger to curiosity to deep humility, and finally to hope pierced with

urgency. For these habits can change. I saw it, in the people I profile here who revised the way they act toward others, and in the places that transformed their operations in order to be more fair. I saw it in data that measure the degree to which biased behavior can diminish. I saw it in myself, in the way I learned to pause, notice my own reactions, and hold them up to the light. I also witnessed how gaining a deep understanding of bias motivates people to fight against it. Before he died in 2017, Ben Barres worked as a vocal advocate, lobbying the National Institutes of Health and Howard Hughes Medical Institute to create less discriminatory processes for recognizing and funding scientists and pushing academia and science to evolve.

In the field of ecology, there's a notion of an "edge," a place in the landscape where two different ecosystems meet, like the salt marshes where land meets sea or the riparian zone where a stream cuts a hillside. This edge is often the most fertile and generative area in an entire landscape, providing nurseries for fish and stopover points for migrating birds.[24] Where one human meets another is also an edge. It's the place where bias appears, a space thick with potential for harm. But it's also the place where we can interrupt bias and replace it with different ways of seeing, responding, and relating to one another. In the ferment of that edge, something new can grow—insight, respect, a mutuality that has evaded us for too long. The stakes are high, the repercussions are serious, and the problem is solvable. There is so much we can do. This book is one beginning.

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PART I

# How Bias Works

# 1

# The Chase

*It didn't make sense.*

Patricia Devine sat hunched over the desk in her cramped office, staring at a piece of paper. Her elbows were splayed, her chin propped up on the heel of each hand. She was twenty-five years old. On the paper were two graphs. She squinted. *Nope, still nothing.* "This is driving me crazy," she said to her officemate. She'd been sitting in the same position for weeks, trying to make sense of the graphs. She'd blink, stare, trek to the nearby Wendy's for food, and trek back to stare some more. Her life had shrunk to a blur of graphs and chicken sandwiches, with an occasional visit to Buck-i-robics, the official Ohio State University aerobics class. She was starting to feel desperate.

"How could the data be so wrong?" she asked herself. "How could *I* be so wrong?" It was March 1985. She was supposed to defend her dissertation by August, then immediately start her first academic job. But this experiment—one that she'd meticulously designed and carried out, and on which she'd staked her entire dissertation—was falling apart. Worse, it was her first independent project. Her advisor had even tried to steer her away from it. It was too risky, he'd said; the approach required new tools. Besides, the subject was too far outside his area of expertise. But she had persuaded him that it was a good idea. "Maybe he was right," she now thought miserably. "Maybe I'm not cut out for research."[1] In fact, Devine's experiment was about to provide a new window into the way we understand prejudice. It would, shortly, alter the social science landscape.

Devine had set out to test the sincerity of White people who said they opposed racism. At this moment, in the mid-1980s, psychologists were flummoxed by a phenomenon we might call the "prejudice paradox." On the one hand, White Americans overwhelmingly opposed racial prejudice: when asked, they denied holding racist beliefs. On the other, many still acted in racially discriminatory ways, both in lab settings and in the real world. Prominent psychologists of the era, faced with this contradiction, concluded that these people were hiding their true beliefs in order to protect their image. White people who said they weren't racist were lying.[2]

Devine wasn't so sure. This verdict didn't ring true to her—it didn't match her experience of people and her knowledge of the world. What about White people who actively fought against racism? Were they faking it, too? She was White. She knew she sincerely opposed racism. The notion that all these White people were engaging in a mass game of make-believe was hard to accept. There must be something else happening inside their minds.

Our data about racial attitudes don't go back very far, because the study of racial prejudice is not very old. In the nineteenth and early twentieth centuries, American and European scientists accepted the notion of White superiority prima facie. Researchers in anthropology and medicine—mainly White, Anglo-Saxon men—were in the business of trying to prove racial hierarchies, sometimes resorting to baroque methods like filling human skulls with mercury and pepper seeds to assess relative brain volume. By the turn of the century, psychologists had joined the quest, publishing and promoting manufactured "evidence" of White greatness. A paper in the *Psychology Review* in 1895, for instance, reported that a handful of Black and Native American subjects had faster reflexes than White subjects and took this as "proof" of the former's "primitive constitution."[3] The same paper argued that men had faster reflexes than women because of their greater "brain development." Reconciling these two conclusions was left, apparently, as an exercise for the reader.

Black scholars long denounced this project (Frederick Douglass had, in 1854, neatly summed up the arguments as "partial, superficial, utterly subversive of the happiness of man, and insulting to the wisdom of God"), and Black and White social scientists like W. E. B. DuBois, Franz Boas, and W. I. Thomas forcefully rejected what came to be known as scientific racism. But the financial resources, authority, and imprimatur of science at the time were largely lassoed to the cause of White supremacy: proving that groups of people White scientists deemed "inferior" possessed immutable, inherited differences that placed them lower in a natural hierarchy. In the meantime, the meaning of the invented category "White"—and who exactly this "superior" group included—was constantly changing, expanding and contracting over centuries. (One study concluded that Nordic Europeans were more advanced than Mediterranean Europeans, declaring "the mental superiority of the white race."[4]) Nonetheless, well into the twentieth century, social scientists largely considered what we now think of as prejudice as simply the truth.

Then, in the 1920s and '30s, the psychology community began an about-face. What had been taken as "evidence" was crumbling under scrutiny. Analyses of "intelligence tests" of World War I army conscripts, for instance, showed that Black conscripts from northern states in fact outscored White conscripts from southern states.* In 1930, Carl Brigham, a psychologist who had analyzed the army tests and concluded Whites were superior, publicly retracted his verdict as "without foundation" (though not before it was used to promote immigration restriction and eugenics). Black civil rights efforts in the United States and anti-colonial movements around the world further propelled psychologists to begin viewing beliefs about White supremacy as prejudiced and worthy of study. This evolution may also have been hastened by the arrival of ethnic minority immigrants into the profession, including Jewish and Asian newcomers; alarming news from Europe about Hitler's uses of "race science" provided additional fuel. Eventually, even the

psychologist who had crowned Nordic Europeans mental monarchs proposed that psychologists were "practically ready" for "a hypothesis of racial equality." The task now shifted to understanding the origins of this irrational, unethical way of thinking.[5]

It was as if astronomers suddenly decided to investigate why so many people believed the moon was made of cheese after spending decades trying to separate its curds and whey. Throughout this radical transformation, as psychologist and historian Franz Samelson wryly notes, the researchers did not question their own "superior rationality."[6]

It wasn't until World War II, however, that the government began collecting information about people's racial attitudes—not out of ethical concern, but because racism threatened the war effort. In Detroit in 1942, the KKK and other White protesters rioted to protest housing built for Black defense workers who had moved north to the factories turning out bullets, ball bearings, and B-24s. The next year, twenty-five thousand White assembly line workers walked off the job to protest laboring next to their Black peers. Detroit's production, as historian Herbert Shapiro notes, was seen as essential to winning the war: now racism was interfering with victory.[7]

Racism caused another problem for the government: it undermined the legitimacy of the fight. Black Americans were being asked to crush the Nazi ideology of racial supremacy on behalf of a country whose racism enforced their own second-class citizenship. As an editorial in the NAACP's *Crisis* proclaimed, "*The Crisis* is sorry for brutality, blood and death among the peoples of Europe.... But the hysterical cries of the preachers of democracy for Europe leave us cold. We want democracy in Alabama and Arkansas, in Mississippi and Michigan...." Langston Hughes pointed out the symmetry in his poem "Beaumont to Detroit: 1943":

> You tell me that hitler
> Is a mighty bad man.
> I guess he took lessons
> From the ku klux klan.[8]

In fact, the parallels were more than coincidental: Nazi lawyers closely studied American race laws as they institutionalized anti-Semitism. Transcripts of a 1934 meeting meant to work out the details of eliminating "racially foreign elements from the body of the *Volk*" reveal Hitler's minister of justice and others debating the merits of Jim Crow. If only these laws included Jews, said the state secretary in the Ministry of Justice, American jurisprudence *"würde für uns vollkommen passen"* [would suit us perfectly].[9]

As young Black men tore their draft cards in half and tossed them at police in Detroit, alarm bells went off in Washington. Anxious officials in the new Office of War Information commissioned surveys of White and Black people's beliefs about race. This was the first wide-ranging effort to collect such data, and it confirmed

that Black Americans "are deeply devoted to American ideals, asking only that these ideals be realized in relation to themselves." It also showed, quantitatively, that the racism enshrined in laws and institutions (segregated schools wouldn't be ruled unconstitutional for another ten years) flourished in the minds of individual White Americans. Most of the thousands surveyed in 1942 and 1944 didn't think Black people should have the same job opportunities. They approved of separate housing and disapproved of interracial marriage. They thought it was best for schools to be segregated.[10]

These surveys, carried out by the National Opinion Research Council, Gallup, and others, continued over the next five decades. By the late 1980s—after desegregation, after civil rights reforms—the numbers had flipped: most White people disapproved of housing discrimination and segregation and responded that Black people should have the same job opportunities as Whites. So few of them supported school segregation that the question was dropped from surveys altogether. As sociologist Lawrence Bobo writes, among White Americans, commitment to legalized discrimination collapsed and was, by the early twenty-first century, replaced at least publicly by "broad support for equal treatment, integration, and a large measure of tolerance."[11]

But, contrary to expressed opinions, racial discrimination in the 1980s had not gone away. It was, in fact, pervasive. To wit: Black renters and would-be homeowners were disproportionately rejected, Black job seekers were less likely to be granted interviews or be hired than equally qualified White people, Black employees were steered to less desirable positions, and Black borrowers were denied loans. These cases found their way to the courts. In 1985, a federal judge determined that the city of Yonkers in New York State had purposely restricted its Black residents to one square mile. In 1993, the American chain restaurant Shoney's settled for almost $135 million for charges of pushing Black workers into low-paying jobs. In 1999, the Department of Agriculture paid more than $1 billion in a settlement for more than a decade of discrimination against thousands of Black farmers applying for loans.[12]

Psychologists found that this gap between word and deed played out on a personal level, too. White individuals denied being prejudiced, but they were observed, unobtrusively, displaying all sorts of discriminatory behavior: in experiments, they acted more hostile to Black people, and, given the opportunity, moved away from them physically. In one set of studies that would not be considered ethical today, White men were provided with fake controls for delivering electric shocks. They were told the study they had joined was examining how punishment affects people's learning. They delivered more aggressive shocks when they were led to believe the recipients of the shocks were Black.[13]

Witnessing this disconnect between White people's responses on questionnaires and their actual behavior, social scientists concluded the rosy surveys couldn't be

trusted. People were lying—there was no other way to make sense of the chasm between word and deed. It was all a façade.

Even the studies themselves were suffused with bias. As psychologist Nicole Shelton notes, even in prejudice research, White people have traditionally occupied a higher status: studies like these were designed to learn from the behavior of White subjects, with Black people cast in passive roles and treated as homogenous. When the internal experience of Black people was studied, the focus was often narrowly trained on how they meet with oppression. The same has often been true of other groups that face discrimination. Studies purporting to study prejudice were and continue to be plagued by racist assumptions as well.[14]

Devine had grown up in fairly homogeneous communities in New York State. She was the third youngest of eight children in a Catholic family that uprooted and resettled every few years as her father quit or got fired from a series of jobs. Devine kept her head down and made school her job, though she was a terrible test-taker and a worse speller. Once, her mother saw Devine boxing with her older brother, hauled her inside, and made her write, "I am a girl" five hundred times. Devine wrote, five hundred times, "I am a gril."[15]

College was a near disaster. She couldn't find like-minded peers; her philosophy professor told her she'd asked the dumbest question he'd ever heard. She was lost. She had resolved to drop out entirely when a psychology professor named Roy Malpass invited her to assist in his lab—he'd seen something in her, a seriousness. Malpass studied criminal eyewitnesses, and together they staged crimes. Now *this* was interesting. In one experiment, they orchestrated a crime that took place during a college lecture in front of 350 people. The "criminal" (in actuality, a high school wrestler they'd recruited to help) shattered a rack of electronic equipment and screamed obscenities at a professor. Then he ran out the door and jumped into a getaway car. Devine was the driver.[16]

The goal of the experiment was to test whether changing the instructions given to eyewitnesses would alter their responses to a police lineup. At the time, real eyewitnesses were often asked, simply, to choose the suspect from a lineup. But these instructions were biased in that they implied that the suspect was present. Malpass wanted to see whether pointing out that the suspect may or may *not* be in the lineup would change the number of false accusations. When students viewed the lineup of suspects, some were given biased instructions; others were given the unbiased version, stating that the disruptive student might not be present.

After they gathered the data, Devine scribbled it on the chalkboard in their lab. Then Malpass walked in, and Devine watched as his eyes lit up. The numbers revealed that when people were given unbiased instructions, they made fewer errors: they were less likely to mistakenly blame a suspect, but equally likely to correctly identify him.[17] People's perceptions of others didn't always line up with

reality, but when prompted to think more carefully, those perceptions could change for the better.

In psychology, Devine discovered, you could make a prediction about human behavior and then set up a piece of theater to test it. And you could learn something new. Not just new to you. New to the world. Devine was hooked. She hustled to graduate school at Ohio State, where she began hunting for a meaty dissertation topic.

At the time, racial prejudice was not widely covered in university psychology courses. Psychology professor James Jones had recently written a pathbreaking book called *Prejudice and Racism,* which traced the way different levels of racism—individual, institutional, and cultural—shape one another, and argued that an institution or culture could be racist through its customs and policies even if its members didn't intend to be.[18] At Ohio State, there were courses on "race relations," but none on the topic of prejudice.

The prejudice paradox bewildered her. The conclusion that all White people were lying to conceal their racist attitudes didn't account for those who were troubled by racism. Devine began requesting reprints of studies from researchers all over the country.

At the same time, she was reading about a new discovery in the psychology research community called "priming": planting a thought in a person's mind in ways that could influence how they then perceived the world. For instance, if you presented someone with words like "careless," then gave them a story about a whitewater kayaker, they'd be more likely to see the kayaker as reckless. If you primed them with words like "independence" and "self-confidence," they'd see the kayaker as adventurous. It was as though once one concept entered through the mind's stage door, it would lurk in the wings and nudge others onto center stage.

And priming could affect people's reactions even when it was done subliminally. If you flashed the word "hostile" at someone for mere microseconds, they would judge another person's ambiguous behavior as more hostile, even though they hadn't registered having seen the word. The word would hit the retina, flow through the visual system to the brain, activate the concept of hostile, and then affect people's evaluations—without their awareness.[19]

In addition to nudging people's reactions, priming also seemed to open up a new way of understanding how knowledge was organized inside the mind. When a person was primed with the word "bread," for instance, and then asked to pick out words from a list, they were faster to recognize the word "butter" than the word "chair." This suggested that "bread" and "butter" were closely connected in the mind. Knowledge, it seemed, was organized in networks, each concept connected to myriad other concepts, like a web. Tapping one seemed to tap the others in the network as well, the way plucking a single string in a web sets the whole web aflutter.[20]

Taken together, these discoveries suggested that there were now surreptitious ways to investigate a person's mind. As she read about priming, Devine began to imagine it might provide a means of assessing White people's true racial attitudes. Perhaps you could prime not just a specific object, like bread, but a social category, like "White" or "Black." If White people were truly racist, she reasoned, the category of "Black" in their minds would be connected to a whole network of racist beliefs and stereotypes. And if you primed them with the category alone, their network of racist notions would cause them to interpret some other scenario in a racist way. Because you could prime people subliminally, their interpretation would be a genuine reflection of their network of beliefs. They wouldn't know their racial attitudes were being tested; they wouldn't have an opportunity to lie.[21]

By contrast, Devine reasoned, if people were truly *not* prejudiced, they would not have a network of racist beliefs connected to the category "Black." There would be no web of stereotypes to pluck, no assumptions to activate. Priming them with the category "Black" would not influence their interpretation of another scenario. Trying to elicit stereotyped responses from an unprejudiced person would be like trying to strike a match against a vacuum. If White people said they were not prejudiced, and priming them with the category "Black" had no effect on their behavior, that would mean they were in fact telling the truth. Priming, she imagined, would be a way to illuminate people's hidden beliefs—a truth serum she could administer.

Devine's advisor said no. Subliminal priming was still so new, he warned. It was risky. There was no way she'd be able to develop the expertise she needed in time. But Devine persisted, and finally he relented.[22]

In the spring of 1985, Devine got to work. She gave 129 White students a questionnaire. Embedded among questions related to politics and gender were questions from the Modern Racism Scale, a tool developed a few years earlier and designed to unearth, indirectly, signs of racial prejudice. Students were asked whether they agreed or disagreed with statements like "It is easy to understand the anger of Black people in America" and "Discrimination against Blacks is no longer a problem in the United States."[23] Based on their answers, she marked them as high or low in prejudice.

Weeks later, she brought students into the lab, telling them they were there to participate in a project related to visual perception. When students came into the lab, she had them put their chin on the chin rest of a device called the tachistoscope, a box that could flash words or images for fractions of a second. They placed their forehead against a strap and looked through goggles, staring at the center of the screen. Devine told them they'd see flashes of light. The "flashes" were in fact words. Some were meant to bring to mind the concept "Black," like "Black" or "afro" or "Harlem." Others, like "something" and "water," were not meant to evoke anything in particular. One group of students saw mostly words relating to Black people; the other group saw mostly neutral words. Because the

words appeared for microseconds, the students could tell they'd seen a flash but weren't aware of the specific words they'd seen.[24]

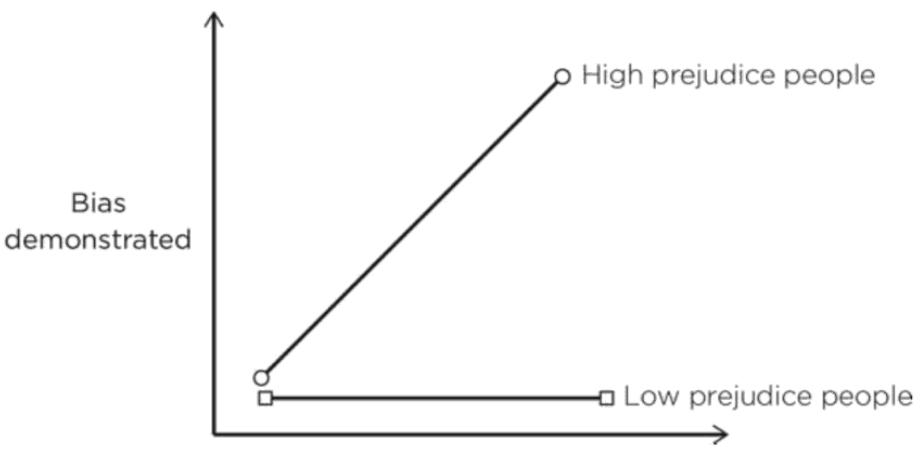
After a short break, the subjects were told there was a second, unrelated experiment about how people form impressions of others. They were asked to read a short story about a person named Donald, whose race was intentionally not specified. As Donald went about his day, he refused to pay rent until his apartment was painted; he also made a purchase and then asked for his money back.

Devine asked them to share their impressions of Donald. How dependable was he? How unfriendly, how boring? How interesting, kind, conceited, or hostile? Prior studies had established hostility as a racist stereotype White Americans held about Black Americans. Devine predicted that for White subjects who were high in prejudice—who had scored higher on the Modern Racism scale—that stereotype would spill onto their view of Donald if they had been heavily primed with words suggesting "Black." They would see him specifically as hostile.

She also predicted, by contrast, that people who had scored low in prejudice would not see Donald as more hostile, even if they had been primed with the same group of words associated with Black people. Those people didn't hold racist beliefs, she reasoned, so priming them with the category "Black" would not activate a network of negative stereotypes. If these people didn't judge Donald as hostile, Devine predicted, it would prove that they had been sincere all along. It would prove that their minds were free of racial prejudice.

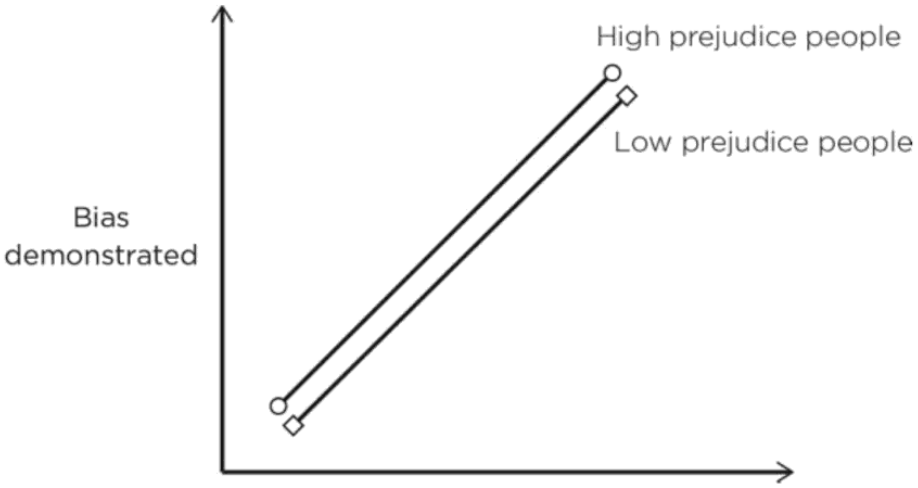
But the data she collected blew her hypothesis apart.

This is what she expected to see.




Priming with words related to African Americans

This is what she saw.




Priming with words related to African Americans

What Devine found—what the bewildering graph in front of her showed—was that the subliminal messages affected *everyone* who was heavily primed with words relating to Black people. Both subjects who held prejudiced beliefs and those who did not judged Donald as hostile. They didn't see him as generally negative—boring or unfriendly. They specifically saw him through a racist lens, as hostile.

It didn't make sense. Why would those who scored low on the prejudice scale show bias? The primes were meant to pluck a web of beliefs people already had. For unprejudiced people, there shouldn't be any racist stereotypes to trigger.

"How could I be so stupid?" Devine asked herself. "Why can't I design an experiment?" Or was it that everyone *was* truly racist, just as other psychologists had concluded?[25]

As Devine despaired, other ideas spun in her head. One was from the field of cognitive psychology. Researchers had begun to see the human mind as having two distinct modes of operating: effortful, deliberate thinking and rapid, automatic thinking. The first kind comes into play when we are engaged in something that requires a lot of attention, like riding a bicycle for the first time or following a challenging conversation. The second arises when we are doing something familiar, like riding a bike for the hundredth time or touch-typing a keyboard. When we engage in the same actions or thoughts repeatedly, they become effortless habits of mind. These two modes, it appeared, could operate independently. They could even contradict each other: studies showed that people could act one way automatically and then, upon reflection, decide they'd been wrong and make an effort to correct it.[26] Automatic and deliberate reactions could oppose each other in the same human brain.

Slowly, then all at once, Devine understood the graphs.

"It all came together in my mind," she told me when we met in Madison, Wisconsin, where she now teaches. "I could understand how automatic processes

could set people up for failure. I could understand the predicament of egalitarian people. That's when I realized that prejudice could be a habit."[27]

Devine deduced that people could consciously reject prejudice on one hand and behave in biased ways out of habit on the other. They might be aware of decisions they made based on their conscious beliefs but not alert to reactions that were influenced by their deep associations. These were habits, she concluded, and people can engage in habits without thinking, just as someone might chew their fingernails down to the quick before realizing what they were doing.

Devine was far from the first to propose that people's behavior could be influenced by stereotypes that arise surreptitiously from hidden chambers in the mind. Lena Olive Smith, the first Black woman to become a lawyer in the state of Minnesota, presented a precise analysis of the phenomenon nearly a century ago. In 1928, she wrote, "It is common knowledge a feeling can be so dormant and subjected to one's sub-consciousness, that one is wholly ignorant of its existence. But if the proper stimulus is applied, it comes to the front, and more often than not one is deceived in believing that it is justice speaking to him; when in fact it is prejudice, blinding him to all justice and fairness." In the years preceding Devine's discovery, other researchers had also proposed that people might have prejudices they hadn't acknowledged or faced, and that embedded stereotypes might influence reactions. Psychologists John Dovidio, Sam Gaertner, and others observed that people might believe themselves to be egalitarian but feel discomfort or have other negative reactions to people of different races.[28]

Devine's argument was that the prejudice paradox could be explained without the requirement that White people were lying: the human mind could contain beliefs people consciously endorse alongside stereotypes or associations that they do not. A belief, she claimed, is something people actively choose, while an association is something that they absorb from their surroundings—cultural knowledge gained without their consent or even awareness. In this view, a belief is like a newsletter you intentionally subscribe to; an association is like spam from a company that somehow obtained your address. You did not choose the spam, and you don't want it, but there it is, clogging your in-box, and you can't seem to get off the mailing list. People who are explicitly prejudiced, on the other hand, do not experience a conflict between chosen beliefs and hidden stereotypes. They subscribed to the spam.

This distinction laid the groundwork for the concept of implicit bias. It was a new way to think about discriminatory conduct: a habitual reaction rooted in deep associations. According to this perspective, beliefs and associations both exist in the mind, and both can steer our reactions to others. When people's words and deeds oppose one another, the contradiction might stem from an internal struggle between the values a person holds dear and the stereotypes they do not. And these stereotypes could be pressed into service without one's bidding, just as a person might drive all the way home from work with no awareness of having turned left or

right. Discrimination could be unintentional, even unconscious—stains from our culture, found all over our behavior.

Devine published her findings in 1989. In people who report being unprejudiced, she wrote, the "activation of stereotypes can have automatic effects that if not consciously monitored produce effects that resemble prejudiced responses." Devine's officemate Mahzarin Banaji told Devine that she had revealed "the dark side of the mind." Devine disagreed. Having biased associations didn't mean you were a bad person. It meant you existed in a culture.[29]

The idea of implicit bias suggests that bias functions like a circuit. The circuit begins when we absorb "cultural knowledge" from the world around us, as our families, the media, our classrooms, our neighborhoods shower us with information about different groups of people. Some of this knowledge is true—there are, for instance, statistical differences between men's and women's average height. Some is not true: boys are not on average better at math than girls. Over time, this information becomes deeply embedded as associations and stereotypes. When we encounter someone or something that triggers those associations, our cultural knowledge affects how we react to the situation at hand, including the way we act, what we say, and how we feel. The discriminatory behavior that emerges as a result can contribute to disparities, which further feed the cultural knowledge that sets the whole process in motion. And we do not see a single dimension of identity at a time, but multiple categories, including race, gender, age, and more, each of which carries associations that may be integrated into a perceiver's mind.[30]

This notion of implicit bias as a circuit can help explain a range of encounters. Take a little boy named JJ Powell, for instance. At age four, JJ was bright and gregarious. He could expertly write his name and his younger brother's name. He loved playing school and was usually pretty well behaved. But in the spring of his first year of preschool in his hometown of Omaha, Nebraska, his mother, Tunette Powell, began receiving calls for her to come pick JJ up. He'd been suspended for dribbling spittle on a classmate. Another time for throwing a chair; another time for not listening during nap time. Powell was bewildered. Her shining, upbeat boy? "Wow," she recalled during an interview. "I failed as a parent."[31]

But then she attended a birthday party for a child in JJ's class and began speaking with other parents at the school. One mother shared that her son had hit a boy so hard the child had been sent to the hospital. Her son hadn't been suspended; she'd only received a phone call. More parents told stories of their kids' behavior problems. There had been no other suspensions. In fact, the other parents didn't even know the school used that punishment. JJ had been suspended three times. The only difference, as far as Powell could tell, was that her son was Black and the other children were White.

Powell's son was not alone. One study in Texas looked at literally millions of school and disciplinary records, among them the school records for every student who started seventh grade between 2000 and 2002, all the way through twelfth

grade. These included all the disciplinary actions for codes of conduct violations—things like tardiness or inappropriate dress. Responding to these behaviors is discretionary—the school can dispense whatever punishment it sees fit. The study found that Black students were more than twice as likely to be suspended the first time they violated the rules.

Studies confirm that same pattern. In one set conducted by psychologist Phillip Atiba Goff and colleagues, subjects were presented with a story about a boy who had behaved in an antisocial way, ranging from a misdemeanor to a felony. They were then asked questions about the child's responsibility for his actions, and his intentions behind them. Evaluating the same behavior, the subjects saw the boy as more culpable for his actions when he was Black; they also overestimated his age by more than four years, such that a thirteen-and-a-half-year-old was perceived as a legal adult. While the Black child was seen as more culpable for a felony than a misdemeanor, the opposite was true for the White child: as the severity of his behavior increased, the White child was seen as less responsible for it. In another study, researchers showed teachers a school record of a student who misbehaved. When the student was Black, the teachers were more likely to label the student a "troublemaker" and were more likely to see a second infraction as part of a larger pattern of bad behavior.[32]

According to the notion of implicit bias, JJ's teacher absorbed racist stereotypes about Black children. When JJ refused to take a nap, the stereotypes in her mind shaped her interpretation of him and his behavior, leading her to see the behavior as worse than if he had been a White child—and JJ as more deserving of punishment.

In the case of a young computer science student named Philip Guo, biased treatment worked in his favor. Guo had grown up in a Chinese American family of humanities majors. He had tried to teach himself BASIC in sixth grade but had given up because it was too hard. Later, he took one high school computer science class, taught by a teacher who'd learned the material weeks before the class started. It sparked his interest in programming, but when he arrived at college in 2001, he was essentially a beginner, especially in contrast to his classmates, many of whom, by freshman year, had already had ten years of programming experience. He took the entry-level computer science class and started doing summer internships where he noticed something unusual. "It always seemed like during meetings," he recalls, "people assumed that I knew what I was doing."[33] He didn't. When he was silent because he was lost, his coworkers thought he was silent because he understood.

During the school year, Guo cold-emailed professors and obtained a research position. Over the next few years, he landed job after job that required skills he knew he didn't yet have. In these jobs, he had the opportunity to acquire knowledge while getting paid to do so, all the while benefiting from people's presumption of

while "rotten" is bad, and therefore in the category "gay or bad.") Then, you are shown another list and are asked to sort each word again, but this time the categories are "gay *or* good" and "straight *or* bad." If you are faster at sorting the words into "gay or bad" than "gay or good," this suggests that the connection in your mind between "gay" and "bad" is stronger than the connection between "gay" and "good," revealing an implicit negative association with homosexuality.[39]

A review of more than 2.5 million such tests revealed that most test-takers (85 percent of whom were from the United States) show a bias in favor of straight people over gay, able-bodied over disabled, and young over old. In many cases, people in stigmatized groups themselves also show an implicit preference for the culturally dominant group. Overweight people exhibit anti-fat bias. White people, Native Americans, Asians, Latinos, and multiracial people all display an implicit bias in favor of White people. Black people are the only racial group that does not express an implicit pro-White bias; some research finds that Black students at historically Black colleges show a pro-Black implicit preference.[40]

These tests also revealed that most people associate men more with work and women more with family, and men more with science and women more with humanities. All racial groups, Black people included, associate Black more than White people with weapons. Research by psychologists Phillip Atiba Goff, Jennifer Eberhardt, and others has found that White subjects implicitly associate Black people with apes. This specific dehumanization, describing people of African origin as not fully human, was explicit in European writings of the eighteenth century, and further accelerated through mainstream medicine and academia throughout the nineteenth century. The fact that this lie persists in the White consciousness centuries after its invention is a testament to how thoroughly and aggressively it was promoted, though some may have trouble facing this reality. In her book *Biased*, Eberhardt recounts how even her scientific colleagues disbelieved these findings as evidence of racist stereotypes, grasping for alternative explanations based on "color-matching."[41]

The Implicit Association Test seemed, at first, to be the holy grail of implicit bias: a laser pointing at the source of biased behavior. But this view, too, has come into question. The test has a number of weaknesses, two of which are particularly problematic. First, the IAT has, in scientific parlance, low "test-retest reliability": the same person might end up with different scores at different times. (If a bathroom scale says you weigh 210 pounds today and 190 tomorrow, you might feel skeptical about the scale.) Second, there's only a modest relationship between a person's IAT score and their actual behavior. A score indicating bias does not necessarily mean a person will act in discriminatory ways toward others—and an unbiased score does not necessarily predict fairness.[†42]

But these weaknesses of the IAT may in fact point to a more complex, nuanced way to understand implicit associations. Researchers have posited that having different IAT scores at different times might indicate that the associations

themselves are not stable quantities but wobbly, malleable connections that are subject to a person's state of mind. People in one experiment, for instance, revealed positive associations with rich foods when they were prompted to focus on taste and negative associations when they were prompted to focus on health. Associations may also vary according to context.[44] If I see a hulking man holding a knife, I'm going to have one kind of reaction if he is in a dark alley, another if he's onstage, another if I'm on an operating table. In this view, we wouldn't expect implicit associations to be static and re-testable.

And while they do not perfectly predict whether individual people will discriminate, neither do explicit beliefs. There is, in fact, no single mental construct that precisely dictates how a person will act, because people are also guided by social norms, personal goals, others' expectations, and more. Implicit associations as measured by tests like the IAT may be most usefully seen as a portrait of a culture. They do reveal social trends: the same preferences for certain social groups over others reappear across millions of tests. Looked at as a group, these associations may uncover the extent to which people in a culture have been exposed to specific knowledge; they show the contours of a society's stereotypes. They also reveal how cultures can change over time. A recent review of millions of test results found that implicit bias about race and sexual orientation has decreased markedly over a recent decade, while negative associations about the elderly and people of heavier body weight persist.[45]

But implicit bias is not the only plausible explanation for the prejudice paradox. Another perspective holds that beliefs and associations are *not* separate things. According to this view, a person's true belief about, for instance, a marginalized group may be buried but become apparent given the right conditions. A psychologist named Russ Fazio proposed that this true belief will emerge or stay hidden depending on the extent to which a person possesses the motivation and opportunity to reveal or conceal it. If someone shows on an implicit test that they link women with incompetence, this means they have not had the motivation or opportunity to conceal their actual attitude.[46] Indeed, "implicit" stereotypes influence behavior especially when people are tired or stressed, under time pressure, or otherwise mentally taxed, while more "explicit" beliefs dominate when people have the motivation or mental resources to think carefully about their actions.

Does this mean people are lying? Not necessarily. It's possible that many of us have simply not fully investigated our beliefs, especially if those beliefs clash with our values. Indeed, Devine's original study relied on a survey to divide people into "low" or "high" prejudice. But it's possible that people answered those survey questions while still harboring unexamined racist beliefs, and that it was those latent beliefs that were later triggered and appeared on the graphs. The prejudice paradox may not be a sign that people are lying, but simply that they haven't fully scrutinized the interior of their own minds. In this case, the conflict may not be

between people's true, egalitarian beliefs on one hand and their habitual associations on the other, but between people's unexamined beliefs and their moral values.

THE IDEA OF IMPLICIT BIAS suggests a sharp distinction between the prejudiced and the unprejudiced, but the distinction is perhaps not so clear-cut. Even the idea that there are two distinct processes in the mind—an automatic one and a deliberate one—is still debated; some see the idea of two processes as overly simplistic. There are, psychologists propose, *many* processes that unfold in a person's mind between any stimulus and any response—between, say, seeing a pair of words and pressing a button, or seeing a female candidate's résumé and making a judgment about her ability to do the job. Our behavior is likely governed by processes that are automatic, deliberate, and combinations of the two.[47]

People's behavior may also be shaped by the person with whom they are interacting. Indeed, psychologist Nicole Shelton has argued that examining prejudice and discrimination in individuals is itself flawed and limited because bias happens dynamically, between people. People don't just project stereotypes onto passive others; both parties respond to each other's actions; misunderstandings and different perceptions can shift behavior in real time. Each person in an interaction exerts pressure on the other's behavior.[48]

Some researchers have begun avoiding the term "implicit bias" altogether. Instead, they refer to bias "measured implicitly," distinguishing the tool, not the attitude. Devine prefers to call it "unintentional bias." A more straightforward term for bias that opposes a person's values is simply "unexamined bias." Practically speaking, the difference between this and other more overt kinds of prejudice is the large gap between what is consciously intended by one person and what is experienced by another.

The exact sequence of mental events that causes well-intentioned people to engage in bias is still a roiling question. The truth is that for those of us who hold the fundamental equality of all people as a value, our behavior toward people of different genders, races and ethnicities, religions, ages, abilities, sexual orientations, and beyond, may stem from an unknowable combination of associations we do not endorse and beliefs we have not fully examined. What is important is the fact that acting in prejudicial ways conflicts with our values. When, faced with our actions, we feel unease or guilt, that may be our conscience speaking, creating the crucial entry point for changing our own biased behavior.[49] We'll explore the many routes this can take in detail in the coming chapters. We can start by exploring the inner workings of the human mind.

**Notes**

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economist Gunnar Myrdal called this conflict between American democratic ideals and reality the "American Dilemma": "The American thinks, talks, and acts under the influence of high national and Christian precepts, and, on the other hand ... consideration of community prestige and conformity; group prejudice against particular persons or types of people; and all sorts of miscellaneous wants, impulses, and habits dominate his outlook." Gunnar Myrdal, *An American Dilemma,* vol. 1, *The Negro Problem and Modern Democracy* (New York: Harper & Row, 1944), xliii.

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6. Samelson, "From 'Race Psychology' to 'Studies in Prejudice,'" 270.
7. Howard Schuman, Charlotte Steeh, Lawrence Bobo, and Maria Krysan, *Racial Attitudes in America: Trends and Interpretations* (Cambridge, MA: Harvard University Press, 1970), 66; August Meier and Elliott Rudwick, *Black Detroit and the Rise of the UAW* (Oxford: Oxford University Press, 1979), 181–82; Amy Fried, "Race, Politics and American State Capacity: U.S. Government Monitoring of Racial Tensions During World War II" (unpublished manuscript, 2017), 13–15; and Herbert Shapiro, *White Violence and Black Response: From Reconstruction to Montgomery* (Amherst: University of Massachusetts Press, 1988), 312–13. The Detroit Housing Commission, surveying the racism that permeated the city, noted:

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9. Quoted in James Whitman, *Hitler's American Model* (Princeton, NJ: Princeton University Press, 2017), 10, 118, 147, Kindle. The memo discussed at this meeting argued for the prevention of public "mixing" of *Volk* and "colored" races: "Protection of racial honor of this kind is already practiced by other *Volker*. It is well-known, for example, that the southern states of North America maintain the most stringent separation between the White population and coloreds in both public and personal interactions."
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* Questions from the army tests included whether a Percheron was a goat, horse, cow, or sheep, and whether Crisco was a medicine, disinfectant, food, or toothpaste.

† It's also unclear that the IAT measures deep associations alone: it may also measure people's ability to control their responses to the test. It's well known, for instance, that one's level of self-control can diminish with age. Older adults have IAT scores that suggest more bias, but this could also come from the fact that they also have less ability to control their reactions to the test.[43]

# 2

## Inside the Biased Brain

If you happened to be scrolling through Facebook in April 2015, you might have seen an ad for the movie *Straight Outta Compton,* a biopic about the iconic West Coast music group N.W.A and an ode to pioneers of gangster rap. If you clicked on the ad, you would have seen documentary footage of real-life members of N.W.A, Dr. Dre and Ice Cube, driving through their old neighborhood. You'd have heard Dre talk about N.W.A as a form of nonviolent protest and about the group's efforts to inspire the next generation: "We put it all in our music—our frustration, our anger." You'd have seen the men hugging young people from the neighborhood. "I'm so appreciative," says a man in a barbershop. "I'm just trying to keep the flame lit." Then, when this mini-doc cut to film footage, you would have seen musicians at work and a White manager speaking about raw talent. You'd have seen these words flash across the screen: "In the most dangerous place in America, their voices changed the world."[1]

At least, that's what you would have seen if you were Black.

If you were White, you'd have been shown something different: within the first twenty seconds, a Black woman brandishing a shotgun. Lights, and sirens, and young Black men drinking dark liquor in a bar. Police handcuffing Ice Cube and then slamming him onto a car. Eazy-E asking, "Where the money at?" to which someone in an undershirt replies, "Why you gotta be so ruthless?" Then: Eazy-E pulling a shotgun from a duffel bag, a row of Black men facedown on the pavement, the White manager demanding that his clients be freed.[2]

*Straight Outta Compton* was the first time Universal Studios used Facebook's "ethnic affinity" labels to target market a film. Instead of creating one trailer for everyone, Universal created race-specific trailers. What you saw depended on how Facebook identified the color of your skin. And as author and journalist Annalee Newitz points out, "They look like they're advertising two completely different films."[3]

The film grossed $200 million at the box office, and Universal's EVP of marketing, Doug Neil, said this race-targeted advertising was partly responsible for the film's triumph. Its success, Neil said, was a surprise. Then he corrected himself. "I shouldn't say a surprise. A breakout hit."[4]

Why did it work? And why did White audiences thrill to this kaleidoscope of Black stereotypes? One possibility is that holding and confirming stereotypes make people feel good. Holding them provides an illusion of certainty in uncertain situations; finding evidence that they are right is also affirming. Like listening to music, or fitting a jigsaw puzzle piece into place, having one's stereotypes confirmed may even be physiologically pleasing.[5]

What these activities have in common is that they involve a sort of prediction. When we listen to music, our minds predict each note that comes next, and we derive pleasure from hearing the pattern we've been expecting. Solving a jigsaw puzzle, too, is a prediction: we guess a piece's location and delight when it snaps into place. In each case, the outcome is uncertain, and research shows that correctly predicting an uncertain outcome feels, in our brains, like pleasure.

Stereotyping, too, is an act of predicting an uncertain outcome—say, seeing a woman and assuming she is bad at math. If she does indeed turn out to be bad at math, then the prediction was correct. Even correctly predicting something negative can feel good, like the smug satisfaction we feel when a habitually tardy friend shows up an hour late. "Aha!" we think. "Just as I predicted." It's irritating, but strangely gratifying: we *knew* what would happen, and we were right. It's as if our brain is constantly running a movie of what we expect will happen milliseconds before it actually


image
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while the term "White on White crime" does not, even though more than 80 percent of White murder victims in the United States are killed by other White people. In the cultural imagination, the White perpetrator and the White victim are not seen as part of a meaningful group. White people are, as philosopher George Yancy puts it, "simply human."[20]

THE SIMPLE ACT OF TEACHING children how to categorize others is something we do constantly, unthinkingly. Every time children see one group of people occupying one sort of job or living in one part of town, it teaches them that these categories matter. Every time we separate by gender, race, ethnicity, religion, age—whether by language, attention, the location of people in space—we are trumpeting the importance of these different categories and pointing to the fundamental essence that underlies them. Every time teachers say, "Good morning, boys and girls," children learn that the distinction between the two is important.

This instruction generally happens imperceptibly, but in my own life I can trace one memorable instance of developing a category from scratch. On a high school foreign exchange trip to France, I stayed with a family in the Lorraine region, near the German border. I learned, from them, how to be French: how to eat cheese after dinner, drink tiny cups of coffee, and go home from school for lunch. During the week, I followed my host student from class to class at her lycée. One day when I was on my own during a break, a group of French students I didn't know motioned for me to join them. They were curious about me and my impressions of France, about the music I liked and the movies I watched. We stretched out in the grassy courtyard under a cloud of cigarette smoke and laughed, each venturing words in the other's language. When the break ended, I waved good-bye to my new friends and headed back to class.

Later, one of the host students sidled up to let me know that I had been hanging out with Arabs. The kids in the courtyard and their families, it turned out, had come to France with the wave of immigration from Morocco and Algeria. Unaware of the French political or social context, I had noticed no difference between these French-speaking students and any others. Where I was from, a largely White, Catholic town in northeastern Wisconsin, the category "Arab" carried no immediate significance at the time, and thus I held no stereotypes, harbored no prejudice, and, crucially, didn't even notice anything about my new friends that might have singled them out. Any characteristics that might have indicated their membership in a group known as "Arab" escaped my attention.

It may be that I did not even see these characteristics. Research suggests that our vision itself is partly a product of our culture: the categories and associations we learn affect how we process visual information. Studies by psychologist Amy Krosch and others showed, for instance, that when White Americans feel threatened, they perceive Black people as darker in skin tone. They are also quicker to categorize mixed-race faces as "Black." Likewise, when White Americans feel threatened, those who associate Arabs with danger perceive their faces to be more angry. Psychologist Jennifer Eberhardt has found that subliminally priming the category "Black" also changes how people see. In her studies, when people were subliminally shown images of Black faces, they were faster to visually discern a gun from a low-resolution image. Likewise, when people were subliminally exposed to images suggesting crime (say, a picture of a gun or handcuffs), their eyes focused more on Black faces than White faces.[21]

As a teenage American in a foreign country, once I learned that Arab was a category, new details came into focus. I saw hair and skin color, and I noticed that these students tended to cluster together. As my vision became tuned to the categories I learned, I stepped through the sequence that a child goes through. I was taught a category and told it was important, and then I began to pay attention to attributes I had not previously known to register.

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Granta Publications, 12 Addison Avenue, London W11 4QR

First published in Great Britain by Granta Books, 2021
Originally published in the United States in 2021 by Metropolitan Books, Henry Holt and Company, New York



Portions of chapters 4 and 7 appeared in different form in the *Atlantic* and the *New York Times*.



A CIP catalogue record for this book is available from the British Library.

1 3 5 7 9 10 8 6 4 2

ISBN 978 1 84627 677 4 (hardback)
ISBN 978 1 78378 864 4 (trade paperback)
ISBN 978 1 84627 679 8 (ebook)

Designed by Kelly S. Too
Offset by Avon DataSet Ltd, Arden Court, Alcester, Warwickshire B49 6HN
Printed and bound by CPI Group (UK) Ltd, Croydon, CR0 4YY

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