Appendix 1: Resilience

How People Learn to Become Resilient
by Maria Konnikova
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Perception is key to resilience: Do you conceptualize an event as traumatic, or as a chance to learn and grow?

Norman Garmezy, a developmental psychologist and clinician at the University of Minnesota, met thousands of children in his four decades of research. But one boy in particular stuck with him. He was nine years old, with an alcoholic mother and an absent father. Each day, he would arrive at school with the exact same sandwich: two slices of bread with nothing in between. At home, there was no other food available, and no one to make any. Even so, Garmezy would later recall, the boy wanted to make sure that “no one would feel pity for him and no one would know the ineptitude of his mother.” Each day, without fail, he would walk in with a smile on his face and a “bread sandwich” tucked into his bag.

The boy with the bread sandwich was part of a special group of children. He belonged to a cohort of kids—the first of many—whom Garmezy would go on to identify as succeeding, even excelling, despite incredibly difficult circumstances. These were the children who exhibited a trait Garmezy would later identify as “resilience.” (He is widely credited with being the first to study the concept in an experimental setting.) Over many years, Garmezy would visit schools across the country, focusing on those in economically depressed areas, and follow a standard protocol. He would set up meetings with the principal, along with a school social worker or nurse, and pose the same question: Were there any children whose backgrounds had initially raised red flags—kids who seemed likely to become problem kids—who had instead become, surprisingly, a source of pride?

“What I was saying was, ‘Can you identify stressed children who are making it here in your school?’” Garmezy said, in a 1999 interview. “There would be a long pause after my inquiry before the answer came. If I had said, ‘Do you have kids in this school who seem to be troubled?’, there wouldn’t have been a moment’s delay. But to be asked about children who were adaptive and good citizens in the school and making it even though they had come out of very disturbed backgrounds—that was a new sort of inquiry. That’s the way we began.”

Resilience presents a challenge for psychologists. Whether you can be said to have it or not largely depends not on any particular psychological test but on the way your life unfolds. If you are lucky
enough to never experience any sort of adversity, we won’t know how resilient you are. It’s only when you’re faced with obstacles, stress, and other environmental threats that resilience, or the lack of it, emerges: Do you succumb or do you surmount?

Environmental threats can come in various guises. Some are the result of low socioeconomic status and challenging home conditions. (Those are the threats studied in Garmezy’s work.) Often, such threats—parents with psychological or other problems; exposure to violence or poor treatment; being a child of problematic divorce—are chronic. Other threats are acute: experiencing or witnessing a traumatic violent encounter, for example, or being in an accident. What matters is the intensity and the duration of the stressor. In the case of acute stressors, the intensity is usually high. The stress resulting from chronic adversity, Garmezy wrote, might be lower—but it “exerts repeated and cumulative impact on resources and adaptation and persists for many months and typically considerably longer.”

Prior to Garmezy’s work on resilience, most research on trauma and negative life events had a reverse focus. Instead of looking at areas of strength, it looked at areas of vulnerability, investigating the experiences that make people susceptible to poor life outcomes (or that lead kids to be “troubled,” as Garmezy put it). Garmezy’s work opened the door to the study of protective factors: the elements of an individual’s background or personality that could enable success despite the challenges they faced. Garmezy retired from research before reaching any definitive conclusions—his career was cut short by early-onset Alzheimer’s—but his students and followers were able to identify elements that fell into two groups: individual, psychological factors and external, environmental factors, or disposition on the one hand and luck on the other.

In 1989 a developmental psychologist named Emmy Werner published the results of a thirty-two-year longitudinal project. She had followed a group of six hundred and ninety-eight children, in Kauai, Hawaii, from before birth through their third decade of life. Along the way, she’d monitored them for any exposure to stress: maternal stress in utero, poverty, problems in the family, and so on. Two-thirds of the children came from backgrounds that were, essentially, stable, successful, and happy; the other third qualified as “at risk.” Like Garmezy, she soon discovered that not all of the at-risk children reacted to stress in the same way. Two-thirds of them “developed serious learning or behavior problems by the age of ten, or had delinquency records, mental health problems, or teenage pregnancies by the age of eighteen.” But the remaining third developed into “competent, confident, and caring young adults.” They had attained academic, domestic, and social success—and they were always ready to capitalize on new opportunities that arose.

What was it that set the resilient children apart? Because the individuals in her sample had been followed and tested consistently for three decades, Werner had a trove of data at her disposal. She found that several elements predicted resilience. Some elements had to do with luck: a resilient child might have a strong bond with a supportive caregiver, parent, teacher, or other mentor-like figure. But another, quite large set of elements was psychological, and had to do with how the children responded to the environment. From a young age, resilient children tended to “meet the world on their own terms.” They were autonomous and independent, would seek out new experiences, and had a “positive social orientation.” “Though not especially gifted, these children used whatever skills they had effectively,” Werner wrote. Perhaps most importantly, the resilient children had what psychologists call an “internal locus of control”: they believed that they, and not their circumstances, affected their achievements. The resilient children saw themselves as the orchestrators of their own
fates. In fact, on a scale that measured locus of control, they scored more than two standard deviations away from the standardization group.

Werner also discovered that resilience could change over time. Some resilient children were especially unlucky: they experienced multiple strong stressors at vulnerable points and their resilience evaporated. Resilience, she explained, is like a constant calculation: Which side of the equation weighs more, the resilience or the stressors? The stressors can become so intense that resilience is overwhelmed. Most people, in short, have a breaking point. On the flip side, some people who weren’t resilient when they were little somehow learned the skills of resilience. They were able to overcome adversity later in life and went on to flourish as much as those who’d been resilient the whole way through. This, of course, raises the question of how resilience might be learned.

George Bonanno is a clinical psychologist at Columbia University’s Teachers College; he heads the Loss, Trauma, and Emotion Lab and has been studying resilience for nearly twenty-five years. Garmezy, Werner, and others have shown that some people are far better than others at dealing with adversity; Bonanno has been trying to figure out where that variation might come from. Bonanno’s theory of resilience starts with an observation: all of us possess the same fundamental stress-response system, which has evolved over millions of years and which we share with other animals. The vast majority of people are pretty good at using that system to deal with stress. When it comes to resilience, the question is: Why do some people use the system so much more frequently or effectively than others?

One of the central elements of resilience, Bonanno has found, is perception: Do you conceptualize an event as traumatic, or as an opportunity to learn and grow? “Events are not traumatic until we experience them as traumatic,” Bonanno told me, in December. “To call something a ‘traumatic event’ belies that fact.” He has coined a different term: PTE, or potentially traumatic event, which he argues is more accurate. The theory is straightforward. Every frightening event, no matter how negative it might seem from the sidelines, has the potential to be traumatic or not to the person experiencing it. (Bonanno focusses on acute negative events, where we may be seriously harmed; others who study resilience, including Garmezy and Werner, look more broadly.) Take something as terrible as the surprising death of a close friend: you might be sad, but if you can find a way to construe that event as filled with meaning—perhaps it leads to greater awareness of a certain disease, say, or to closer ties with the community—then it may not be seen as a trauma. (Indeed, Werner found that resilient individuals were far more likely to report having sources of spiritual and religious support than those who weren’t.) The experience isn’t inherent in the event; it resides in the event’s psychological construal.

It’s for this reason, Bonanno told me, that “stressful” or “traumatic” events in and of themselves don’t have much predictive power when it comes to life outcomes. “The prospective epidemiological data shows that exposure to potentially traumatic events does not predict later functioning,” he said. “It’s only predictive if there’s a negative response.” In other words, living through adversity, be it endemic to your environment or an acute negative event, doesn’t guarantee that you’ll suffer going forward. What matters is whether that adversity becomes traumatizing.

The good news is that positive construal can be taught. “We can make ourselves more or less vulnerable by how we think about things,” Bonanno said. In research at Columbia, the neuroscientist Kevin Ochsner has shown that teaching people to think of stimuli in different ways—
to reframe them in positive terms when the initial response is negative, or in a less emotional way when the initial response is emotionally “hot”—changes how they experience and react to the stimulus. You can train people to better regulate their emotions, and the training seems to have lasting effects.

Similar work has been done with explanatory styles—the techniques we use to explain events. I’ve written before about the research of Martin Seligman, the University of Pennsylvania psychologist who pioneered much of the field of positive psychology: Seligman found that training people to change their explanatory styles from internal to external (“Bad events aren’t my fault”), from global to specific (“This is one narrow thing rather than a massive indication that something is wrong with my life”), and from permanent to impermanent (“I can change the situation, rather than assuming it’s fixed”) made them more psychologically successful and less prone to depression. The same goes for locus of control: not only is a more internal locus tied to perceiving less stress and performing better but changing your locus from external to internal leads to positive changes in both psychological well-being and objective work performance. The cognitive skills that underpin resilience, then, seem like they can indeed be learned over time, creating resilience where there was none.

Unfortunately, the opposite may also be true. “We can become less resilient, or less likely to be resilient,” Bonanno says. “We can create or exaggerate stressors very easily in our own minds. That’s the danger of the human condition.” Human beings are capable of worry and rumination: we can take a minor thing, blow it up in our heads, run through it over and over, and drive ourselves crazy until we feel like that minor thing is the biggest thing that ever happened. In a sense, it’s a self-fulfilling prophecy. Frame adversity as a challenge, and you become more flexible and able to deal with it, move on, learn from it, and grow. Focus on it, frame it as a threat, and a potentially traumatic event becomes an enduring problem; you become more inflexible, and more likely to be negatively affected.

In December the *New York Times Magazine* published an essay called “The Profound Emptiness of ‘Resilience.’” It pointed out that the word is now used everywhere, often in ways that drain it of meaning and link it to vague concepts like “character.” But resilience doesn’t have to be an empty or vague concept. In fact, decades of research have revealed a lot about how it works. This research shows that resilience is, ultimately, a set of skills that can be taught. In recent years, we’ve taken to using the term sloppily—but our sloppy usage doesn’t mean that it hasn’t been usefully and precisely defined. It’s time we invest the time and energy to understand what “resilience” really means.

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