

## How Science Helps Us Find the Good by Jeremy Adam Smith

I've been covering the science of human goodness, off and on, for almost 10 years. In that time, I've seen a dramatic transformation in the way scientists understand how and why we love, thank, empathize, cooperate, and care for each other.

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Of course, "goodness" doesn't seem like a very scientific concept. It sounds downright squishy to many people, and thus unworthy of study. But you can count acts of goodness—and all science begins with counting. It's the counting that has started to change our understanding of human life.

For example, in a study published in the January edition of the journal *Mindfulness*, psychologists C. Daryl Cameron and Barbara Fredrickson asked 313 adults if they had helped anyone during the previous week. Eighty-five percent said they had—by, say, listening to a friend's problems, babysitting, donating to charity, or volunteering.

This small study reveals a truth that is consistently demonstrated in many domains of research: that daily human life is not characterized by violence, exploitation, or indifference. Far from it. The research—that is, the counting—reveals that we care deeply for one other, and that we would rather help our fellow beings than not. Even more, the science shows that refusing to help others can have debilitating, long-term mental and physical consequences for ourselves. Isolation hurts, physically; so does aggression. Every angry word we utter fries neurons and wears out our hearts.

When I first started to write about the research, that was big news: Wow, human life isn't as bad as we thought it was! Acts of goodness yield physical rewards! Good thoughts are good for our bodies! These insights led to a lot of predictably Pollyannaish media coverage.

But as the years went on, the science of goodness grew more complex. Scientists started to look at how the good and the bad interact. The study by Cameron and Fredrickson explores how we feel when we're helping others, and they found that quite a few participants didn't feel good at all. These people helped others out of a sense of obligation, and they felt disgust, contempt, stress, or resentment toward those they helped.

Today, the science of human goodness reveals that good and bad go hand in hand, and what ties us together can also tear us apart. So the important question becomes: How can I cultivate the good? The empirical answer to that question contains some surprises. Just as good and bad are linked, the science reveals how inextricably our inner world and the

external one are tied together.

This is what the research currently suggests: If you want to find and foster the good in society, you need to start by searching for the goodness inside yourself.

## The Science of evil

You've probably heard of the famous Stanford Prison experiment. In 1971, the US Navy asked professor Philip Zimbardo to study the psychological effects of prison conditions. He did this by recruiting twenty-four young men as either guards or prisoners for a mock jail in the basement of the Stanford psychology building.

The results of the "experiment" are often cited as evidence for the innate depravity of human beings. Things went horribly wrong in the mock jail, as the guards brutally abused their authority and the prisoners turned on each other. Zimbardo himself was caught up in the inhumanity of the situation he had created.

The story of the Stanford Prison experiment has been told and re-told countless times, despite the fact that it's widely considered to be an example of science gone wrong and its results have never been replicated. (There is even a new film about the experiment, starring Billy Crudup.)

Why are we so fascinated by this study in evil—as Zimbardo often calls it—and why does the word "evil" sound so much more serious and hard-edged than good?

Part of the answer lies in our inborn negativity bias. This is our hardwired tendency to notice and amplify threats. It explains why so many people tend to believe that human life is brutal and cold, despite all evidence to the contrary. Negativity bias is essential to natural selection: people who run away from a man with a gun or a car running a red light are more likely to pass on their genes to the next generation. And these harrowing moments are more likely to burn themselves into our neurons than the gentle ones, so that we can avoid similar threats in the future.

The Stanford Prison experiment fascinates us in part because of its highly concentrated negativity. We're really good at focusing the spotlight of our attention on things we think might hurt us.

But what happens when we put a spotlight on one thing? Everything else is thrown into darkness, as psychologist Paul Gilbert points out. This means we miss the good things that are outside of the spotlight. Something else happens as well: When we focus on bad things, we're triggering the stress response, often below conscious awareness. If you think of the Stanford Prison experiment as a kind of model of real life—if you conceive of yourself as living in the equivalent of that basement—then you're going to be stressed.

What is stress? As another Stanford professor, Robert Sapolsky, likes to say, stress is a tool nature gave us to survive lion attacks.

Of course, you're not a primate on the African savannah menaced by lions. You're a modern human who, for example, might be caught in a traffic jam. The spotlight of your

attention—a mechanism built for a time when threats were much simpler—is focused only on your destination, which seems to be getting further and further away. The miracles that surround you escape your notice, like the fact that a trip that takes sixty minutes in your car would have taken your ancestors the better part of a day.

So what do you do instead of appreciating the good things? Sitting in that traffic jam, you turn the other cars into lions, and you feel threatened. You might shout obscenities, or scare your kids by pounding on the steering wheel. And yet—somehow!—this activity does not make the cars move any faster. Instead, the stress hurts you and others, mentally and physically. This evolutionary confusion is one of the tragedies of modern life.

You don't need a Ph.D. to figure this out. Here's an experiment you can perform right now, as you read this article:

Think about something stressful that happened to you during the past week. Now scan your body: How does your chest, stomach, or neck feel?

Then think about something good that happened during the same period, however small. Now what happens in your body?

Did you feel any difference, according to where your attention was focused? The research predicts that the stressful memory caused you physical discomfort—and it also predicts that too much long-term stress can take years off of your life, without fixing the problem. Your tight chest and clenched stomach doesn't make the world a better place. In fact, it can make everything worse.

So what can you do? How do you bring out the good in yourself when your savannah-bred instincts tell you to scream and run people over with your car?

Counting the good things

Science has an answer, and it starts with counting. The questions you have to ask yourself are these:

Am I counting the good things, too?

Am I taking the time to shine light on things that make me happy and give my life meaning?

Who thanked me today?

To whom did I feel grateful?

What acts of kindness or cooperation did I witness?

This is the essence of that much-maligned term “positive thinking”: we make it a goal to count the good things in life. That doesn't mean we ignore the bad. Undeniably there are threats in the world, to our own well-being and that of others. There are also threats within ourselves—selfishness, laziness, short-sightedness, and so on. But all too often our negativity bias leads us to see only the bad, in other people as well as in ourselves.

When we try to think positively, we are making a conscious, cognitive effort to correct for our natural and understandable tendency to focus on threats. By counting the good

things, we see reality more clearly.

Sometimes, seeing the good takes enormous personal strength, because we need to overcome the great power of the stress-induced, fight-or-flight response.

Let's go back to the Stanford Prison experiment—and the career of Philip Zimbardo. His work didn't stop in 1971. As the decades went on, Zimbardo moved beyond evil. He started asking himself how to cultivate the good in people. In recent years, he has studied heroism, the willingness to make sacrifices on behalf of other people. "The two lines of research aren't as different as they might seem; they're actually two sides of the same coin," writes Zimbardo in *Greater Good*. He continues:

Some people argue humans are born good or born bad; I think that's nonsense. We are all born with this tremendous capacity to be anything, and we get shaped by our circumstances—by the family or the culture or the time period in which we happen to grow up, which are accidents of birth; whether we grow up in a war zone versus peace; if we grow up in poverty rather than prosperity.

That statement encapsulates thirty years of scientific research into human goodness. Negativity bias isn't the whole story. There's more to us than fight or flight.

The interesting thing is that even in extreme circumstances, humans will override their habitual or instinctive responses. And when we do fight, we won't just fight for ourselves. We can and do fight for others. If a certain kind of person sees a child walking in front of a car, she'll put herself at risk to knock the child out of the way. Some individuals will deliberately put themselves between a gun and other people. We can and do override our short-term self-interest, all the time. Every day, some of us put ourselves in harm's way so that others can live.

That heroic impulse is what Zimbardo now studies. He has researched who is most likely to commit heroic acts, and the prosaic answers include: black people more than whites, those who have experienced violence or disaster before, and people with more education. But he has also found that heroism is a skill. People are more likely to make sacrifices on behalf of others when they've made a conscious commitment to heroism and are trained to act heroically.

Helping people to cultivate such skills is one of the most important things we do at the Greater Good Science Center at the University of California, Berkeley. We recently launched a new site, *Greater Good in Action*, which offers concrete, research-tested practices for individuals to cultivate strengths like awe, gratitude, empathy, and compassion.

This is the work of a lifetime. Changing yourself is no simple task. And changing the world? That can seem impossible.

Going from inner to outer

Writers like Barbara Ehrenreich and Oliver Burkeman have criticized positive thinking as a tool of social control. If you're grateful for everything, they ask, how can you possibly see

what's wrong in the world? Does a focus on perfecting yourself mean that you ignore improving society?

I think it's true that these are dangers to guard against, but research like Zimbardo's—which includes nonviolent civil disobedience as an example of heroism—finds specific steps we can take to develop a more caring society, ones the critics might dismiss as self-centered or wishful thinking.

Remember the study of helping behavior by Cameron and Fredrickson that I mentioned at the beginning? They hypothesized that two mindful traits—a focus on the present moment and a non-judgmental acceptance of thoughts and experiences—would help people feel better about helping others.

The research confirmed their hypothesis: present-focused attention and non-judgmental acceptance both predicted more helping behavior. Mindful participants were more likely to experience emotions like compassion, joy, or elevation while giving help. In part this was because mindfulness helped them to put their own anxiety aside in order to focus on the needs of others. They just felt better when helping people, which likely led them to engage in more helping behavior in general.

It's a result echoed in other studies. Paul Condon of Northeastern University and his colleagues put study participants through an eight-week mindfulness course. After the course, the meditators were called into a waiting room with no empty seats. An actress working for the researchers limped in on crutches and leaned against a wall. The researchers created the same situation for a group who didn't go through the mindfulness course.

Here's what they found: members of the group that studied mindfulness meditation were five times more likely to give up their seat to the woman on crutches than those who didn't. The upshot of these two studies is that cultivating awareness of your own thoughts, feelings, and surroundings makes you more likely to see and meet the needs of others.

Mindfulness is also linked to greater compassion for ourselves—in other words, mindful people are quicker to comfort themselves when they screw up. The critics might think they're just letting themselves off the hook, but the research says otherwise.

“We think we need to beat ourselves up if we make mistakes so that we won't do it again,” said University of Texas psychologist Kristin Neff in a Greater Good interview. She continues:

But that's completely counterproductive. Self-criticism is very strongly linked to depression. And depression is antithetical to motivation: You're unable to be motivated to change if you're depressed. It causes you to lose faith in yourself, and that's going to make you less likely to try to change and conditions you for failure.

Mindfulness and self-compassion are also turning out to be tools to correct for different forms of implicit bias, such as racial discrimination. This shouldn't surprise us. Too often, we believe that people are either racist or they're not—but new research finds that's just

not true. As David Amodio, Susan Fiske, and other scientists have documented, everyone is prone to kneejerk bias. The trick is to cultivate enough self-awareness to know when you are being biased—to see the world as it is, not what we fear it is. This is what allows us to override automatic associations.

Several studies—most recently by Adam Lueke and Brian Gibson of Central Michigan University—find that even very brief training for young white people in mindfulness seems to limit unconscious negative reactions to black faces. This is perhaps because awareness of one's own impulses can help us to override them. Many police departments are now training officers to be aware of the implicit biases that influence split-second decision-making.

Which one will you choose?

To me, nothing better reveals the relationship between our inner lives and our social reality than the fight against implicit bias. Given the pervasive impact of racism—from the psychological insecurity it creates in minority communities to the huge gaps in wealth between different racial groups—I think we all have a responsibility to search inside ourselves for signs of bias.

But it can't stop at just recognizing the problem. We also have to find the good in ourselves. We can start by recognizing that bias toward your own group isn't a sign of your innate evil. It's a sign that you are human. The next step is to forgive yourself, for these are feelings that all human beings have at one time or another. In forgiving ourselves, we open the door to forgiving others, and in forgiveness, we create the possibility for widespread social change. The very idea of forgiveness always implies that change is possible. From there, we can find the part of ourselves that wants to be fair to everyone, and embrace that as a goal. Like heroism, egalitarianism is a skill we can learn, a natural propensity that we can cultivate.

When we grow as individuals, we grow as a species. As we evolve together, let us count each act of love, empathy, and compassion, and not take our goodness for granted. In our distant evolutionary past, our survival depended on attention to the negative. Today, it may depend on our awareness of the good.  $i\frac{1}{4}$