

# How stereotyping yourself contributes to your success (or failure)

*People's performance on intellectual and athletic tasks is shaped by awareness of stereotypes about the groups to which they belong. New research explains why — and how — we can break free from the expectations of others*

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## Abstract

Stereotypes and Success:

- Faults in performance do not necessarily signify a dearth of skills or abilities, social scientists have found. Instead the failures may arise from awareness of stereotypes that others hold about the groups to which we belong.
- Social identity research examines not only how we both take on (internalize) and live out (externalize) identities that are shared with our peers but also how these things can change.
- This research can help us identify ways of responding to others' stereotypes so that human talent and potential are not squandered. Although stereotypes can promote failure, they can also lift a person's or group's performance and be tools that promote social progress.

You tried so hard. But you failed. You did not pass the test, you performed poorly in the interview or you missed your project goal at the office. Why? Is it that you were not capable? Or could something more subtle—and worrisome—also be at work?

As it turns out, research shows that such performance failures cannot always be attributed simply to inherent lack of ability or incompetence. Although some have jumped to the highly controversial conclusion that differences in attainment reflect natural differences between groups, the roots of many handicaps actually lie in the stereotypes, or preconceptions, that others hold about the groups to which we belong. For instance, a woman who knows that women as a group are believed to do worse than men in math will, indeed, tend to perform less well on math tests as a result.

The same is true for any member of a group who is aware that his or her group is considered to be inferior to others in a given domain of performance—whether it is one that appears to tap intellectual and academic ability or one that is designed to establish athletic and sporting prowess. Just as women's performance on spatial and mathematical tasks is created by, and appears to “prove”, the stereotype of their spatial and mathematical inferiority, so, too, the sporting performance of a team of long-failing underdogs will tend to live up (or, in fact, down) to its low expectations.

The social psychological research that has uncovered these effects is an important development of theoretical work initiated in the 1970s that focused on issues of social identity—looking at how people see themselves as members of a particular group and what the implications of this are. More important, however, social identity research examines not only how we both take on (internalize) and live out (externalize) identities that are shared with our peers—other members of our in-group—but also how these things can change. This research helps us to understand the debilitating consequences of sexism, racism, homophobia and the like, as well as to identify ways

of addressing the problems they cause so that human talent and potential are not neglected or squandered.

Part of the story here involves recognizing not only that stereotypes can promote failure but that they can also lift a person's or group's performance and be tools that promote social progress. Understanding these dynamics—and the processes that underpin them—enables us to think more productively about the conditions that allow ability to be expressed rather than repressed and that foster success rather than failure.

## **Stereotype Threat**

In the past decade such issues have been put on center stage by social psychologists who have been researching the phenomenon of “stereotype threat”. The impressive body of work they have built up demonstrates not only that such underperformance occurs but also that it is especially common for individuals who are aware that their group is considered inferior to others with which it is compared. Pioneering studies conducted at Stanford University by Claude Steele and Joshua Aronson are particularly illuminating in this respect.

Steele and Aronson's classic demonstration of stereotype threat emerged from a series of studies in the mid-1990s in which high-achieving African-American students at Stanford completed questions from the verbal Graduate Record Examinations (GRE) under conditions where they thought either that the test was measuring intelligence or that it was not a test of ability at all. Intriguingly, these participants' performance was much worse when they were told that the test was a measure of intelligence. This slide, the researchers argued, occurred because “in situations where the stereotype is applicable, one is at risk of confirming it as a self-characterization, both to one's self and to others who know the stereotype”.

This pattern of findings has been replicated with many different groups on many different dimensions of stereotype content. For example, Sian L. Beilock of the University of Chicago and her colleagues reported in a 2007 issue of the *Journal of Experimental Psychology* that if female students are made aware of the stereotype that men have greater mathematical ability than women do, they tend to perform worse on complex mathematical tasks than they do if they are not alerted to this stereotype. Likewise, elderly people have been found to perform worse on memory tests if they take them after being made aware of stereotypes that associate aging with deteriorating cognitive ability.

In the domain of athletic performance, studies of golf putting have shown that expert golfers tend to leave their putts farther from a target than they would otherwise do if they are exposed to a stereotype that members of their sex are worse at putting than members of the opposite sex. It seems unlikely that Greg Norman choked in the 1996 Masters Tournament, when he blew an early lead and ultimately lost, because he was mindful of this stereotype, but other relevant stereotypes (for instance, that Australians underperform in the Masters—with no one from that country ever having won the tournament) may have interfered with the flow of his game at the critical juncture. Along similar lines, it seems entirely plausible that England's poor performance on penalty shoot-outs in World Cup soccer matches has something to do with a lack of self-belief associated with a team history of performing poorly in such contests (of seven shoot-outs in major tournaments, the team has won only one).

## **Understanding Process**

What, though, is the “something” that is responsible for the effects of stereotype threat? Recent work has argued that one core factor is enhanced cognitive load. For example, a 2005 study by social psychologists Mara Cadinu, Anne Maass and colleagues at the University of Padua in Italy showed that when women perform mathematical tasks after being exposed to the stereotype that they are worse at math than men, they report entertaining more intrusive negative thoughts about their own mathematical ability. That is, they find themselves thinking things such as “These exercises are too difficult for me” and “I am not good at math”. Likewise, a number of studies have indicated that exposing people to negative stereotypes about groups to which they belong increases their anxiety and stress when performing tasks related to that stereotype.

Evidence from work by Beilock and others also suggests that such anxieties can use up information-processing resources that are required to carry out the tasks at hand. For example, when people perform complex math tasks, this cognitive burden places heavy demands on working memory, using the brain areas that briefly store and manipulate information.

The 2007 article by Beilock and her colleagues attempts to explore and integrate these ideas by delving deeply into the cognitive dynamics of stereotype threat. Working in the domain of women's performance on mathematical tasks, a series of experiments replicates the standard stereotype threat effect: it shows that the effect is most pronounced on tasks that place demands on phonological resources (such as those requiring verbal reasoning); demonstrates that the presence of stereotype threat increases verbal reports of worry associated with either the task or the stereotype; and suggests that the debilitating consequences of stereotype threat can be avoided if participants learn to perform tasks in such a way that they are mentally undemanding. The last insight is based on evidence that women do not succumb to the effects of stereotype threat if they learn answers to math problems by rote (as one does when learning one's times tables) so that their production relies only on long-term memory.

On the basis of these studies, the researchers make the case that their work advances our understanding of stereotype threat by revealing what is responsible for its effects (for instance, anxiety-related demands on short-term verbal memory) and then using this understanding to suggest how this impact can be overcome. In this regard, there is no doubt that their work contributes substantially to our understanding of specific cognitive aspects of the phenomenon, and in particular the role that memory processes can play in the dynamics of particular threat-related effects. Yet despite its internal coherence, there are reasons for believing that an exclusively cognitive analysis is limited both theoretically and practically.

## **Stereotypes That Help**

A sense that the theoretical analysis by Beilock and her colleagues is incomplete derives from other research inspired by Steele and Aronson's original demonstration of the effects of stereotype threat. Exposure to stereotypes, researchers have found, can have welcome as well as unwelcome consequences. That is, under certain circumstances, exposure to stereotypes about one's group can serve to elevate performance instead of compromising it.

Studies conducted at Harvard University in 1999 by Margaret Shih and her co-investigators provide particularly good demonstrations of this point. The participants in this research were Asian women. In different conditions of the studies they were required to focus on the fact either that they were women (who are stereotypically worse at math than men) or that they were Asian (stereotypically better at math than members of other ethnic groups). As in Beilock and her colleagues' work, in the former case the women performed worse than they did when no group membership was made salient. Yet in the latter case they did better.

Other studies reveal similar effects, finding that women display superior ability on spatial tests if reminded that they attend a college whose students perform well on such tasks and that golfers putt more accurately if exposed to a stereotype that members of their sex are better at putting than those of the opposite sex. Jeff Stone of the University of Arizona and fellow psychologists also found that when white golfers are told that their golfing performance will be compared with that of black golfers they perform worse if they believe this is a test of "natural athletic ability" (because here the comparison poses a threat), but that they perform better if they believe it to be a test of "sport strategic intelligence" (because this comparison suggests the in-group's superiority).

A meta-analysis of similar studies published in 2003 by social psychologists Gregory Walton and Geoffrey Cohen, then at Yale University, has shown that if people are exposed to stereotypes about the inferiority of an out-group (those who are not part of the individual's in-group) in a given domain, then their performance is typically elevated—a phenomenon they refer to as stereotype lift. In this way, just as a sense of in-group inferiority can impair performance, an ideology of superiority can give members of high-status groups a performance boost.

Such elevated performance cannot easily be explained in terms of cognitive load—because it is hard to see how the salience of a positive in-group stereotype (as in "we are good") could increase

the memory resources available to participants (relative to those in control conditions). Ideally, then, a parsimonious explanation of the effects of stereotypes should be capable of accounting for both upward and downward change. It should also be able to explain a host of other effects reported in the research literature—including evidence that such effects are apparent in domains where cognitive capacity is not critical (golf or basketball, say); are diminished if people are exposed to stereotypes about multiple groups; are weaker if one’s in-group is not exposed to generalized hostility (for example, if one is male or white); and vary depending on whether participants are encouraged to focus on promoting positive outcomes or on preventing negative ones.

More important, an explanation of effects arising from stereotype threat also needs to explain why these influences are not as generalized as a cursory reading of Beilock and her colleagues’ work might suggest. Because it is certainly not the case that all members of a given group succumb to the perils of threat.

On the contrary, effects are restricted to individuals who value the domain in question and who have high levels of basic competence (for instance, those who, in the abstract, have less to worry about). To be selected to participate in Beilock and her colleagues’ first study of mathematical performance, for example, women had to perform baseline tasks with greater than 75 percent accuracy, and they had to agree with the statements “I am good at math” and “It is important to me that I am good at math”. Why do these things matter?

## Self and Identity

One answer to the preceding question is that, fundamentally, stereotype threat is not so much an issue of cognition per se as one of self and identity. This point has been made by a number of researchers working in the stereotype domain, including Steele and Aronson themselves. Along these lines, in a recent major review of work in this area, they, together with social psychologist Steven Spencer of the University of Waterloo in Ontario, argue that stereotype threat can be understood as a phenomenon that centers on a person’s social identity. That is, stereotype threat (and lift) effects come about because, and to the extent that, people are encouraged to think of themselves in terms of a particular group membership (such as Asian or female; white or male).

As specified by the social identity theory that Henri Tajfel and John Turner developed at the University of Bristol in England, when people define themselves as group members (as “we” rather than “I”), behavior is shaped by the stereotypic norms that define in-group membership in any given context [see “The Psychology of Tyranny”, by S. Alexander Haslam and Stephen D. Reicher; *Scientific American Mind*, Vol. 16, No. 3; 2005]. Here people are generally motivated to advance the interests of their in-group and to see it positively. They are, for example, more inclined to agree with stereotypes that suggest “we are good” than with those that say “we are bad”. Yet under conditions in which broad consensus exists about an in-group’s low status and in which status appears to be stable and legitimate (that is, uncontestable), members of that group often accept and internalize their group’s inferiority on status-defining dimensions (“We are poor at math . . .”) and seek to achieve a positive in-group identity in other areas (“. . . but we are more verbally skilled, more sociable, more musical, and so on”).

Thus, when the content of a salient social identity conflicts with a person’s motivations to do well in a given domain (to be good at math, for instance), he or she will experience identity-related psychological conflict. This conflict tends to interfere with performance in the way that studies of stereotype threat reveal. As the work of Cadinu and others shows, it creates anxiety, self-consciousness and self-doubt. In short, people will tend to perform relatively poorly in situations where they have a conflicted sense of self—wherein their sense of what they are (and want to be) as individuals appears incompatible with what they are seen to be as group members.

On the other hand, if the content of a salient social identity is compatible with a person’s aspirations (perhaps because they suggest superior ability), this circumstance will tend to motivate and energize the individual and thereby improve performance in the manner suggested by demonstrations of stereotype lift. We experience a facility of self and “flow” when what we are and want to be as individuals is fully compatible with what we appear to be as group members.

## Overcoming Stereotypes

One final question, though, is whether the phenomenon of stereotype threat (or lift) means that people are destined always to reproduce existing stereotypes and social structures. Are we inevitably condemned to act in ways that reinforce existing stereotypes of superiority and inferiority? Not at all. Indeed, one important lesson to be learned from theorizing about social identity is that when individuals are confronted with obstacles to self-enhancement associated with the apparent inferiority of their in-group, they can deal with these obstacles in multiple ways. These strategic responses do more or less to reproduce the status quo.

The first is to adopt a strategy of “social mobility”, which involves individual-level activities that serve to downplay the impact of the group on the self. In effect, this is the kind of strategy that Beilock and her colleagues recommend when they encourage participants to work hard to learn solutions to problems by rote so they will no longer be handicapped by stereotype threat. The limitation of this solution is that it protects the individual by working around the problem but, in the process, leaves the problem itself unresolved. As two of us (Haslam and Reicher) note in a 2006 article in the *Journal of Applied Psychology*, such activities thus involve attempting to cope with the stress of threats to self through a strategy of personal avoidance. This approach may be cognitively sophisticated but politically naive.

A second strategy is one of “social creativity”, which invokes different in-group stereotypes that deflect the impact of belonging to a disadvantaged group. Traditionally, researchers and laypeople alike have tended to think of stereotypes as fixed and invariant representations of social groups that are impervious to change. In fact, however, the large body of evidence reviewed in the mid-1990s by Penelope Oakes and her fellow social identity researchers at the Australian National University suggests that stereotypes—of both ourselves and others—are inherently flexible.

For example, the degree to which psychology students think of themselves as “scientific” or “artistic” has been shown to vary considerably depending on whether they compare themselves with drama students or with physical scientists. In comparison with physical scientists they are more inclined to stereotype themselves as artistic, but in comparison with people who work in the theater they are more inclined to stereotype themselves as scientific. Psychology students should experience stereotype threat if they are asked to perform a scientific task when compared with physicists or an artistic task when compared with artists, but they should experience stereotype lift if asked to perform an artistic task when compared with physicists or a scientific task when compared with artists.

Leaders and other agents of change are thus able to promote changes to in-group stereotypes by altering the dimensions of comparison, the comparative frame of reference or the meaning of particular attributes. There is a sense, however, in which these strategies of social creativity still work within a prevailing consensus rather than doing anything directly to change features of the social world that give rise to a group’s stigmatization and disadvantage. In this respect, they can still be seen as strategies of threat denial rather than threat removal.

A third alternative, then, is to advocate group-based opposition to the status quo through a strategy of social competition that involves engaging in active resistance. Here group members work together to challenge the legitimacy of the conditions (and associated stereotypes) that define them as inferior—trying to change the world that oppresses them rather than their reactions to the existing world. They work to counter the stereotypes that are tools of their repression with stereotypes that are tools of emancipation. This strategy was precisely what activists such as Steve Biko and Emmeline Pankhurst achieved through black consciousness and feminism, respectively. They challenged the legitimacy of those comparisons and stereotypes that defined their groups as inferior and replaced them with expressions of group pride. They were (as one supporter said of Pankhurst) “self-dedicated reshaper[s] of the world”. And the more their opponents invoked stereotypes against them, the more they acted collectively to contradict those stereotypes and reveal their claims to legitimacy as a lie.

To quote from the evidence that Biko gave at his trial in South Africa in 1976: “The basic tenet of black consciousness is that the black man must reject all value systems that seek to make him a foreigner in the country of his birth and reduce his basic human dignity”.

Which of these three strategies individuals choose to pursue, social identity theory argues,

depends on a range of factors that are structural and political as well as cognitive and psychological. In particular, whether or not people seek to change an unequal world rather than adapting to it depends partly on whether they are exposed to social-change belief systems that engage their imagination and articulate cognitive alternatives to the prevailing orthodoxy. In this respect, the significance of established methods for measuring differences between groups (for example, in various forms of ability) derives from their capacity to limit the potential for people to conceive of such alternatives by presenting data as objective and uncontested “fact”. That is, they do not so much measure “real” difference as contribute to making measured differences “real”. In this regard, too, the success of leaders of emancipatory movements typically derives from their capacity to create a sense of shared social identity that centers on challenges to the stereotypes and received forms of understanding that define their group as inferior.

Resistance, of course, is not always successful. Yet it is rarely entirely futile either. Indeed, history teaches us that change is as much a part of social reality as is stability. And when they are in our own hands, stereotypes can be essential to mobilizing the group for success as much as, when in the hands of others, they can be used as forces of restraint and failure.

Thus, the literature on stereotype threat delivers two fundamental lessons. The first is to beware of equating performance and ability, especially when dealing with differences between groups, and to understand the power that the expectations of others has over what we do. The second is to realize that we are not doomed to be victims of oppressive stereotypes but can learn to use stereotypes as tools of our own liberation. In short, who we think we are determines both how we perform and what we are able to become.