

How Small Inequities Lead To Big Inequalities

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Compared to white Americans, African-Americans [earn about 25 percent less](#) and are [twice as likely to develop dementia](#). Compared to American men who work full time, the average American woman who works full time [earns only 80 percent as much; for Latina women that number is 54 percent](#).

These statistics merely hint at the widespread inequalities in American today; inequalities based on race, sex, and ethnicity, among others.

How do these inequalities arise and persist?

Disparities across social groups are typically explained by appeal to a mix of structural factors (such as access to high-quality education and healthcare), explicit biases (such as racism and sexism), and what psychologists call [implicit biases](#) or attitudes — non-conscious stereotypes or associations between membership in a some social group and particular characteristics. Examples might include associating white men with leadership, or women with being submissive. (You can hear an introduction to implicit biases at the *Hidden Brain* [here](#), and also on the recent *Invisibilia* episode, "The culture inside.")

While several [measures of people's explicit racism and sexism](#) suggest that both have declined over time, inequalities and discriminatory practices haven't gone away. That's led many people to appeal to implicit biases as the modern-day culprit for modern-day inequalities, and to focus on them as the target for modern-day interventions. [Training sessions and workshops](#) around the country — in business, in schools, and in the police force — aim to eliminate these unconscious biases, with the hope of changing people's behavior and ultimately leading to a more equitable world.

And yet, there are open [questions about just how much implicit biases can explain](#). Studies that have aimed to use implicit biases to predict whether a person will act in a discriminatory way don't always find reliable relationships between the biases and the behaviors. Often when such relationships are found, they're fairly small. So we're left with the puzzle of whether these small effects can explain the large disparities we see around us.

Philosopher Ron Mallon, a professor at Washington University and author of [The Construction of Human Kinds](#), thinks that small implicit biases *can* explain large disparities (and he's not alone). But in a presentation I heard him give last month, he also argued that understanding how this

occurs can lead to an unintuitive conclusion: that implicit biases might explain less than we often take them to. I thought his perspective was worth sharing with readers of 13.7, and Mallon was kind enough to answer a few questions about it by email.

It all begins with what Mallon calls "accumulation mechanisms": the processes that explain how small biases can have big effects. That's where we'll begin.

In your presentation at the Society for Philosophy and Psychology's annual meeting last month, you introduced the idea of an "accumulation mechanism." What is an accumulation mechanism?

An accumulation mechanism is something that aggregates or "adds up" the effects of small individual past events, sometimes giving rise to bigger advantage or disadvantage in the present. [Virginia Valian](#) has emphasized the way that institutions like educational and employment records can mark and aggregate past events in ways that lead to advantage or disadvantage later on. For instance, even if the effect of each individual quiz, test, or paper on your overall academic standing is small, the fact they get aggregated allows the series of these small events to play an important role in determining future opportunities.

Can you provide some examples of how small implicit biases could result in large group disparities?

Accumulation mechanisms are appealed to in some social psychological debates when the measurable effect of some trait or attitude is small. In the case of implicit attitudes, for example, recent meta-analyses of many studies involving the "Implicit Association Test" or "IAT" have suggested that the effects of implicit attitudes on behavior are small. But defenders of the importance of implicit attitudes have pointed out that many small instances of

bias can add up to significant disadvantage. This kind of argument presupposes some sort of mechanism that aggregates the instances of bias.

If someone cheated you yesterday, then, other things equal, today you have less and they have more. If someone is systematically paid less or given worse economic terms over time, the effects can accumulate over time resulting in disparate wealth. So, wealth is an accumulation mechanism in this sense.

Once we appreciate a general category of accumulation mechanisms, we can see many things that can play this role. If implicit biases toward a group exert small effects on individual educational decisions, these can aggregate to bigger educational disparities. As those small outcomes accumulate, they will affect all kinds of further decisions: choices like grades, feedback, scholarships, and admissions decisions. Similarly, if implicit biases exert small effects on individual law enforcement decisions regarding a group, over time this can result in substantial disadvantages in criminal justice records for group members. Recently, increasing attention has been paid to the role that small events of bias might play in producing sustained physiological stress that has cumulative effects upon the body and mind, creating disparate health outcomes.

I've talked about wealth, education, criminal justice, and health as separate domains, but they of course interact, so we also should attend to the interactions of accumulation mechanisms in thinking about disparities.

In your talk, you argued that recognizing the role of accumulation mechanisms might *decrease*, rather than *increase*, the role of implicit bias in explaining group disparities. Can you explain?

The appeal to accumulation mechanisms is an example of a "how possibly" explanation: It explains how it could possibly be the case that things with

small effects could explain substantial outcomes. I think this appeal is very powerful, since — as I just suggested — there are real candidates that plausibly serve as accumulation mechanisms for group disparities; and we know with certainty (from math and from formal models) that if we add up a bunch of small things, we can get a big thing.

My point in my talk was that accumulation mechanisms don't just accumulate the effects of contemporary implicit biases. They also plausibly accumulate the effects of contemporary explicit biases, and of a whole range of causes extending back many decades. So, if we want to explain contemporary disadvantage, the appeal to accumulation mechanisms shows how contemporary implicit biases could have a place in the explanation, but it also presses the question about whether that place is important in comparison with other sorts of bias and with causes in the more distant past.

When we think, for example, of the wealth discrepancies among black and white households in America, wealth plausibly acts as an accumulation mechanism not only for recent or contemporary events but also for events that occurred decades ago. For instance, housing and banking discrimination in the early and mid- twentieth century contributed to the racial segregation of many urban areas that continues today. Because patterns of property ownership can persist through long periods of time, accumulating the effects of individual events of discrimination, such patterns highlight the worry that contemporary implicit psychological bias is not as important in explaining contemporary disadvantage as past bias whose residue remains with us, accumulated in racially and economically segregated housing structures and infrastructure.

Do you think these ideas have implications for whether and how we should go about reducing group disparities?

If contemporary psychological biases are important to the explanation of group disparities, then it is plausibly because accumulation mechanisms aggregate their effects. It follows that if we wanted to intervene to reduce the pernicious effects of psychological bias, it gives us at least these two options: intervening on our biased minds and behaviors or intervening on the accumulation mechanisms that aggregate the effects of our behaviors. We know that it is possible to change psychological bias because explicit racial bias has declined precipitously in recent decades. But it could be that nowadays intervention on the accumulation mechanisms themselves would be the best way to reduce some group disparities.

This is all very abstract though. Different sorts of group disparity are plausibly underwritten by different accumulation mechanisms. Inherited wealth probably plays a much different role for explaining racial disparities than gender disparities, for instance. And these sorts of details will matter for policy. And there's still a lot that we don't know about many elements of this picture. But I think it's useful to investigate accumulation mechanisms both because of their explanatory importance, and because they provide an important possible site of intervention.

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