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Excerpt  
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PART I

# The Nature of Thinking Styles

## 1

# What Are Thinking Styles and Why Do We Need Them?

When Susan was in the third grade, her teacher had a neat idea. The children were studying the planets, and the teacher wanted her students to learn actively, not just passively. So she decided to have the children pretend to be astronauts, and simulate going to Mars.

## PENALIZING PEOPLE WHO DON'T FIT IN

This idea was a good one for promoting learning. What better way is there to learn about a place than to simulate being there, whether it be Mars, Venice, or Hoboken, for that matter? Here, the children would have to think about the air supply, the gravity, the terrain, and anything else that a visitor to Mars would have to consider. Of course, the children could learn all these things by reading about them. But their learning and their retention would certainly be enhanced by pretending to deal with them at first hand. However, they would have to know enough about Mars to be able to imagine being there. Reading would give the children an additional way to learn, and thus further enhance the learning process. But it could never be a substitute for the children's actively putting themselves in the place of astronauts.

As the children were preparing to be astronauts, Susan had an idea. How about if she dressed up as a Martian, and met the astronauts when they arrived on Mars? The teacher's idea was good, but perhaps Susan's was even better. For one thing, we do need to consider what it might be

like if we ever actually encounter extraterrestrial aliens. But for another, all of us have to deal and cope with people who at times seem like extraterrestrial aliens, whether from Mars or from somewhere else.

If there is one thing I have learned in 20 years as a psychologist, it is that other people at times can seem to be incomprehensible, whether they be people from another culture or another social group, or even a spouse or lover. So what better preparation could there be for interacting with people who seem strange to us than to spend a few hours in the third grade thinking about what it would be like to interact with a Martian? Might as well get ready for the future, whatever it may hold.

When Susan told her idea to her teacher, the teacher immediately nixed it. Flustered, and perhaps needing a reason for her immediate no, the teacher patiently told Susan that we knew from space probes that there are no inhabitants of Mars, and so it would not be realistic to have Susan pretend to be a Martian. The teacher pointed out that she was doing a science lesson, and science lessons can't have nonexistent Martians in them.

The teacher's excuse was lame. For one thing, astronauts aren't going to Mars, either, not yet anyway. For another thing, space probes can't really assure us that there is no life on Mars: Maybe the Martians live in the interior of the planet, or maybe they exist as some life form that space probes cannot yet recognize. But these issues are only secondary to what made me so depressed when I heard about Susan's encounter with the teacher.

I began to wonder how many more times, when Susan had a creative idea, she would bother to express it, either to her teacher or to anyone else. I wondered how many times this same incident repeated itself, not only in Susan's classroom, or in the classroom of that teacher, but in countless classrooms at all grade levels and all around the world. How many punishments does it take for children to learn to suppress their creative ideas, and instead learn to play the school game? What's the game? Well, often it seems to be that if you have a creative idea, you should keep it to yourself. Unfortunately, schools are no worse than other institutions in playing such a game. Many families and many organizations play by the same rules.

It would be easy to jump on Susan's teacher and point out that there are bad apples in any profession. Easy, but wrong. Because what

Susan's teacher did, virtually every teacher, including myself, does at one time or another. After feeling myself become very hot under the collar upon hearing of the teacher's response, I cooled down pretty fast, because I realized that I was far from blameless myself. How many times had I been in a classroom, trying to teach too much material in too little time? I knew I had to finish the lesson that day and get on to the next one so that the students would be ready for the final exam, and later in their careers, possibly for the Psychology Advanced Test required for admission to many graduate schools.

Virtually all teachers operate under the same pressures: They need to teach to tests, and arguably, students who suppress their creativity will actually do better on most existing tests. The name of the test varies, but the fact of some test or another doesn't. The teacher is trying desperately to get through a lesson; it is going slower than it was supposed to because lessons hardly ever go exactly the way they are planned. Something that was supposed to be clear isn't, and a little more explanation is needed. Something else that was supposed to be easily explained isn't. And soon a 30-minute lesson becomes a 40- or 50-minute one. Then a student suggests a way of making a lesson that is going too slowly go even more slowly. The teacher's instantaneous reflex is to shoot a bullet – right through the student's idea, but also through the student's desire to be creative. The pattern repeats itself from time to time, from place to place, and eventually that student, and everyone else in the class who gets to watch, learns to play by the rules and to hide or suppress their creative ideas.

Let there be no doubt that most children do learn in school (just as most people learn on the job). But what do they learn? The most important lessons are often not those taught by the textbooks.

I have worked with both elementary-school students and with college students at Yale on developing ideas for experiments. The elementary-school students have an easier time of it. But when I ask the students to remember the details of or to critique already published studies – ones that are signed, sealed, and delivered – the Yale students win, hands down. The Yale students have developed the skills that schools value – the memory and analytical ones.

And what about the students who haven't learned? They pay – one way or another. Some are viewed as annoyances, or worse, as behavior

problems. Others are viewed as show-offs. Still others come to be labeled as antisocial, and in many cases, start to fulfill the role that is suggested to them. Some teachers will tolerate these children; others won't. But few will appreciate them, because they disrupt what the teacher believes would otherwise be an orderly class. And orderly classes are easy-to-teach classes, whether the students are learning or not.

Organizations other than schools are little or no different. An organizational culture emerges that does things in a certain way. It has worked before. There is competitive pressure from all sides, so there is hardly enough time to produce what needs to be produced, much less to think about how it is being produced. People who question the way things are done are usually not viewed as creative, but rather as disruptive.

Several years ago we did a study of conceptions of intelligence, creativity, and wisdom in different occupations, one of which was business.<sup>1</sup> We asked participants in our study to rate a list of behaviors for how relevant they were to each of the attributes of intelligence, creativity, and wisdom. There was a negative correlation between ratings for conceptions of creativity and those for conceptions of wisdom. The behaviors that were seen as creative were viewed as unwise, and those that were seen as wise were viewed as uncreative.

The problem here might appear to be one of the individual who likes to think creatively in a school or other organization that discourages creativity, but the problem is more general than that – quite a bit more general. Consider the following situation.

### LEARN MY WAY – OR ELSE

Ben is in his high school English class. The students are studying the *Odyssey*, one of the great works of Western literature, and certainly one from which any high school student has much to learn. But learn what? It is Parents' Day, and so Ben's parents are in the classroom. Ben's father knows that things have not been going well for his son in English that year, and he is about to find out why.

The teacher reads a quotation. Who said it? Here's another quota-

tion. Who said this one? And here's another. Who said that? And what was happening at the time? And what happened next? Damned if Ben's father knows, but then, it's been more years than he cares to count since he has read the book. The level of detail that the teacher requires the students to remember seems to him quite extraordinary. Ben most definitely isn't a detail person. The whole class consists of remembering details of this order. The tests the teacher gives are the same: identifying who said what.

Ben's father talks to the teacher after the class, to ask what his goals are. The teacher explains that he is trying to teach the students to be able to read carefully. Makes sense. But does he have any other goals, the father asks him? The teacher replies that before students can start analyzing texts, they first have to learn to read them carefully. Before he starts analyzing texts, Ben will hate English, and not want to be bothered to analyze them. And all because the teacher has a model of learning that most psychologists realized to be wrong roughly 40 years ago.<sup>2</sup> His outdated model is not a function of his having gone to school in the stone age.<sup>3</sup> The teacher could not have been more than 30 years old. But the model is one he and many other teachers at all levels and of all subjects still accept. This incorrect model assumes that one should learn, *then* think, rather than that one should think to learn and thereby learn to think.

Ben also told his father that he doesn't like history. Why, the father asked? Ben's father loved history when he was Ben's age. Because he hates memorizing dates, Ben said. To Ben, learning history is synonymous with memorizing dates, just as learning English is synonymous with memorizing quotations. At least the teachers are consistent: The English teacher's tests consist primarily of quotations whose speakers are to be identified, and the history teacher's tests consist primarily of dates to be recalled.

So Ben learned to hate English and history. Some other student, who takes to memorizing quotes and dates, learns to like English and history. But there's a rub. Is the student who is good at learning "who said what" going to be the best writer or literary scholar? Is the student who is king of memorizing the dates of the reigns of various kings later going to be the best historian, or an ordinary citizen capable of using the past to understand the present? Perhaps not. The problem is not

that the students had to learn facts: It's that that's all they were doing, and that the facts were being force-fed. The same thing is happening in millions of classrooms around the world.

Compare the stylistic demands of Ben's English class to those of his physics class for students of the same grade in the same school. The students were studying mass and its properties. The teacher had the students put on their coats and march outside. Once they were all outside, they made their way to the teacher's parking lot. The teacher divided the students into small groups, and then said: "This is my car. Your assignment today is to use the supplies I am going to give you to figure out the mass of my car." Students spent the entire class working in groups, interacting among themselves, and trying to figure out the mass of the teacher's car. Without doubt, the students who took to this assignment were in many cases not the same ones who took to the class of the English teacher. In fact, Ben loved the physics class, but hated the English class. As importantly, Ben's physics teacher admired him a great deal, his English teacher, not one whit.

There are two very general issues here, and they will be central themes of this book.

1. Schools and other institutions, from households to businesses to cultures, value certain ways of thinking more than others.
2. People whose ways of thinking do not match those valued by the institutions are usually penalized.

A *style* is a way of thinking. It is not an ability, but rather, a preferred way of using the abilities one has. The distinction between style and ability is a crucial one. An ability refers to how well someone can do something. A style refers to how someone likes to do something.

In our society, we think and talk a lot about abilities. Books such as Herrnstein and Murray's *The Bell Curve* show just how obsessed with abilities our society is.<sup>4</sup> And certainly abilities are important to success in school and later in life. Yet abilities are not and cannot be the whole story.

Although psychologists disagree regarding the predictive power of ability tests for various purposes, they all agree that they are highly imperfect predictors.<sup>5</sup> A consensus figure would be that tested differences in ability account for perhaps 20% of the variation among

students in school performance, and 10% of the variation among workers in job performance. What about the rest of the variation – the 80% unexplained variation in school performance and the 90% unexplained variation in job performance? Thinking styles might be one source of unexplained variation. How people prefer to think might be just as important as how well they think. Consider three college roommates who illustrate this point.

### THREE CASE STUDIES, THREE STYLES

The three college roommates had one thing in common: their high school records. All had been excellent students, and their Verbal and Mathematical SAT (Scholastic Assessment Test) scores were within a few points of each other. Even their patterns of abilities were the same: higher in verbal than in math, and definitely weak in spatial abilities. These were the kinds of people who could never get the suitcases to fit in the trunk of the car.

Alex was virtually a straight-A student in high school and had terrific test scores to boot. He was the kind of student every college wanted, and on April 15 of the fateful year for his application to colleges, he received many fat envelopes offering him acceptance. He went to an Ivy League college.

Alex's first three years were almost as distinguished as had been his high school years. He received mostly A's with a smattering of B's. He was considered one of the best. But then, his senior year, he had to do an independent project in his major, government. Alex liked to be given the structure within which he would work; and throughout his entire school career, he had been given this structure. His teachers had told him what to do, and he had done it, and done it well. Now, for the first time, there was no one to tell him what to do, and he was at loose ends. He was uncomfortable structuring the entire task himself, and it showed in the work he produced. He pulled a C on the project.

Alex has found a career that is a good match to his style of thinking. Today he is a contracts lawyer. Asked to describe his work, he explains that the investment bankers draw up the deal and decide what's to be what. Alex's job is to take their deal and set it down into a precisely



written contract. Thus whereas Alex once took direction from his teachers, today he takes direction from the bankers. Alex explains that, to him, the ideal contract is one that is so perfect, so airtight, that if the bankers want to change their deal, they have to pay him to do it. In other words, they have to pay Alex every time they change their ideas. Little wonder that Alex has been so successful in his career: He's found a way to make his clients pay not only when they make up their minds about what to do, but also every time they change their minds.

Bill also had a strong high school record, although not as strong as Alex's. Bill liked to do things his own way, and so came into conflict with the constraints that any school imposed. Bill recognized that, to succeed, he would need to do well in school – and he did. But his major energy was devoted to his love, biology. He was involved in summer programs in biology, and did high-level research in biology even as a high school student. Moreover, his research was his own, not someone else's.

Bill's grades during his first three years of college were good, although not as good as Alex's. But his senior year, he and Alex crossed paths. Given the opportunity to do an independent senior thesis, Bill was in his element. He was now doing exactly what he had always most liked to do. And he received an A on the project, as well as an award for it.

Bill went on to graduate school to become a biologist, and today he is a successful researcher. His career is about as different from Alex's as another career could be. Bill, like Alex, loves his work, but for exactly the opposite reason. Whereas Alex likes translating the bankers' ideas into contract language, Bill likes translating his own ideas into language that is meaningful to biologists and laypeople alike. He is a team leader, and gives rather than takes direction.

Note that both Alex and Bill are very successful at what they do, but for different reasons. Neither would do well in the other's occupation, but not for lack of ability: Alex has the ability to be a biologist, Bill to be a lawyer. Rather, what makes them successful, given the basic ability to succeed, is that they are in jobs that are good matches to their styles of thinking. The same is true for Corwin.

Corwin went to the same Ivy League school as did Alex and Bill. He was quite critical of the school, as he tends to be of almost everything

and everyone, himself not excepted. Indeed, Corwin is difficult to take in large doses because he is so critical. And because he is bright, his criticisms are usually on target. As a college student, Corwin wrote critiques of student productions, a task that fit him admirably.

Corwin's critical eye was not fixated only on courses. When he would go out on dates, Corwin would give his dates a test of values. The test was what is called a "nonobtrusive measurement": The dates never knew they were taking a test. But they most definitely were. If the woman passed, Corwin would go out with her again; if not, that was the end of that relationship.

Perhaps unsurprisingly, Corwin's relationships tended to be short-lived. No one quite met his standards. Today, Corwin is in his mid-fifties and still unmarried. I don't know if he is still giving the same test, or a variant of it. What I do know is that he has found a job that is a good match to his critical, judgmental style: Today, Corwin is a psychiatrist, and a good one. He spends his days evaluating patients and their problems, and prescribing and then administering treatment for them. He is very successful, as would befit someone who seems to like nothing more in life than to evaluate people and their problems.

The cases of Alex, Bill, and Corwin show us how styles can help us understand why, given equal abilities, one person chooses one career and another person chooses some other career. People with different styles like to use their abilities in different ways, and so respond differentially well to the kinds of thinking required in different occupations. Styles also help us understand why some people succeed in their chosen careers and others don't. Put Bill in Alex's career, and he is likely to find himself with no clients. He wants to do things his way, not the way of his clients. Put Alex in Bill's career, and the match will be equally bad: Alex prefers to be given direction. People need to find careers that match not only their abilities, but their styles as well.

### THE IMPORTANCE OF MATCH BETWEEN STYLES AND ENVIRONMENTS

I care about styles, and you should too – if you care about your children, your spouse or lover, your colleagues at work, or yourself, for