Wise Intervention: Using Social Psychology to Understand and Reduce Intergroup Disparities
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GEOFFREY L. COHEN. I'm really happy to be here and to share some of the perspective of, that comes from our research and from the field of social psychology, which is my discipline. A social psychologist studies the way in which the social situation affects the things we care about.

So, looking out at the problem of racial disparities or gender disparities in achievement or in access are, the question that we ask is what is the situation? What is the situation of American schooling that contributes to these gaps? And you can make a rough cut. You can make a rough cut between the objective features of the situation, sort of things out there in the social structure, prejudice, discrimination, the realities of poverty and opportunity, limited opportunities that impinge on a person to affect their success. But you can also examine the subjective situation. The psychological experience of being a member for instance of a group that is marginalized or negatively stereotyped, and what is the situation as subjectively perceived from that person's first person point of view, and how might that contribute to racial and gender disparities. So the things that we, the questions that we ask as a social psychologist are, what is the situation in its objective and subjective forms that contribute to disparities in school, in education, in the economics profession, what not? And the studies that I'm going to describe today, address both those but mainly this sort of idea that even when the objective situation is relatively similar, regardless of the actual level of prejudice in environment, in an environment, the subjective experience of that environment, of that classroom can be radically different. That's going to be the big idea.

Before jumping in, I want to sort of pull back and distill out two key themes, two key lessons that come out of this research. It is easy to get lost in the minutia. The first idea is the

easiest thing in the world to say but the hardest thing in the world to get, and that is that perception matters. How people subjectively perceive their environment matters a lot. And we all experience situations very differently. We have different subjective experiences and takes on similar experiences, and it's easy to under appreciate the degree to which our experiences can differ.

One of my favorite examples of this comes from research by Carol Dweck. And Carol Dweck, she was interested in motivation and motivational resiliency. And why some kids give up in the face of frustration and other kids persist. And one of the things she noticed was that, yeah, there are, sort of to caricature it, two kinds of kids. Those who, in the face of setback, try harder, and those who withdraw. What distinguishes those kids, she asked.

One answer is their conception of intelligence. Kids and grownups can think of intelligence as something that's fixed and static, you either have it or you don't. Or they can see it as something expandable like a muscle, the more you work it out, the more you practice it, the stronger it gets. And it turns out that the way you conceive of intelligence dramatically affects the way you construe the meaning of failure. For individuals who see intelligence as fixed when they hit a hard problem that there's, that they struggle with, it's like a referendum on the self. This must mean I'm dumb. For kids and grownups who believe that intelligence is malleable, it's ever expandable, bumping up against frustration is like an opportunity to learn, and they relish the challenge and try harder. The classroom looks radically different from the perspective of an individual, or a profession looks radically different from the perspective of an individual, who sees the ability in question as fixed or as malleable, list a whole cascade of different psychological reactions that have kind of very different effects.

So that's one key lesson, perception really matters even when the objective experience of a place or classroom is the same, the subjective experience of it can differ. And those differences in subjective perception can have motivational consequences. It's easy to forget this and it's easy not to see it. And in some sense, we're talking about the power of what's invisible. Whereas economists focus, tend to focus on incentives, what we're focused on here are meanings and subjective construals of situations. So perception matters.

The second big idea, beyond perception matters, is the notion that psychology can be marshaled for educational gain. So, in the past one or two decades, an increasing amount of research has shown that small but tactical changes in the way people think about their situation can have large effects, sometimes lasting effects in the right time and in the right place. Changing the way people think about their experience in the workplace or in the classroom can, under certain circumstances, change their achievement and their aspirations and their prospects even years later. So one example of this, is that Carol Dweck along with Josh Aronson discovered something that was pretty interesting. Your theory of intelligence that would predict people, a person' motivation in the face of challenge, in itself is malleable. It can be changed. So what they did in several studies, this is both with college students, they've have done it. The study I'll talk about is with urban minority kids going to a disadvantaged school. What they did is they went in and they taught kids the notion that intelligence is malleable. So they had children read scientific information about the brain's plasticity, they learned about how even experts have had to practice for 10,000 hours to achieve the level of skill and acumen that they have. And the idea, they learned about the idea that mistakes are inevitable in the pursuit of any, in the pursuit of excellence. And so the kids went through a workshop that conveyed this message, that intelligence is malleable. And by flip of the coin, they were either assigned to this

treatment, this intervention or to a controlled condition where they did not get this sort of key information about the malleable, expandable nature of intelligence. Instead, they just got study skills, information on study skills. What they found when they look at children's math grades is that whereas children in the controlled condition showed a downward trend in math grades over the course of the year, they went down. This is a common trend in a lot of transitions such as the transition to middle school and even to college. They showed this decline in GPA. Children in, who had gone through this growth mindset training, teaching them, inculcating in them with this idea that intelligence is like a muscle, show growth in achievement over time. And what is more, when their teachers were queried, roughly five times as many children who had received this growth mindset intervention were nominated by their teacher as having shown signs of intellectual growth over the course of the semester. So this is a demonstration of this second idea, the idea that psychology can be mobilized for educational gain.

So two big ideas, perception matters and psychology can be mobilized for educational gain. And we think that in the workplace and in the classroom, these kinds of tactics could go a long way to creating a more equal, a more welcoming place for members of various groups. What are the key factors that affect the way people subjectively experience their environment or their workplace, are the group memberships to which they belong. So their racial group, their gender group. And in certain circumstances, we may all feel that, in a given context, members of our group don't quite fit in. They don't quite belong. We might not be totally sure. It may just be a question in our minds, a hypothesis. Well, maybe this isn't a place for me.

One illustration of this is a passage by Tobias Wolff. And here he is talking about his, he's talking from the perspective of a Jewish student attending an elite prep school in the 1960s. And this Jewish student is thinking about, in the backdrop of the anti-Semitism of the 1960s,

about whether to come out about the fact that he's Jewish. And he writes, "I decided it would be better not to say that I was Jewish, even though there was no obvious anti-Semitism at the school. It just seemed to me that the Jewish boys, even the athletes, even the popular ones, had a subtly-charged field around them, an air of apartness. This apartness did not emanate from any quality or wish of their own but from the school as if a guardian spirit had risen from the walkways and weathered stone and breathed that apartness upon them." And I love this quote because it just captures how kids from, or individuals from, different walks of life can be going to the same exact campus but the experience of it may be very different. And there's no overt anti-Semitism here though there very well could have been. Instead, very subtle cues in the environment, like the Gothic architecture in the walkways which seem neutral to an insider, cast outsiders as somehow not belonging. They send this signal. And that's the kind of subjective experience that I want to zero in on today, this air of apartness, the sense when I enter a profession or a classroom that I may not be fully accepted, welcome. I may not know for sure but regardless of the level of prejudice in an environment, I may wonder. Now, we've all been there, right? We all have experienced these kinds of situations where we know, wait, other, someone could be looking at me negatively. If you've had a boss who you think might not think very highly of you. You know how this kind of, this interactions with the boss can then be stressful. You're just wondering about how you're being seen and if a mistake might just sort of confirm your ineptitude in the eyes of your boss. What's important about negative stereotypes, especially along racial and gender lines, is that they impugn a socially sacred skill, like intelligence or your work ability. And the threat occurs day in day out, over and over again. So we've all been there. We all know what it's like to be an outsider but when this sense of apartness involves a sacred skill and is experienced chronically, it can have devastating

consequences for motivation and contribute to some of the disparities we see in workplace professions and in school. It's not the whole piece of the puzzle for sure but it's part of the puzzle. Rodney Ellis wrote about, or actually in an interview, said this. And in it, he captures this idea that belonging to a negatively-stereotyped racial group, could have some of the qualities that contribute to an air of apartness that we saw in the opening Tobias Wolff passage. He wrote, or Ellis said, "I was just as intelligent as everyone else but for some reason, I didn't score well on tests. Maybe I was just nervous. There's a lot of pressure on you knowing that if you fail, you fail your race."

What Ellis is describing is an experience that Claude Steele called stereotype threat. And stereotype threat is the experience of knowing that if I do poorly, it could confirm this reputation out there that's about me and my group. I may look Jewish at this elite prep school. I may confirm the stereotype of my group's lack of intelligence on the standardized test. What is really important is that, for Ellis, and for many members of groups that are negatively stereotyped in the intellectual domain, an everyday ritual, the standardized test, becomes freighted with meaning. It is a moment of potential direness where if I do poorly, it doesn't just affect me and my prospects but it says--it may say something about my group. And this extra apprehension can create a sense that I am under threat here, I cannot fully relax and I cannot fully marshal my cognitive resources to meet the demands in front of me. OK. So this is anecdote, how do you show that something as abstract as a stereotype affects something as concrete as academic achievement or workplace success? Well, here's one study that was done not with African-Americans, but with European-Americans. They brought white students to the gym and they asked them to jump. And as we know, there is this widely-known stereotype that white men can't jump. And in one condition, the experimenter that you're jumping for is white and people

jumped. Their improvement from jump one to jump two is about an inch, so there's a practice effect. What happens now when the experimenter is black and now I as a white male have to sort of worry that, "You know, if I don't jump that high, he's going to confirm this negative stereotype." People jump less high. And this is just to make the point that we all confront this kind of experience of, as social creatures, we are very concerned with how we're viewed by others. And in context where we feel we could be viewed negatively, it can be stressful, and stress can undermine performance. Claude Steele and Joshua Aronson did a little study that I'll tell you about. This was a laboratory study with African-American and European-American college students looking at this process of stereotype threat in an academic domain. And what they did was they just gave African-Americans and European-Americans a GRE test, a very difficult GRE test, because stereotype threat is something that you encounter at the frontiers of your ability. In one condition, you're told as a participant that this test is a measure of your intellectual ability, actually your verbal ability. So this is a stereotype threat situation because now I know as an African-American here that if I do poorly, it could confirm the stereotype.

As I'm struggling on this test, it might invite the allegation of the stereotype. These are tests about ability and the stereotype is about ability. In this condition, African-Americans perform at roughly half the level of white college students. And this is even when statistically controlling or equating them for their prior ability as measured by their SAT. So they should be doing roughly equal. What happens though when you remove the stereotype as a potential explanation, explanatory frame for their performance? They do equal. Again, statistically equating for their prior preparation as measured by the SAT. One of the things you can think about is that if you had a workforce or if you had a classroom, and you saw an achievement gap of the size of those leftward pair of bars, that's roughly about a standard deviation effect size,

what would you think? What would most teachers or bosses or managers think about the size of this gap? You could imagine the attributions people would make. Well, maybe they lack skill, maybe they're not prepared, maybe they need remediation, but what these explanations would miss would be the power of the subjective situation, that taking that test is not the same situation for the minority student as it is for the white student. And it's easy to miss that. And that's one of the big themes--big ideas here, is the power of the invisible, of the subjective experience, the first hand experience of being a member of a stereotype group and how that affects people. How it makes it more difficult for them to show what they know and achieve what they can? So when you start to think about stereotype threat, you know, as one piece of the puzzle, you start to think about, "Well, what are some of the other cues that are out there, the messages that are being sent that reaffirm the stereotype?" And there are lots. As Dr. Handelsman's talk suggested, there are a lot of implicit and explicit biases that if I am a member of a group, a Jewish kid walking in this elite prep school and someone says something a little anti-Semitic, it could kind of trigger this feeling that I'm under threat here. So biases can trigger it, also the media.

There's a great little study by Todd Davies and Steve Spencer. Where all they did was they brought men and women to the lab and they presented them with some commercials, media commercials that reinforce the stereotype. So you come into this study and you're shown some commercials and one of them is of a girl jumping up and down on her bed, behaving ditzilly and all excited about a new acne medication. Another commercial is of a housewife, salivating over a new brownie mix. And these are sort of stereotypical commercials that sort of confirm or reinforce the stereotype. What is the effect of seeing this? In the neutral condition, men and women perform equally, equivalently. Again, this is actually with no adjustment. But in the stereotypic commercial, women's performance crashes, so that their accuracy falls from roughly

30 percent to 10 percent. So it starts to make you think that how the media, through the messages, implicit and explicit, subtle and not-so subtle, that in a sense may be affecting people's cognitive achievement. But, there was another measure in the study that I think is actually more important. They also asked men and women to indicate their interest in careers that involve math skills and quantitative skills. Things like accountant, mathematician, actually I don't think they had economist in there but that would be one in principle. And what they found was that the stereotypic commercials also reduce women's interest in quantitative careers and increase their interest in service-related careers like becoming a nurse or doctor, which is very interesting. One of the things that you sometimes you hear out there is the idea that, "Well, these groups of women are choosing not to go into these kinds of careers. It's a personal choice." And to that comment, I'm reminded of a quote by Daryl and Sandra Bem, two feminists, also psychologists, who once wrote, "The freedom to choose is an illusion when society controls the motivation to choose." This, I think, is a really important idea that you feel, people feel like they're making their own independent choices but it's easy to confuse threat and vulnerability for personal preference, and that's why these messages can be so corrosive especially over the long-term when people are seeing them day in and day out, from issues that we care about like achievement and equity. OK. So what do we about it? What are some environmental changes to lessen stereotype threat? OK. Well, again, to sort of echo a theme from Dr. Handelman's talk, the no-brainer is reducing prejudice and increasing diversity. There's work that suggests for instance that being in a place where there is a critical mass of people in my group reduces stereotype threat. So if I'm working in a classroom where there are a lot of other women, women experience less stereotype threat. If I have positive role models, people who are high achieving and also my gender racial group, that mitigates stereotype threat. So that's one solution. This is

not an easy solution by any means. And in fact, one of the things we need a lot more of, is rigorous theory-based interventions about how to reduce discrimination and prejudice, because some of the some obvious things don't work. Telling people to be objective or having them affirm their objectivity, emphasizing values like "you need to be fair," actually tend to do more harm than good. It seems when you have people assert their objectivity or remind them of the importance of fairness, they actually end up discriminating more rather than less. And that seems to be no one quite knows why because when people feel fair and objective they have the sort of "I think it therefore it's true", mindset, where if they have a little bit of stereotypical impulse they think, "Why? Yeah. This person must not be ready for the job," and they do this sort of sneaky rationalizations of, you know, shifting their criteria to favor members of groups that they want rather than don't want. What works better in terms of insuring egalitarian outcomes seems to be accountability. So, getting people to commit prior to reviewing applicant folders, the kind of criteria of merit that they want to apply, reduces discrimination. There was a study by Jack Dovidio in the military where the only intervention was telling the people in charge of promotions of personnel, telling them, "Well, if you have any inequities, race-based inequities, in your promotion rates, that's OK. We just want to know why. Just explain it." And what they found was that, that addition of accountability, just "explain why you're making the decisions that you do" eliminated race-based discrimination in the military's rate of promotions. So, accountability seems to work. So, I'm making, I'm taking this brief detour just to underscore the point that, yeah, we need big structural changes, interventions to rout out discrimination and prejudice, but it's not necessarily easy. Some of the obvious things that we think should work, don't work. And some of the less obvious things that are based in phycological theory, do work and should be applied more than they are. So, environmental changes that increase diversity and

representation are really, probably, business order number one, that's what we need to do. But, are there other kinds of approaches that we can use to help people deal with this air of apartness, giving the world as it actually is with prejudice and discrimination being a reality, is there some kind of way that we can buttress or bolster people against these everyday threats so that they might be more persistent and more resilient? And I want to talk about two such interventions. These are social-psychological interventions.

One is called Wise Criticism. And I know it's touched upon earlier. And the second is called Values Affirmation. So let's start with wise criticism. Wise criticism. So this term wise is actually a term first used in the academy by Erving Goffman, a sociologist. And Goffman used the term to refer to those people, though not bearing a stigma themselves, who recognize the full humanity of the stigmatized. He actually borrowed it from the gay subculture in the 1950s. And they used this term "wise" to describe straight people who kind of accepted them as full people in spite of they're being gay and belonging to this stereotype group at that time. And so I'm using the term wise in a similar way. These are strategies for conveying respect and creating a more welcoming atmosphere so that people feel more psychologically accepted. They don't have that air of apartness as much. So wise criticism. Criticism as we know is a super important tool for learning. It's probably the most important tool. Throughout our lives, we get critical feedback such as when we put our blood, sweat, and tears into a paper and get back something that looks like this. Now, for a lot of people there's going to be some ambiguity here. What is this critic saying? Are they saying I'm dumb that I should go back to kindergarten? Or are they saying something else? What does this mean? Are they saying, "Oh, I could reach a higher standard? They're holding me to a high level of aspiration." This actually are--This is actually an early draft of T.S. Elliot's "The Waste Land", and the comments are those of Ezra Pound.

This is to make the point that, yeah, at every level we're always getting feedback. It's a key tool for learning.

Now, discrimination. It turns out that there is discrimination in the provision of critical feedback. Teachers give less criticism to African-Americans, critical feedback, constructive criticism to African-Americans than to white Americans. So, there is work by Sandy Dornbusch, Kent Harber, showing this effect that, given the same sort of mediocre essay, white evaluators tend to praise it more and mute their criticism more when the author is ostensibly black rather than white. So, this is a form of discriminations, subtle discrimination. These seems like, oh, you know, the white--as a white person I'm being really nice by giving all this feedback. But in reality, the argument is that they maybe killing these, their students with kindness because they're depriving them of real opportunities to learn and the message that you can do better. So, how do you deal with this dilemma though of providing feedback when there is a stereotype in play? If I received this criticism and I'm a member of a stereotype group like that perhaps Jewish students who feels like they don't quite belong, I might sort of take this as evidence that, yeah, there might be a little anti-Semitism here. This person might be applying a bias rather than judging my work on its merits. The ambiguity might be greater. And so the question that we asked, and this is work with Claude Steele and David Yeager and Lee Ross, was how can we provide critical feedback in a way that it will be used more effectively? We did this with college students. Here we're looking at their response to two pages of critical feedback and they're assigned to either a buffer criticism condition where they get two pages of criticism on an essay they wrote. And then in this study, we just asked them for how biased they thought the criticism was. African-Americans, when they get unbuffered critical feedback, they see relatively more bias in it than whites. There's this sort of extra ambiguity. One of the fascinating things here is

that, this is sort of like colorblind treatment. I'm sparing you the methodological details, but in effect, everyone is getting the same objective two pages of critical feedback but it's subjectively construed differently as a function of the student's group. The experience is subjectively unequal for African-Americans and whites. In another condition, we give the same criticism but with a commonplace strategy of giving: preceding the criticism with a buffer of positive feedback, "Overall nice job. Your enthusiasm really shows through." And then the two pages of critical feedback follow. This is a sort of standard message. And here, the racial gap and perception is attenuated but not fully eliminated.

Finally, in a third, wise criticism condition, we gave the criticism with a different message. And this is a message that typically teachers don't give when they give critical feedback. It was a note, penned by the professor who ostensibly wrote the criticism, "Judged by a higher standard I have serious reservations. I wouldn't go to the trouble of giving you this feedback if I didn't think, based on what I've read in your essay, that you're capable of meeting the higher standard I mentioned." and then the two pages of critical feedback follow up. In this condition, the gap and perception is wiped out such that African-Americans even trust the feedback a little bit more. And a lot of our interventions operate this way. They're a little like psychological jujitsu. They sort of take what might otherwise be a negative like the harshness of criticism and turn it into a positive. No, this isn't a sign that I'm viewing you as limited, it's a sign that I believe in your ability. And then African-Americans can better sort of seize the criticism as much as their white peers. So this is just perceptions of bias but, then we went to an actual school and worked with social studies teachers. I'm going to make a long story short. We have the social studies teachers assign an essay and asked the kids to write an essay about a personal hero that they've valued and then the teachers gave the kids critical feedback on their

hero essay. And then we, the researchers, by flip of the coin, randomly assigned kids to get either a note that looked like this: "I'm giving you these comments because I have high standards and know that you can meet them," so a wise criticism condition that refutes the limitation of the stereotype that it might be in play. And these were penned by their actual teachers. I'm sparing you the details but everyone is blind to everything. And then there's a control group where you just get a little bit of explanation for the feedback and we're giving you these comments so you have feedback on your essay. But here we're looking at, now, one of the key things in the aftermath of criticism is, do you dust off boots and try again. And here we're looking at the percentage of children who revised their essay. It's a pilot study. For white students, there's no significant effect but it's in a positive direction. They go from 64 percent of the majority resubmitting their essay to 82 percent in the wise criticism condition. For black students, a minority resubmit their essay, only 27 percent. But what happens when they get this validating note? Sixty-four percent, more than a two-fold increase, resubmit their essay or revised their essay, take that risk. This got us to thinking, you know, this is odd because it's a small intervention. It's just a little note. But, one of the big lessons of a lot of these studies is that what seems objectively small may not be subjectively small. From the perspective of a person who feels like they might be excluded, who doesn't quite have that foothold, that sense of inclusion in the workplace or in school, getting that message early on in the transition that, "Yeah, I believe in you and this criticism is really an affirmation of my belief in you" can be like water on parched soil. It's sort of novelty effect that, okay, now I understand. The situation has been disambiguated. Another thing to notice in addition to that idea is that what this message does is tell us the power of what we're already doing. So critical feedback is a great resource for learning and the kids have the opportunity to learn from it but they can only take full advantage

of it when they get this message of "you can do it, you can reach a higher standard." So, without this message, one might infer, "Hey, my students are not..." or "My workers are not taking advantage of these tools for learning, this critical feedback." But with this message, then that sort of catalyzes the impact of the good things I'm already doing. Okay. Let me tell you about another. So a lot of these studies involved kids but we've also done these studies with collage-age students so the same processes apply. Here we're trying just to, we're asking the question, here we went to an urban high school and we're asking the question, could you reframe an entire school experience not just an isolated event, like the receipt of critical feedback. And what we're doing is we're trying to create a new explanatory frame for the way kids see feedback. So this is with David Yeager. He went in to the school, near the beginning of the year, he put children through a module, on the computer. And this module was designed to teach you that, when you get criticism, here's a good way to see it as a reflection of high standards and a belief in your potential. So, you come in and you review testimonials from upperclassmen at your school. And they convey things like this, "My parents used to tell me that every criticism is like a treasure and my teachers taught me the same thing. I've come to learn that criticism doesn't mean my teacher sees me as dumb. It means they think their students can reach that high standard." And then another student writes, these are actually from actual quotes, "Sometimes people think that all the red ink on your paper happens for some reason, for some other reason like maybe the teacher is biased. But think of a pro athletes or baseball teams that make it to the World Series. Just like in sports, you need that critical feedback to get excellent." So, this is just kind of changing people's frame, the cognitive lens through which they view criticism and critical feedback from their teachers. We find the significant effect on grades but to drive home this, the effects, I want to show you data on the percentage of the courses that kids failed. And

as you know, failing of course is a bad thing. It takes up a lot of resources not just from the kid from the school. For European-Americans, very few courses are failed. But for African-Americans, they go from roughly failing about 44 percent of their courses to roughly 20 percent of their courses. The failure rate is cut in half as the result of getting this intervention. So, I admit, to some extent, this seems a bit mysterious, but from another point of view, one of the ways in which inequality gets perpetuated is through these events that repeatedly recur, over and over. You get feedback all the time over and over in your job and in the classroom. And if you can just sort of nudge a little bit, a person's ability to learn from that feedback, you could get these compounding benefits over time. And I think that what these kinds of interventions are doing, is there's sort of nudging meaning just a little bit so that people can benefit more than they otherwise might from these recurring opportunities. OK, this is a college replication. I'm not going to go into details but pretty much finding the same thing for African-Americans, getting treatment that reframe struggle to mean that, you know, it doesn't, is nothing personal about you and it's something that will pass, improve their grades over four years relative to African-Americans in the control group. Now, all these things are working through perception. They're changing the everyday meanings that people ascribe to the, the inevitable adversities that come with, that come with working in a workplace or in a school. Okay. So the big implication of this research on wise criticism is that, the same objective treatment can be perceived differently. These are lesson, idea number one, perception matters. These perceptions can have motivational consequences, the psychological environment matters and it can have recurring impacts on people's ability to take advantage of opportunity. And in the right time and the right place, these perceptions can be changed for the better. We're not saying that these are magic bullets. They don't work everywhere. An important conditionality is that there must be resources for growth.

There must be good criticism for me to learn from. And then, if I have this optimism and trust, I can better seize that opportunity. So no one's saying that psychology is everything. It's really opportunity plus psychology, is the equation for success here. And what these mindset interventions do is they help clear the psychological air so that people can better take advantage of the opportunities before them. So, of course, we also need efforts and reforms to introduce and inject those opportunities into school systems that, by all means is the first order of business. In addition though, we may need to go this extra step of creating equally welcoming, subjectively equal psychological environments for students. Okay. Last intervention I want to tell you about that I think is illustrative. The first intervention showed how you can change the way people see meaning in adversity to their benefit.

This next intervention deals with how you can change the way people see themselves. And one of the things we all work hard at is creating a narrative of the self as adequate. I am a good person. I can meet the demands in front of me. If I'm dealing with the stereotype day in and day out or doing poorly in school, those sorts of events threaten this narrative of adequacy. One strategy pioneered by Claude Steele, for reaffirming a person's sense of adequacy in a threatening situation, is values affirmation. So, with values affirmation, what you do is at a moment of stress, you take a step back and think about the things that really matter. And I think the premise of this intervention is that we are forgetful creatures. We kind of forget what really matters. We get caught up in things like money, no offense to economists, status, ego, and it's easy to miss the sort of big picture, the things that really matter that give value, enduring values to our lives like family, friends. It turns out that taking this psychological time out and sort of thinking about the big picture is beneficial. David Cresswell did a study where he had students, these are college students, come in and give a stressful talk. They had to give a talk in front of a

really judgmental audience who was heckling them as if they're like really stressful. And when this happens, the typical response is people's cortisol, the stress hormone, goes up, but for a separate group of students, he had them reflect on their important values before doing this speech. And for those students, their stress hormone levels did not go up. If I can sort of think about the big stuff that really matters, then I, you know, not the sort of cheap stuff that society tells you that matter, again, think about the big stuff that really matters, I understand that this stressor does not define me, that I am larger than the specific event. So, we thought, this is what Julio Garcia and Valerie Purdie-Vaughnns that, well, maybe we could do something about this in the classroom. When kids make that transition, for instance to middle school or to college or into an introductory gateway course like economics perhaps, maybe it's a really stressful transition and people are, when they take a difficult exam, they're under stress that might cause them to underperform, perhaps because of stereotype threat, could we give them values affirmation to inoculate them? And that's what we did. So, this one study was an early study, it's with middle schoolers but the effect's been replicated with college-age students, where we had children at the beginning of the year, beginning of seventh grade a stressful transition where a lot of kids take a turn for the worse, write about an important value that they hold. It's just a structured writing assignment, the teacher gives it to you at the beginning of the year, you open it up and there's likes prompts to help you start thinking about important value. And here are some of the things that kids write. One child, one of our children wrote, "Dance is my passion, my life. My family and friends are so important to me too, even more so than dance. My family, I can't live without them. My friends, I can be my real self around them. They can be silly, goofy, weird, and they don't care. They accept me for who I am." Another student wrote, "If I didn't have my family, I wouldn't be raised right. And if I didn't have my friends, I would be a boring

person. If I didn't have my religion I wouldn't know what to do, I would be lost. If I didn't have my creativity, I'd be bored out in my mind." So, it's objectively small, it's just a ten-minute writing exercise, but it's objectively big from the point of view of the kids. It's almost as if they've been preparing their whole life for this intervention, they're bringing to the floor a lifelong source of value. The idea is that this should kind of shore up my belonging and reduce my stress during this threatening transition and make me better able to show my stuff early on. And if I can better show my stuff early on, then there might be this positive cascade, with the teacher thinks better of me, reinforces me more, and I'm on this upward cycle. Well, we found this in a number of studies. It's not something that works everywhere by any means. It seems to be something that is, that's contingent on being in a high growth class or a classroom with the opportunities to learn. But in three studies in a row, we found the same effects such that looking, this is on the Y axis is grade point average, GPA, and European-Americans are the two leftward bars. African-Americans are the two rightward bars. I'm just sort of putting the data with arrow bars here just to kind of illustrate the robustness of the effect. And we see that consistently, for African-Americans, the active, doing these writing exercises increases their grade point average, in the class in which the intervention is given. It doesn't eliminate the achievement gap but it closes it substantially.

We can understand the intuitive level, the intuitive significance of these results by looking at an important outcome. This is the percentage of students receiving a D or an F in their course. For white students I'm just combining them for ease and speed of presentation, only 6 percent failed their course. Black students in the control, 20 percent do, but for affirmed black students only 9 percent. For the percentage of students placed in a remedial track or held back in grade, white students, very few are held back in grade or placed in a remedial track. Black

students in the control, 9 percent are. Black students in the affirmed, only 3 percent. It's, this latter outcome is not just an outcome but a driver of the long-term effects. A kid does well and the system response to sustain that benefit, it's like a chain reaction. So, by doing a little bit better early on, I may narrowly miss the remedial track and be assigned to a more advanced track. And being assigned to a more advanced track, I'm on a totally different trajectory. This relates to institutional racism too, because one of the things that contribute to inequities and education most is being assigned to remediation. Minorities are more likely to be assigned to the remedial track, and it is really hard to get out of on average. It's like an academic death sentence. So, if you can introduce a little nudge to steer people away from this channel, it can have lasting consequences. Okay. I'm not going to talk about the various replications except for a couple. Here's one with college students by Judy Harackiewicz, who found that giving an affirmation in an introductory biology class improved poor kids, this is sort of first generation students' performance in biology routed to controlled condition. And not only that, the students who, the poor undergraduates who got the affirmation were also significantly more likely to take the next biology course in a sequence. It went from about 75 percent to 86 percent, taking the next bio course in the sequence. Here is a study by Miyaki Adal where they found that in introductory physics, giving the affirmation improved exam scores and in-class exam scores of women. And recently, a doctoral student, Parker Goyer, followed these women up and looked at them long-term and found that for a certain subgroup of women, women who endorse the stereotype at baseline relatively more, we thought that, "Yeah, maybe men have more ability than women in science." That group, as represented by the bottom green line, was significantly less likely to be enrolled in a STEM major or in engineering for the two years after the introductory gateway course. But, for those same students who had been affirmed, they were as likely as men to

continue to be enrolled in engineering. It's not something that will work everywhere, but in the right time and in the right place if you get a little nudge that sends you on your way, it can push you through gateways of success that feed off of themselves. Okay. This was a district-wide replication. I don't have the time you can go into it, I don't think it's that important. One last datum that I want to show you is when we widen the temporal lens, let's look seven years later at the percentage of children now going to college. This is from our original affirmation study. We're following them up seven years later and asking the question, who's in college? And we're looking at actual official data from the National Clearinghouse, National Student Clearinghouse. At this school, white students across conditions, 80 percent go to college. Black students in the control, 76 percent, relatively high. But for black students in the affirmation conditions, seven years after they completed the series of affirmations in their classroom, a significantly greater number are going to college. This is not, I want to make it clear, just a psychological intervention. The irony here is that the psychological intervention highlights injustices and inefficiencies in the system. What is driving these effects in part is that the intervention steers African-American students away from that remedial track, and being in that remedial track keeps them out of college. The psychological intervention is not separate from the institutional channels that propagate success and failure over the long-term. Instead, it piggybacks on them. ^M00:49:59 Okay. Big picture, I just want to end with two key points. One is that these interventions are not magic bullets. They are contingent on opportunities for growth being available in the system that students can take advantage of if they're there. So they don't work everywhere and every place, they are conditional. Opportunity plus psychology leads to success. The second is more of a question that I want to end with, is to what extent are these processes ordinary versus extraordinary? I mean, to some extent, we were very surprised to see these long-

term effects but from another perspective I think we can kind of all relate to the experience of having a great teacher, a great mentor who gives us a well-timed pat on the back and sends that message that you belong, or you can do it, or you are valued. And at just the right moment, and in the right time, and in the right place that could change our life or any life, it all depends on what's already there already. Thanks.

[Applause]

JANICE SHACK-MARQUEZ. So, we can take a couple of questions if people have them. And then--Yeah, let's get the microphones. Thanks.

AUDIENCE MEMBER. Hi. I really appreciate your talk. So, I have a question. We have this program at my university. It's an undergraduate, liberal arts, where we have minority students from underprivileged backgrounds. They, you know, they get and they start with, you know, like early start program, that's the frame, but in reality it's kind of a remedial program, but these students do not succeed in STEM. Even if they planned on doing it originally, you know, after the first, a couple or something, obviously these kids have been through the stereotypes for a very, very long time. So, is it too late to intervene at the early college stage? Like what would be your thoughts on that, how to go about it. Anything, it would be great.

GEOFFREY L. COHEN. Yeah, I think these interventions and these practices, I think they're more like tools, I will call this one tools, tell us a lot about how to manage transitions. So, the transition to middle school, the transition to college, the transition into a new academic major, that first economics course. That's the point at which people are asking this question of belonging. Do I belong here? Are there other people like me? Do I want to belong here? That's a kind of interesting question, too.

[Inaudible Remark]

GEOFFREY L. COHEN. Sometimes--

[Inaudible Remark]

GEOFFREY L. COHEN. And that could be why. And lots of cues can, I mean it's hard. It's like, we live in an ambiguous social world and it's hard to tell, and so people are sort of grabbing at these little meanings, sort of cues that signal meanings, like are there people like me here, is one, obvious one. There's work by Sapna Cheryan at University of Washington showing that, you know, images of the geek stereotype, like seeing an office like CS office where, you know, it's like, there's like "Star Trek" posters. And, you know, it's like nothing really offensive at all but it kind of sends a message, oh, maybe, you know, for a lot of women who don't like that stuff, it sends a message, "Maybe this isn't for me" like she finds this in very subtle ways, these little physical cues can send this message of not belonging. It makes some sense. It's an adaptation where I kind of go back to that Tobias Wolff example where, yeah, if I'm living in a society where the stereotype is reality, prejudice is the reality, it really makes lots of sense to be vigilant to these cues, because the world's ambiguous and I've got to know if I'm safe or not. So, I think transition points are sensitive periods are the places to intervene. There's even studies that show you kind of randomize it to the do the interventions earlier you get bigger effects. Intervening, actually that's one of the big lessons that we learn from this work, timeliness is almost everything. Stopping a pernicious process at its beginning is key. Where is the beginning? I'm not sure, but I think transitions have a lot to do with it, like that transition, any transition.

AUDIENCE MEMBER. I'm Trevon Logan from Ohio State and President of the National Economic Association. And so it seems you're making a very strong case for historically black colleges and universities because there's other research which shows that it's not just the message as you've been emphasizing but the messenger themselves--

GEOFFREY L. COHEN. Yeah

AUDIENCE MEMBER. --so that the race of a professor has long and persistent effects as well.

GEOFFREY L. COHEN. Yeah.

AUDIENCE MEMBER. So, have you done any studies that look at the race of the messenger in addition to the affirmative message whether or not if the messenger is of the same race as the student, whether the affirmation is actually needed or not?

GEOFFREY L. COHEN. Yeah. That's a good question. The short answer is no, we haven't looked at that. Most of the schools we looked at are, just for practical reasons that the schools that we've been able to work with have been predominantly white, in terms of their teachers. Actually most schools are, even predominantly minority public schools, predominantly minority student public schools have predominantly white teachers about I think 60 or 70 percent. So, we're looking at a pretty typical situation. And historically black colleges, I don't know how much these processes apply. It might, you know, kind of being at a place where there are people like me, you know, I think maybe these processes have little relevance or less relevance. And I'm just sort of thinking aloud, I'm not sure but, you know, like thinking about the big success stories in education like KIPP schools for what that's worth, and they seem to be pretty successful. Xavier University, Howard University, they're predominantly African American, and so, or minority. And those are the big success stories. It's hard to think of a

school that's integrated that's also as big a success story. I don't know if people know one. I've been looking out for this. So. And maybe the case that this is really a sort of technology for working in integrated settings and predominantly minority schools may accomplish some of the same goals just by virtue of numerical representation, and the messages that they send. This is not just numerical representation, of course it's sort of climate, and the ethos that get conveyed at these schools, too. Xavier, for instance, is really sort of a high standard, is very rigorous. That message is clearly conveyed from the start that, yeah, you can be a doctor, you can be a physician. That's not impossible. You're going to do it. That's conveyed from day one. So, I think those messages might just be more persuasive if the messenger is of the same group, potentially. You know, in principle that should be true, but that's, this is sort of, that's my best guess, high standard error.

AUDIENCE MEMBER. Well, again, Bill Spriggs from Howard University. So, it is more, because actually much of what you talked about we do. We--

GEOFFREY L. COHEN. Yeah.

AUDIENCE MEMBER. It's the act of consciously understanding this process and having professors who know--

GEOFFREY L. COHEN. Yeah.

AUDIENCE MEMBER. --that you are going to be stereotyping, you come from a stereotype setting and therefore consciously thinking about it. It's not--

GEOFFREY L. COHEN. Yeah.

AUDIENCE MEMBER. It isn't subconscious. It's a conscious effort, which I think has to do with your second part, which is also it's not just doing that but do you have the resources?

GEOFFREY L. COHEN. Yeah.

AUDIENCE MEMBER. And so, two points. One is, I think it's a plug to say that, you know, we think about funding but it's always how do we get other people to do what we do, and I think that means people need to fund us because we already do it. And I think, there's a reality here, right?

GEOFFREY L. COHEN. Yeah.

AUDIENCE MEMBER. From my perspective, spring training is over. We knew for some time that the country was going to be majority minority, so spring training is over. If you don't already get it it's time for us, as Greg Price was saying, you've got to cut bait. If you're not doing it now, we shouldn't be funding you. You're not going to help us, because right now we are, the majority of kindergartners, first grade, second grade, are children of color. So, it's too late for somebody to say I'm going to solve the problem. It's too late for the nation. We can only back the people who already figured it out. But my more important question, my question is this. Given what you've presented about test scores, is it possible for us to think of them as being endogenous to how we reinforce this?

GEOFFREY L. COHEN. Yeah.

AUDIENCE MEMBER. So, I think about Moneyball, right--

GEOFFREY L. COHEN. Yeah.

AUDIENCE MEMBER. --where the baseball industry has convinced itself of how to chose people. We as economists know that these test scores at most do like 25 percent--

GEOFFREY L. COHEN. Yeah.

AUDIENCE MEMBER. --of the variation, we know there's 75 percent that we're not explaining, using these test scores, and that's letting all the admitted-variable biases run through

those variables and make them even bigger than what they really are, so they really don't even do 25 percent. And yet, and I'm saying this from, you know, departmental perspective because we were in a hiring stance, because we have retirements. Consistently, I have seen graduate schools turn out people who can barely speak English, which for a university is kind of difficult because we're going to put you in front of a classroom, that may not mean that much to the Fed because you're just going to read reports and you're never going to hear the person. But, you have to wonder if our metric for being the gatekeeper of who's going to get the PhD--

GEOFFREY L. COHEN. Yeah.

AUDIENCE MEMBER. --is reinforcing a bias as opposed to giving us an opportunity to say, yes, that information is important. What I have observed is that it looks very much like you have to have this 790, 800 on a quant.

GEOFFREY L. COHEN. Yeah.

AUDIENCE MEMBER. --on the GRE, which tells me something about your ability to do graduate work but not--

GEOFFREY L. COHEN. Yeah.

AUDIENCE MEMBER. --everything and I'm often amazed that students who go to schools and, I'm not trying to be elitist but they go to schools that I've never heard of in China that I suspect that where the American universities would sort of be the equivalent of Eastern Tennessee State. And many of these graduates schools who will accept somebody, who has an 800 quant, if I was an applicant to Eastern Tennessee State, they would throw away my application, they wouldn't even look at it. But they're accepting somebody from a school, they cannot possibly understand the quality of it. And here they are. So, I wonder if the profession is putting in barriers to the pipeline that aren't necessary and preventing it from getting to—

GEOFFREY L. COHEN. Yeah.

AUDIENCE MEMBER. --being able to address the person.

GEOFFREY L. COHEN. Yeah, some of the greatest interventions might be removing some of the things we're doing already. Two quick responses because I know you're getting antsy about moving on. So let me just kind of respond quickly. One is I, I should have mentioned this but a lot is, going back to the early part of your question. A lot of the things we're testing here actually come from these success stories, Howard and Xavier, I think Wimby who is like, one of the advisers for Xavier, had this motto, "Intelligence can be taught." That's the growth mindset. So we're actually lifting a lot of the things that the success stories do, and trying to kind of just distill out their key features so that we can kind of give away to other places, but I think their origin often comes from these real world success stories. And science is useful for figuring out what's useful and then sort of propagating it. The second thing is, yeah, I think we live in an era of the sort of tyranny of the metric, you know, so all things follow from test scores, and that's how we sort of weight the quality of schools and decisions about funding I think. And at least to some extent, I think that's problematic. And I'll give you one example. So, years and years later, our kids who are affirmed are more likely to be in college. One driver that is the remediation effect that I'd mentioned, another driver though is the kid's sense of belonging in middle school. So children, so kids who say in response to this little five-item questionnaire, "I feel like I belong here. I feel like this is a place where people accept me." Those who assert that are more likely to go to college years and years later, above and beyond their GPA, above and beyond their test scores. It's like the power of the invisible idea, like you wouldn't know if you didn't measure this thing how important it was, the sort of kid's psychological sense of inclusion matters a lot. And so, by that rubric or by that logic, you may

have a school that produces, you know, mediocre test scores but a high sense of belonging in kids, and that school, may be sort of unrecognized, unrewarded. And even though in the long-run, sort of in the long-term, their kids may be doing better in society and in success into adulthood. So, it just makes you think about what are we using as our metrics for success? Are they short-term, are they long-term? And what are we missing that we're not measuring? Thanks.

[Applause]