

Shelley E. Taylor

*on healthy illusions*

When people see news reports about survivors of traumatic events, they are often startled to hear them sound so upbeat – even grateful. “We all pulled together” and “I found out what is really important in life” are common themes. In interviews I have conducted with survivors of life-threatening diseases, I’ve often heard such statements as “I can keep the cancer from coming back,” “I have control over the course of my HIV,” and “I am a better person for having had a heart attack.”

Many of these accounts reflect the self-affirming beliefs that arise from having done battle with an intensely stressful experience and won, at least for the short term. Others, however, are

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based on mild but unquestionable illusions. There is no hard evidence that cancer patients can keep their cancer from coming back, for example, or that people with HIV can personally exert control over its course, yet the optimism that illness can be overcome by will is common among people with life-threatening diseases. When interviewed some months after what would seem to be devastating experiences, people often say their lives are even more happy and satisfying than they were before these catastrophic events. My research program of the last twenty-five years has explored such ‘positive illusions’ and their impact on mental and physical health.

When I first began this work, I had assumed that adjustment to trauma and recovery was a homeostatic process. That is, I suspected there were mechanisms within the mind that help restore people’s emotional balance to levels they experienced before encountering a threatening event. Homeostasis is a logical theory for such a process, because it accounts for the many biological systems that function after a perturbation. When we run from a threatening dog, for example, respiration and heart rate first increase and then quickly decline to their normal levels after the event has passed.

But my students and I soon learned from our interviews that the process that characterizes recovery from a broad array of traumatic events – cancer, heart disease, natural disasters, even rape – is not defined by homeostasis. Rather, many people who have been through these challenging events appear to have achieved a higher level of emotional and social functioning than they had experienced prior to the event. Many of them say the event forced them to rethink their values and priorities and to live a

moment at a time in order to extract as much enjoyment and meaning from life as possible. As one of the cancer patients put it: "The trick, of course, is to do this without getting cancer."

At the same time, many of the recoveries seemed to depend on certain distortions. I was, for example, surprised and somewhat disturbed to hear a cancer patient state with complete confidence that she would never get cancer again, knowing from the medical chart that she would almost certainly develop a recurrence and ultimately die of the disease.

At first we were concerned that these optimistic illusions reflected a poor adjustment to the illness, and that when recurrences subsequently appeared people would be left more devastated than if they had not clung to such optimistic fantasies. But our concerns were misplaced. In fact, those who maintained optimistic assessments of their situations, who believed, despite evidence to the contrary, that they could conquer their problems, were actually *healthier*: they were better adjusted to their circumstances, as assessed by standard clinical tools, than were patients with a more realistic understanding of their condition. Moreover, when a disease recurred, those who had expressed unwarranted optimism about their ability to stave off illness nonetheless fared better psychologically than patients whose expectations were more reasonable. Indeed, it seemed that optimistic illusions were an invaluable resource; they gave patients a sense of personal control and bolstered their ability to find meaning in life's unwelcome experiences, enabling them to cope effectively with intensely stressful events.

Over the past decade, our research has addressed an even more intriguing question: Can positive illusions not only buffer people psychologically against adverse responses to threatening events,

but also actually influence biological responses to stress and illness?

This complex and controversial question has long been a focus of attention for both humanists and scientists, yet until recently the idea that the mind can influence the body in ways that promote healing has been little more than a hunch. Now there is mounting evidence that positive beliefs do indeed influence health and the course of physical illnesses. Solid medical research has demonstrated the relation of negative emotional states such as depression to the course of several chronic diseases, including heart disease and hypertension. Depression and anxiety have been linked unequivocally to altered immune processes. In laboratory studies, scientists have been able to induce positive emotional states and show how they lessen biological responses to stressful events.

To address these issues in the context of a physical disease, my colleague Margaret Kemeny and I examined the relation of positive beliefs to the course of HIV infection. Unlike the progression of cancer, heart disease, and some of the other illnesses we studied with respect to psychological adjustment, HIV progression can be precisely charted through the numbers of CD4 T-helper cells and the amount of viral load, that is, the amount of HIV in the system. Using methods like these, scientists have uncovered many of the biological and treatment-related cofactors that independently influence the course of HIV infection, which include alcohol consumption, drug use, sleep, and medication use. These factors can be precisely controlled when looking at the potential role of positive beliefs in affecting the course of the disease.

An early study spearheaded by Geoffrey Reed focused on men who had been diagnosed with AIDS. We were able to identify a group of men who had realisti-

cally accepted and were preparing for their inevitable death, and a second group of men who were holding on to their optimistic beliefs, despite the progression of their illness. Controlling for the many other factors that influence the course of the illness, we found that those men who maintained their optimistic beliefs lived an average of nine months longer than those who had accepted their decline. We conducted similar studies with men who were HIV seropositive but asymptomatic with respect to AIDS and found that those who held positive beliefs about their future were less likely to develop symptoms and decline over a several-year follow-up period. Remarkably, then, positive beliefs are protective against the progression of what was at the time and often continues to be a fatal disease.

But how does this remarkable psychological achievement occur? What converts positive beliefs into biological benefits? We reasoned that optimistic illusions may enable people to cope more successfully with stress and thereby keep physiological and neuroendocrine responses to stress at low levels. Everyone is familiar with the biological changes that occur in response to stress, which include shallow rapid breathing, an increased heart rate, and neuroendocrine changes within the body.

In the short term, such changes are protective. They engage the fight-or-flight response that helps us escape from harm. However, with repeated exposure to stressful events, the biological systems responsible for mounting these protective emergency reactions get overused and may lose their elasticity and ability to respond. Blood pressure, for example, increases in response to stressful events, and with accumulating exposure to such events may permanently increase. The almost inevitable increase in resting blood pressure that accompa-

nies aging is thought to result from the wear and tear exerted on this regulatory system by repeated exposure to stress.

With these observations in mind, one may hypothesize that unrealistically optimistic beliefs are protective of health. Beliefs that the future will be better, that one has the ability to cope with it, and that personal efforts to control stressful events will be successful may enable people to confront the challenges of daily life with tempered biological responses to those events. Over time, the cumulative wear and tear on their biological stress regulatory systems will be less than if they met stressful events head-on, with no psychological buffer.

Our most recent investigations have confirmed this hypothesis. When people with positive illusions are brought into the laboratory to face challenging events, such as giving a speech or computing mental arithmetic, their biological stress responses, in the form of heart rate, blood pressure, and neuroendocrine responses, are lower and remain so throughout the events, compared to those of people who do not hold these positive beliefs.

Science has now taken some of the mystery out of how the mind influences the body, but none of the wonder that such psychological achievements inspire. The ability of human beings to remain hopeful in the face of tragedy is a remarkable psychological achievement. Exploring how the mind imposes meaning on challenging events, and does so in ways that are ultimately adaptive for physical and mental health, is not only scientifically exciting, but also yields great respect for a species that has evolved to the point that it can triumph over many adversities through sheer mental effort.