

ELEMENTS

# A BETTER KIND OF HAPPINESS

By Will Storr, JULY 7, 2016



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*Discoveries in the field of social genomics may confirm a theory of well-being that is almost as old as Western civilization.*

Nearly two and a half millennia ago, Aristotle triggered a revolution in happiness. At the time, Greek philosophers were trying hard to define precisely what this state of being was. Some contended that it sprang from hedonism, the pursuit of sensual pleasure. Others argued from the perspective of tragedy, believing happiness to be a goal, a final destination that made the drudge of life worthwhile. These ideas are still with us today, of course, in the decadence of Instagram and gourmet-burger culture or the Christian notion of heaven. But Aristotle proposed a third option. In his *Nicomachean Ethics*, he described the idea of eudaemonic happiness, which said, essentially, that happiness was not merely a feeling, or a golden promise, but a practice. “It’s living in a way that fulfills our purpose,” Helen Morales, a classicist at the University of California, Santa Barbara, told me. “It’s flourishing. Aristotle was saying, ‘Stop hoping for happiness tomorrow. Happiness is being engaged in the process.’ ” Now, thousands of years later, evidence that Aristotle may have been onto something has been detected in the most surprising of places: the human genome.

The finding is the latest in a series of related discoveries in the field of social genomics. In 2007, John Cacioppo, a professor of psychology and behavioral neuroscience at the University of Chicago, and Steve Cole, a professor of medicine at the University of California, Los Angeles, among others, identified a link between

loneliness and how genes express themselves. In a small study, since repeated in larger trials, they compared blood samples from six people who felt socially isolated with samples from eight who didn't. Among the lonely participants, the function of the genome had changed in such a way that the risk of inflammatory diseases increased and antiviral response diminished. It appeared that the brains of these subjects were wired to equate loneliness with danger, and to switch the body into a defensive state. In historical and evolutionary terms, Cacioppo suggested, this reaction could be a good thing, since it helps immune cells reach infections and encourages wounds to heal. But it is no way to live. Inflammation promotes the growth of cancer cells and the development of plaque in the arteries. It leads to the disabling of brain cells, which raises susceptibility to neurodegenerative disease. In effect, according to Cole, the stress reaction requires "mortgaging our long-term health in favor of our short-term survival." Our bodies, he concluded, are "programmed to turn misery into death."

In early 2010, Cole spoke about his work at a conference in Las Vegas. Among the audience members was Barbara Fredrickson, a noted positive psychologist from the University of North Carolina at Chapel Hill, who had attended graduate school with Cole. His talk made her wonder: If stressful states, including loneliness, caused the genome to respond in a damaging way, might sustained positive experiences have the opposite result? "Eudaemonic and hedonic aspects of well-being had previously been linked to longevity, so the possibility of finding beneficial effects seemed plausible," Fredrickson told me. The day after the conference, she sent Cole an e-mail, and by autumn of that year they had secured funding for a collaborative project.

Fredrickson's team would profile a group of participants, using questionnaires to determine their happiness style, then draw a small sample of their blood. Cole would analyze the samples and see what patterns, if any, emerged.

Fredrickson believed that hedonism would prove more favorable than eudaemonia—that discrete feelings of happiness would register on the genome more powerfully than abstract notions of meaning and purpose. Cole, meanwhile, was skeptical about the possibility of linking happiness and biology. He had worked with all kinds of

researchers, trying to find a genomic response to everything from yoga to meditation to tai chi. Sometimes he made quite interesting findings, but more often the data provoked only a shrug. “Day after day, I see null results,” he told me. “Nothing there, nothing there, nothing there.” Fredrickson and Cole’s first study wasn’t huge, containing usable results from eighty people, but, because Cole had been studying misery for so long, he knew what to look for in the blood samples. “By this time, we had a pretty clear sense of the kinds of shifts in gene expression we see when people are threatened or uncertain,” he said. “We were in a good position, even in a relatively small study, to say, ‘These are the outcomes I’m going to look at.’ ”

When they parsed the data, they saw that Fredrickson’s prediction appeared to be wrong. “This whole hedonic well-being stuff—just how happy are you, how satisfied with life?—didn’t really correlate with gene expression at all,” Cole said. Then he checked the correlation with eudaemonic happiness. “When we looked at that, things actually looked quite impressive,” he said. The results, while small, were clearly significant. “I was rather startled.” The study indicated that people high in eudaemonic happiness were more likely to show the opposite gene profile of those suffering from social isolation: inflammation was down, while antiviral response was up. Since that first test, in 2013, there have been three successful replications of the study, including one of a hundred and eight people, and another of a hundred and twenty-two. According to Cole, the kind of effect sizes that are being found indicate that lacking eudaemonia can be as damaging as smoking or obesity. They also suggest that, although people high in eudaemonic happiness often experience plenty of the hedonic stuff, too, the associated health benefits tend to surface only in those who lead what Aristotle might have called a good life.

But what, precisely, is this quasi-mythical good life? What do we mean when we talk about eudaemonia? For Aristotle, it required a combination of rationality and *arete*—a kind of virtue, although that concept has since been polluted by Christian moralizing. “It did mean goodness, but it was also about pursuing excellence,” Morales told me. “For Usain Bolt, some of the training it takes to be a great athlete is not pleasurable, but fulfilling your purpose as a great runner brings happiness.”

Fredrickson, meanwhile, believes that a key facet of eudaemonia is connection. “It refers to those aspects of well-being that transcend immediate self-gratification and connect people to something larger,” she said. But Cole noted that connectedness doesn’t appear to be an absolute precondition. “It seems unlikely that Usain Bolt is doing what he does to benefit humanity in any simply pro-social sense,” he said. “If that’s the case, is eudaemonic well-being mostly about the stretched goal, doing something you personally think is amazing or important? Or does it involve something more around pro-social behavior?” For Cole, the question remains open.

A further tantalizing clue might come from a distant corner of the academy. Since the early nineteen-seventies, the psychologist Brian R. Little has been interested in what he calls personal projects. He and his colleagues at Cambridge University, he told me, have “looked at literally tens of thousands of personal projects in thousands of participants.” Most people, Little’s work suggests, have around fifteen projects going at any time, ranging from the banal, like trying to get your wife to remember to switch off your computer once she’s used it (that’s one of mine), to the lofty, like trying to bring peace to the Middle East. Little refers to this second category as the “core” projects. One of his consistent findings is that, in order to bring us happiness, a project must have two qualities: it must be meaningful in some way, and we must have efficacy over it. (That is, there’s little use trying to be the fastest human in the world if you’re an overweight, agoraphobic retiree.) When I described Cole and Fredrickson’s research, Little noted that it was remarkably congruent with his ideas. As with eudaemonia, though, the precise definition of a core project is malleable. “Core projects *can* increase the possibilities for social connection, but not necessarily,” Little said. It all depends on an individual’s needs. “A Trappist monk’s core projects don’t require the same kind of connection as an everyday bloke from Birmingham.”

Indeed, this malleability is perhaps the most encouraging quality of both Little’s core project and Aristotle’s eudaemonia, because it makes finding happiness a real possibility. Even the most temperamentally introverted or miserable among us has the capacity to find a meaningful project that suits who we are. Locating it won’t just bring pleasure; it might also bring a few more years of life in which to get the project

done.

*Will Storr is the author of two books of nonfiction and a novel. His most recent book is “The Unpersuadables: Adventures with the Enemies of Science” (The Overlook Press).*

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