Why We're Born Optimists, and Why That's Good

By Maria Popova

The innate biases that cause us to adjust our perceptions and memories toward the positive give us unique advantages.

"If I expect as little as possible, I won't be hurt," Susan Sontag famously wrote in her diary. And yet we're wired to expect a lot -- and to expect great things. So argues neuroscientist Tali Sharot in *The Science of Optimism: Why We're Hard-Wired for Hope* -- a short, absorbing TED Book summarizing Sharot's own research, as well as that of others in the field, using a combination of neuroimaging and behavioral science to explore why we're "more optimistic than realistic," what this might mean for our everyday well-being, and whether it's due to the specific architecture of our brains.

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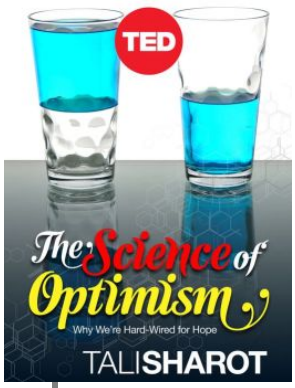

The root of optimism, Sharot suggests, isn't far from what Montaigne argued five centuries ago. She writes:

> Optimism starts with what may be the most extraordinary of human talents: mental time travel. That is, the ability to move back and forth through time and space in one's mind. To think positively about our prospects, it helps to be able to imagine ourselves in the future. Although most of us take this ability for granted, our capacity to envision a different time and place is critical for our survival. It allows us to plan ahead, to save food and resources for times of scarcity, and to endure hard work in anticipation of a future reward.
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> While mental time travel has clear survival advantages, conscious foresight came to humans at an enormous price -- the understanding that somewhere in the future, death awaits. This

> knowledge that old age, sickness, decline of mental power, and oblivion are somewhere around the corner, can be devastating.

In some instances Sharot cites, this "optimism bias" might be better termed "narcissism bias" -- a phenomenon known as the "superiority illusion":

> In a survey by two Ohio researchers, 25 percent of respondents said they were in the top 1 percent for getting along well with others. A separate study of college students found that 93 percent of respondents in the U.S. believed they were above average in driving ability. Most people would even be willing to bet money on it if you asked them to. This high level of car-handling expertise, however, is statistically impossible -- we cannot all be better than everyone else.

In discussing the role of memory in optimism and illusion, Sharot echoes the idea that memory is not a recording device:

> Memories ... are susceptible to inaccuracies partly because the neural system responsible for remembering episodes from our past may not have evolved for the memory function alone. Rather, the core function of the memory system could in fact be to imagine the future -- to enable us to prepare for what is to come. The system was not designed to perfectly replay past events, they claimed. It was designed to flexibly construct future scenarios in our minds. As a result, memory also ends up being a reconstructive process. Occasionally, details are deleted. At other times, they are inserted.

She traces the intersection of memory and optimism to a neural framework:

> The capacity to envision the future relies partially on the hippocampus, a brain structure that is crucial to memory. Patients with damage to their hippocampus are unable to recollect the past, but they are also unable to construct detailed images of future scenarios. They appear to be stuck in time.
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> [...]
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> Findings from a study I conducted a few years ago with prominent neuroscientist Elizabeth Phelps suggest that directing our thoughts of the future toward the positive is a result of our frontal cortex communicating with subcortical regions deep in our brain. The frontal cortex, a large area behind the forehead, is the most recently evolved part of the brain. It is larger in humans than in other primates and is critical for many complex human functions such as language and goal setting.

Curiously, people with depression are better able to predict future events accurately, indicating that we would all be somewhat depressed if we lacked that very neural mechanism that underpins our optimism bias. But, of course, there's a problem with that realistic -- or, worse yet, pessimistic -- accuracy:

> The problem with pessimistic expectations, such as those of the clinically depressed, is that they

> have the power to alter the future; negative expectations shape outcomes in a negative way. Not everyone agrees with this assertion. Some people believe the secret to happiness is low expectations. If we don't expect greatness or find love or maintain health or achieve success, we will never be disappointed. If we are never disappointed when things don't work out and are pleasantly surprised when things go well, we will be happy. It's a good theory -- but it's wrong. Research shows that whatever the outcome, whether we succeed or we fail, people with high expectations tend to feel better. At the end of the day, how we feel when we get dumped or win an award depends mostly on how we interpret the event.

Indeed, as we've seen with "the winner effect," optimism might provide an adaptive advantage:

> Although the belief in a better future is often an illusion, optimism has clear benefits in the present. Hope keeps our minds at ease, lowers stress, and improves physical health. This is probably the most surprising benefit of optimism. All else being equal, optimists are healthier and live longer. It is not just that healthy people are more optimistic, but optimism can enhance health. Expecting our future to be good reduces stress and anxiety, which is good for our health. Researchers studying heart attack patients have found that optimists were more likely than nonoptimistic patients to take vitamins, eat low-fat diets, and exercise, thereby reducing their overall coronary risk. A study of cancer patients revealed that pessimistic patients under the age of 60 were more likely to die within eight months than nonpessimistic patients of the same initial health, status, and age.

One of the most fascinating aspects of optimism comes from behavioral economist Andrew Oswald's research, who studies happiness across the life-cycle. Sharot writes:

> Happiness and the ability to learn from bad news alter with age in reverse patterns. The latter follows an inverse U shape, while the former a more traditional U shape. The behavioral economist Andrew Oswald found that from about the time we are teenagers, our sense of happiness starts to decline, hitting rock bottom in our mid-40s (middle-age crisis, anyone?). Then our sense of happiness miraculously starts to go up again rapidly as we grow older. This finding contradicts the common assumption that people in their 60s, 70s, and 80s are less happy and satisfied than people in their 30s and 40s.
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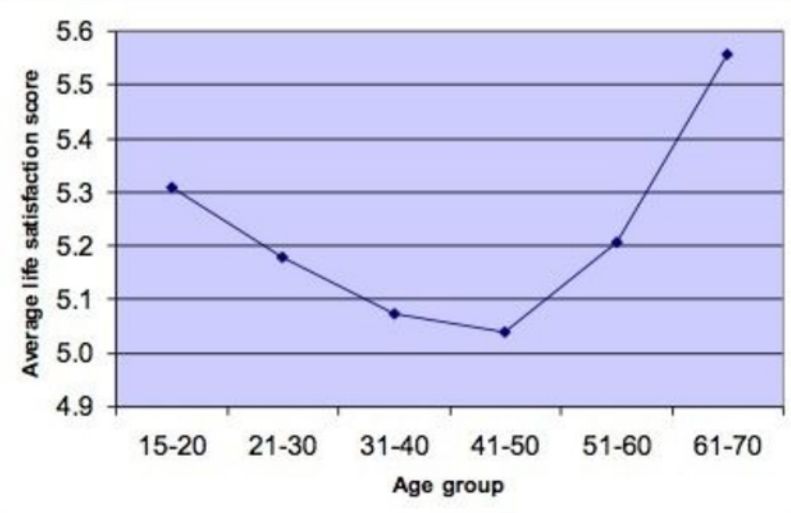
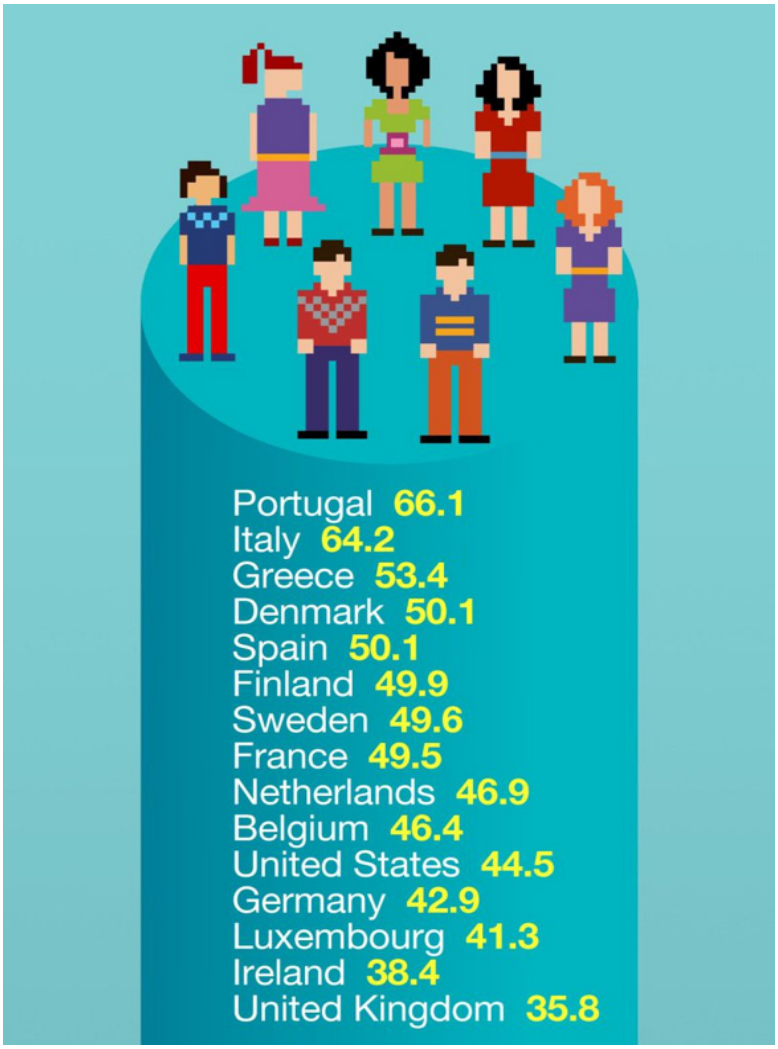
> All in all, Oswald tested a half million people in 72 countries, in both developing and developed nations. He observed the same pattern across all parts of the globe and across sexes. From Switzerland to Ecuador, from Romania to Singapore, Slovakia, Israel, Spain, Australia, and China. Happiness diminishes as we transition from childhood to adulthood and then starts rising as we grow wrinkles and acquire gray hair. And it's not only we humans who slump in the middle and feel sunnier toward the end. Just recently, Oswald and colleagues demonstrated that even chimpanzees and orangutans appear to experience a similar pattern of midlife malaise.



Perhaps most interestingly, these results held even when Oswald controlled for variables like marital status, health, and cultural climate. But Oswald did find some discrepancies in the age at which happiness reaches its lowest point across different countries, as well as across gender -- women hit happiness-bottom at 38.6 years on average, whereas men do more than a decade later, at nearly 53.



Sharot goes on to examine the potential causes of such life-cycle patterns and explores the practical implications of this research -- like, for instance, why fear-based PSAs targeting adolescents might be

ineffective and how packaging might better communicate a product's benefits. She concludes:

> Yes, optimism is on one level irrational and can also lead to unwanted outcomes. But the bias also protects and inspires us: It keeps us moving forward, rather than to the nearest high-rise ledge. To make progress, we need to be able to imagine alternative realities, and not just any old reality but a better one; and we need to believe that we can achieve it. Such faith helps motivate us to pursue our goals. The question then is: How can we remain hopeful, benefiting from the fruits of optimism while at the same time guarding ourselves from optimism's pitfalls? We are not born with an innate understanding of our biases. The brain's illusions have to be identified by careful scientific observation and controlled experiments, and then communicated to the rest of us. Once we are made aware of our optimistic illusions, we can act to protect ourselves. The good news is that awareness rarely shatters the illusion. The glass remains half full. It is possible to strike a balance, to believe we will stay healthy but get medical insurance anyway; to be certain the sun will shine but grab an umbrella on our way out the door -- just in case.

Because, as a very wise woman once wrote, "if you imagine less, less will be what you undoubtedly deserve ... imagine immensities."

For a deeper dive, complement *The Science of Optimism* with Sharot's full-length book, *The Optimism Bias: A Tour of the Irrationally Positive Brain*, one of 7 essential books on optimism, and pair with her 2012 TED talk:

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Tali Sharot

The optimism bias

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