

**Mistakes Were Made—(but not by me)**  
**Dr. Carol Dweck**

*It is considered unhealthy in America to remember mistakes, neurotic to think about them, and psychotic to dwell upon them.*

—playwright Lillian Hellman

How we think about mistakes is not hardwired. After the disastrous bloodbath of Pickett's Charge at the Battle of Gettysburg, in which more than half of his 12,500 men were slaughtered by Union Soldiers, Robert E. Lee said: "All this has been my fault. I asked more of my men than should have been asked for them." Robert E. Lee was a great general who made a tragic miscalculation, but that mistake did not make him an incompetent military leader. If Robert E. Lee could take responsibility for an action that cost thousands of lives, why can't all those people who get pulled over for speeding admit that they were speeding?

Most Americans know they are supposed to say "we learn from our mistakes," but deep down, they don't believe it for a minute. They think that mistakes mean you are stupid. Combined with the culture's famous amnesia for anything that happened more than a month ago, this attitude means that people treat mistakes like hot potatoes, eager to get rid of them as fast as possible, even if they have to toss them in someone else's lap. One lamentable consequence of the belief that mistakes equal stupidity is that when people do make a mistake, they don't learn from it.

So embedded is the link between mistakes and stupidity in American culture that it can be shocking to learn that not all cultures share the same phobia about them. In the 1970s, psychologists Harold Stevenson and James Stigler became interested in the math gap in performance between Asians and American schoolchildren: By the fifth grade, the lowest-scoring Japanese classroom was outperforming the highest-scoring American classroom. To find out why, Stevenson and Stigler spent the next decade comparing elementary classrooms in the U.S., China, and Japan. Their epiphany occurred as they watched a Japanese boy struggle with the assignment of drawing cubes in three dimensions on the blackboard. The boy kept at it for forty-five minutes, making repeated mistakes, as Stevenson and Stigler became increasingly anxious and embarrassed for him. Yet the boy himself was utterly unselfconscious, and the American observers wondered why they felt worse than he did. "Our culture exacts a great cost psychologically for making a mistake," Stigler recalled, "whereas in Japan, it doesn't seem to be that way. In Japan, mistakes, error, confusion (are) all just a natural part of the learning process." (The boy eventually mastered the problem, to the cheers of his classmates.)

The researchers also found that American parents, teachers, and children were more far more likely than their Japanese and Chinese counterparts to believe that mathematical ability is innate; if you have it, you don't have to work hard, and if you don't have it, there's no point in trying. In contrast, most Asians regard math success, like achievement in any other domain, as a matter of persistence and plain hard work. Of course you will make mistakes as you go along, that's how you learn and improve. It doesn't mean you are stupid.

Making mistakes is central to the education of budding scientists and artists of all kinds, who must have the freedom to experiment, try this idea, flop, try another idea, take a risk, and be willing to get the wrong answer. One classic example, once taught to American school children and still on many inspirational Web sites in various versions, is Thomas Edison's reply to his assistant (or to a reporter), who was lamenting Edison's ten thousand experimental failures in his effort to create the first incandescent light bulb. "I have not failed," he told the assistant (or reporter). "I successfully discovered 10,000 elements that don't work." Most American children, however, are denied the freedom to noodle around, to experiment, and be wrong in ten ways, let alone ten thousand. The focus on constant testing, which grew out of the reasonable desire to measure and standardize children's accomplishments, has intensified their fear of failure. It is certainly important for children to learn to succeed; but is just as important for them to learn not to fear failure. When children or adults fear failure, they fear risk. They can't afford to be wrong.

There is another powerful reason that American children fear being wrong: They worry that making mistakes reflects on their inherent abilities. In twenty years of research with American schoolchildren, psychologist Carol Dweck has pinpointed one of the major reasons for the cultural differences that Stevenson and Stigler observed. In her experiments, some children are praised for their efforts in mastering a new challenge. Others are praised for their intelligence and ability, the kind of thing many parents say when their children do well: "You're a natural math whiz, Johnny." Yet these simple messages to children have profoundly different consequences. Children who, like their Asian counterparts, are praised for their efforts, even when they don't "get it" at first, eventually perform better and like what they are learning more than children praised for their natural abilities. They are also more likely to regard mistakes and criticism as useful information that will help them improve.

In contrast, children praised for their natural ability learn to care more about how competent they look to others than about what they are actually learning. They become defensive about not doing well or about making mistakes, and this sets them up for a self-defeating cycle: If they don't do well, then to resolve the ensuing dissonance ("I'm smart and yet I screwed up"), they simply lose interest in what they are learning or studying ("I could do it if I wanted to, but I don't want to"). When these kids grow up, they will be the kind of adults who are afraid of making mistakes or taking responsibility for them, because that would be evidence that they are not naturally smart after all.

Dweck has found that these different approaches toward learning and the meaning of mistakes—are they evidence that you are stupid or evidence that you can improve?—are not engrained in personality traits. They are attitudes, and, as such, they can change. Dweck has been changing her students' attitudes toward learning and error for years, and her intervention is surprising simple: She teaches elementary-school children and college students alike that intelligence is not a fixed, inborn trait, like eye color, but rather a skill, like bike riding, that can be honed by hard work. This lesson is often stunning to American kids who have been hearing for years that intelligence is innate. When they accept Dweck's message, their motivation increases, they get better grades, they enjoy their studies more, and they don't beat themselves up when they have setbacks.

The moral of our story is easy to say, and difficult to execute. When you screw up, try saying this: "I made a mistake. I need to understand what went wrong. I don't want to make the same mistake again." Dweck's research is heartening because it suggests that at all ages, people can learn to see mistakes not as terrible personal failings to be denied or justified, but as inevitable aspects of life that help us grow, and grow up.

*A man travels many miles to consult the wisest guru in the land.*

*When he arrives, he asks the wise man: "Oh, wise guru, what is the secret of a happy life?"*

*"Good judgment," says the guru.*

*"But oh, wise guru," says the man, "how do I achieve good judgment?"*

*"Bad judgment," says the guru. (Unknown)*

*A great nation is like a great man:*

*When he makes a mistake, he realizes it.*

*Having realized it, he admits it.*

*Having admitted it, he corrects it.*

*He considers those who point out his faults*

*as his most benevolent teachers. Lao Tzu*

