

Implicit Bias versus Intentional Belief: When Morally Elevated Leadership Drives Transformational Change

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The twenty-first century is witnessing rapid and deep change in the global economy. These changes require innovation-driven solutions and motivated, skilled workforces. The talents of every person will be required to support performance in every domain, and deliberate actions must be taken to address impediments to full engagement. Even with clear government policy and significant investments in encouraging representation and inclusion of diversity of race, sexual orientation, gender identity, and ability, progress continues to lag. This essay captures promising practices and recommendations for structural or systemic change punctuated with stories of leadership driven by the belief that implementing strategies to disrupt the effects of implicit bias are important to develop diverse, fully engaged populations.

Are there opportunities to shape our future based on the beliefs we articulate? Or are our actions controlled by our unconscious biases, preprogrammed and potentially toxic? For more than fifty years, American polling on perspectives of diverse populations has reflected shifting attitudes. For example, the 2022 Gallup poll on race relations shows a reversal of position on interracial marriage, from 4 percent approval in 1958 to 94 percent in 2021.¹ The poll on values and morality in America indicates a greater acceptance of same sex marriage, from 27 percent to 71 percent approval (1996 to 2022).² Psychologists Tessa E. S. Charlesworth and Mahzarin R. Banaji report explicit attitudes on race, sexual orientation, weight, and ability have decreased in bias by 98 percent, 65 percent, 31 percent, and 37 percent respectively since 2007.³ These supportive trends have been reflected in public commitments to accessibility, inclusion, equity, and diversity by various groups, including the government, industry, and education communities, and reflected in public policy and the media. So why is there still significant evidence of toxicity?

- There are glass ceilings for women, racially minoritized people, and gender-nonconforming people, making them unlikely to hold executive roles.⁴

- In companies with more than one hundred employees, Black people make up approximately 3 percent of senior leaders.⁵
- Hiring and promotion for cultural fit is the norm, but only people under forty-five years old are seen as a “good cultural fit” by 85 percent of hiring managers.⁶
- Extroverts and confident talkers are seen as a better cultural fit and more promotable but may not be the best leaders.⁷
- Overweight people are seen as less suitable.⁸
- Explicit evidence of heightened anti-Asian racism during and after the COVID-19 crisis exists.⁹

Apparently, against a backdrop of articulated support, evidence of equality seems limited. Charlesworth and Banaji contrasted explicit attitudes with results from implicit bias testing.¹⁰ Reductions in implicit biases were generally lower than articulated values, sometimes significantly so. Kirsten N. Morehouse and Banaji’s essay in this volume provides a detailed discussion.¹¹

Let’s clarify terminology. *Implicit bias* is a negative attitude, often unconscious, against a specific social group.¹² Other essays in this volume discuss the history, theory, research, and sustainability of interventions of implicit bias.¹³ As noted by psychologists Calvin K. Lai and Banaji in their essay on implicit intergroup bias, and Jack Glaser in this volume, unconscious biases may unwittingly produce behaviors that limit access to resources like health care, education, and funding, and may influence workplace decisions.¹⁴ *Intentional belief* refers to moral reasoning, an intentional and conscious mental activity that consists of transforming given information about people (and situations) in order to reach a moral judgment.¹⁵ Initiated by leaders with the intentional belief that they can influence implicit bias by using their “bully pulpit” within their organization to reduce systemic bias, this essay discusses possibilities for sustainable organizational change.

As discussed elsewhere in this volume, individual bias and systemic discrimination are interrelated. Using the “bias of crowds” theoretical framework, Manuel J. Galvan and B. Keith Payne’s review of the structural or systemic aspects (used interchangeably) of bias, specifically racism, explains why articulated support of racial equity has not had greater impact. As we address structural inequalities, we reframe the experiences that shape implicit bias.¹⁶ As culture drives experiences, experiences shape bias, bias in society shapes the mind, and, in turn, bias in the mind shapes culture. Institutional and structural bias drives long-standing conditions that reinforce implicit bias. *Both* individual and institutional solutions are needed.¹⁷

Although significant research exists on implicit bias, evidence of successful interventions is limited. The meta-analyses by psychologists Patrick S. Forscher, Jordan R. Axt, Lai, and colleagues, as well as those by psychol-

ogists Chloe FitzGerald, Angela Martin, Delphine Berner, and Samia Hurst reviewed hundreds of bias-intervention studies and data on tens of thousands of participants.¹⁸ None resulted in long-term change.¹⁹ However, Lai and Banaji acknowledge that the influence of bias may be reduced through various learning processes and practices they recommend. But they also acknowledge that it is “unreasonably optimistic” to assume individuals will choose to change their values on their own on a large scale. Structural solutions may be appropriate at the macro level, with institutions implementing policy and governance solutions that control resources like housing, education, business, and health care, to encourage individuals to close gaps and push for justice and equality.²⁰ Cass R. Sunstein and Richard H. Thaler suggest a form of “paternal libertarianism” in circumstances such as this, by which they mean that the best approach to organizational decision-making is one within a framework that includes data analysis and a clear cost-benefit analysis.²¹

This essay focuses on systemic solutions. Recognizing the role that work plays in the lives of individuals, and that workplace culture is often a reflection of society, our examples and discussion are focused on leaders and changes in the organization of workplaces. Highlighting promising practices and featuring stories of leaders who have moved beyond their own unconscious biases in favor of actions that elevate their communities, we discuss transformational leaders addressing the effects of implicit bias within their organizations.

Transformational leadership, a theoretical model attributed to historian James MacGregor Burns, highlights that “the result of transforming leadership is a relationship of mutual stimulation and elevation that converts followers into leaders and may convert leaders into moral agents.”²² Building on Burns’s work, which focuses on political leaders, psychologist Bernard Bass extended the model to organizational management, adding that transformational leaders “attempt and succeed in raising colleagues, subordinates, followers, clients, or constituencies to a greater awareness about the issues of consequence.”²³

The drivers of transformational leadership originate in personal beliefs and value systems that include such values as justice and integrity. Burns refers to these values as “end values,” those that cannot be negotiated or exchanged between individuals. When leaders introduce change at key intervals, it supplies a nudge to redirect and prevent bias-based outcomes.²⁴

This model for leadership was selected because of its potential to create and energize the next level of leaders to carry on sustained change, and because of the opportunity to engage individuals, potentially a disagreeing majority, in transforming beliefs. The four dimensions of transformational leadership – inspirational motivation, idealized power, intellectual stimulation, and consideration of individuals – temper the potential for elitist leader-driven change.²⁵ Sustainable change requires participatory, somewhat democratic methods of engagement, including transpar-

ent communications and commitments from organizational stakeholders, while achieving performance goals.²⁶ Alexandra Kalev and Frank Dobbin give historical context and multiple examples of organizational change that resulted in a “revolution in attitudes.” When common goals are established and members of different groups are working as equals, real change is possible across areas of race, ethnicity, and religion.²⁷

Although the pace of change in addressing social issues is inadequate, we know change is possible, particularly when leaders see it as critical and act. Research on transformational leaders who focus on both moral values and data-driven reasoning to drive culture change is limited. However, there are examples of leaders using values to drive decisions, engagement, and inclusion:

- Who hired the first Black woman into a predominantly white male business world and why?
- Who first gave same-sex partners benefits in an assumed heterosexual business world and why?
- Who enables, in a business world rich with choice, all people, no matter who they are, to be their best and do their best each and every day and why?

We explore promising practices for disrupting the effects of implicit bias through reflections on each of our own experiences working for strong leaders with strong beliefs and clear value systems (even if their words may have revealed internal biases to the contrary).

Donofrio: IBM, a company I grew up in and lived in for forty-four years, not only taught me these lessons but actually had a history of teaching others these lessons—if you are only willing to look, listen, and learn.

Starting with Thomas J. Watson Sr., who was basically the founder of the IBM Company as it is known today, I often wondered how he knew what to do when everything around him was changing, if not telling him to do something else. How did he know in the 1920s and 1930s that women had a place in business when everything around him told him otherwise? How did he know that equal pay for equal work—no matter your gender, ethnicity, religion, nationality, or skin color—was the right thing to do? While he wasn’t always perfect and right and first, somehow he seemed to have implicit belief versus bias! Net, he led from his beliefs, which perhaps became his bias. Or was it the other way around?

Soon after Watson arrived at IBM in 1914, he developed and released his “Basic Beliefs” for all employees. IBM’s three Basic Beliefs, the foundation for the values and culture that guided the company decade after decade, were respect for the individual, superlative customer service, and the pursuit of excellence in all tasks.

Even as I joined IBM in 1964, these Basic Beliefs were on the tip of everyone’s tongue and guided everything every IBMer did. In three simple thoughts, Watson told

everyone what IBM would do for them and what IBM expected from them. Beliefs, values, culture. There was very little room for bias.

Clearly, Watson made this happen because he saw a critical void and stepped up to fill it based on his own experiences and beliefs. After all, it was his company, and he was charged with its leadership for the betterment of all stakeholders, employees, clients/customers, partners, investors, and communities.

History would suggest that this top-down move worked wonders for the struggling CTR Company Watson joined in 1914, and the incredible IBM success he left in 1956.

The willingness and determination of leaders to act on values for the good of their teams and the good of their enterprise are critical. Both organizational and individual goals are important. Transformational leadership theory pushes leaders to pursue teamwork, communal respect, and cooperation.²⁸

Our concentration on the role of leadership in setting up policy, providing incentives like awards, recognition, and promotions, and enforcing accountability with metrics is based on the links between organizational behavior and organizational culture. Employee engagement is a product of the organizational culture with the “daily experience” crafted by colleagues, peers, supervisors, stakeholders, and the organization.

Culture is evident in the vision, values, and frameworks for the behaviors that prevail. Psychologist Edgar Schein has captured these elements when he defines organizational culture as “a pattern of shared basic assumptions that was learned by a group as it solved its problems of external adaptation and internal integration, that has worked well enough to be considered valid and, therefore, to be taught to new members as the correct way to perceive, think, and feel in relation to those problems.”²⁹ Shared assumptions evolve as the group works to adapt to external conditions and achieve internal integration. Basic assumptions and practices are being taught to new members as the correct way to perceive, think, and feel.³⁰ The issue of bias is associated with the character of the organization, the character of its leadership, and the conviction with which all are willing to shape the organization on the side of right. Much of the leadership challenge is to hand decision-making back to our rational belief system and wrestle it away from implicit bias.

Schein also finds a unique association with leadership in creating culture. The values of the leader are imposed on the group through process and requirements. With success, the culture develops, including assumptions that are taken for granted, like in-group/out-group dynamics, and other elements of culture. The leader has the responsibility to step outside the culture when assumptions are no longer valid and change is needed. “This ability to perceive the limitations of one’s own culture and to evolve the culture adaptively is the essence and ultimate challenge of leadership. Leaders begin the culture creation process and, as we will see, must also manage, and sometimes change culture.”³¹ Sustainable change re-

quires clear goals, change agents, engagement, metrics, reward structures, resources, and leadership support.

Donofrio: Another approach to ensuring you are connected and relevant as you look to innovate in this multigenerational workforce world is to engage everyone and anyone you can in addressing the problem as you seek to unlock hidden value. In 2002 and 2003, as Sam Palmisano took the reins at IBM as CEO and chair, we focused on utilizing technology to enable an open, collaborative, multidisciplinary, global platform focused on the problem in a way that everyone could contribute. We called them “Jams.” The Values Jam was Sam’s brainchild (with complete support of all of us on his senior leadership team) as he determined that IBM needed to update, refresh, and reassess its original Basic Beliefs as laid out by its founder.

Rather than “handing down” his version, Sam chose to ask IBM’s employees to engage and help him determine what those beliefs should be that we would all follow and use to build our twenty-first-century culture. Sam engaged the entire IBM global workforce, over three hundred thousand members strong in one hundred seventy countries. Over a few days, more than half of all IBMers engaged to provide their thoughts and ideas with lots of discussion and debate. Shortly thereafter, when all the results were tallied, Sam simply announced what everyone working together had determined: our chosen new IBM Values are, “Dedication to every client’s success. Innovation that matters for the company and the world. Trust and personal responsibility in all relationships.”

Much has been written about this massively parallel approach to collaboration and problem-solving (in 2004, scores of colleges and universities wrote about the Jams approach and their results). If values and beliefs set the base for culture, which in turn provides everyone the guidelines for action or inaction, what better way to get everyone, including the leaders, on the same page than through an experience like Values Jam? When everyone is looking and everyone is engaged, is there really any room for bias?

Footnote... Just before I graduated from IBM, we held an Innovation Jam that again utilized the entire IBM workforce, with the addition of their family members and IBM’s clients, to help us determine where to invest and how to quicken our path to successful innovation. As Sam led the Values Jam, I led the Innovation Jam. What an innovative way to innovate! Hiding biases when nearly two hundred thousand people are engaged and questioning every move, while not impossible, is highly unlikely.

Customers buying goods, investors investing, employees choosing where to work and how to engage – all are tied to a cycle of innovation, performance, and customer attraction. The challenge of creating value or producing something of value for a customer or the business itself involves balancing the needs and interests of external and internal stakeholders. While businesses have always struggled to increase revenue, differentiate themselves, manage costs,

and delight customers, the pace of innovation has been accelerated to accommodate disruptive business models and a growing global marketplace. The key driver of innovation – the people within the enterprise – must be carefully considered and their engagement painstakingly prioritized. The National Commission on Innovation and Competitiveness Frontiers clearly laid the foundation for all to follow since 2003: “To compete in the next economy requires playing a new innovation game, one whose goal is to boost U.S. innovation tenfold,” demanding bold leadership, a global perspective, a whole-of-nation strategy, and appropriate support.³² To meet this demand, the American workforce should be engaged, skilled, and enabled to contribute.³³ Needless to say, this includes every employee in every role.

Sociologist Bas Hofstra and colleagues’ research points to higher innovation rates among demographically underrepresented doctoral candidates.³⁴ The innovation enterprise is at its best when it fully uses the broadest range of human talent.³⁵ In their meta-analysis of multiple studies, health care researchers Luis Emilio Gomez and Patrick Bernet found that diverse teams can support better decision-making by introducing difficult, unexpected questions that require resolution.³⁶

Sigur: The Return-to-Flight effort following the tragic NASA Space Shuttle Columbia accident included both significant technical and personal challenges. A comprehensive investigation found that catastrophic damage to the shuttle orbiter was caused by the loss of large pieces of shuttle external tank foam insulation during launch. The tank production plant, located in New Orleans, was hit by Hurricane Katrina during the safe hardware redesign effort. Ninety-eight percent of the workforce were affected, most left homeless. The factory was surrounded by water, and a concrete roof had collapsed onto near-complete hardware.

I was asked to lead the recovery effort for Lockheed Martin Space, the external tank contractor. Recovery meant every person was needed, both qualified and qualifiable, with no room for racism, ageism, sexism, or sexualism as we worked together on solutions across every front: finding our team members and families and helping re-establish lives while developing solutions for safe flight against a backdrop of schedule pressure to assist with building the Space Station as geopolitical support waned.

Prompted by NASA Human Factors expert Cynthia Null, I redesigned the makeup of solution teams, giving production-floor practitioners a voice along with engineering, a first. They supported everything as a group: design, build, test at work; and house “gutting,” rebuilding, and personal support at home. I realized the unique nature of this effort when I observed a “production huddle” before performing a redesigned tank spray: the practitioners, a nearly all-Black group, and the scientists and engineers, a nearly all-white group—expert peers, discussing a solution that had escaped solving for years. Intergroup relationships flourished and continue to this day, including those across racial lines, as they had helped each other succeed both at work and at reknitting their personal lives. And tank vehicle performance was nearly perfect.

Although it may be difficult to revise individual bias, it is definitely possible to interrupt bad behaviors. Promising practices include identifying and owning clearly defined expectations and practices for a) the daily experiences of employees; b) organizational demographics (hiring and promotions); and c) self-assessment tools to measure progress – everything must be linked to the organization’s strategy and goals.³⁷

You cannot simply “have” diversity. Improved performance is *possible* with diverse teams, but different perspectives, knowledge, and backgrounds will only lead to the promised breakthroughs when issues of communication and integration can be resolved.³⁸ Dialogue around expected outcomes and behaviors can have significant impact. Left unresolved, employee turnover prompted by bias and unfair treatment (unfair employee assessments, limited access to key assignments and promotions) has cost U.S. employers \$172.4 billion over the past five years.³⁹ Employees who perceive bias react by downsizing contributions, disengagement, absenteeism, leaving, and withholding innovative ideas in greater percentages than those who do not perceive negative bias.⁴⁰ Gallup’s State of the Workforce Report estimates active disengagement alone can cost around \$500 billion per year.⁴¹

- Investing in retention is generally a better strategy than letting talent leave. The literature points to multiple practices to better manage daily work experiences.⁴²
- Involve multiple leaders and employees in diversity management. It helps to hear concerns and possible solutions directly. Leadership engagement can supply needed visibility and even build relationships.
- Review how and to whom assignments that lead to visibility, networking, and promotions get assigned. Ultimately these experiences set up employees for their next opportunities.
- Ensure equal access to decision-makers. Personal biases of leaders are best influenced by proper engagement and access.⁴³ Establish specifically expressed corporate rules and consequences for unacceptable behaviors.
- Introduce senior-level advocates focused on careers of women and minorities, particularly if there are disparities. In a study by economists Sylvia Ann Hewlett, Melinda Marshall, and Laura Sherbin, this practice resulted in more inclusive leaders who created a “speak-up” culture, which decreased perceived bias up to 90 percent.⁴⁴ Addressing the underlying systems that keep inequality in place is important to changing the work environment.⁴⁵
- Ensure inclusion-training incorporates easy-to-implement, skill-building tasks, and is ingrained with company goals and inclusive of targeted, positive approaches and messages that communicate acceptable behaviors.⁴⁶ As Kalev and Dobbin discuss in their essay in this volume, cultural inclusion training curricula can be particularly effective at teaching listening and

observational skills and increasing diversity and inclusion.⁴⁷ For example, affinity bias, the tendency to gravitate toward people similar to us, can be limited by requiring that hiring and promotion slates must include two or more qualified underrepresented candidates as well as two or more qualified women.⁴⁸

Donofrio: This is an important topic. I have always understood that for business success, everyone is needed and welcomed and enabled to be their best. As a young engineer, I often wondered what we were missing based on who was not in the room where it happened. Clearly, there were very few women and even fewer people of color. How do we know that this all-white male group is going to give us the best answer? Are they really the only experts on this topic? While I struggled with these thoughts, I also better understood what needed to be done.

As a member of the National Action Council for Minorities in Engineering board, and later serving as its Chair, as a recipient of the Rodney D. Chipp Memorial Award from the Society of Women Engineers and eventually a member of their ranks, and as a recipient of the Renaissance Engineer Award from the Society of Hispanic Professional Engineers, as well as a frequent speaker at their national convention, I learned to use every opportunity to help turn bias into belief by simply enabling and amplifying the obvious. “She is right, just listen!” Who is not here, and where are they?

At IBM, we narrowed and focused our commitments in support of women and underrepresented minorities. We could not do everything and support everyone, but for those we could help, we would double down if not triple down our support and long-term commitment. This was not always the most popular corporate decision, given the natural bias to always keep your business commitment options open to change when and as required. But addressing long-term structural societal deficits requires much more than simply following wise and sage corporate advice. Once again, we had to make good business sense out of all of this, regardless of how emotionally connected our biases and beliefs were.

As I studied the processes around innovation between 2002 and 2008 for the U.S. Council on Competitiveness (see their National Innovation Initiative, which I helped lead and IBM strongly supported), all the pieces started to fall into place. Start with the problem and not the answer.⁴⁹ Enable an environment that supports open, collaborative, multidisciplinary, global engagement. If you do not know who has the missing piece to the puzzle, why are you excluding people from engaging? Why let your bias determine the outcome? Innovation in business, government, education, for-profit, and nonprofit enterprises is the holy grail. Letting your bias control what you do is like starting with the answer. Every now and then, you may actually get it right. But more often than not, you will be wrong.

Perhaps it was easier for me to engage on these topics because I was often representing those who were not in the room to people who were in the room who looked

just like me. It is likely I had their biases if not beliefs working for me. Bias or belief. Right or wrong? Moral or immoral? If you are honest about what is really best for the enterprise now and in the future, the answer is obvious to and believable by all!

Sigur: In the 1980s, I took part in a “glass ceiling study” to assess whether there was indeed a barrier to promotion for women and minorities. The approach was generally straightforward, starting with an assessment of the numbers of employees of multiple demographics at each career stage. One of the products of the study was a series of pie charts showing percentages of diverse employees in the overall population, starting at entry levels and at successive levels of career advancement, later called the “Pac-Man series,” as successive levels of career promotions showed smaller and smaller percentages of women and minorities who had made it through the ranks. The graphics, placed in the same location on successive pages, produced a flip-book animated illusion or movie when viewed in quick succession that was reminiscent of the chomping arcade character by Namco. The effect was dramatic and rallied support for addressing inequities. The white male population was “eating” women and minorities over time. Significant corrective actions included mentoring, leader training, implementation of representative promotion slates, and more consistent processes, with positive shifts in representation.

How do we establish clear practices to manage organizational demographics, such as hiring and retention? A diverse team starts with ensuring effective hiring.

- Establish objective criteria for each position.
- Ensure interviews are structured around skills-based questions to limit bias.
- Limit the use of referrals to avoid reaffirming social rather than objective-focused hiring.
- Supply explicit guidance on expectations for a “diverse candidate pool.” Research shows that the odds of hiring or promoting a woman are seventy-nine times as great if at least two women are in the finalist pool, while the odds of hiring or promoting a nonwhite nominee are one hundred ninety-four times as great with at least two finalist minority applicants.⁵⁰
- Avoid assessing candidates for “culture fit.” Culture fit is frequently associated with shared interests, experiences, and backgrounds. When used as a selection criterion, culture fit often leads to homogeneity. Clear objective criteria and a common rubric to evaluate candidates help to avoid unintended impacts.⁵¹
- Place focus on recruiting diverse candidate employees. Although historically white alma maters of existing managers supply great references and those schools produce candidates of color, top Brown and Black talent should also be recruited from minority-serving institutions, including historically Black

colleges and universities (HBCUs), Hispanic-serving institutions (HSIs), Tribal colleges and universities (TCUs), and Asian American and Pacific Islander–serving institutions (AAPISIs).

Donofrio: Capitalizing on the belief that talent is equally distributed and the need for STEM talent is nearly endless, my colleagues and I focused on pathways for historically underrepresented communities in STEM. Included within the broad HBCUs are fifteen schools that meet the Certified Engineering requirements set by the Accreditation Board for Engineering and Technology. Our bias-turned-belief was that if we could ensure success for current students through industry internships and mentoring, and at the same time ensure success for faculty through industry and government funding, these colleges and universities with help and support could build out clear and strong pathways for local P–12 schools in their proximity. Focusing school by school, this initiative has started to take hold, built off this underlying belief that rich STEM talent is available locally and simply needs to be enabled. The added belief here is that constantly moving talent to opportunity may not always yield the fullest return on the investment. Moving opportunity to talent is a belief that counters the bias that talent must seek out opportunity and move toward it.⁵²

Sigur: Leaders committed to developing diverse talent may take bold action. In response to learning that roughly three-quarters of the Black executive leadership in the corporation had undergraduate degrees from HBCUs, the CEO, Marilyn Hewson, allocated an annual investment for developing talent pathways produced by accredited minority-serving institutions (MSIs) with executive liaisons to develop programs to help both the students and the corporation. The multimillion-dollar investment resulted in multiple benefits: a dialogue on new and upcoming talent beyond the big name schools and frankly an effort to grow talent resident in not only HBCUs, but MSIs and community colleges serving other communities across the United States; partnerships with some of these schools and faculty on new contracts; and opportunities for the faculty of these schools to engage in big business engineering and technology—experiences most of them had not had.

While hiring talent is critical, retention and development must get equal attention. Data on executive leaders who are neither white nor male show that business practices for promotions and employee development should be reexamined. Generally, around 90 percent of the *Fortune* 500 CEOs are white men, usually justified by a lack of available and qualified candidates. In addition to pipeline challenges, research points to negative perceptions of companies with women and minority executive leadership by both outside stakeholders (such as equity investors and other CEOs) and internal stakeholders. Internal leaders experiencing reduced organizational identification following the appointment of a racial minority or female CEO (versus the appointment of a white male CEO) manifests in tendencies to supply less help in task guidance, less mentoring, and limited recommendations

for promoting minority colleagues.⁵³ Hopefully, these tendencies can be managed through the best practices captured by business scholars Michael L. McDonald, Gareth D. Keeves, and James D. Westphal.

- Ensure objective criteria are used in evaluations, with different metrics for skills, personality, and potential;
- Implement transparent promotion and talent-development review boards that understand company values and goals;
- Use structured and open mentoring; and
- Implement robust and transparent succession planning.⁵⁴

Sigur: In my career, diversity initiatives have focused mostly on hiring, with some success in wider representation of both race and gender identities. But promotion candidates were mostly white and male. And their résumés and experiences supported them as the better candidates for advancement. Why were equally capable women and people of color becoming “less capable” over time?

An examination of contributing causes revealed that they were not given the “hard assignments”: working challenges on the production floor, dealing with difficult customers, or meeting tight margin assignments. Anecdotally, some white women weren’t being given “dirty work” in attempts to “protect” them; a Black woman wasn’t being given an assignment because “she wouldn’t like it”; and the Black men “might be too imposing.” The result was that they missed assignments that would have developed needed skills because of stereotypes and biases. These issues were only revealed through one-on-one dialogues with supervisors, pointing out that these practices, while maybe well-intended, ensured that potential rising stars were being left behind. Without further prompting, the supervisors implemented immediate corrective action and our demographics improved.

Donofrio: Too often, we believe as leaders that offering ourselves as a mentor is going to consume us. How can I do any more than I am doing? How many protégés are too many? We approach this topic with a personal bias. Over the years, I have learned more from mentoring than I ever expected. The act of mentoring is simpler than I ever thought, and I learned to offer myself freely to anyone who would have me. People cringe when I say that. Yet how hard is it to listen and offer advice? How hard is it to connect one thing to another or one person to another? I tell my protégés to have many mentors. No mentor has all the answers to all your problems or questions. Keep the relationship real and lifelike. It is not about form; it is all about function. The temptation, and perhaps bias, is to document everything and report progress. To whom and for what reason? If you like what I have to say and it helps, you got what you wanted and needed and will come back as needed for more. Along the way, I will also learn through the very subtle process of reverse mentoring. I counsel, guide, and teach you while I also see and learn and better understand you. This is so critical as we embrace and work in a world that is increasingly more and more multigenerational. Baby

Boomers working side by side with Gen Zs, if not pre-Boomers working side by side with Gen Alphas. All those biases and beliefs within each generation need to be understood, heard, and hopefully reconciled. Generational biases run rampant. We all think and believe we know better about each other until we sit down and talk together to determine what the real issues and questions are so we can each contribute to the solution.

Sigur: Succession planning is recognized as a best practice to ensure the longevity and health of an organization. When we implemented the “who’s in charge if you win the lottery and leave?” dialogue, it seemed like a good process; however, the result was an overwhelming number of nonminority male, albeit qualified, leaders ascending through the organizational ranks. Somehow we had institutionalized a glass ceiling! The leadership courage of the executive vice president of Lockheed Martin Space, Joanne Maguire, saw this and turned it around. Upon realizing the limitations of our leadership pipeline, she instituted mandatory succession planning meetings that started with a synopsis of each department’s current and future plans and included a “wall-walk” of succession plans for key positions. Mandatory diverse slates were developed, to include both “ready now” candidates and candidates that could be ready in as many as fifteen years, including skill gaps and paths to promotion. Assignments were negotiated for every candidate to push them to their next level. The result was the most transparent talent-development effort I’ve seen and a massive shift in the promotion of qualified women, men, and underrepresented minorities to significant positions within the company.

Organizations should measure the impact of their actions against desired goals by keeping internal metrics. Just like other metrics of accomplishment, such as returns on investment or capital, the returns on training and other actions should be measured and expanded to include not only whether the actions took place and under what circumstances, but data on the effects for those the actions are intended to benefit. Data should be shared, as appropriate. Visibility supports accountability and the data inform decision-making. Increasing the numbers of minority groups represented in the workforce does not mean the company has embraced inclusivity or created a culture of belonging. Established objective criteria, scoring rubrics, and consistent practices provide information to assess effective performance. Regular climate surveys can measure progress and identify areas of concern.⁵⁵ In addition, as companies use analytical tools to support workforce decisions – from hiring and promotion to productivity and compensation – the risks of bias being introduced into these key processes need to be monitored and managed, as potentially toxic training datasets or nonrepresentative information may detrimentally influence and worsen existing conditions.⁵⁶

Multiple tools exist to aid in the development of fair and equitable processes and in assessing progress. Examples include the tools developed by MITRE, available through the MITRE Social Justice Platform and the Aspen Institute, with mul-

tiple tools that cover a range of job quality attributes: wages, benefits, scheduling, legal rights, equity and inclusion, opportunity to build skills and advance, supportive work environment, and worker voice.⁵⁷

When results can be driven by policy, leadership direction should be used to reduce bias, whether explicit or implicit. The character or culture of an organization reflects its leaders and their courage. It may be difficult to shift individual bias, but it is definitely possible to interrupt bad behaviors, at least in the near term.

Our collective stories reflect the positive actions of strong leaders who had influence. Because it was those strong leaders who, regardless of their personal biases, made the hard decisions to break barriers enabling “firsts,” but just as important, introduced changes that inspired emerging leaders to engage the organization’s stakeholders in enabling opportunities for sustainable change.

So, is it implicit bias or intentional belief? And if leadership has the courage of its convictions to transform the community it can impact, to shift away from systemic bias toward supporting equality, opportunity, and high values, does the answer matter?

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ENDNOTES

- ¹ Gallup, “Race Relations,” <https://news.gallup.com/poll/1687/race-relations.aspx> (accessed May 2023).
- ² Gallup, “LGBTQ+ Rights,” <https://news.gallup.com/poll/1651/Gay-Lesbian-Rights.aspx> (accessed July 30, 2023).
- ³ Tessa E. S. Charlesworth and Mahzarin R. Banaji, “Patterns of Implicit and Explicit Attitudes: IV. Change and Stability from 2007 to 2020,” *Psychological Science* 33 (9) (2022): 1347–1371.

- ⁴ George B. Cunningham and Harper R. Cunningham, "Bias among Managers: Its Prevalence across a Decade and Comparison across Occupations," *Frontiers in Psychology* 13 (2022).
- ⁵ "Businesses started caring a lot more about diversity after a series of high-profile lawsuits rocked the financial industry. . . . They have also expanded training and other diversity programs. But on balance, equality isn't improving in financial services or elsewhere. Although the proportion of managers at U.S. commercial banks who were Hispanic rose from 4.7 percent in 2003 to 5.7 percent in 2014, white women's representation dropped from 39 percent to 35 percent, and black men's from 2.5 percent to 2.3 percent. . . . Among all U.S. companies with 100 or more employees, the proportion of black men in management increased just slightly—from 3 percent to 3.3 percent—from 1985 to 2014. White women saw bigger gains from 1985 to 2000—rising from 22 percent to 29 percent of managers—but their numbers haven't budged since then." Frank Dobbin and Alexandra Kalev, "Why Diversity Programs Fail," *Harvard Business Review*, July–August 2016.
- ⁶ Mona Mourshed, Ali Jaffer, Helen Cashman, et al., "Meeting the World's Midcareer Moment," *Generation*, July 2021, <https://www.generation.org/wp-content/uploads/2021/07/Meeting-the-Worlds-Midcareer-Moment-July-2021.pdf>.
- ⁷ Knowledge at Wharton Staff, "Analyzing Effective Leaders: Why Extraverts Are Not Always the Most Successful Bosses," *Knowledge at Wharton*, November 23, 2010, <https://knowledge.wharton.upenn.edu/article/analyzing-effective-leaders-why-extraverts-are-not-always-the-most-successful-bosses>.
- ⁸ Stuart W. Flint, Martin Čadek, Sonia C. Codreanu, et al., "Obesity Discrimination in the Recruitment Process: 'You're Not Hired!'" *Frontiers in Psychology* 7 (2016): 647.
- ⁹ Inna Reddy Edara, "Anti-Asian Racism in the Shadow of COVID-19 in the U.S.A.: Reported Incidents, Psychological Implications, and Coping Resources," *Journal of Psychological Research* 2 (3) (2020): 13–22.
- ¹⁰ Introduced in 1998, the Implicit Association Test is a computer-based test that "measures implicit attitudes by measuring their underlying automatic evaluation." Anthony G. Greenwald, Debbie E. McGhee, and Jordan L. K. Schwartz, "Measuring Individual Differences in Implicit Cognition: The Implicit Association Test," *Journal of Personality and Social Psychology* 74 (6) (1998): 1464–1480. See also Charlesworth and Banaji, "Patterns of Implicit and Explicit Attitudes."
- ¹¹ Kirsten N. Morehouse and Mahzarin R. Banaji, "The Science of Implicit Race Bias: Evidence from the Implicit Association Test," *Dædalus* 153 (1) (Winter 2024): 21–50, <https://www.amacad.org/publication/science-implicit-race-bias-evidence-implicit-association-test>.
- ¹² American Psychological Association, "Implicit Bias," *APA Dictionary of Psychology*, <https://www.apa.org/topics/implicit-bias> (accessed May 1, 2023).
- ¹³ Morehouse and Banaji, "The Science of Implicit Race Bias"; Kate A. Ratliff and Colin Tucker Smith, "The Implicit Association Test," *Dædalus* 153 (1) (Winter 2024): 51–64, <https://www.amacad.org/publication/implicit-association-test>; Rebecca C. Hetey, MarYam G. Hamedani, Hazel Rose Markus, and Jennifer L. Eberhardt, "When the Cruiser Lights Come On": Using the Science of Bias & Culture to Combat Racial Disparities in Policing," *Dædalus* 153 (1) (Winter 2024): 123–150, <https://www.amacad.org/publication/when-cruiser-lights-come-using-science-bias-culture-combat-racial-disparities-policing>; and Alexandra Kalev and Frank Dobbin, "Retooling Career Systems to Fight Workplace Bias: Evidence from U.S. Corporations," *Dædalus* 153 (1) (Winter 2024): 213–230,

<https://www.amacad.org/publication/retooling-career-systems-fight-workplace-bias-evidence-us-corporations>.

- ¹⁴ Calvin K. Lai and Mahzarin R. Banaji, "The Psychology of Implicit Intergroup Bias and the Prospect of Change," in *Difference without Domination: Pursuing Justice in Diverse Democracies*, ed. Danielle Allen and Rohini Somanathan (Chicago: University of Chicago Press, 2020); and Jack Glaser, "Disrupting the Effects of Implicit Bias: The Case of Discretion & Policing," *Dædalus* 153 (1) (Winter 2024): 151–173, <https://www.amacad.org/publication/disrupting-effects-implicit-bias-case-discretion-policing>.
- ¹⁵ Jonathan Haidt and Selin Kesebir, "Morality," in *Handbook of Social Psychology*, 5th edition, ed. Susan T. Fiske, Daniel T. Gilbert, and Gardner Lindzey (Hoboken, N.J.: Wiley, 2010), 797–832.
- ¹⁶ Manuel J. Galvan and B. Keith Payne, "Implicit Bias as a Cognitive Manifestation of Systemic Racism," *Dædalus* 153 (1) (Winter 2024): 106–122, <https://www.amacad.org/publication/implicit-bias-cognitive-manifestation-systemic-racism>.
- ¹⁷ Hetey, Hamedani, Markus, and Eberhardt, "When the Cruiser Lights Come On."
- ¹⁸ Patrick S. Forscher, Calvin K. Lai, Jordan R. Axt, et al., "A Meta-Analysis of Procedures to Change Implicit Measures," *Journal of Personal Social Psychology* 117 (3) (2019): 522–559; and Chloe FitzGerald, Angela Martin, Delphine Berner, and Samia Hurst, "Interventions Designed to Reduce Implicit Prejudices and Implicit Stereotypes in Real World Contexts: A Systematic Review," *BMC Psychology* 7 (1) (2019): 1–12.
- ¹⁹ Kalev and Dobbin, "Retooling Career Systems to Fight Workplace Bias."
- ²⁰ Lai and Banaji, "The Psychology of Implicit Intergroup Bias and the Prospect of Change."
- ²¹ Cass R. Sunstein and Richard H. Thaler, "Libertarian Paternalism Is Not an Oxymoron," *The University of Chicago Law Review* 70 (4) (2003): 1159–1202.
- ²² James MacGregor Burns, *Leadership* (New York: Harper & Row, 1978), 4.
- ²³ Bernard M. Bass, *Leadership and Performance beyond Expectations* (New York: Free Press, 1985), 27.
- ²⁴ Richard H. Thaler and Cass R. Sunstein, *Nudge: Improving Decisions about Health, Wealth, and Happiness* (New York: Penguin Group, 2009).
- ²⁵ Bruce J. Avolio, David A. Waldman, and Francis J. Yammarino, "The Four I's of Transformational Leadership," *Journal of European Industrial Training* 15 (4) (1991): 9–16.
- ²⁶ Syed Talib Hussain, Shen Lei, Tayyaba Akram, et al., "Kurt Lewin's Change Model: A Critical Review of the Role of Leadership and Employee Involvement in Organizational Change," *Journal of Innovation & Knowledge* 3 (3) (2018): 123–127.
- ²⁷ Kalev and Dobbin, "Retooling Career Systems to Fight Workplace Bias."
- ²⁸ Fredson Kotamena, Pierre Senjaya, and Augustian Budi Prasetya, "A Literature Review: Is Transformational Leadership Elitist and Antidemocratic?" *International Journal of Sociology, Policy and Law* 1 (1) (2020).
- ²⁹ Edgar H. Schein, *Organizational Culture and Leadership*, 3rd ed. (Hoboken, N.J.: Wiley, 2004), 7.
- ³⁰ *Ibid.*
- ³¹ *Ibid.*, 223.

- ³² National Commission on Innovation and Competitiveness Frontiers, *Competing in the Next Economy, The New Age of Innovation* (Washington, D.C.: Council on Competitiveness, 2020).
- ³³ National Academy of Sciences, National Academy of Engineering, and Institute of Medicine, *Rising Above the Gathering Storm, Revisited: Rapidly Approaching Category 5* (Washington, D.C.: The National Academies Press, 2010).
- ³⁴ Bas Hofstra, Vivek V. Kulkarni, Sebastian Munoz-Najar Galvez, et al., “The Diversity–Innovation Paradox in Science,” *Proceedings of the National Academy of Sciences* 117 (17) (2020).
- ³⁵ Sylvia Ann Hewlett, Melinda Marshall, and Laura Sherbin, “How Diversity Can Drive Innovation,” *Harvard Business Review* 91 (12) (2013).
- ³⁶ Luis Emilio Gomez and Patrick Bernet, “Diversity Improves Performance and Outcomes,” *Journal of the National Medical Association* 111 (4) (2019): 383–392.
- ³⁷ Committee on Homeland Security and Governmental Affairs, U.S. Senate, *Diversity Management: Expert-Identified Leading Practices and Agency Examples* (Washington, D.C.: United States Government Accountability Office, 2005).
- ³⁸ Nancy J. Cooke and Margaret L. Hilton, eds., *Enhancing the Effectiveness of Team Science* (Washington, D.C.: The National Academies Press, 2015).
- ³⁹ The methodology is based on a survey administered to a sample of 1,313 American workers, including Black, Hispanic/Latino, and Asian workers. Survey questions addressed the feelings, sources, and resulting impacts (actions) of the employees based on their experiences associated with unfair treatment due to their race or ethnicity. See Society for Human Resource Management, *SHRM Study: Racial Bias at Work Costs U.S. Employers Billions* (Trenton: New Jersey Industry and Business Association, 2021).
- ⁴⁰ Research was conducted using a survey (3,570 respondents: 1,605 men, 1,965 women; 374 Black, 2,258 white, 393 Asian, 395 Hispanic; ages twenty-one to sixty-five) and focus groups (both in-person [56 people] and virtual [250 people]). Analyses were performed by CTI (Center for Talent Innovation, currently known as Coqual). Data on employee potential were assessed using a methodology derived by CTI using an instrument to measure six attributes: ability, ambition, commitment, connections, emotional intelligence, and executive presence. Survey questions included a self-assessment of potential, and an assessment of how employees perceived their supervisors would assess their potential across all six fronts. Those that identified their own potential as greater than their supervisor’s perception of their potential in two or more areas were identified as perceiving a negative bias. The percentages of employees who perceived negative bias ranged from 7.7 percent to 14.5 percent by groupings of race, sexual orientation, gender, immigrant/citizenship status, and ability/disability. A consortium of eighty-six human resource officers was used in developing the instrument. The focus of their study was to capture how bias manifests in corporations, how it impacts companies, and what can be done to disrupt it. See Sylvia Ann Hewlett, Ripa Rashid, and Laura Sherbin, *Disrupt Bias, Drive Value: A New Path Toward Diverse, Engaged, and Fulfilled Talent* (New York: Coqual, 2017).
- ⁴¹ Ryan Pendell, “The World’s \$7.8 Trillion Workplace Problem,” Gallup, June 14, 2022, <https://www.gallup.com/workplace/393497/world-trillion-workplace-problem.aspx>. In September 2023, the article was updated to reflect a new sum: \$8.8 trillion.

- ⁴² Stephanie J. Creary, Nancy Rothbard, and Jared Scruggs, “Improving Workplace Culture through Evidence-Based Diversity, Equity, and Inclusion Practices,” PsyArXiv, July 1, 2021, <https://doi.org/10.31234/osf.io/8zgt9>.
- ⁴³ Adam D. Galinsky and Gordon B. Moskowitz, “Perspective-Taking: Decreasing Stereotype Expression, Stereotype Accessibility, and In-Group Favoritism,” *Journal of Personality and Social Psychology* 78 (4) (2000): 708–724.
- ⁴⁴ Hewlett, Marshall, and Sherbin, “How Diversity Can Drive Innovation.”
- ⁴⁵ Hetey, Hamedani, Markus, and Eberhardt, ““When the Cruiser Lights Come On.””
- ⁴⁶ Creary, Rothbard, and Scruggs, “Improving Workplace Culture through Evidence-Based Diversity, Equity and Inclusion Practices.”
- ⁴⁷ Kalev and Dobbin, “Retooling Career Systems to Fight Workplace Bias.”
- ⁴⁸ Stefanie K. Johnson, David R. Hekman, and Elsa T. Chan, “If There’s Only One Woman in Your Candidate Pool, There’s Statistically No Chance She’ll Be Hired,” *Harvard Business Review*, April 1, 2016.
- ⁴⁹ National Commission on Innovation and Competitiveness Frontiers, *Competing in the Next Economy, The New Age of Innovation*.
- ⁵⁰ Ibid.
- ⁵¹ Joan Williams and Sky Mihaylo, “How the Best Bosses Interrupt Bias on Their Teams,” *Harvard Business Review*, November–December 2019.
- ⁵² For additional information on aligning talent and opportunity, see Nicholas M. Donofrio, “Strengthen Innovation and Inclusion by Bringing Opportunity to Talent,” *The Bridge: Linking Engineering and Society* 50 (5) (2021).
- ⁵³ “Organizational identification” is “a form of group identification in which an employee defines himself or herself in terms of involvement or membership in a particular corporation or other type of workplace. A growing body of evidence indicates that organizational identification underpins a range of important outcomes in work settings.” For more about organizational identification, a term used to capture alignment of an individual and the organization’s values and vision, see American Psychological Association, “Organizational Identification,” *APA Dictionary of Psychology*, <https://dictionary.apa.org/organizational-identification> (accessed July 2023).
- ⁵⁴ Michael L. McDonald, Gareth D. Keeves, and James D. Westphal, “One Step Forward, One Step Back: White Male Top Manager Organizational Identification and Helping Behavior toward Other Executives Following the Appointment of a Female or Racial Minority CEO,” *Academy of Management Journal* 61 (2) (2018): 405–439; and Jen Choi, Micha’el Monique Davis, Lilianna Kay Deveneau, et al., *Designing for Equity Starter Guide* (McLean, Va.: MITRE Social Justice Platform, 2022), <https://sjp.mitre.org/insights/designing-for-equity-starter-guide>.
- ⁵⁵ Marie A. Bernard, Frank Dobbin, Markus Brauer, et al., *Scientific Workforce Diversity Seminar Series (SWDSS) Seminar Proceedings: Is Implicit Bias Training Effective?* (Washington, D.C.: National Institutes of Health, 2021), https://diversity.nih.gov/sites/default/files/media-files/documents/NIH_COSWD_SWDSS_Implicit_Bias_Proceedings_508.pdf.
- ⁵⁶ Mike Capps, Bob Darin, Nuala O’Connor, et al., *Algorithmic Bias Safeguards for Workforce* (New York: Data & Trust Alliance, 2023), https://dataandtrustalliance.org/Algorithmic_Bias_Safeguards_for_Workforce_Overview.pdf.

- ⁵⁷ “A Framework for Assessing Equity in Federal Programs and Policies,” MITRE Social Justice Platform, <https://sjp.mitre.org/insights/60f1e225b1d934001a56df4b> (accessed December 5, 2023); “A Systems Analysis of the Black-White Racial Wealth Gap in the District of Columbia” MITRE Social Justice Platform, <https://sjp.mitre.org/racial-wealth-gap> (accessed December 5, 2023); Jonathan Rotner, *An Equity Guide for Techies* (McLean, Va.: MITRE Social Justice Platform, 2022), <https://sjp.mitre.org/insights/Equity%20Guide%20for%20Techies>; Choi, Davis, Deveneau, et al., *Designing for Equity Starter Guide*; and The Aspen Institute, “Tools: Equity and Inclusion,” last modified September 21, 2023, <https://www.aspeninstitute.org/longform/job-quality-tools-library/section-4-strengthening-practices-to-improve-job-quality/tools-equity-and-inclusion>.