

MINDSET

*The New Psychology
of Success*

CAROL S. DWECK, PH.D.



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THE MINDSETS

When I was a young researcher, just starting out, something happened that changed my life. I was obsessed with understanding how people cope with failures, and I decided to study it by watching how students grapple with hard problems. So I brought children one at a time to a room in their school, made them comfortable, and then gave them a series of puzzles to solve. The first ones were fairly easy, but the next ones were hard. As the students grunted, perspired, and toiled, I watched their strategies and probed what they were thinking and feeling. I expected differences among children in how they coped with the difficulty, but I saw something I never expected.

Confronted with the hard puzzles, one ten-year-old boy pulled up his chair, rubbed his hands together, smacked his lips, and cried out, "I love a challenge!" Another, sweating away on these puzzles, looked up with a pleased expression and said with authority, "You know, I was *hoping* this would be informative!"

What's wrong with them? I wondered. I always thought you coped with failure or you didn't cope with failure. I never thought anyone *loved* failure. Were these alien children or were they on to something?

Everyone has a role model, someone who pointed the way at a critical moment in their lives. These children were my role models. They obviously knew something I didn't and I was determined to figure it

out—to understand the kind of mindset that could turn a failure into a gift.

What did they know? They knew that human qualities, such as intellectual skills, could be cultivated through effort. And that's what they were doing—getting smarter. Not only weren't they discouraged by failure, they didn't even think they were failing. They thought they were learning.

I, on the other hand, thought human qualities were carved in stone. You were smart or you weren't, and failure meant you weren't. It was that simple. If you could arrange successes and avoid failures (at all costs), you could stay smart. Struggles, mistakes, perseverance were just not part of this picture.

Whether human qualities are things that can be cultivated or things that are carved in stone is an old issue. What these beliefs mean for you is a new one: What are the consequences of thinking that your intelligence or personality is something you can develop, as opposed to something that is a fixed, deep-seated trait? Let's first look in on the age-old, fiercely waged debate about human nature and then return to the question of what these beliefs mean for you.

WHY DO PEOPLE DIFFER?

Since the dawn of time, people have thought differently, acted differently, and fared differently from each other. It was guaranteed that someone would ask the question of why people differed—why some people are smarter or more moral—and whether there was something that made them permanently different. Experts lined up on both sides. Some claimed that there was a strong physical basis for these differences, making them unavoidable and unalterable. Through the ages, these alleged physical differences have included bumps on the skull (phrenology), the size and shape of the skull (craniology), and, today, genes.

Others pointed to the strong differences in people's backgrounds, experiences, training, or ways of learning. It may surprise you to know that a big champion of this view was Alfred Binet, the inventor of the IQ

test. Wasn't the IQ test meant to summarize children's unchangeable intelligence? In fact, no. Binet, a Frenchman working in Paris in the early twentieth century, designed this test to identify children who were not profiting from the Paris public schools, *so that new educational programs could be designed to get them back on track*. Without denying individual differences in children's intellects, he believed that education and practice could bring about fundamental changes in intelligence. Here is a quote from one of his major books, *Modern Ideas About Children*, in which he summarizes his work with hundreds of children with learning difficulties:

A few modern philosophers . . . assert that an individual's intelligence is a fixed quantity, a quantity which cannot be increased. We must protest and react against this brutal pessimism. . . . With practice, training, and above all, method, we manage to increase our attention, our memory, our judgment and literally to become more intelligent than we were before.

Who's right? Today most experts agree that it's not either—or. It's not nature *or* nurture, genes *or* environment. From conception on, there's a constant give and take between the two. In fact, as Gilbert Gottlieb, an eminent neuroscientist, put it, not only do genes and environment cooperate as we develop, but genes *require* input from the environment to work properly.

At the same time, scientists are learning that people have more capacity for lifelong learning and brain development than they ever thought. Of course, each person has a unique genetic endowment. People may start with different temperaments and different aptitudes, but it is clear that experience, training, and personal effort take them the rest of the way. Robert Sternberg, the present-day guru of intelligence, writes that the major factor in whether people achieve expertise “is not some fixed prior ability, but purposeful engagement.” Or, as his forerunner Binet recognized, it's not always the people who start out the smartest who end up the smartest.

WHAT DOES ALL THIS MEAN FOR YOU? THE TWO MINDSETS

It's one thing to have pundits spouting their opinions about scientific issues. It's another thing to understand how these views apply to you. For twenty years, my research has shown that *the view you adopt for yourself* profoundly affects the way you lead your life. It can determine whether you become the person you want to be and whether you accomplish the things you value. How does this happen? How can a simple belief have the power to transform your psychology and, as a result, your life?

Believing that your qualities are carved in stone—the *fixed mindset*—creates an urgency to prove yourself over and over. If you have only a certain amount of intelligence, a certain personality, and a certain moral character—well, then you'd better prove that you have a healthy dose of them. It simply wouldn't do to look or feel deficient in these most basic characteristics.

Some of us are trained in this mindset from an early age. Even as a child, I was focused on being smart, but the fixed mindset was really stamped in by Mrs. Wilson, my sixth-grade teacher. Unlike Alfred Binet, she believed that people's IQ scores told the whole story of who they were. We were seated around the room in IQ order, and only the highest-IQ students could be trusted to carry the flag, clap the erasers, or take a note to the principal. Aside from the daily stomachaches she provoked with her judgmental stance, she was creating a mindset in which everyone in the class had one consuming goal—look smart, don't look dumb. Who cared about or enjoyed learning when our whole being was at stake every time she gave us a test or called on us in class?

I've seen so many people with this one consuming goal of proving themselves—in the classroom, in their careers, and in their relationships. Every situation calls for a confirmation of their intelligence, personality, or character. Every situation is evaluated: *Will I succeed or fail? Will I look smart or dumb? Will I be accepted or rejected? Will I feel like a winner or a loser?*

But doesn't our society value intelligence, personality, and character? Isn't it normal to want these traits? Yes, but . . .

There's another mindset in which these traits are not simply a hand

you're dealt and have to live with, always trying to convince yourself and others that you have a royal flush when you're secretly worried it's a pair of tens. In this mindset, the hand you're dealt is just the starting point for development. This *growth mindset* is based on the belief that your basic qualities are things you can cultivate through your efforts. Although people may differ in every which way—in their initial talents and aptitudes, interests, or temperaments—everyone can change and grow through application and experience.

Do people with this mindset believe that anyone can be anything, that anyone with proper motivation or education can become Einstein or Beethoven? No, but they believe that a person's true potential is unknown (and unknowable); that it's impossible to foresee what can be accomplished with years of passion, toil, and training.

Did you know that Darwin and Tolstoy were considered ordinary children? That Ben Hogan, one of the greatest golfers of all time, was completely uncoordinated and graceless as a child? That the photographer Cindy Sherman, who has been on virtually every list of the most important artists of the twentieth century, *failed* her first photography course? That Geraldine Page, one of our greatest actresses, was advised to give it up for lack of talent?

You can see how the belief that cherished qualities can be developed creates a passion for learning. Why waste time proving over and over how great you are, when you could be getting better? Why hide deficiencies instead of overcoming them? Why look for friends or partners who will just shore up your self-esteem instead of ones who will also challenge you to grow? And why seek out the tried and true, instead of experiences that will stretch you? The passion for stretching yourself and sticking to it, even (or especially) when it's not going well, is the hallmark of the growth mindset. This is the mindset that allows people to thrive during some of the most challenging times in their lives.

A VIEW FROM THE TWO MINDSETS

To give you a better sense of how the two mindsets work, imagine—as vividly as you can—that you are a young adult having a really bad day:

One day, you go to a class that is really important to you and that you like a lot. The professor returns the midterm papers to the class. You got a C+. You're very disappointed. That evening on the way back to your home, you find that you've gotten a parking ticket. Being really frustrated, you call your best friend to share your experience but are sort of brushed off.

What would you think? What would you feel? What would you do?

When I asked people with the fixed mindset, this is what they said: "I'd feel like a reject." "I'm a total failure." "I'm an idiot." "I'm a loser." "I'd feel worthless and dumb—everyone's better than me." "I'm slime." In other words, they'd see what happened as a direct measure of their competence and worth.

This is what they'd think about their lives: "My life is pitiful." "I have no life." "Somebody upstairs doesn't like me." "The world is out to get me." "Someone is out to destroy me." "Nobody loves me, everybody hates me." "Life is unfair and all efforts are useless." "Life stinks. I'm stupid. Nothing good ever happens to me." "I'm the most unlucky person on this earth."

Excuse me, was there death and destruction, or just a grade, a ticket, and a bad phone call?

Are these just people with low self-esteem? Or card-carrying pessimists? No. When they aren't coping with failure, they feel just as worthy and optimistic—and bright and attractive—as people with the growth mindset.

So how would they cope? "I wouldn't bother to put so much time and effort into doing well in anything." (In other words, don't let anyone measure you again.) "Do nothing." "Stay in bed." "Get drunk." "Eat." "Yell at someone if I get a chance to." "Eat chocolate." "Listen to music and pout." "Go into my closet and sit there." "Pick a fight with somebody." "Cry." "Break something." "What is there to do?"

What is there to do! You know, when I wrote the vignette, I intentionally made the grade a C+, not an F. It was a midterm rather than a final. It was a parking ticket, not a car wreck. They were "sort of brushed off," not rejected outright. Nothing catastrophic or irreversible happened. Yet

from this raw material the fixed mindset created the feeling of utter failure and paralysis.

When I gave people with the growth mindset the same vignette, here's what they said. They'd think:

"I need to try harder in class, be more careful when parking the car, and wonder if my friend had a bad day."

"The C+ would tell me that I'd have to work a lot harder in the class, but I have the rest of the semester to pull up my grade."

There were many, many more like this, but I think you get the idea. Now, how would they cope? Directly.

"I'd start thinking about studying harder (or studying in a different way) for my next test in that class, I'd pay the ticket, and I'd work things out with my best friend the next time we speak."

"I'd look at what was wrong on my exam, resolve to do better, pay my parking ticket, and call my friend to tell her I was upset the day before."

"Work hard on my next paper, speak to the teacher, be more careful where I park or contest the ticket, and find out what's wrong with my friend."

You don't have to have one mindset or the other to be upset. Who wouldn't be? Things like a poor grade or a rebuff from a friend or loved one—these are not fun events. No one was smacking their lips with relish. Yet those people with the growth mindset were not labeling themselves and throwing up their hands. Even though they felt distressed, they were ready to take the risks, confront the challenges, and keep working at them.

SO, WHAT'S NEW?

Is this such a novel idea? We have lots of sayings that stress the importance of risk and the power of persistence, such as "Nothing ventured, nothing gained" and "If at first you don't succeed, try, try again" or "Rome wasn't built in a day." (By the way, I was delighted to learn that the Italians have the same expression.) What is truly amazing is that people with the fixed mindset would not agree. For them, it's "Nothing ventured, nothing lost." "If at first you don't succeed, you probably don't

have the ability.” “If Rome wasn’t built in a day, maybe it wasn’t meant to be.” In other words, risk and effort are two things that might reveal your inadequacies and show that you were not up to the task. In fact, it’s startling to see the degree to which people with the fixed mindset do not believe in effort.

What’s also new is that people’s ideas about risk and effort grow out of their more basic mindset. It’s not just that some people happen to recognize the value of challenging themselves and the importance of effort. Our research has shown that this *comes directly* from the growth mindset. When we teach people the growth mindset, with its focus on development, these ideas about challenge and effort follow. Similarly, it’s not just that some people happen to dislike challenge and effort. When we (temporarily) put people in a fixed mindset, with its focus on permanent traits, they quickly fear challenge and devalue effort.

We often see books with titles like *The Ten Secrets of the World’s Most Successful People* crowding the shelves of bookstores, and these books may give many useful tips. But they’re usually a list of unconnected pointers, like “Take more risks!” or “Believe in yourself!” While you’re left admiring people who can do that, it’s never clear how these things fit together or how you could ever become that way. So you’re inspired for a few days, but basically the world’s most successful people still have their secrets.

Instead, as you begin to understand the fixed and growth mindsets, you will see exactly how one thing leads to another—how a belief that your qualities are carved in stone leads to a host of thoughts and actions, and how a belief that your qualities can be cultivated leads to a host of different thoughts and actions, taking you down an entirely different road. It’s what we psychologists call an *Aha!* experience. Not only have I seen this in my research when we teach people a new mindset, but I get letters all the time from people who have read my work.

They recognize themselves: “As I read your article I literally found myself saying over and over again, ‘This is me, this is me!’” They see the connections: “Your article completely blew me away. I felt I had discovered the secret of the universe!” They feel their mindsets reorienting: “I can certainly report a kind of personal revolution happening in my own thinking, and this is an exciting feeling.” And they can put this new

thinking into practice for themselves *and* others: “Your work has allowed me to transform my work with children and see education through a different lens,” or “I just wanted to let you know what an impact—on a personal and practical level—your outstanding research has had for hundreds of students.”

SELF-INSIGHT: WHO HAS ACCURATE VIEWS OF THEIR ASSETS AND LIMITATIONS?

Well, maybe the people with the growth mindset don’t think they’re Einstein or Beethoven, but aren’t they more likely to have inflated views of their abilities and try for things they’re not capable of? In fact, studies show that people are terrible at estimating their abilities. Recently, we set out to see who is most likely to do this. Sure, we found that people greatly misestimated their performance and their ability. *But it was the people with the fixed mindset who accounted for almost all the inaccuracy.* The people with the growth mindset were amazingly accurate.

When you think about it, this makes sense. If, like those with the growth mindset, you believe you can develop yourself, then you’re open to accurate information about your current abilities, even if it’s unflattering. What’s more, if you’re oriented toward learning, as they are, you need accurate information about your current abilities in order to learn effectively. However, if everything is either good news or bad news about your precious traits—as it is with fixed-mindset people—distortion almost inevitably enters the picture. Some outcomes are magnified, others are explained away, and before you know it you don’t know yourself at all.

Howard Gardner, in his book *Extraordinary Minds*, concluded that exceptional individuals have “a special talent for identifying their own strengths and weaknesses.” It’s interesting that those with the growth mindset seem to have that talent.

WHAT’S IN STORE

The other thing exceptional people seem to have is a special talent for converting life’s setbacks into future successes. Creativity researchers con-

cur. In a poll of 143 creativity researchers, there was wide agreement about the number one ingredient in creative achievement. And it was exactly the kind of perseverance and resilience produced by the growth mindset.

You may be asking again, *How can one belief lead to all this—the love of challenge, belief in effort, resilience in the face of setbacks, and greater (more creative!) success?* In the chapters that follow, you'll see exactly how this happens: how the mindsets change what people strive for and what they see as success. How they change the definition, significance, and impact of failure. And how they change the deepest meaning of effort. You'll see how these mindsets play out in school, in sports, in the workplace, and in relationships. You'll see where they come from and how they can be changed.

Grow Your Mindset

Which mindset do you have? Answer these questions about intelligence. Read each statement and decide whether you mostly agree with it or disagree with it.

1. Your intelligence is something very basic about you that you can't change very much.
2. You can learn new things, but you can't really change how intelligent you are.
3. No matter how much intelligence you have, you can always change it quite a bit.
4. You can always substantially change how intelligent you are.

Questions 1 and 2 are the fixed-mindset questions. Questions 3 and 4 reflect the growth mindset. Which mindset did you agree with more? You can be a mixture, but most people lean toward one or the other.

You also have beliefs about other abilities. You could substitute "artistic talent," "sports ability," or "business skill" for "intelligence." Try it.

It's not only your abilities; it's your personal qualities too. Look at these statements about personality and character and decide whether you mostly agree or mostly disagree with each one.

1. You are a certain kind of person, and there is not much that can be done to really change that.
2. No matter what kind of person you are, you can always change substantially.
3. You can do things differently, but the important parts of who you are can't really be changed.
4. You can always change basic things about the kind of person you are.

Here, questions 1 and 3 are the fixed-mindset questions and questions 2 and 4 reflect the growth mindset. Which did you agree with more?

Did it differ from your intelligence mindset? It can. Your "intelligence mindset" comes into play when situations involve mental ability.

Your "personality mindset" comes into play in situations that involve your personal qualities—for example, how dependable, cooperative, caring, or socially skilled you are. The fixed mindset makes you concerned with how you'll be judged; the growth mindset makes you concerned with improving.

Here are some more ways to think about mindsets:

- Think about someone you know who is steeped in the fixed mindset. Think about how they're always trying to prove themselves and how they're supersensitive about being wrong or making mistakes. Did you ever wonder why they were this way? (Are you this way?) Now you can begin to understand why.
- Think about someone you know who is skilled in the growth mindset—someone who understands that important qualities

can be cultivated. Think about the ways they confront obstacles. Think about the things they do to stretch themselves. What are some ways you might like to change or stretch yourself?

- Okay, now imagine you've decided to learn a new language and you've signed up for a class. A few sessions into the course, the instructor calls you to the front of the room and starts throwing questions at you one after another.

Put yourself in a fixed mindset. Your ability is on the line. Can you feel everyone's eyes on you? Can you see the instructor's face evaluating you? Feel the tension, feel your ego bristle and waver. What else are you thinking and feeling?

Now put yourself in a growth mindset. You're a novice—that's why you're here. You're here to learn. The teacher is a resource for learning. Feel the tension leave you; feel your mind open up.

The message is: You can change your mindset.

Chapter 2

INSIDE THE MINDSETS

When I was a young woman, I wanted a prince-like mate. Very handsome, very successful. A big cheese. I wanted a glamorous career but nothing too hard or risky. And I wanted it all to come to me as validation of who I was.

It would be many years before I was satisfied. I got a great guy, but he was a work in progress. I have a great career, but boy, is it a constant challenge. Nothing was easy. So why am I satisfied? I changed my mindset.

I changed it because of my work. One day my doctoral student, Mar Bandura, and I were trying to understand why some students were so caught up in proving their ability, while others could just let go and learn. Suddenly we realized that there were *two* meanings to ability, not one: a fixed ability that needs to be proven, and a changeable ability that can be developed through learning.

That's how the mindsets were born. I knew instantly which one I had. I realized why I'd always been so concerned about mistakes and failures. And I recognized for the first time that I had a choice.

When you enter a mindset, you enter a new world. In one world—the world of fixed traits—success is about proving you're smart or talented. Validating yourself. In the other—the world of changing qualities—it's about stretching yourself to learn something new. Developing yourself.

In one world, failure is about having a setback. Getting a bad grade

Losing a tournament. Getting fired. Getting rejected. It means you're not smart or talented. In the other world, failure is about not growing. Not reaching for the things you value. It means you're not fulfilling your potential.

In one world, effort is a bad thing. It, like failure, means you're not smart or talented. If you were, you wouldn't need effort. In the other world, effort is what *makes* you smart or talented.

You have a choice. Mindsets are just beliefs. They're powerful beliefs, but they're just something in your mind, and you can change your mind. As you read, think about where you'd like to go and which mindset will take you there.

IS SUCCESS ABOUT LEARNING—OR PROVING YOU'RE SMART?

Benjamin Barber, an eminent sociologist, once said, "I don't divide the world into the weak and the strong, or the successes and the failures. . . . *I divide the world into the learners and nonlearners.*"

What on earth would make someone a nonlearner? Everyone is born with an intense drive to learn. Infants stretch their skills daily. Not just ordinary skills, but the most difficult tasks of a lifetime, like learning to walk and talk. They never decide it's too hard or not worth the effort. Babies don't worry about making mistakes or humiliating themselves. They walk, they fall, they get up. They just barge forward.

What could put an end to this exuberant learning? The fixed mindset. As soon as children become able to evaluate themselves, some of them become afraid of challenges. They become afraid of not being smart. I have studied thousands of people from preschoolers on, and it's breathtaking how many reject an opportunity to learn.

We offered four-year-olds a choice: They could redo an easy jigsaw puzzle or they could try a harder one. Even at this tender age, children with the fixed mindset—the ones who believed in fixed traits—stuck with the safe one. Kids who are born smart "don't do mistakes," they told us.

Children with the growth mindset—the ones who believed you could get smarter—thought it was a strange choice. *Why are you asking*

me this, lady? Why would anyone want to keep doing the same puzzle over and over? They chose one hard one after another. "I'm dying to figure them out!" exclaimed one little girl.

So children with the fixed mindset want to make sure they succeed. Smart people should always succeed. But for children with the growth mindset, success is about stretching themselves. It's about becoming smarter.

One seventh-grade girl summed it up. "I think intelligence is something you have to work for . . . it isn't just given to you. . . . Most kids, if they're not sure of an answer, will not raise their hand to answer the question. But what I usually do is raise my hand, because if I'm wrong, then my mistake will be corrected. Or I will raise my hand and say, 'How would this be solved?' or 'I don't get this. Can you help me?' Just by doing that I'm increasing my intelligence."

Beyond Puzzles

It's one thing to pass up a puzzle. It's another to pass up an opportunity that's important to your future. To see if this would happen, we took advantage of an unusual situation. At the University of Hong Kong, everything is in English. Classes are in English, textbooks are in English, and exams are in English. But some students who enter the university are not fluent in English, so it would make sense for them to do something about it in a hurry.

As students arrived to register for their freshman year, we knew which ones were not skilled in English. And we asked them a key question: If the faculty offered a course for students who need to improve their English skills, would you take it?

We also measured their mindset. We did this by asking them how much they agreed with statements like this: "You have a certain amount of intelligence, and you can't really do much to change it." People who agree with this kind of statement have a fixed mindset.

Those who have a growth mindset agree that: "You can always substantially change how intelligent you are."

Later, we looked at who said yes to the English course. Students with

the growth mindset said an emphatic yes. But those with the fixed mindset were not very interested.

Believing that success is about learning, students with the growth mindset seized the chance. But those with the fixed mindset didn't want to expose their deficiencies. Instead, to feel smart in the short run, they were willing to put their college careers at risk.

This is how the fixed mindset makes people into nonlearners.

Brain Waves Tell the Story

You can even see the difference in people's brain waves. People with both mindsets came into our brain-wave lab at Columbia. As they answered hard questions and got feedback, we were curious about when their brain waves would show them to be interested and attentive.

People with a fixed mindset were only interested when the feedback reflected on their ability. Their brain waves showed them paying close attention when they were told whether their answers were right or wrong.

But when they were presented with information that could help them learn, there was no sign of interest. Even when they'd gotten an answer wrong, they were not interested in learning what the right answer was.

Only people with a growth mindset paid close attention to information that could stretch their knowledge. Only for them was learning a priority.

What's Your Priority?

If you had to choose, which would it be? Loads of success and validation or lots of challenge?

It's not just on intellectual tasks that people have to make these choices. People also have to decide what kinds of relationships they want: ones that bolster their egos or ones that challenge them to grow? Who is your ideal mate? We put this question to young adults, and here's what they told us.

People with the fixed mindset said the ideal mate would:

Put them on a pedestal.

Make them feel perfect.

Worship them.

In other words, the perfect mate would enshrine their fixed qualities. My husband says that he used to feel this way, that he wanted to be the god of a one-person (his partner's) religion. Fortunately, he chucked this idea before he met me.

People with the growth mindset hoped for a different kind of partner. They said their ideal mate was someone who would:

See their faults and help them to work on them.

Challenge them to become a better person.

Encourage them to learn new things.

Certainly, they didn't want people who would pick on them or undermine their self-esteem, but they did want people who would foster their development. They didn't assume they were fully evolved, flawless beings who had nothing more to learn.

Are you already thinking, *Uh-oh, what if two people with different mindsets get together?* A growth-mindset woman tells about her marriage to a fixed-mindset man:

I had barely gotten all the rice out of my hair when I began to realize I made a big mistake. Every time I said something like "Why don't we try to go out a little more?" or "I'd like it if you consulted me before making decisions," he was devastated. Then instead of talking about the issue I raised, I'd have to spend literally an hour repairing the damage and making him feel good again. Plus he would then run to the phone to call his mother, who always showered him with the constant adoration he seemed to need. We were both young and new at marriage. I just wanted to communicate.

So the husband's idea of a successful relationship—total, uncritical acceptance—was not the wife's. And the wife's idea of a successful relationship—confronting problems—was not the husband's. One person's growth was the other person's nightmare.

CEO Disease

Speaking of reigning from atop a pedestal and wanting to be seen as perfect, you won't be surprised that this is often called "CEO disease." Lee Iacocca had a bad case of it. After his initial success as head of Chrysler Motors, Iacocca looked remarkably like our four-year-olds with the fixed mindset. He kept bringing out the same car models over and over with only superficial changes. Unfortunately, they were models no one wanted anymore.

Meanwhile, Japanese companies were completely rethinking what cars should look like and how they should run. We know how this turned out. The Japanese cars rapidly swept the market.

CEOs face this choice all the time. Should they confront their shortcomings or should they create a world where they have none? Lee Iacocca chose the latter. He surrounded himself with worshipers, exiled the critics—and quickly lost touch with where his field was going. Lee Iacocca had become a nonlearner.

But not everyone catches CEO disease. Many great leaders confront their shortcomings on a regular basis. Darwin Smith, looking back on his extraordinary performance at Kimberly-Clark, declared, "I never stopped trying to be qualified for the job." These men, like the Hong Kong students with the growth mindset, never stopped taking the remedial course.

CEOs face another dilemma. They can choose short-term strategies that boost the company's stock and make themselves look like heroes. Or they can work for long-term improvement—risking Wall Street's disapproval as they lay the foundation for the health and growth of the company over the longer haul.

Albert Dunlap, a self-professed fixed mindsetter, was brought in to turn around Sunbeam. He chose the short-term strategy of looking like a hero to Wall Street. The stock soared but the company fell apart.

Lou Gerstner, an avowed growth mindsetter, was called in to turn around IBM. As he set about the enormous task of overhauling IBM

culture and policies, stock prices were stagnant and Wall Street sneered. They called him a failure. A few years later, however, IBM was leading its field again.

Stretching

People in a growth mindset don't just *seek* challenge, they thrive on it. The bigger the challenge, the more they stretch. And nowhere can it be seen more clearly than in the world of sports. You can just watch people stretch and grow.

Mia Hamm, the greatest female soccer star of her time, says it straight out. "All my life I've been playing up, meaning I've challenged myself with players older, bigger, more skillful, more experienced—in short, better than me." First she played with her older brother. Then at ten, she joined the eleven-year-old boys' team. Then she threw herself into the number one college team in the United States. "Each day I attempted to play up to their level . . . and I was improving faster than I ever dreamed possible."

Patricia Miranda was a chubby, unathletic high school kid who wanted to wrestle. After a bad beating on the mat, she was told, "You're a joke." First she cried, then she felt: "That really set my resolve . . . I had to keep going and had to know if effort and focus and belief and training could somehow legitimize me as a wrestler." Where did she get this resolve?

Miranda was raised in a life devoid of challenge. But when her mother died of an aneurysm at age forty, ten-year-old Miranda came up with a principle. "When you're lying on your deathbed, one of the cool things to say is, 'I really explored myself.' This sense of urgency was instilled when my mom died. If you only go through life doing stuff that's easy, shame on you." So when wrestling presented a challenge, she was ready to take it on.

Her effort paid off. At twenty-four, Miranda was having the last laugh. She won the spot for her weight group on the U.S. Olympic team and came home from Athens with a bronze medal. And what was next?

Yale Law School. People urged her to stay where she was already on top, but Miranda felt it was more exciting to start at the bottom again and see what she could grow into this time.

Stretching Beyond the Possible

Sometimes people with the growth mindset stretch themselves so far that they do the impossible. In 1995, Christopher Reeve, the actor, was thrown from a horse. His neck was broken, his spinal cord was severed from his brain, and he was completely paralyzed below the neck. Medical science said, *So sorry. Come to terms with it.*

Reeve, however, started a demanding exercise program that involved moving all parts of his paralyzed body with the help of electrical stimulation. Why *couldn't* he learn to move again? Why couldn't his brain once again give commands that his body would obey? Doctors warned that he was in denial and was setting himself up for disappointment. They had seen this before and it was a bad sign for his adjustment. But, really, what else was Reeve doing with his time? Was there a better project?

Five years later, Reeve started to regain movement. First it happened in his hands, then his arms, then legs, and then torso. He was far from cured, but brain scans showed that his brain was once more sending signals to his body that the body was responding to. Not only did Reeve stretch his abilities, he changed the entire way science thinks about the nervous system and its potential for recovery. In doing so, he opened a whole new vista for research and a whole new avenue of hope for people with spinal cord injuries.

Thriving on the Sure Thing

Clearly, people with the growth mindset thrive when they're stretching themselves. When do people with the fixed mindset thrive? When things are safely within their grasp. If things get too challenging—when they're not feeling smart or talented—they lose interest.

I watched it happen as we followed pre-med students through their first semester of chemistry. For many students, this is what their lives

have led up to: becoming a doctor. And this is the course that decides who gets to be one. It's one heck of a hard course, too. The average grade on each exam is C+, for students who've rarely seen anything less than an A.

Most students started out pretty interested in chemistry. Yet over the semester, something happened. Students with the fixed mindset stayed interested *only when they did well right away*. Those who found it difficult showed a big drop in their interest and enjoyment. If it wasn't a testimony to their intelligence, they couldn't enjoy it.

"The harder it gets," reported one student, "the more I have to force myself to read the book and study for the tests. I was excited about chemistry before, but now every time I think about it, I get a bad feeling in my stomach."

In contrast, students with the growth mindset continued to show the same high level of interest even when they found the work very challenging. "It's a lot more difficult for me than I thought it would be, but it's what I want to do, so that only makes me more determined. When they tell me I can't, it really gets me going." Challenge and interest went hand in hand.

We saw the same thing in younger students. We gave fifth graders intriguing puzzles, which they all loved. But when we made them harder, children with the fixed mindset showed a big plunge in enjoyment. They also changed their minds about taking some home to practice. "It's okay, you can keep them. I already have them," fibbed one child. In fact, they couldn't run from them fast enough.

This was just as true for children who were the best puzzle solvers. Having "puzzle talent" did not prevent the decline.

Children with the growth mindset, on the other hand, couldn't tear themselves away from the hard problems. These were their favorites and these were the ones they wanted to take home. "Could you write down the name of these puzzles," one child asked, "so my mom can buy me some more when these ones run out?"

Not long ago I was interested to read about Marina Semyonova, a great Russian dancer and teacher, who devised a novel way of selecting her students. It was a clever test for mindset. As a former student tells it, "Her students first have to survive a trial period while she watches...

how you react to praise and to correction. Those more responsive to the correction are deemed worthy.”

In other words, she separates the ones who get their thrill from what's easy—what they've already mastered—from those who get their thrill from what's hard.

I'll never forget the first time I heard myself say, “This is hard. This is fun.” That's the moment I knew I was changing mindsets.

When Do You Feel Smart:

When You're Flawless or When You're Learning?

The plot is about to thicken, for in the fixed mindset it's not enough just to succeed. It's not enough just to look smart and talented. You have to be pretty much flawless. And you have to be flawless right away.

We asked people, ranging from grade schoolers to young adults, “When do you feel smart?” The differences were striking. People with the fixed mindset said:

“It's when I don't make any mistakes.”

“When I finish something fast and it's perfect.”

“When something is easy for me, but other people can't do it.”

It's about being perfect right now. But people with the growth mindset said:

“When it's really hard, and I try really hard, and I can do something I couldn't do before.”

Or “[When] I work on something a long time and I start to figure it out.”

For them it's not about immediate perfection. It's about learning something over time: confronting a challenge and making progress.

If You Have Ability,

Why Should You Need Learning?

Actually, people with the fixed mindset expect ability to show up on its own, before any learning takes place. After all, if you have it you have it, and if you don't you don't. I see this all the time.

Out of all the applicants from all over the world, my department at Columbia admitted six new graduate students a year. They all had amazing test scores, nearly perfect grades, and rave recommendations from eminent scholars. Moreover, they'd been courted by the top grad schools.

It took one day for some of them to feel like complete imposters. Yesterday they were hotshots; today they're failures. Here's what happens. They look at the faculty with our long list of publications. “Oh my God, I can't do that.” They look at the advanced students who are submitting articles for publication and writing grant proposals. “Oh my God, I can't do that.” They know how to take tests and get A's but they don't know how to do *this*—yet. They forget the *yet*.

Isn't that what school is for, to teach? They're there to learn how to do these things, not because they already know everything.

I wonder if this is what happened to Janet Cooke and Stephen Glass. They were both young reporters who skyrocketed to the top—on fabricated articles. Janet Cooke won a Pulitzer Prize for her *Washington Post* articles about an eight-year-old boy who was a drug addict. The boy did not exist, and she was later stripped of her prize. Stephen Glass was the whiz kid of *The New Republic*, who seemed to have stories and sources reporters only dream of. The sources did not exist and the stories were not true.

Did Janet Cooke and Stephen Glass need to be perfect right away? Did they feel that admitting ignorance would discredit them with their colleagues? Did they feel they should already be like the big-time reporters before they did the hard work of learning how? “We were stars—precocious stars,” wrote Stephen Glass, “and that was what mattered.” The public understands them as cheats, and cheat they did. But I understand them as talented young people—desperate young people—who succumbed to the pressures of the fixed mindset.

There was a saying in the 1960s that went: “Becoming is better than being.” The fixed mindset does not allow people the luxury of becoming. They have to already be.