

SECTION SEVEN

WHY DO BRILLIANT PEOPLE BELIEVE NONSENSE? BECAUSE THEY MISINTERPRET LITERATURE

CHAPTER 20

THEY MISS SUBTLE SHIFTS IN WORD MEANINGS

*“Words are like eggs dropped from great heights;
you can no more call them back than ignore the mess they leave when they fall.”*

— Jodi Picoult, *Salem Falls*

“The beginning of wisdom is the definition of terms.”

— Socrates

Introduction

In this section, I attack problems in language that lead astray even the brightest among us. I could talk about many issues at the intersection of critical thinking and literature, but I'll confine myself to the most common issues that I've noticed, useful whether you're trying to make sense of a scientific text, a novel, a religious text, a speech, or a song. And since it takes more than linguistic accuracy to produce effective communication, I'll also give some tips at the end of each chapter on using creativity to communicate more clearly, persuasively, and interestingly.

Defining "Smart"

So far in this book, as in the paragraph above and the book title, I've used words such as "smart," "bright," "brilliant," and "genius" in a rather loose, imprecise way. So let's see if we can tidy things up a bit, and in the process explore the importance of, and some difficulties in, defining our words. And since our definitions ultimately impact people, let's begin with a story of a student who was quite obviously *not* very smart.

A Slow Student

I first met Bartle Niesient in my class, *Tomorrow's World Today*. He was a Freshman international student and I desperately wanted to help him succeed. He was likeable enough—content to be his own unique self, seemingly oblivious to what others might think of him. But I quickly realized that academic success would be an uphill battle.

For one thing, he didn't prioritize learning in class. If he didn't like the class, he simply didn't show up very often. When he did drop by, he exhibited a poor rote memory for retaining lectures and often seemed distracted. Since he was also taking first year Physics, I chatted with his professor, who said Bartle was flunking.

Now some people who are slow at academics may make up for it with brilliant relationships, exceptional leadership, or a knack for common sense. But in all three of these, Bartle seemed flawed. In fact, he was so forgetful that he'd frequently lock himself out of his room or forget to take his suitcase on a trip.

I placed a few international calls to talk to his parents and high school principle. They painted the picture of a low achiever. As a child, he began talking much later than other kids. When he finally began to talk, he seemed to have trouble translating his thoughts into words, mumbling sentences to himself before saying them aloud. Thus, the family maid called him "the dopey one." His high school principle called him "dull." His high school faculty said that Bartle didn't fit in with other students and was such a poor student that one teacher told him straight up that he'd never amount to anything, was wasting everyone's time, and should drop out.

So he dropped out of high school.

Yet, he had the presence of mind to take some college prep courses that allowed him to get into college.

Defining "Smart"

From this description of Bartle, let's reflect on the meaning of the word group "bright, brilliant, smart, genius." Below I've listed common characteristics that we associate with "bright" on the left and "dull" (Think: Bartle) on the right. Does it look like I'm on track here? Do you agree with the characteristics I list? Are we getting closer to a definition?

Brilliant	Dull
<p>Strong rote memory for acquiring languages</p> <p>Amazing memory for facts</p> <p>Strong at all academics</p> <p>A's come easily</p> <p>Expresses self well verbally</p> <p>Understands people and the subtle nuances of their behavior</p> <p>Understands time and how to get things done efficiently</p> <p>Can focus on the task at hand</p> <p>Good with directions</p> <p>Can multi-task</p>	<p>Weak rote memory for acquiring languages</p> <p>Forgetful</p> <p>Some subjects come very slowly</p> <p>Seldom makes A's</p> <p>Not a good conversationist</p> <p>Often doesn't "get" relationships</p> <p>Poor at managing time</p> <p>Often unfocused; scatterbrained</p> <p>Can't find his way home</p> <p>Does one thing at a time</p>

Think!

With this introduction in mind, try your hand at writing a definition of "genius" or "smart".

So far, this chapter seems rather duh. We all know what "bright" is. We all know what "dull" is. So why try so hard to define them? Simply because our definitions influence how we size up people, how we treat them, who we choose as friends, who we hire, and what jobs we choose for ourselves. Trust me, this definition is extremely important. So let's press on.

Have We Gone Astray?

In this case, I strongly believe that our discussion has led us far off track.

People seem to define "bright" and "dull" as communicated to them, both subtly and overtly, by their educational experience. When Suzie, still in kindergarten, looks at the ABCs briefly on the blackboard and afterward recites them both backwards and forwards, her astonished teacher refers to her as "very bright." This achievement, and the teacher's reaction, tells her that she's exceptional, one of the elite, securely in that exclusive subset of "very smart students."

Of course, this also sends out a clear message to the other students. Those who take weeks to memorize the ABCs (and could never say them backwards), consider themselves "average." Those who struggle to either remember or write the symbols of our language—either because of poor rote memories, poor visual memories, processing issues, or trouble focusing on a task—begin to see themselves as "slow."

And so it goes throughout our educational experience. We quickly learn to identify the "bright" students as those who easily get A's and master math, reading and writing more quickly than the rest.

So Who Was Bartle Niesient...Really?

The more I study the brain and learning and genius and disabilities, the more I'm convinced that our mental picture of genius and our resulting definitions of genius are somehow misguided. In fact, I purposely led you astray with the story of Bartle Niesient. He actually wasn't my student. I invented his name by shuffling the letters for Albert Einstein, forming an anagram.

Yet, the characteristics I gave "Niesient" are consistent with Einstein. The person that we identified as the poster child for slow—the person we would have likely considered slow had we known him only on the playground and in certain classes—became the very poster child for genius. Somehow, in defining "genius," we've gotten off track. So let's take a closer look at "brilliant/genius" and "dull/stupid."

Here are some characteristics that I culled from Walter Isaacson's excellent biography of Einstein. Add them to your background data for refining your definition of genius:

His childhood through high school

- He was so late beginning to talk that his worried parents consulted a doctor.¹
- "Every sentence he uttered," recalls his sister, "no matter how routine, he repeated to himself softly, moving his lips" before he said it out loud. "He had such difficulty with language that those around him feared he would never learn."²
- The family maid called him "the dopey one." Others in his family considered him "almost backwards."³
- "As a young student he never did well with rote learning." He said that he had a "bad memory for words and texts."⁴
- One schoolmaster declared that Einstein would never amount to much. One of his teachers said that she wished he'd leave the school.⁵ He dropped out and took some preparatory classes to hopefully prepare him for a technical college.

As a college student and adult

- He flunked his first college physics course.⁶
- He was so absentminded and forgetful that he was always losing stuff, like the keys to his room. If he visited others overnight, he'd often forget his clothes, or even his entire suitcase. One family friend said, "That man will never amount to anything because he can't remember anything."⁷
- His brain was wired to think primarily in pictures. Einstein once said, "I very rarely think in words at all. A thought comes, and I may try to express it in words afterwards."⁸
- His wife watched for him to walk home from the Princeton campus (where he taught) because he'd forget whether he was coming or going, and might start walking back toward the campus.⁹
- He once took public transportation, but forgot to get off at his stop, had to reboard going the other direction, then forgot to get off on his second try.¹⁰
- In his letters, he'd often close by signing the name of the person he was writing, rather than his own name.¹¹
- He couldn't drive. As his wife explained, "It's too complicated for him."¹²
- He admittedly failed miserably at his marriages.¹³

Einstein's Strengths

Yet, he obviously had great strengths. His absentmindedness was probably a result of his ability to concentrate exclusively on whatever he was thinking about. If he's walking home and thinking about how traveling at close to the speed of light alters time, he's probably not thinking about where he's walking.

He excelled early at math (although he'd always need a mathematical "caddy") and enjoyed studying it on his own. He mastered differential and integrated calculus before he turned 15.¹⁴ He was an early lover of philosophy, delighting in Immanuel Kant at age 13.¹⁵ He could obsess on a question for long periods of time until he found a solution. And he put his childlike curiosity and visual brain to good use in formulating and running mental experiments. According to Isaacson,

"Throughout his life, Albert Einstein would retain the intuition and the awe of a child. He never lost his sense of wonder at the magic of nature's phenomena—magnetic fields, gravity, inertia, acceleration, light beams—which grown-ups find so commonplace."¹⁶

Eventually of course, people considered him the quintessential genius. In 1999, *Time* magazine crowned him the person of the century, describing him as "the pre-eminent scientist in a century dominated by science."¹⁷

Think!

With this new data on Einstein's strengths and weaknesses, see if your definition of "genius" or "smart" needs modification.

Was Einstein Odd among Geniuses, Having So Many Mental Weaknesses?

It's not wise to define "genius" by one person. It's too small a sample. Perhaps Einstein doesn't well represent the typical genius. "Surely," some would object, "most people we consider geniuses typically excel at most any intellectual activity they put their minds to. If they're that smart at something, they should be able to master most anything!"

You'd think so. But my study of "really smart people" reveals that those who excel in one area tend to lag behind in other areas.

- Steven Spielberg is a genius at producing movies, but his rote memory was so poor that he couldn't memorize lines for high school plays. He participated by building the sets instead.¹⁸
- Sam Walton was a genius at understanding and leading the retailing industry, but made so many mistakes with the cash register that an early boss said he would have fired him

if he weren't so good at sales.¹⁹ Once he started Walmart, he missed calendared appointments so often that his secretary refused to schedule them.²⁰

- The brilliant, but dyslexic and ADD founder of Kinko's never learned to read and couldn't work his own copying machines.²¹
- Brilliant writer and scholar C.S. Lewis seemed to have a disability with math, getting accepted into Oxford because of a fluke in history. Administrators skipped the math part of the entrance exam due to lacking students because of the war.²²
- Mel Levine, professor of pediatrics and one of America's top experts on learning, excelled at most academics, but couldn't understand his gym teachers' instructions about physical tasks, couldn't throw or catch balls, and couldn't even operate a manual pencil sharpener.²³
- Although Leonardo da Vinci is known as a polymath—someone who can do multiple tasks at a genius level—he couldn't do *everything* well. He never excelled at math, seemed to have little natural aptitude for it, and was often inaccurate in his calculations. He also struggled with languages, learning rudimentary Latin but never mastering it.²⁴

Much of his great output in sketches and diagrams was done while he was being paid to do something else. He was great at doing what he wanted to do at the moment, but quite lazy at doing the job at hand, which is characteristic of poor executive functioning of the brain.²⁵

- One of today's most successful entrepreneurs in Silicon Valley, Ajit Gupta, once summed up his genius for me: "I'm great at a few things, terrible at hundreds of things."²⁶

Redefining "Smart"

If "genius" can be defined by the unique characteristics of those that we all agree are geniuses, then certain standard definitions appear not only imprecise, but misleading. For example, Webster's New College Dictionary defines "smart" as "Characterized by sharp, quick thought: Intelligent." Yet, those who grew up with Einstein certainly didn't consider him "quick." Rather, they described him as "dull" and "slow." I don't get the impression that he was the person who could work a complicated multiplication problem almost instantly in his mind, like a Daniel Tammet.²⁷ Rather, Einstein had the patience and creativity to work on a math problem until he could find a workable solution.

Merriam-Webster defines "smart" as "very good at learning or thinking about things." This seems much improved in that it doesn't require Webster's characteristic of "quick." But it gives the impression that the "smart" person has the aptitude to learn *most anything* very well. Certainly this wasn't the case for any of the geniuses I mentioned above. They were good at learning certain things, but poor at learning other things.

So allow me to revise Merriam-Webster in crafting my definitions:

A "smart" person is one who is very good at learning or thinking *about certain things*.

Similarly:

A "genius" is a person who is extremely good at learning or thinking *about certain things*."

In other words, if I'm on track here, then people aren't geniuses "in general," but are geniuses "at something." People aren't smart "in general," but are smart "at one or more things."

The Vast Implications of our Definitions

"Come on! You're splitting hairs!" some may complain. "This entire discussion resulted in your adding a brief phrase to a definition. Big deal!"

But if I'm right in refining the definition by adding that phrase, the practical implications are quite revolutionary.

Revolutionizing Education

As I write, secondary education in America has a strong focus on general mastery of select subjects, which has its strong points. For example, we have the worthy goal that, by high school graduation, every student should be able to read well, write well, and do well at many types of science and math. Not wanting anyone to be "left behind" with an educational deficit, we don't want them to keep moving through the system until they've mastered these skills to a sufficient level.

In other words, by graduation day, we aspire to have produced students who are "smart" in the general sense of the word. As noble as this sounds, it does result in several problems.

1. We myopically focus on academic weaknesses rather than strengths.

Fourth-grader Timmy brings home with an A in Art, A in Music, B in writing, and a D in Math. When the parents meet with the teachers, what do they talk about? Obviously, how to bring up that math grade.

Without passing middle school and high school math, which will build upon elementary math and get increasingly complex, Timmy can't finish high school. Poor or failing grades in math would severely limit his college options. Repeated failures may cause him to get discouraged and drop out before graduation. So the resounding concern for Timmy, expressed by his parents and school counselors becomes, "How can we help Timmy bring up his Math grade?"

Yet, a large body of evidence²⁸ shows that our greatest potential for academic growth is typically found in our areas of strength. Perhaps Timmy's brain isn't wired for higher math. Perhaps he'll never be able to achieve even a competence level in Algebra II or Geometry. In his case, if a

workable fix can't be found, wouldn't it be better to focus on gaining competence in *basic* math rather than pursuing higher levels of algebra, calculus, and trigonometry? Instead, we worry and fret over Timmy's weakness in math, forcing him to take ever more complicated classes in his area of weakness, which makes him feel dumber and dumber. No wonder so many drop out.

But let's imagine that parents and educators agree on our new definition of "smart"—a definition that recognizes that geniuses typically aren't smart "at everything," but have unusual potential "at something." In a possible world where dictionaries and educators accept this definition, the fourth-grade parent/teacher conference with Timmy may look very different.

First, the teacher mentions a couple of strategies for improving at math, which they realize may or may not entirely solve the issue.

"Perhaps it will always be a weakness and we'll have to limp along as best we can," suggests the school counselor. "But let's focus our time here on why Timmy's doing so well in art and music, and not bad at all in writing. Perhaps we're discovering some of Timmy's strengths, perhaps even areas of genius."

"We simply must insure that Timmy gets the best possible help to develop these areas of innate talent and interest. Perhaps he needs to attend a magnet school for art students. Perhaps administrators need to insure that he gets classes with select teachers who are best equipped to help him develop his talents. My primary concern is that we cannot allow Timmy to finish his secondary education without exploring and developing his areas of strength."

Isn't this essentially what Da Vinci's father did with his son's education? While he got an exposure to a broad education in his bogotá,²⁹ he was allowed from an early age to concentrate on his areas of strength. Wouldn't it have been a shame if Da Vinci had been forced to concentrate on his weaknesses (math and languages) rather than develop his artistic strengths? Da Vinci's type of education allowed geniuses to blossom in their area of genius, even if they were very weak in other areas.

Some of America's schools offer a concentration on strengths via a "tech track," whereby students can pursue their interests and strengths, such as art, design, programming, etc. But some schools drop the tech track in order to concentrate on trying to help every student achieve competence in every subject. Thus, those who are poor at math may find themselves doubling up on math, concentrating on their weaknesses rather than exploring their strengths. The spotlight daily shines on students' frustrating and embarrassing weaknesses. If our new definition of "smart at something" were adopted, we might bring back the tech track.

2. Many of our brightest (brightest "at something") students aren't allowed continue their education in the schools best suited for their areas of genius.

We typically require general competence, measured as a grade point average (GPA) in order to get into the best schools. But if we're right by adding "at certain things" to our definition of genius, we realize that we're denying many exceptional students the type education they need

to fully develop their genius. Surely we all sense that something's amiss in academia when we realize that Steven Spielberg wasn't accepted into a top film school because of his mediocre high school grades (probably due to his poor rote memory). He had been producing movies since he was in middle school and showed obvious, exceptional talent, as well as extraordinary motivation. Yet, because most colleges want people who are generally competent (smart in general) at every school subject, he had to attend a college that had few film classes, some of which he could have probably taught better than his teachers.³⁰

Brain scans of bright ("at something") people like Temple Grandin show that her brain is optimally wired for visual tasks. That's why she can look over a property once and sketch it from memory. Years later she retains a detailed visual memory of places, even stop lights on a street, that's astounding. But being wired for visual tasks means that her brain's *not* wired for other tasks. (A brain can't be wired for everything.) In her case, she could never understand Algebra, no matter how hard she tried and how much time her frustrated teacher spent with her. Fortunately, she learned along the way to concentrate on her strengths, so that she produces studies in her areas of competence and teaches on the university level.³¹

3. Many people who would be brilliant at managing people, leading a company, or designing cars are taught by our system to think of themselves as dumb. Some may never find their niches because their areas of strength were never identified, encouraged, and cultivated in school.

My twins are dyslexic, which makes math and reading/writing quite difficult. But each have very high emotional intelligence and get along great with people. They're also creative thinkers and have artistic talent. Unfortunately, educators had no time to help them identify and grow in their areas of strength. Instead, they had to double up on math and English and concentrate on their weaknesses.

Traits like emotional intelligence, people skills, ability to negotiate solutions, analytical thinking and creative thinking, which are in high demand vocationally, are seldom taught, graded, and rewarded in secondary education. Sure, it's difficult to test and standardize such skills. But while the vast majority of managerial positions need people who can motivate and work with people, our secondary schools prepare managers who can do calculus, but may have no clue how to hire, train, retain, and motivate people.

As Howard Gardner, Psychologist at the Harvard School of Education has said:

"The time has come to broaden our notion of the spectrum of talents. The single most important contribution education can make to a child's development is to help him toward a field where his talents best suit him, where he will be satisfied and competent. We've completely lost sight of that. Instead we subject everyone to an education where, if you succeed, you will be best suited to be a college professor. And we evaluate everyone along the way according to whether they meet that narrow standard of success. We should spend less time ranking children and more time helping them to identify their natural competencies and gifts, and cultivate those."³²

Gardner and many others would argue that people aren't typically smart *in general*, or geniuses *at everything*. They're smart *at something*, geniuses *at something*.³³ Even IQ tests evaluate a fairly narrow set of potentially useful types of intelligence.³⁴

If we're on track with our definition, when little Suzie recites her ABCs forward and backward, her teacher should *not* respond "Suzie, you're so smart!" But more accurately, "Suzie, you're really smart at memorizing letters! I'll be eager to see if you can learn other things with such ease. For those of you who are finding memorizing the ABCs more difficult, don't get discouraged. Over time, you'll find areas of strength, which Suzie may lack. That's why we all need each other."

Clarifying our definition of "smart" has vast implications for education, child-rearing, hiring, and vocational choice. Unfortunately it seems that the *language* of smart hasn't kept pace with the *science* of smart.

My point? Definitions are important. They have vast implications for our understanding of ourselves and how we build our societies. Getting definitions right often means going beyond looking up words in a dictionary, which only tells us how people *use* the word, not how we *should* use the word to better conform with our current scientific understanding.

The Wider Importance of Definitions

Words are thrown around very loosely these days, with many words meaning entirely different things to different people, often spoken or written with the intent of evoking emotions rather than expressing precise ideas. In politics, the words "liberal" and "conservative" and "socialist" and "progressive" often mean entirely different things to different people.

To further confuse, in educational circles the term "liberal education" refers, not to a political ideology, but to an approach to education that is broad in scope but allows students to probe deeply into an area of interest, with an emphasis on developing analytical, communication and problem-solving skills. In other words, with this meaning in mind, a school that leans conservative in its political stance may offer a liberal education.³⁵

Failing to clarify what people mean by these terms obviously leads to confusion. Speakers say one thing; audiences hear another.

In medical science, I find professionals using the term "anecdotal" in a variety of confusing ways. Sometimes it refers to evidence that isn't conclusive, other times to worthless hearsay, and still other times to fairly strong evidence which is based solely upon patient reports (such as reporting how well a pain medication works, relying primarily on patient testimonies).

Popular conversations about scientific issues often confuse the *popular* use of the term "theory" with the *scientific* use of the term "theory." The former typically refers to an idea that has no evidential base, such as when one says, "His explanation of why his wife left is all theory and no evidence." Yet scientists use the term to describe everything from a theory that has *some* evidence supporting it, to one that has a *great deal* of evidence supporting it. No wonder people

get confused.

Even words in fields that you'd think would be known for their precision—words or phrases like "science" or "the scientific method" are used with vastly different meanings by scientists, depending upon the field and the context.

I hope you see the importance of getting our definitions right. Let's discuss some ways that speakers and writers, as well as those who interpret them, get their definitions wrong.

Common Fallacies in Defining Terms

"The word aerobics comes from two Greek words: aero, meaning 'ability to,' and bics, meaning 'withstand tremendous boredom.'"

— Humorist Dave Barry

1. Overdependence on Etymology (how a word was originally put together and how the meaning changed through history.)

Linguists warn interpreters not to use a term's etymology to derive the meaning in current usage. In our section on fallacies, this was called the "etymological fallacy." Here's an example to demonstrate why it's considered fallacious. Let's divide the word "refrigerate" into its component parts:

"re" = "to do again"

"frigerate" = "to make cold"

So literally, according to its etymology, we derive the definition of refrigerate as "take something that was once cold and make it cold again." Yet, this leads us astray since refrigerators are also used to "make cold" certain items that were never cold before, like leftovers from a warm lunch.

I've repeatedly heard preachers dividing up words into their component parts or giving their history in order to derive their meanings. They might say, "The Greek word *dunamis* became our English word dynamite; therefore, when you read the word "power" as a translation of the word *dunamis*, think dynamite!" Well, that certainly wasn't what a first century Greek reader thought when he heard the word *dunamis*, since dynamite had yet to be invented.

Unfortunately, I could give many other illustrations of definitions gone awry.³⁶ Thus, make sure that if you use a dictionary that gives the etymology of a word as well as its present usage that you don't draw your definition from that etymology. The only circumstance where it's necessary to derive a word's meaning from its etymology would be in the case of very rare words ("hypoxlegomena" are words that have been found in only one instance), in a text from ages past, which often lack enough context to derive meaning in the ordinary way. In such cases, we go to etymology as a last-ditch effort, knowing that we're still skating on thin ice.

2. Mistranslation.

Literal, word-for-word translations often fall far short because people miss the subtleties of language. Imagine the challenge of translating English into another language, even just considering the one problem of shifts of meaning over time. Before the 1970s "bad" consistently meant "of poor quality; inferior or defective." Then the younger generation began referring to their favorite artists as "bad," meaning the exact opposite: "of excellent quality." This is just one of many exegetical minefields that translators must traverse.

3. Using specialized, insider language.

Your bill at the auto shop often uses insider language. On the surface, it looks pretty straightforward—"Three hours of labor at \$60 per hour and \$95 for parts." As an outsider to the industry, you take this to mean that they worked on your car for three hours and paid \$95 for the parts. Silly customer! They may have done the work in an hour and a half and paid only \$50 for the parts. And they don't consider it lying. Here's how each of those terms gets redefined in the world of auto mechanics.

The time it takes to fix your vehicle is typically listed as "book time," which is an industry standard of an average amount of time it *should* take to fix a specific issue, allowing for typical setbacks. A good mechanic can often consistently beat the book time.

Many mechanics charge you *what you would pay* (or more) for parts if you purchased them from a parts store. But they get a pretty hefty discount for being regular customers, so they typically paid much less for the parts, thus making more money off the parts sale.³⁷

In the end, I don't see many mechanics getting filthy rich, so if I've got a good mechanic who charges reasonable prices, I don't quibble about the insider meanings of terms in his bill. Yet, by understanding his terminology I know what I'm paying for, how to compare prices, and when to buy the part and try to fix it myself.

4. Equivocation.

This is one of the common logical fallacies we discussed earlier. The meaning of a word subtly shifts during an argument, invalidating the argument.

I saw this recently in a passage by academic neurologist Kevin Nelson, in his book on near-death experiences. In critiquing the research of cardiologist Pim van Lommel, Nelson took him to task on his usage of the word "dead." Van Lommel had stated, in his report in the prestigious medical journal, the *Lancet*, that he interviewed 344 of his patients who had been resuscitated from cardiac arrest. Sixty-two of them had near-death experiences. "All patients had been clinically dead," van Lommel wrote.

Nelson countered that "the brain is nowhere near physically dead during near-death experiences." He goes on to describe brain death as a condition where so many brain cells rupture that they can no longer sustain life. Since this is irreversible, the patient dies and can't return to life.³⁸

Yet, this seems to be a clear case of equivocation. Van Lommel had argued, not that his patients were "brain dead," but that they were "clinically dead," a state from which patients are often resuscitated. "Clinical death" has a very specialized definition in medical science. It refers, not to brain death, but to the cessation of heartbeat and respiration. By using the same word in two different ways, but arguing as if they meant the same thing, Nelson argued fallaciously.

How to Avoid (for Writers) and Recognize (for Readers) Problems with Definitions

1. Consult general and specialist dictionaries.

Specialist dictionaries, for example, in philosophy and medicine, give extensive definitions of words as used in their specialty. But remember, dictionaries merely tell us how a word is commonly *used*. *Is* (the way a dictionary describes its common usage) doesn't necessarily imply *ought*" (how a word *should* be used), as we discussed in trying to define "genius."

2. Beware of the pitfalls of brief summaries.

I've seen this as particularly a problem in the legal sphere. One of my sons has a "hit and run" on his record. This term conjures up images of crashing into a car and fleeing the scene of the accident, perhaps leaving an injured person unattended and trying to get out of paying for damages. In my son's case, the full report shows that my son backed into his brother's parked car in front of our house and left for work because his brother wasn't around to tell. His brother reported it, and thus it's on his record. But the consolidated report, the report that businesses check when they hire people, merely says he was charged with a "hit and run," which can seriously damage a person's reputation.

Paragraph summaries of peer reviewed articles pose the same hazards. Without reading the full study, terms are often misunderstood.

3. Pay special attention to the word's usage in its immediate context.

In defining words, linguists insist that context is king. More important than how a word was originally put together, or what a word meant fifty years ago, or the primary meaning listed in a dictionary, linguists look to a word's *usus loquendi*—its use in context. Of utmost importance is the *immediate* context—the sentence and discussion in the surrounding paragraphs. This is especially important since the same word can take on so many different meanings, and shades of meanings, depending upon the context.

Take the word "run," to see how its meaning totally changes from context to context.

- "Let's run the marathon." (Participate in a foot race)
- "Run to the store and get me a drink!" (Drive your car there)
- "You've got a run in your hose." (an accessory calamity)

- "I've got to run." (leave)
- "I've got the runs." (intestinal issue)

Those examples are easy enough to discern. The immediate context identifies their meaning. But it's easy for even brilliant writers to shift meanings in ways that aren't apparent to the casual reader. When Dudley Shapere at the University of Chicago critiqued Thomas Kuhn's influential book, *The Structure of Scientific Revolutions*, he argued that Kuhn used the term "paradigm" in so many different ways, and often in such a broad way, as to make the term almost void of meaning.³⁹

4. Understand the larger context of the chapter, the book, or the author's other writings.

When the Apostle Paul writes "to the saints at Ephesus," he's neither referring to a select subset of Ephesian believers who are unusually upstanding in their conduct (e.g., "saintly"), nor to those few deemed by religious leaders to have special honor and even power (e.g., Catholic saints). Rather, he's referring to the ordinary believers in Ephesus, warts and all. How do exegetes know this? They compare this passage with Paul's use of the same term throughout his writings.

5. Consider the cultural context.

Words shift meaning from time to time and place to place. For definitions of Greek words in the first century, don't think primarily of how we use the words today, but how they used the words in their culture. One authoritative dictionary for the common (koine) Greek of the first century would be Bauer, Arndt and Gingrich's *A Greek-English Lexicon of the New Testament and Other Early Christian Literature*. Authors of resources such as this scour writings of the time period in close geographical proximity to find numerous occurrences of the word in question, determining various meanings from various contexts.

Writers of historical fiction would do well to consult specialized dictionaries for language usage during the time they're writing about.

6. In important conversations, ask people to define their terms.

Often, "what you're hearing" and "what they're saying" are miles apart. If you sense a disconnect, or know that they're using terms that are often convoluted, ask them to define their terms.

Conclusion

Since we express our thoughts in words and interpret the thoughts of others by understanding their words, look closely at their meanings. Subtle shifts in meaning, such as an absent phrase in discussing "smart" or "brilliant," can impact decisions from our children's education to determining our life's work.

Think Different Tips for Communicating More Creatively Teaching to Change Lives

Precise definitions make more *accurate* communication. But don't expect audiences to rush the stage for your autograph because of your accuracy. And certainly don't expect them to remember your talk or change their lives in response. Accurate knowledge, in order to impact, must be served up in creative ways that are interesting, helpful, insightful, motivational, and unforgettable. Once again, we see the power of joining the creative with the critical. Thus, I'll close each of the next few chapters with tips on adding more power and creativity to our communications.

How can we take a well-reasoned argument and bring it to life?

One of Steve Jobs' strengths was his ability to inspire. Example: When Apple needed a new CEO, Jobs began to court Pepsi-Cola's president and marketing whiz, John Sculley. Jobs believed Sculley was the man to take Apple to the next level, but Sculley needed convincing. After all, Sculley already had a prestigious and lucrative position at a respected company. Besides, Sculley wasn't that excited about computers. At their first meeting, Sculley told Jobs frankly that most executives didn't find computers to be worth their trouble. But Jobs turned on the charm: "We want to change the way people use computers."

After several meetings, Sculley was still unconvinced, but told Jobs he'd be willing to offer advice from the sidelines. Then, according to Sculley, "Steve's head dropped as he stared at his feet. After a weighty, uncomfortable pause, Jobs issued a challenge that would haunt me for days. 'Do you want to spend the rest of your life selling sugared water, or do you want a chance to change the world?'"

Sculley felt like he'd been punched in the stomach. He *had* to say yes. Scully said of Jobs, "He had an uncanny ability...to size up a person and know exactly what to say to reach a person." Soon, Apple had a new CEO.⁴⁰

Jobs' yearly presentations of new Apple products to stockholders and the media were legendary. Rather than tell audiences in a sterile, grammatically correct manner where the company was going, he motivated and inspired, convincing them that they were not just making new products, but changing the world.

How can we teach and write to change lives?

1. Take your communications seriously.

Most people, in their daily communications, seem to speak rather spontaneously. But if you're speaking/writing to motivate people to take action, make adequate preparation. The best speakers appear to be speaking spontaneously and effortlessly, but from my experience in interviewing great speakers, that effortless manner came as a result of great planning. As one

person said of the great speaker Winston Churchill, "Winston has spent the best years of his life composing his impromptu speeches".⁴¹

Having studied Jobs a bit, I'd guess that he prepared those words for Sculley, down to the body language of dropping his gaze to his feet, the dramatic pause, and the carefully worded, loaded-for-impact sentence.

2. Know your audience.

What motivates them? What turns them off? What's important to them? The more you know about your audience, the better you can tailor your speech/article to them. I often ask my students about their personal interests, vocational interests, etc. Then I can gear my lectures/discussions to speak directly to those interests.

3. Use fascinating illustrations and stories to make your points memorable.

In this chapter, had I restricted the discussion to how to properly define words, without illustrating the concept, you'd have likely yawned through the chapter and remembered nothing. But hopefully you'll remember some of the fascinating details of Einstein's weaknesses, so that the next time you hear a person label someone as dumb because of their forgetfulness, you'll think of Einstein and reflect: "Well, just because she forgets where she's going doesn't necessarily make her dumb." Hopefully, you'll also connect this thought with the importance of and difficulty of defining words.

I'll write more about collecting and using stories at the end of the next chapter.

4. Collect ideas from everywhere.

A large part of creativity (some would argue it's the very essence of creativity) is connecting two ideas from different realms that nobody has yet put together.⁴² If true, this might explain in part why so many great ideas come to people while they're not working on the project at hand.

Einstein's best ideas often came to him as he played his violin.⁴³ I get many of my best ideas while driving. One author looked at a filing cabinet with two drawers—one for letters A-N, the next O-Z. He wrote down "Oz", which became the name of his fictional world, which was adapted to film as *The Wizard of Oz*.⁴⁴

When director George Lucas was working on the film *American Graffiti*, someone asked him for Reel 2, Dialogue 2 of the film, abbreviating it to R2-D2. It sounded cool to Lucas, so he jotted it down in his small notebook where he recorded name ideas, plot angles, and "anything that popped into his head." In this way, R2-D2 would become the name of the spunky little droid in *Star Wars*.⁴⁵

For me, this means to never, ever be caught without paper and pen. (Others might prefer to text ideas from a smart phone to a cloud-based app like Evernote, to be accessed and stored later on your desktop computer, iPad, or Netbook.)

5. Find others who offset your weaknesses.

In my opinion, most writers don't have it all, e.g., the ability to spot all grammatical errors, catch inconsistencies, stay on task for months and years, "hear" the rhythm of sentences, see the big picture, use humor, organize tons of details, recognize flaws in logic, make readers laugh, find all factual errors, develop intriguing characters that people care about, do thorough research, write catchy titles, do painstaking research, etc.

For this reason, many writers work closely with a favorite editor, or regularly run chapters or articles by a writers' group. C.S. Lewis and J.R.R. Tolkien did this with their writers' group, the *Inklings*. Many speakers have a person or team they work with at a certain point of their preparation. Many writers for TV and films work as a group, or hand off their version to the next writer for further refining. (Remember Pixar's "Brain Trust.")

6. Distance yourself from the manuscript/talk before revisiting it.

Stephen King locks a completed manuscript in a drawer and waits at least six weeks before pulling it out for personal editing. Why? When we're in the heat of writing, we lose perspective and become blind to our faults. Taking a break and coming back later can help us to see the manuscript through fresh eyes.

7. Add "that little something extra."

When an interviewer asked Johnny Depp about his acting, Depp said that he liked to not only play the part prescribed, but to add "that little something extra." We can certainly see that in his films. Think: Jack Sparrow in *Pirates of the Caribbean*. Steve Jobs added "that little something extra" to his yearly presentations, ending them with "Oh, and one last thing..." so that he could leave his audiences with a bombshell. No wonder one documentary on Jobs was titled, "One Last Thing."

Flex Your Neurons!

Pursuing the Point of Know Return

1. Note this week how people (in personal conversations, in the media, etc.) use words like "smart" and "genius" and "brilliant." What do you think they mean by those terms? Do you think we should use the terms in a different way? Why or why not?

2. What are some of the best online sources for accurate definitions? What are the best dictionary Apps for smart phones?

3. Trace the meaning of the word "cared" in this sentence. Does it shift? If so, how did the meaning change, and what would this fallacy be called?

Jim: Did you hear about the murder at the gas station? Apparently the murderer had just been fired. He must not care at all about people.

Bob: Oh, I think he cared a lot about people, and that's why he shot up the place. He cared that his boss was so insensitive as to fire him. Why would he have killed him had he not cared?

4. Often, unclear definitions result in unclear reasoning. Take the following two sentences. Does the second sentence logically follow from the first? On what definition does the conclusion hinge?

"Our proven oil reserves will be depleted by 2080. So we'd better prepare ourselves now to live in a world with no oil."

5. How could you take creativity in your communications to the next level?

6. What speakers and writers inspire you? What do they do that differentiates them from boring communicators? What characteristics of inspiring communicators could you adopt?

Making It More Personal Practical Takeaways

What are one or more ideas provoked by this chapter that you can apply to help you think more critically?

What are one or more ideas that you can apply to help you think more creatively?

What else do you want to make sure you don't forget?

Recommended Trails For the Incurably Curious and Adventurous

1. Find various types of dictionaries that might be useful to you. Consider which might be the best to consult for the following information:

- How New Yorkers used a certain word in 1920.
- A slang word used by California "valley girls" in the 1980s.
- The history of a word.
- The meaning of a word in the Koran.
- An extensive discussion of the philosophical meaning of, and the history of, "existentialism."



2. If you're interested in pursuing this theme of "What is smart?" and "What is modern brain science and psychology telling us about mental human potential?" read some of the following books:

- Daniel Tammet, *Born on a Blue Day: Inside the Extraordinary Mind of an Autistic Savant* (New York: Free Press, 2006). Tammet can attain fluency in a new language in a week, memorize 22,000 digits of pi, and multiply large numbers in his head immediately and effortlessly. Yet, he found Algebra difficult and can't drive a car, takes an hour to shave his face, and finds great difficulty trying to carry on a social conversation or to know when someone's expecting him to verbally respond. So is he brilliant, or dumb? What if all of us are simply on different places on a spectrum of strengths and weaknesses? What does this say about our education and our hiring of people?
- Temple Grandin (with Richard Panek), *The Autistic Brain: Thinking across the Spectrum* (New York: Houghton Mifflin Harcourt, 2013). Another autistic who explains (sometimes by showing her actual brain scans) much about how different brains can be wired, either from birth or from our early years.
- Harvard Psychologist Howard Gardner defends and explains his theory of multiple intelligences in his book, *Frames of Mind* (New York: BasicBooks, 1983). If Gardner is on target, then there are many kinds of minds, each of which has a different set of strengths and weaknesses. This would imply that a person might be considered a genius in a specific field of thought, such as "spatial intelligence," but not so smart at "linguistic intelligence."
- In 1995, Daniel Goleman published *Emotional Intelligence: Why It Can Matter More than IQ* (New York: Bantam Books, latest edition in 2010). This is a good book to take one type of intelligence—that which makes one smart at people skills—and show how it works. Although Goleman says that emotional intelligence can be developed, we can see from Tammet and Grandin that for some people it will come much easier than

others. But again, this shows why a person might be a genius at math, but clueless about relationships.

3. Many good books have been written on effective communications. For a brief but powerful book to complement my points above, read *Teaching to Change Lives: Seven Proven Ways to Make Your Teaching Come Alive*, by Howard Hendricks (Multnomah Books, reprint, 2003).

4. A popular classic on persuasion is *Influence: The Psychology of Persuasion*, by Robert B. Cialdini (New York: Collins, revised edition, 2007).

CHAPTER 21

THEY MISINTERPRET PHRASES AND SENTENCES

"It's dreadful what little things lead people to misunderstand each other."

— L.M. Montgomery, *Emily's Quest*

A Grammatical Insight Ignites a Reformation and Changes History

In July of 1505 a German law student named Martin Luther travelled alone, by foot, on a road outside the Saxon village of Stotternheim. As he approached the village, the sky darkened and he suddenly found himself caught in a vicious thunderstorm. A bolt of lightning pierced the sky, landing so close that it knocked him to the ground. Terrified, he took it to be a call from heaven and on the spot vowed to become a Catholic monk.¹

But Luther failed to find peace of mind. The religious instruction he'd received as a child painted the picture of a wrathful, fearsome God who couldn't seem to be pleased no matter how much Luther fasted and prayed and confessed. He never felt good enough for God and struggled with feelings of hate toward God.

Fortunately, almost a decade into Luther's monastic experience, an Augustinian vicar named Johann von Staupitz sympathized with Luther's plight and tried various ways to help him. He decided that Luther should study for his doctor's degree and teach the Bible. (Significantly, during Luther's time, studying the Bible wasn't emphasized by the Catholic church.) His study of Paul's Epistle to the Romans provided the key that unlocked the spiritual and psychological chains that bound his spirit.²

The key came in the form of a phrase that he struggled to understand: "the righteousness of God." Luther couldn't fathom why Paul was so excited about "the righteousness of God," since it was precisely God's righteousness that made Luther so depressingly aware of his own *un*righteousness.

Think!

Imagine that you're Martin Luther, reading this text: "For in it the righteousness of God is revealed...." (Luther would have been studying the Latin Vulgate and original Greek texts.) Without the benefit of context, what possible interpretations of this phrase, "righteousness of God" could you imagine?

Suddenly it struck him. This phrase wasn't speaking of "God's righteousness," but rather a "righteousness *from* God"—a righteousness that isn't *earned* by constant fasting and prayer and holy living, but a righteousness that is freely given (imputed) to those who accept the free gift offered by Jesus' payment for sins on the cross.³

Finally, Luther found the freedom and joy he'd been missing. He no longer needed to *earn* God's favor and heaven, but to accept a price that had already been paid. Luther was transformed.

The echoes of Luther's insight concerning this tiny phrase reverberated through history. He would risk his life to challenge the church during a particularly bleak period of its history, when power plays, insincerity, and teachings designed to enrich the church often took the forefront. By tacking his famous 95 theses to the Wittenberg door, he sparked a revolution that jump-started Protestantism, reformed Catholicism, changed the shape of Western Civilization, and ultimately impacted the world.

Such is the power of a little phrase, rightly interpreted.

The Problem with Genitive Phrases

In ancient Greek, as well as in English, phrases such as this (English: noun + "of" + noun; Greek: the genitive case of a noun) can be legitimately read in several ways.

- "The *love of Cherie* (meaning "Cherie's love") insured that the orphans were well cared for."
- "For the *love of Cherie* (meaning "my love *for* Cherie"), I've sacrificed all other loves."
- "The *counsel of my professors* (meaning the counsel I received *from* my professors), helped me choose a suitable vocation."

So if similarly (or exactly) structured phrases can have entirely different meanings, how can we interpret them correctly?

Building on the last chapter, context once again reigns as king. In the case of Paul in his letter to the Romans, his explanation of imputed righteousness in his surrounding chapters and other

Pauline epistles tells us what he meant by the phrase.

But phrases such as this can still pose a quandary for translators. A perhaps more literal translation of Romans 1:17 from the original Greek text into English, as given by the New American Standard Bible, is "the righteousness of God," leaving the interpretation in the hands of the reader. But the most *literal* translation doesn't always communicate the original sense most effectively. Many (perhaps *most*) readers would understand "the righteousness of God" as "God's righteousness" and thus misunderstand its intent. So the New International Version, in a less literal but perhaps more accurate translation, reads "a righteousness from God."

So sentences and their phrases are critical for our understanding, but are often difficult to interpret. How can we understand and use them better?

Tips for Understanding Sentences and Phrases

1. Know your grammar for the language you're reading.

A Greek present tense speaks more of "kind of action" than "time of action." Thus, if the verb is present tense, interpret it as "Seek (and keep on seeking) and ye shall find," as opposed to "Seek once..." when the verb is in the present tense.

2. Don't trust titles to be accurately descriptive of the article.

We've already talked about titles under the subject of media bias, but I'll just remind readers that titles often serve several purposes to editors, such as spinning a story to agree with their political bias or sensationalizing it to attract readers, both of which compromise accuracy.

3. Ask "What was the intended meaning of the author(s)?" before asking "What does it mean to me today?"

While some art, poetry, or songs are created to provoke different meanings in different people, other expressions have a particular meaning in mind. But finding that meaning isn't always easy. For example, one duty of our courts is to interpret the meaning of our founding documents as applied to specific cases.

Recently, The Supreme Court ruled on a case which questioned the right of a city council to begin its meetings with prayer. Some people felt that the prayer violated the phrase "Congress shall make no law respecting an establishment of religion..." in the First Amendment to the U.S. Constitution. Others felt that since the counsel was open to include prayers from diverse faiths, that they did nothing to "establish" a particular religion.

Decisions in such cases are often made, in part, by trying to determine the intentions of those who originally drafted and adopted the First Amendment. If you want to wrestle with this phrase and the Supreme Court decision on this case, I include more specifics under "Flex Your Neurons!"

4. When interpreting important historical documents, from the founding documents of your country to the Bible to the Koran to Plato's Republic, consult commentaries by respected scholars.

Often, they reveal cultural or linguistic nuances unknown to those who aren't scholars in those fields of study.

5. Consider the cultural context.

This is important for interpreting the First Amendment. What were the concerns of the early drafters and adopters about church and state relations they'd observed in Europe? What were they trying to protect or promote in America?

I've heard people quote Jesus' teaching that God "sends rain on the righteous and the unrighteous," as meaning that he sends hard times on both good and evil people. After all, we speak of "rainy days" as bad days, and say "Don't rain on my parade!" Yet, Jesus spoke these words in a dry, agrarian culture, so that early hearers almost certainly took it to mean that God gives good gifts, such as rain, to both the deserving and undeserving.

An acquaintance who works with a pharmaceutical company often interacts with people from other countries. When explaining a procedure to a Japanese contact, she asked several times whether the person understood, and she kept replying "Yes." Yet, it became apparent later that she didn't understand at all. The problem? Japanese resist admitting that they don't understand something. Perhaps they're embarrassed; or perhaps they think it reflects poorly on the person who's doing the explaining.

6. Beware of deceptive phrases in advertising.

Grocery store products contain enough misleading phrases to warrant a handbook to interpret them. So this juice "contains 100 percent fruit juice." But it doesn't actually say that 100 percent of the content is fruit juice. It just "contains" *some* "100 percent fruit juice." Look to the ingredients to find how much is actually fruit juice. The same goes for any bread that "*contains* 100 percent whole wheat flour."

7. Look for all possible antecedents.

I'm colorblind, which often gets me into embarrassing situations. One day my wife noticed a wild, strange, collarless cat wandering the neighborhood. She asked me to call animal control, since she was concerned for the safety of our small children. When I called, they asked some questions about the neighborhood and our house, then asked about the color of the cat. I asked my wife, "What color is it?"

Now she thought I was still describing the house, and responded "Sawmill green with yellow trim." So I relayed to animal control that they should look for a green cat with yellow trim. After I hung up, I said, "Honey, are you sure that cat was green?" She said, "I was talking about the house! They'll never show up!"

The problem was the antecedent of "it." I was thinking "cat"; she was thinking "house."

Unclear antecedents often confuse communication, both in writing and speaking. I may review my own manuscript multiple times and never notice the unclear antecedents, since I already know what I'm referring to. This is where multiple early readers and editors come to the rescue.

8. Be alert for unclear punctuation.

Writers, make sure that your punctuation clarifies your meaning. While all the nitpicky punctuation rules in *Elements of Style* are often helpful, remember that the primary purpose of punctuation is to make sure people can understand what the heck you're writing about. Review your sentences with several different inflections and emphases to see if they can be misread. If it's even remotely possible to misread a sentence, somebody will certainly read it that way.

9. Learn the most common phrases that often confuse people in the language you're interpreting.

Once you're made aware of, for example, the problems with unclear antecedents and genitive phrases, it's much easier to spot potential problems with multiple meanings. Again, consult *Elements of Style* for the bare basics of English grammar. Serious writers should consult the latest edition of *The Chicago Manual of Style*.

Conclusion

Sentences and their phrases can be confusing, but deciphering them can open up new worlds of understanding. In some cases it can change human history. Learn to recognize the common issues, and you're more likely to spot them and avoid misinterpretations.

Think Different!

Tips for Communicating More Creatively

Finding, Collecting and Using Stories

Making your sentences and phrases clear isn't enough. How do we make them interesting and impactful? Typically, when I hear truly impactful speakers, it's the quality of their stories that make the biggest impact.

From this book, you'll probably remember my stories before you recall my principles. Fortunately the stories often connect our minds to the principles they illustrate. No wonder great speakers are typically great story tellers.

Stories also provoke critical thinking. By positioning them *before* the point I wish to make, readers are challenged to use their higher level reasoning to try to draw out a life lesson.

I find stories everywhere—in my reading, in conversations, in the news. When I find a great story, I put it in a physical file or digital folder, categorized by popular topics. If I find great stories in a book, I write the location in the back of the book, for example, "p. 154, story on motivation for learning."

If I'm writing an article or book, and want to put one of the stories into my own words, I may do further research to confirm and collect important details. Thus I consulted a respected biography of Martin Luther to write the story that opened this chapter.

I also intentionally collect a *variety* of stories—business leaders, religious leaders, thinkers, sports heroes, writers, musicians, scientists—so that I can impact a variety of people.

Thus, when I plan a talk or write a book, I've got wealth of stories to pull from. Many of the stories simply come to mind as I write, so that all I have to do is pull the appropriate book off the shelf and look in my hand-written index, or pull something from my physical or digital collections.

Similarly, I keep research, jokes, great visuals, and other ideas in the same topical files for later use. It's a practice I started in college that has paid off richly through my decades of speaking and writing.

Flex Your Neurons!

Pursuing the Point of Know Return

1. Above, we introduced a case where the Supreme Court ruled on an issue of public prayer in the context of a city council, which some deemed to be in violation of the Establishment of Religion clause in the First Amendment. This is a good example of interpreting a phrase. Before looking at the specifics of the case, and how the Supreme Court ruled, ask yourself a couple of questions:

- What do you think the authors of the First Amendment meant by "Congress shall make no law respecting an establishment of religion, or prohibiting the free exercise thereof; or abridging the freedom of speech...."?
- Do you believe that opening a city council meeting with prayer in some way establishes a religion?

The First Amendment Center at Vanderbilt University is a good starting point for finding articles on the First Amendment: <http://www.firstamendmentcenter.org/about-the-first-amendment>.

To gather details on the case, search for the case "Town of Greece v. Galloway." Here are a couple of articles:

- Town Meetings Can Have Prayer, Justices Decide, by Adam Liptakmay, *New York Times*, May 6, 2014 - <http://www.nytimes.com/2014/05/06/nyregion/supreme-court-allows-prayers-at-town-meetings.html>
- Breaking — Supreme Court upholds legislative prayer in *Town of Greece v. Galloway*, *Washington Post*, by Jonathan H. Adler, May 5, 2014 - http://www.washingtonpost.com/news/volokh-conspiracy/wp/2014/05/05/breaking-supreme-court-upholds-legislative-prayer-in-town-of-greece-v-galloway/?tid=pm_national_pop

2. I wanted to watch the latest installment of "The Hobbit" films, but my son didn't want to see it if it left us hanging to await the final film. Seeing the title, I assumed it must be the final film, since it was titled *The Desolation of Smaug*. I took this to mean that Smaug (the dragon) would be killed, which comes near the end of Tolkien's book. I was wrong. Thinking back to our discussion of genitive phrases, how should I have interpreted "The Desolation of Smaug?"

3. Concerning unclear antecedents, what are several possibilities for what "it" refers to in the following passage?

"For my brother's bachelor party, we took him on an ill-planned wilderness adventure during the day, and played video games all night. We forgot to set our clocks and almost missed the wedding. It was a disaster."

Why Brilliant People Believe Nonsense

How could the sentence have been written more clearly?

4. Look at packaged food descriptions and product descriptions in a grocery store. How are many of the descriptions written in a deceptive way? Bring back some instances to class for discussion.

5. Do you like the way the Martin Luther story was told at the beginning of this chapter? If so, what elements made it more interesting? If you were telling the story, what would you change? People who can tell and write interesting stories are often seen as interesting people. How could you improve your story telling skills?

6. Write a brief account of something interesting that happened to you. Have your fellow students critique it to try to make it more clear and interesting.

Making It More Personal Practical Takeaways

What are one or more ideas provoked by this chapter that you can apply to help you think more critically?

What are one or more ideas that you can apply to help you think more creatively?

What else do you want to make sure you don't forget?

Recommended Trails For the Incurably Curious and Adventurous

1. As I sought a publisher for my first book, I read the following tip from an acquisitions editor at a respected publisher: "If I were writing a nonfiction book for publication, I'd read Zinsser's *On Writing Well* and do what he says." I read Zinsser and wrote a short list of his suggestions to guide me in revising my manuscript (e.g., "get your subjects moving by substituting active for passive verbs.") Result: A respected publisher offered me a contract! Thus, to improve your writing, I highly recommend *On Writing Well*, by William Zinsser (New York: Harper Perennial). Originally published in 1976, Zinsser updated and added to it through the years.
2. Some writers swear by Strunk and White's *Elements of Style* (New York: Macmillan) as the classic, handy summary of grammatical tips. But for me, it's easy to get bogged down in some of the minutia. In my opinion, Arlene Miller's (no relation to me) more recent *The Best Little Grammar Book Ever* (Petaluma, CA: Bigwords101, 2010) offers much of the same information in a more engaging way.
3. For many professors and professional editors, *The Chicago Manual of Style* (Chicago: University of Chicago Press, latest edition) remains the standard bearer of all things proper in writing. At over 1,000 pages, it's the reference book I keep close at hand for grammatical minutia.
4. For those studying the Bible as literature, a quite comprehensive (over 700 pages) classic in interpretation is *Biblical Hermeneutics: A Treatise on the Interpretation of the Old and New Testaments*, by Milton Terry (Zondervan, 1974 reprint edition). To hone your exegetical skills by examining common exegetical errors, study D.A. Carson's *Exegetical Fallacies* (Baker Academic, second edition, 1996).
5. For a good book on creativity in writing stories, particularly humorous and touching stories from real life, see *Bird by Bird: Some Instructions on Writing and Life*, by Anne Lamott (Anchor: 1995). For writing fiction, see Stephen King, *On Writing: A Memoir of the Craft* (New York: Scribner, 2010, anniversary edition). In fact, if you're pursuing writing, I'd read many books on writing, in order to compare and contrast how writers approach their craft, so that you don't fall into the trap of thinking there's only one way to write. Some write at night, some early morning; some swear by writing long hand, others on their computers. My wife put together a collection of quotes by popular writers on the writing life. See *Writing Conversations: Spend 365 days with your favorite authors, learning the craft of writing*, by Cherie K. Miller (Wisdom Creek Press, 2010).



CHAPTER 22

THEY USE FAULTY PARALLELS AND ANALOGIES

"[Science undergraduates] are inept at those turns of phrase or happy analogy which throw a flying bridge across a chasm of misunderstanding and make contact between mind and mind."

— William Lawrence Bragg

American Education in Crisis

According to authoritative sources, America's secondary education has become so poor that it's in a state of crisis.

- **Comparing our *students* with those in other countries** - According to our Secretary of Education, "We have a real state of crisis" in education. We're scoring so poorly compared to other nations in technology, math and literacy that we're in danger of not being able to compete in the global economy.¹
- **Comparing our *adults* with those in other countries** - According to the editors of the New York Times, "In a recent survey by the Organization for Economic Cooperation and Development, a global policy organization, adults in the United States scored far below average and better than only two of 12 other developed comparison countries, Italy and Spain."²

From these quotes, it appears that we're shortchanging the next generation with an inferior education.

Comparisons with other countries strongly influence our views of both how we're doing and what changes need to be made. But in doing such comparisons, it's vital that we discover the answers to such questions as:

- Are the comparisons accurate?
- Should we try to emulate the top-scoring countries?
- Are the comparisons fair, or are we comparing apples with oranges?

Our answers to these questions have a far-ranging impact on how we raise our children, which

schools we send them to (or opt for home schooling), and choosing political leaders (who often push opposing solutions for fixing our education). Ultimately, few doubt that the quality of our education significantly impacts the future of our nation and our world. Since I'm no specialist in educational reform, I don't pretend to solve our problems in this chapter. But at least we can clarify the issues by learning to think beneath the surface when we draw parallels between our own educational system and those of other cultures. In the process, we'll hopefully come to better understand the challenges of making accurate comparisons and analogies.

Think!

Write a hypothesis stating your opinion as to why you think America's education is failing.

Example Hypothesis #1 - Students these days don't really want to get ahead, so they don't take their studies seriously. Thus, there's not much that frustrated teachers can do to motivate them.

Example Hypothesis #2 - Teachers don't treat students as individuals, but try to cram everyone into the same mold, which frustrates everybody to no end.

Your Hypothesis -

Recommendations from *The New York Times*

When we argue for changes in education, we must use accurate data and argue correctly from that data. Unfortunately, many if not most discussions suggest parallels with other countries that are far from exact, making their recommendations questionable at best.

Let's take a recent article in *The New York Times* as an example, authored by the NYT editorial board. It's titled *Why Other Countries Teach Better*, subtitled *Three Reasons Students Do Better Overseas*.*

***Overseas = "beyond or across the sea" (Merriam-Webster)**

(Digression: Since the article was written by Americans, a population never distinguished for its geographical savvy, let's try to ignore the fact that the NYT used Canada as one of their three examples of "overseas" countries. Since only half of New York city's residents own cars, we should perhaps forgive them for failing to notice that Toronto is easily accessible by land. Alternatively, perhaps this serves to underscore the problems with education in America,

making it a perfect segue into the body of this chapter.)³

In brief, the article begins by stating that America's education compares poorly to other countries in testing and is in danger of not being able to compete globally. Thus, according to the article, we must make some big changes. They then look to Shanghai, Finland and Canada, which consistently score exceptionally in standardized testing in Math, Science, and Literacy. For each country, they highlight a feature they believe we should adopt to improve America's education.

Clarifying the Line of Argument

Since the authors didn't make their line of argument explicit, let's attempt to formulate it ourselves. How about this?

Implicit Argument That America's Failing at Educating Her Students

Premise One: International comparisons of standardized test scores for Math, Science and Literacy provide an objective way to measure how well America is educating her students.

Premise Two: America is performing poorly in its standardized test scores, compared to many other countries.

Conclusion: America is failing at educating her students.

Implicit Argument That Emulating the Best-Performing Schools Will Make Us Successful

Premise One: By identifying and emulating the factors that caused top-performing countries to lead the pack, we can eventually lead the pack.

Premise Two: We've identified the factors that caused top-scoring countries to lead the pack.

Conclusion: By emulating these factors, we can eventually lead the pack.

I believe that both of these arguments are *valid*, meaning that if you agree with the premises, then you must agree with the conclusions, since they logically follow. But is each argument *sound*, meaning, do you agree with each of the premises? If the premises are wrong, then the conclusion is likely wrong as well.

By the way, the line of argument in this NYT article is typical of the majority of articles I see comparing America's education with that of other countries. So we're not just critiquing an article; we're critiquing a popular and influential way of thinking about our education.

So let's gather more data concerning this issue by spotlighting differences between America and Finland, not only in their education, but also in their culture and demographics. Then, we'll use this data to evaluate comparisons of the two countries.

Think!

To set us up mentally for the next section, allow me to give you a problem to solve. Try to solve it as quickly as possible, as if you are doing a timed test:

Imagine that you're driving a bus. You start with 30 passengers. At the first stop, 15 get off and three get on. At the second stop, 5 get off and 7 get on. At the third stop, 13 get on and 12 get off. Then, you have an accident at a busy intersection. Nobody is hurt, so you call the insurance claims adjuster. He asks you one question and only one: "Was the driver male or female?" Quickly now, without looking back...what's your answer?

At first reading, the majority of people throw up their hands and declare it was a trick question. "Who knows whether the driver was male or female? You never told us!" But I did indeed tell you. I told you in the first sentence. "You" were driving the bus. But most people get so distracted with the mathematical data that they entirely overlook the most critical data.

My point? In comparing the educational systems of different countries, it's easy to focus on one or two characteristics that jump out to us, while totally ignoring other characteristics that may, upon further reflection, turn out to be much more important.

So while *The New York Times* editors briefly mention a couple of distinctives in Finnish education (like free school lunches for all and a rigorous curriculum) they quickly focus on what they consider the most important distinctive—superior teacher training—suggesting that this is the area we need to focus our efforts on to improve our education. And perhaps they're right.

Yet, for those willing to dig a bit deeper, there are many aspects of Finnish education and culture and demographics which differ from the American system and context. Without considering as many distinctives as we can compile, how can we possibly discern which are 1) the most important to Finnish education and 2) which, if any, should be adopted in America?

Below, I've listed some ways Finland educates differently from America. Imagine that you've been sent to Finland with a delegation of American educators to observe their educational system. You return with the following observations. Try to come up with recommendations, based upon

- 1) Which you think are the most important.
- 2) Which you think would transfer best from Finnish culture to American culture.

Finland Versus America: An Apples to Apples Comparison?

I'll organize these observations into sections on demographics, geography, and differences in how Finland educates. Note that although demographics and geography can greatly impact test scores, educators are largely powerless to change them.

Demographic Apples and Oranges

- **America is educating almost three times as many students who were born in foreign countries, compared to Finland.** The high school I attended (Dalton High School) was fairly homogeneous. Surely this contributed to our fairly high SAT scores. Over the years, the demographic changed to almost 50 percent Hispanic. (Today, first generation Mayans are impacting the education in the area as well.)

Imagine comparing scores between the old Dalton High and the new Dalton High, when so many of today's students have yet to master English. Imagine how absurd it would be for a state official to look at a drop in test scores and, without noting the change in demographics, conclude that the quality of teachers must have dropped significantly, suggesting that we could solve the problem by having the teachers get masters degrees. Is this any different from comparing the USA to Finland, without considering this significant difference?

"...as of 2010, just 4.6 percent of Finnish residents had been born in another country, compared with 12.7 percent in the United States."⁴

- **Three percent of Finland's students live in poverty, as opposed to twenty percent of American students.**⁵ Poverty is strongly correlated with poor test scores. To see the impact of poverty, compare test scores among American schools. While there are exceptions, the wealthier districts exhibit a strong tendency to score significantly better. After all, their homes tend to be more stable. Students get more parental support. They have less problems with violence in their neighborhoods. Their parents have more time to support the teachers and schools as volunteers. They attract better teachers.

Thus, it's no wonder that there's a strong correlation between the wealth of a district and its scores. According to one observer of Finnish schools, "there is a near absence of poverty."⁶

- **Fourteen percent of Finnish children live in single parent homes, versus 27 percent in the USA.** We realize the importance of this when Finnish officials tell us how important the early years are to education. The government gives parents books on childrearing at the birth of a child. Yet, single parents in America are often so preoccupied with working multiple jobs that they find difficulty fully engaging with their children's education.⁷

Thus, comparing demographics, it makes little sense to compare Dalton High, with a large number of students in poverty and many learning English as a second language, to a school in Helsinki pulling from an entirely different demographic, and concluding that we'll solve the problem with better teacher training. Can it be purely coincidental that many of the world leaders in test scores are also many of the most homogeneous cultures? For example, Japan and

South Korea are the first and second most homogeneous countries in the world. Their students also consistently score at the top of international testing.

To get closer to an apples to apples comparison with Finland, we might compare Finnish schools to only the American schools that have a similar distribution of wealth, a similar number of students who grew up speaking the language, a similar number of single parent homes, etc. When we do this, a very different statistic emerges:

"Note that U.S. schools with poverty rates comparable to Finland's (below 10 percent) *outperform* Finland and schools in the 10-24 percent range aren't far behind."⁸ (italics mine)

If this statistic holds true, then we should reconsider the assumption that America's schools are doing something terribly wrong. Perhaps our teachers are doing a pretty good job, given the demographics some are working with. Perhaps our schools located in areas with more stable demographics are doing pretty well, even excellent, compared to other countries. Perhaps our mandate shouldn't be figuring out how to overhaul out entire education system, but figuring out how to better educate our socially disadvantaged students, or how to help their families stabilize and escape from poverty.

Geographical Apples and Oranges

Finland is smaller than the state of California, wedged between Norway, Sweden and Russia. Only six million people worldwide speak Finnish, compared to about a billion people who either grew up speaking English or have acquired it. This is very significant when we speak of the Finns doing so much better than Americans at learning other languages.

Imagine that you're growing up in Finland.

- You're extremely motivated to learn other languages, since you'll almost certainly need them to do business in several languages.
- Even within your own country, your next door neighbors and friends may grow up speaking both Swedish and Finnish, since both are national languages.
- Your parents likely speak a couple of additional languages and can help you learn them growing up.
- Your teachers are probably fluent at several languages, so that you're introduced to multiple languages at an early age and it quickly becomes a part of your school life.
- The TV shows and news and video games you play may be in multiple languages, giving you practice from an early age.

No wonder they excel at foreign languages! No wonder it would be difficult, if not impossible, to replicate their success at language acquisition in America.

Differences in How Finland Educates

Comparing our education with that of other countries can provide a wonderful resource for ideas. Yet, the articles we read comparing our education with other countries often pull out a few characteristics of Finnish education and suggest that applying those to our schools will help, while ignoring many other aspects. As you read the below characteristics of Finnish schools, ask yourself, "What would I like to adopt for American education?" Circle your choices and try to rank them for priority.

- Adopt/Not Adopt - **They start academics later than us.** They don't emphasize math or reading till about age seven, when their compulsory education starts, reasoning that before that age, students need to be learning such foundational skills/traits as communication, social awareness, empathy, and self-reflection.⁹
- Adopt/Not Adopt - **They have no mandated, standardized tests, except for one at the end of the 12th grade year (think: SAT or ACT) to decide if they're qualified for college.** Throughout, they deemphasize testing, especially deemphasizing comparing grades between students and between schools.¹⁰
- Adopt/Not Adopt - **They spend less money on education (about 30 percent less) per student than American schools.**¹¹
- Adopt/Not Adopt - **They don't put "gifted" or "special ed" students in different classes. Instead, they stay in the classes with the other students.** Those who are stronger in certain subjects help the weaker. Weak students also get extra help from educational specialists, who have even more training than the regular teachers. Thirty percent of the students receive some kind of special help at some point.¹²
- Adopt/Not Adopt - **The national curriculum consists of broad guidelines rather than specifics of what content must be taught and tested.** Control over policies rests with town councils. Accountability and inspection rest primarily with teachers and principals.¹³
- Adopt/Not Adopt - **Comprehensive (grades 1-9) education is broad, including "four to eleven periods each week taking classes in art, music, cooking, carpentry, metalwork, and textiles."** By contrast, one of my Asian students told me that "all we studied was math and science."¹⁴
- Adopt/Not Adopt - **They don't emphasize testing in their weekly work.** "We prepare children to learn how to learn, not how to take a test," said Pasi Sahlberg, a former math and physics teacher who is now in Finland's Ministry of Education and Culture."¹⁵
- Adopt/Not Adopt - **They value play,** allowing 15 minutes of play between lessons in elementary school.¹⁶
- Adopt/Not Adopt - **Teachers give minimal homework.**¹⁷

- Adopt/Not Adopt - **Students don't spend as much time in school as other Western nations.** When Dr. Pasi Sahlberg, of Finland's Education Department, was asked what he thought about the many hours Asian students spent in school, he replied,

"There's no evidence globally that doing more of the same [instructionally] will improve results. An equally relevant argument would be, let's try to do less. Increasing time comes from the old industrial mindset. The important thing is ensuring school is a place where students can discover who they are and what they can do."¹⁸
- Adopt/Not Adopt - **Classes are small - typically not more than 20 students.**¹⁹
- Adopt/Not Adopt - **In schools with more disabilities and poverty, they pay special education specialists a higher salary since they've had to put in more schooling.** Including special education teachers, schools have about one teacher for every seven students. Teachers need to know the students personally.²⁰
- Adopt/Not Adopt - **They offer nine years of comprehensive education, then students can choose the college track or tech track.**²¹
- Adopt/Not Adopt - **They start teaching a couple of foreign languages by age nine.**²²
- Adopt/Not Adopt - **They foster the sense that the entire faculty is responsible for the success of each student, rather than just their individual teachers.** Since the schools are typically smaller than American schools, all teachers feel responsible for little Timmy's success, whether he's in their class or not, and can offer suggestions.²³
- Adopt/Not Adopt - **They require "that every teacher earn a fifth-year master's degree in "theory and practice" at one of eight state universities—at state expense."**²⁴
- Adopt/Not Adopt - **There's much less top-down (federal level) control, so that teachers have more autonomy to choose their own texts, and ways of assessing whether students are getting the material or not.** As a result of their training and autonomy and success (and probably many other factors), teaching has become a much-envied and respected occupation—they look up to teachers much like we look up to physicians or lawyers. This insures that many of the best students compete to become teachers. Thus, "In 2010, some 6,600 applicants vied for 660 primary school training slots."²⁵
- Adopt/Not Adopt - **"For residents, school lunches are free, preschool is free, college is free."**²⁶

Questionable Premises: The Problems with Parallels

The challenge of comparing education systems (America versus Finland) or businesses (Microsoft versus Apple) or families (mine versus my neighbor's) or musicians (Led Zeppelin versus The Beatles) is that the comparisons are seldom if ever exactly parallel. Thus, we must question the premises of articles and presentations that make such comparisons.

"Our students perform horribly at math compared to other countries!" an article proclaims. "We've got to get better teachers!"

Oh really? Based on what data? Are the "other countries" educating the same demographics as we are? What would a more apples to apples comparison find?

"Shanghai is beating our students in standardized tests. We'd better find out what they're doing!"

But Shanghai is educating, not everyone, but their select, most promising students, making it an unfair comparison.²⁷

"Nations such as Singapore are outscoring us in math. Unless we catch up with them, they'll soon overtake us in our global economy!"

But what's our purpose in education? To do well on standardized tests? If so, we may do well to adopt massive rote memory and drills aimed at scoring high on tests, much like Japan and Singapore. But what's the opportunity cost of obsessing on test scores? What if an obsession with rote learning produces people who can do well on Jeopardy, but find difficulty thinking critically or relationally or creatively? Perhaps by having a broader curriculum, allowing for creative and critical thinking, and allowing time after school to explore our talents and interests, we develop more and better entrepreneurs.

Bill Gates spent massive amounts of time outside of high school working at a local tech company, practicing his programming and learning about business. Warren Buffet started and worked at many businesses during his middle school and high school years, helping him to understand businesses and contributing to his ability to know which businesses are more likely to succeed. Could Gates and Buffett and hosts of others have succeeded had they spent all their after school time feverishly memorizing material for tests?

Singapore's students do great on tests, but don't do well in starting new businesses. Perhaps there's a correlation between this problem and their educational methods.

"Finland outscores us on standardized tests. If we give all our teachers more training, we can match their scores!"

But as we've seen, there are many ways Finnish schools differ from ours. And once we compare apples with apples (in this case schools with a similar socioeconomic mix as their schools), we find that the scores may not differ significantly. If they are indeed offering a better education in certain ways, then we must first decide which differences are the most important and which might work well in Finland, but not at all in America.

The Art of Asking Good Questions

Again, this applies to comparing, not just schools, but businesses and sports and styles of childrearing. So learn the habit of dreaming up the many and varied questions necessary to evaluate comparisons and analogies.

Here are some of the questions we should ask when assessing comparisons of school systems:

1. Are we comparing all relevant aspects, or are we just cherry-picking the aspects that seem important to us?

2. Do we have a way to judge which differences are actually impacting the quality of education, and to what extent? Don't be guilty of *pos hoc ergo propter hoc*, assuming that since certain events (styles of teaching, etc.) took place prior to the testing, that each of these *caused* the superior scores.

3. Have we identified and understood the impact of the demographic and geographical differences?

4. Do we understand the cultural differences that may make a practice work in one culture, but not in another? Example: A practice that works in Walmart may not work in a high end store. A practice that works in Japanese education (extremely high parent involvement, due in part to a culture that emphasizes shame on the family if a student doesn't achieve A's, and a culture where the best jobs are reserved for those with the highest grades), may not work in America (where many parents are content with C's or even passing). This process might be called "contextualization."²⁸

5. Are we considering opportunity costs?

- If we implement tougher tests, do we raise drop-out rates?
- If we implement more services, are we willing to pay more taxes or add to the national debt to fund them?
- If we institute high stakes testing, do we produce high anxiety youth, resulting in high suicide rates? (Part of the high suicide rate in Japan is attributed to shiken jigoku—"Examination Hell.")²⁹
- If we emphasize rote memory in order to promote high test scores, do we fail to develop creative and critical thinking skills?
- If we require all students to take four years of high school math, do we hold back the students who love and excel in math, since they're often thrown together with students who hate and struggle with math?
- If not all students can excel at math, but we require them to master higher forms of math in order to graduate, doesn't this make teaching math an incredibly discouraging career, since teachers must flunk so many discouraged students?

Conclusion

We dare not stop learning and tweaking our education. Analyzing the best schools and discovering their best practices is a great way to find great ideas. I actually like the NYT article. It

revealed some helpful ideas. But if we assume parallels that aren't parallel, we risk discouraging passionate teachers and failing to inspire the next generation of learners.

So the next time someone says, "We ought to do things like ____ does them!" stop and think.

Think Different

More Tips for Creativity in Communication

On Content: Fresh and Counterintuitive in a Style That Communicates

So you want to write an article to inspire your generation to get more exercise. The last thing people want is the same old thing regurgitated by yet another writer. The worst thing students could say about my content is that they already knew it, or that it was intuitively obvious.

To avoid these common maladies, I choose content with these principles in mind:

- Fresh information trumps stale.
- Counterintuitive trumps intuitive.
- Inspiring trumps boring.
- Practical trumps impractical.

Reflect on the nature of some of the concepts we've covered in this book. Our trusted medical sites can't be trusted?! Wikipedia is often a fabulous tool for research?! The experts we confidently quote are often off-the-charts wrong?! That content, and some of the content of each of my chapters, is probably new to most students. I'm trying to keep my content fresh, counterintuitive, practical, and hopefully effective at inspiring readers to think for themselves.

Prioritize the Counterintuitive

In his classic work on creativity—*A Whack on the Side of the Head*—Roger von Oech urges us to experiment with "arguing for the opposite" of received wisdom. So when you hear experts lamenting about the sorry state of education in America, try defending the opposite, even if at first it appears ridiculous.

- How might *lowering* certain educational standards lead to better learning?
- How might *less* testing produce better students?
- If America achieved the top scores in the world, might the required changes in our education *hurt* our innovative edge rather than *help* it?
- What if teachers are doing a pretty good job of teaching, given the demographics they're working with?

- What if an overemphasis on science and math turns students off to the subjects rather than inspiring them to become scientists?

By "arguing for the opposite" we often find counterintuitive data that makes for interesting writing or speaking. Even if we conclude that the standard view was right all along, by trying to argue for the other side, we surely come to a better understanding of the issues.

On Appropriate Style: What is Good Writing and Good Literature?

This is an interesting philosophical issue, roaming into the realm of aesthetics. But before the discussion, read the following passage and imagine that a fellow student handed it to you, asking for your candid input. What would you recommend?

I said, "Who killed him?" and he said "I don't know who killed him but he's dead all right," and it was dark and there was water standing in the street and no lights and windows broke and boats all up in the town and trees blown down and everything all blown and I got a skiff and went out and found my boat where I had her inside of Mango Key and she was all right only she was full of water."

Critical thinkers might remember a label to slap on this hapless writing and advise the writer: "It's a run-on sentence—an obvious infraction of proper English. If you ran out of periods, here's a quarter. Run down to the corner store and pick up a package of five periods and sprinkle them throughout that 'sentence gone wild.'"

Creative thinkers might be divided: one group arguing that it's a cool way to express the jumble of thoughts that flood our minds when we first encounter a disaster area. Other creatives may despise it, seeing it as proof of the deplorable state of American education.

Actually, I pulled the quote from the short story "After the Storm," by Ernest Hemingway, winner of a Pulitzer, and considered by many one of the greatest writers of the 1900s.

My point? It's difficult to agree on what constitutes good writing. Let me suggest (and many will differ) that good writing can only be judged within a genre, by those who love and appreciate that genre. In other words, good writing is largely in the eye of the reader. If a large number of readers love Hemingway's style, they're probably the best to pass judgment on that passage.

The implication of my view is that communicators need to be in touch with their audiences. You may love William Shakespeare, but if your intended audience hates Shakespearian English and prefers a more colloquial style, you'd be foolish to ignore their preferences. So instead of letting an authority figure tell you what good writing is, why not find the most talented writers who write for your audience, learn from their works, and listen to what they say about writing? While most great authors and musicians don't *end up* with a style that merely mimics their mentors, they often begin there.

Flex Your Neurons!

Pursuing the Point of Know Return

1. After looking at the similarities and dissimilarities between America's education and Finland's, what elements do you think should be adopted from Finland, if any?
2. In general, what do you think should be done to improve America's education? How would you defend your view if you were a policy maker?
3. Why do you think people often go astray in using analogies, comparing school systems, comparing companies, or comparing products? How could we make more accurate comparisons?
4. With pen and paper in hand, watch a couple of episodes of a well-written TV show, such as "House" or the recent BBC rendition of "Sherlock Holmes." Note the characteristics of the writing that make it work. Note especially House's use of analogies, as related to this chapter. (If you hate these shows, find a show you like.) You'll likely find more elements by viewing with a friend or group of friends. After collecting characteristics, try your hand at writing the dialogue for a portion of an episode.

Making It More Personal Practical Takeaways

What are one or more ideas provoked by this chapter that you can apply to help you think more critically?

What are one or more ideas that you can apply to help you think more creatively?

What else do you want to make sure you don't forget?

Recommended Trails For the Incurably Curious and Adventurous

1. If you're passionate about improving our education, continue to read articles that reveal problems and suggest paths for improvement. The more you read, the more you'll likely see how educated people often differ in their analyses and prescriptions. What paths do various professors in academia recommend? What are teachers in the classrooms recommending? What are business leaders saying they need their employees to know? What are students saying? Is there any kind of consensus as to what, if anything, needs to be done?
2. As I mentioned in another context, those who struggle with writers' block often connect with their creative muse by reading *The Artist's Way*, by Julia Cameron (New York: Penguin Putnam, 1992).
3. To foster creative thinking in business, education, writing or whatever, read a classic (translated into 11 languages) on creativity: *A Whack on the Side of the Head: How You Can Be More Creative*, by Roger von Oech (Grand Central Publishing, revised edition, 2008). It's also just plain fun to read. Imagine...a book on creativity that's actually written creatively! It will help you to argue the opposite of what everybody knows, to ask the questions people don't tend to ask, such as the ones we asked in this chapter.
4. To learn more about creative thinking, read books that study creative people to discover what makes them tick. Frank Barron, et. al., edited *Creators on Creating*, offering essays by creative people discussing their creativity, from Ingmar Bergman to Tchaikovsky to Frank Zappa (New York: Penguin, 1997). Denise Shekerjian interviewed 40 people who won the prestigious MacArthur Award for accomplishments demonstrating creative genius. Rather than devote a chapter to each person, she distilled 14 principles of creativity from the interviews, devoted a chapter to each principle, and quoted from the interviews to illustrate and illuminate each principle. *Uncommon Genius: How Great Ideas Are Born* (New York: Penguin Books, 1990). From such books, compile your own list of keys to creativity.
5. Read full biographies (and/or watch documentaries) of creative people you admire in various fields, from music to sports to math to science to politics. From these biographies, add to and revise your list of keys to creativity.
6. If you want to delve into the academic research on creativity, Jon and Ronni Fox wrote an accessible introduction to the subject: *Exploring the Nature of Creativity* (Dubuque, Iowa: Kendall/Hunt Publishing Company, 2000), which will introduce you to much of the relevant research. Next, study the *Handbook of Creativity*, in which Robert J. Sternberg, a Yale professor of psychology and education, attempts to "provide the most



comprehensive, definitive, and authoritative single-volume review available in the field of creativity." Its 22 chapters, covering a wide range of topics related to creativity, are written by scholars in their fields. (Cambridge: Cambridge University Press, 1999.) To update the book by a decade of research, see James C. Kaufman and Robert J. Sternberg, eds., *The Cambridge Handbook of Creativity* (Cambridge University Press, 2010).

CHAPTER 23

THEY FAIL TO CORRECTLY IDENTIFY AND INTERPRET FICTION AND FIGURATIVE LANGUAGE

*"No story can be devised by the wit of man
which cannot be interpreted allegorically by the wit of some other man."*

— C.S. Lewis, *On Stories: And Other Essays on Literature*

"Persons attempting to find a motive in this narrative will be prosecuted; persons attempting to find a moral in it will be banished; persons attempting to find a plot in it will be shot."

— Mark Twain, in his preface to *The Adventures of Huckleberry Finn*

"American Pie": What Does It Mean?

Anyone who listens to 1970's radio stations has heard the song "American Pie." It's one of the all-time great road trip songs. Written and performed by folk rock artist Don McLean and published in 1971, it's one of those elite classic hits that still gets plenty of air time, allowing listeners to nostalgically reflect upon many of the seminal events of the tumultuous '60s.

Listeners often ask, "But what does all its cryptic language refer to, such as..."

- "the day the music died"
- "moss grows fat on a rollin' stone"
- "and while the king was looking down, the jester stole his thorny crown."?

Fortunately, a Google search provides some promising answers. The first site Google offered gave a helpful phrase by phrase commentary, revealing that, for example:

- "The day the music died" refers to the tragic death of singer Buddy Holly in a plane crash in 1959.

- "moss grows fat on a rollin' stone" refers to both Bob Dylan (who wrote a song titled "Like a Rolling Stone") and Buddy Holly (who quoted an English proverb in one of his songs: "A rolling stone gathers no moss.")
- "and while the king was looking down" refers to Elvis Presley, who was often referred to as "the king" of rock and roll. "The Jester stole his thorny crown" refers to Bob Dylan becoming more popular than Elvis with the younger generation.¹

While these interpretations sound reasonable, especially when stated with such assurance, why should I believe them? Is the commenter just guessing? Did he interview McLean? How can we, with any degree of certainty, interpret figurative expressions?

The Importance of Interpreting Literature*: from Chernyshevsky to Ozzy

In exile during his college years, Vladimir Lenin read Chernyshevsky's novel, *What is to be Done?* five times. According to Lenin, "It completely reshaped me. This is a book that changes one for a whole lifetime," showing "what a revolutionary must be like." Unfortunately, the novel showed only contempt for ordinary people, in all likelihood influencing Lenin's contempt for people and his willingness to sacrifice multitudes in pursuit of his political goals.² No wonder Martin Amos considered *What is to be Done?* "the most influential novel of all time."

***Literature** = in its broadest sense, any written documents, including fiction, nonfiction, scientific studies, poetry and song lyrics.

"But it was just a novel!" some might object. "Fiction. A made up story." Yet it resonated with Lenin in a way that other writings hadn't, influencing not only the course of his life, but the course of the world.

Literature is important. It impacts us. Thus it's important to understand its deeper meanings and decipher its symbols.

More than one family brought lawsuits (unsuccessfully) against Ozzy Osbourne for a couple of his fans who committed suicide, allegedly while listening to his music and taking his song *Suicide Solution* as an invitation to suicide.³ It could be argued that they would have killed themselves anyway, regardless of their musical preference, but according to a summary study in the *Journal of the American Medical Association*, while some young people may not be influenced by negative music, those who lack a strong moral compass may identify with the meanings of songs and indeed make behavioral decisions based upon them.⁴

But the word "solution" in the song title can have multiple meanings. While some take the song to mean that suicide is a "final solution" to having to face tomorrow, it can equally be taken to refer metaphorically to alcohol abuse as a type of suicide, resulting from a dangerous chemical "solution" (a blend or compound, a liquid mixture) that mimics the impact of a slow suicide.

According to Ozzy, speaking in the context of the people who committed suicide:

“(It’s) solution as in liquid, not a way out. The song’s about the dangers of alcoholism—alcohol will kill you just like any other drug will...it’s just a terrible case of misinterpretation....”⁵

So there you have it on the authority of that creator and expositor of great literature, Ozzy Osbourne: It's important to identify and correctly interpret figurative language.

Objective Versus Subjective Interpretations

Literature can be taught and interpreted in many ways. Some professors want students to read primarily with a view to how the novel or poem *impacts them*, emphasizing "what it means to you" rather than "what the author meant." Such an approach can be a profitable exercise—sometimes therapeutic, always creative, helping us to clarify and come to grips with our own feelings.

In fact, some art was never meant to communicate any particular truth. Rather, the artist created it to provoke different meanings in the minds of different viewers or readers. And there's nothing wrong with this approach, whether it's expressed in a sculpture or novel or song.

But in the present chapter, I'm interested in literature that was intended by the author to mean something in itself and to communicate something, like Chernyshevsky's *What is to be Done?* I'm trying to provide direction when we ask "What did Don McLean mean when he wrote those lyrics?"

Here are some principles that might help.

How to Rein in our Flights of Fantasy

1. Discover What the Authors Say about Their Meaning

When McLean was asked what "American Pie" meant, he famously replied, "It means I don't ever have to work again if I don't want to."⁶ In an email, he clarified a bit:

"As you can imagine, over the years I have been asked many times to discuss and explain my song "American Pie." I have never discussed the lyrics, but have admitted to the Holly reference in the opening stanzas. I dedicated the album *American Pie* to Buddy Holly as well in order to connect the entire statement to Holly in hopes of bringing about an interest in him, which subsequently did occur...."

"You will find many 'interpretations' of my lyrics but none of them by me."⁷

So the interpretation of "the day the music died" referring to the day Buddy Holly died in a small aircraft tragedy seems pretty secure. But what of the interpreter's dogmatic statements that "moss grows fat on a rollin' stone" refers to Bob Dylan and "while the king was looking down" to Elvis Presley? Both are certainly possible, but in light of McLean's statement, do we have any reason to take them any more seriously than educated guesses?

The same criticism could be leveled against those who see great symbolism in J.R.R. Tolkien's *Lord of the Rings*. Since Tolkien placed the evil land of Mordor in the East, and since Tolkien, as well as many other British citizens of the time, distrusted the intentions of Soviet Russia, it's tempting to conclude that Mordor symbolized Russia. But fortunately, Tolkien himself cleared this up by stating that he placed Mordor in the East because of "simple narrative and geographical necessity." Tolkien was all about writing great stories that people could "apply" in their own way. In his own words:

"I cordially dislike allegory in all its manifestations, and always have done so since I grew old and wary enough to detect its presence. I much prefer history, true or feigned, with its varied applicability to the thought and experience of readers. I think that many confuse 'applicability' with 'allegory'; but the one resides in the freedom of the reader, and the other in the purposed domination of the author."⁸

In his introduction to the second edition of *Lord of the Rings*, Tolkien states:

"As for any inner meaning or 'message', it has in the intention of the author none. It is neither allegorical nor topical."⁹

By way of contrast, other authors, such as Tolkien's good friend C.S. Lewis, had no qualms with writing stories that contained deeper meanings, as in his *Space Trilogy* and his *Chronicles of Narnia*. Lewis was quite open about the spiritual intentions of his works and makes the symbolism quite evident to those who are aware.¹⁰

The value of discovering the author's intention is demonstrated by the early reviewers of Lewis' *Out of the Silent Planet*, the first book in his *Space Trilogy*, very few of whom noticed the biblical analogies. (Lewis said that only two in 60 reviewers recognized the religious symbolism.)¹¹

In studying the Bible as literature, the intent of the author of each book is often stated, or is made obvious by its content. Psalms is a collection of songs, and should be interpreted as such. Proverbs is a collection of wisdom in the form of pithy sayings, not commands and promises that speak authoritatively to every situation. Thus, a proverb stating that wisdom leads to a long life isn't contradicted by the early death of a wise person. We're talking *principles* in Proverbs—the way things *generally* work—rather than the way they *always* work.¹²

The author of Luke, both in his account of Jesus' life (The Gospel of Luke) and history of the early church (The Acts of the Apostles) claims to be writing history based upon his own careful investigation. Thus, to take what was intended as history and to suggest (as is the habit of some writers and pastors with overactive imaginations), that each number and name and incidence has a deeper, symbolic meaning, would seem to be no different from the professors of literature who feel they simply must find deeper meaning in *The Lord of the Rings*. The former was written as history, the latter as a children's story. Obsessively looking for "deeper, symbolic meanings" risks losing all objectivity in flights of fancy that were never intended by the authors.

Surely it's safer to distinguish "what it means" (requiring sufficient reasons) from the equally

legitimate "what it means to me," or as Tolkien expressed it, how it "applies" to my situation (requiring introspection and resonance). A helpful first step is to discover the author's stated intention.

2. Study the Historical Context

I fear that the intention of the author didn't take us very far in our journey to comprehend "American Pie." McLean never tells us, as Tolkien did, that it's merely a story with no deeper or symbolic meaning. Quite to the contrary, he tells us that it was inspired by Buddy Holly's death. It certainly appears that the often cryptic phrases mean something, but McLean declines to tell us those meanings. Thus, I feel warranted in continuing my search for those deeper meanings.

Fortunately, those who study the 1960s (or who paid attention while living through them) can identify many phrases in the song that have special meaning. Thus, the historical context can help us to better appreciate almost all of the lyrics and suggest possible meanings.

For example:

- "a generation lost in space" - A popular TV series titled "Lost in Space" aired 83 episodes from 1965-1968. McLean seems to be comparing the TV family that was lost in space to young people losing their moorings in the tumultuous 1960s.
- "And while Lennon read a book of Marx" - The Beatles (with John Lennon as one of the primary song writers) transitioned from singing almost exclusively love songs to political songs and social messages with songs like "Revolution." So it's quite possible that The Beatles were the "quartet playing in the park."

All in all, based on McLean's constant historical references, he seems to be painting a picture of the optimistic, relatively stable 1950s (at the end of which Holly and his music died), followed by the angst and disillusionment of many in the '60s. The impact of drugs, lost faith in the government (and anyone over 30 years old), and even a blatant embracing of evil by some musicians led McLean to a feeling of remorse and loss. (See the passage in "American Pie," evidently about the Rolling Stones playing their song "Sympathy for the Devil" at the outdoor festival at Altamont, while members of Hell's Angels beat a fan to death in front of the stage.)

For me, having grown up in the latter '60s and early '70s, many of these lines hold special meaning—perhaps different meaning, or even *more* meaning, than McLean originally intended. In one interview, he expressed surprise upon hearing about how his song had such deep meanings. So perhaps it's good that he refused to tell the meanings he intended. I'd hate to hear that some of the phrases were just thrown together because they happened to rhyme. In the end, I might like my interpretation better than his.

So whether you're interpreting a song or a religious text or the founding documents of a country, the historical context should be considered.

3. A Check for Reining in Flights of Fancy: Find Other Interpretations.

Had I stopped my "American Pie" search at the first website I encountered, I might have bought into that person's interpretation. After all, the writer sounded very sure of the meanings he set forth, as if they were not his personal take, but the general consensus of what everyone in the know thought. After reading his interpretations, it was easy for me to read them back into the lyrics.

But by extending my search to other sites, I found a variety of interpretations, each of which seemed just as possible as the first. While certain phrases seemed to draw a consensus opinion, others were interpreted in wildly different ways. For example, "moss grows fat on a rolling stone" has been thought to refer to such various people/things as Bob Dylan, Elvis, rockers in general (raking in the money), a stagnating music industry, or the Rolling Stones.¹³

The takeaway? Resist believing the first interpretation that occurs to you, or the first interpretation you hear, no matter how dogmatically the professor or writer presents his or her view. By looking at many interpretations, we can weigh the evidence for each, perhaps in the end determining that one makes more sense than another, or alternatively concluding that the phrase is so vague that we'll likely never know with any degree of certainty what it means.

Yet, living with uncertainty doesn't sit right with many interpreters. Not comfortable with degrees of certitude, they feel that they simply must find *the* definite answer and express it with equal certitude. But in doing so, don't they hinder our search for truth by proclaiming their ill-formed opinions as the final word?

Why does a person give one and only one interpretation of "moss growing thick," present it with an air of finality, and not even reveal to readers that many other equally valid suggestions have been offered? Perhaps they heard this interpretation, believed it implicitly, and passed it on before checking for other interpretations. Perhaps they mask their insecurity by playing the part of the confident authority.

In interpreting "American Pie," such unwarranted dogmatism does little harm. But in other cases, when people make life decisions based upon a person's interpretation, writers and speakers should exercise more care.

In interpreting the Bible or other influential literature, this is where consulting the best commentaries comes in. Experts on the relevant historical context and original languages often help us to see things differently from our first, uninformed perceptions.

Some who teach literature feel that they simply must find deeper meanings everywhere. In the popular text, *How to Read Literature Like a Professor*, Thomas Foster, an English professor, notes that for many professors "everything is a symbol of something, it seems, until proven otherwise."¹⁴

So if, to your literature professor, every meal represents the Lord's Supper and every Fall season represents death, check out a few other interpretations. If you discover multiple

conflicting opinions, with insufficient evidence to indicate which might be right, just keep nodding your head at the appropriate places during your professor's lecture, answering the test questions the way your professor wants you to, while in your own mind assuming that his overactive imagination has taken him for a ride. Just resist allowing him to take *you* along for the ride as well.

4. Apply the Common Rules of Exegesis* and Hermeneutics*.

Two of my favorite college classes were hermeneutics and Greek exegesis—both of which attempt to construct a consistent science of interpretation. For me, they rescued all types of literature from being hopelessly adrift in a sea of subjective opinion.

Paying attention to exegetical principles keeps us from arbitrarily interpreting words according to our fancy. Consulting the appropriate dictionaries and lexicons can help. But when multiple meanings of words are possible, we explore the immediate and larger context in which the words are used. Exegesis helps us to understand how grammar influences meaning, as we demonstrated with Martin Luther reflecting on the Greek genitive phrase, "The righteousness of God."

***Exegesis** = determining the meaning of a text based on a careful, objective analysis.

***Hermeneutics** = the branch of knowledge that deals with properly interpreting texts.

In hermeneutics we explore, for example, abuses in interpreting figurative language. If I tell a fictional story to make a point, like the story of the bus that wrecked in chapter 22, I'm making a single point with the story. My context (what I'm talking about when I introduce the story) told you the meaning of the story (we obsess on certain details while overlooking others). Proper hermeneutics suggests that I call a literary foul if someone tries to interpret this story to mean that I think all buses are dangerous, bus drivers should be more careful, or (*a la* Freud) that the bus driver represents a repressed and resented father figure in my life.

Conclusion

While exegesis and hermeneutics help us to see through much literary nonsense, they may, as in the case of obtuse writing, merely reinforce that a passage is indeed obscure and indecipherable. I fear that the most informed and talented exegete or hermeneut is helpless to tell us with authority what McLean's moss on a rolling stone meant. Fortunately, most literature isn't so obtuse.

Think Different

More Tips for Clear, Lively, Creative Communication

A Helpful List

As we've seen, from an artistic perspective, not all literature is intended to be clear. Sometimes an artist wants the meaning to be obscure, or to leave the meaning "in the eye of the beholder." But when we write to communicate truth, we want to be both clear and creative, keeping our audiences both on track and awake. Here are some final tips (not absolutes):

1. Don't use an obtuse word when a clear, common word works just as well. My skin cream container warns: "Not for ophthalmic use." Surely more people would better understand, without any loss of meaning whatsoever, "Don't put in your eyes!"

2. Omit unnecessary words. This is the bulk of my personal editing—cutting words, sentences and entire sections.

3. Write brief sentences. As a rule, the longer the sentence, the more ways it can be misunderstood.

4. Keep your subjects moving by using active verbs, rather than either passive verbs or verbs of being. Example: Which sentence stimulates more action?

"Luther was almost hit by a bolt of lightning." (passive verb: the subject receives the action)

"A bolt of lightning pierced the sky, knocking Luther to the ground." (active verb: the subject acts)

5. Make regular divisions (like paragraphs or subheadings) and use any excuse to leave white space. Note how people lay out their blogs, typically using white space to divide thoughts rather than traditionally indented paragraphs. Dyslexics groan when they see a page of nonstop words. In my opinion, added white space helps all readers. This is quite a transition from the longer, sometimes page-long paragraphs of past writers such as C.S. Lewis, but I think it's an upgrade.

6. Get over the academic thing. If you're writing solely to impress your professor and a few nerdy friends, feel free to use specialized, insider, academic language. But if you want people outside academia to read your work, write for a more general audience. Let your research and the quality of your ideas, not your arcane style of writing, make people take you seriously.

7. Learn from various fields of communication. Read the *New York Times* for great journalistic writing. Note how sportscasters find 50 creative ways to say "He's out!" in baseball, to keep their commentary from being monotonous. Learn how literary writers paint vivid scenes and fascinating characters. Study how certain popular fiction writers keep stories moving with sparse prose and minimum description, allowing readers more latitude in creating their own mental versions of scenes and characters. Study standup comedians, who've mastered one of

the most difficult forms of communication—their expressions, their pauses, their motions, their content, how they interact with their audiences.

8. Get candid input from teachers, from friends, from family, from anyone who's willing to share a tip. In classes, I solicit regular input on the effectiveness of my teaching, asking students to evaluate me both mid semester and at semester's end.

9. KEEP HONING YOUR CRAFT! Whether you're teaching a class, leading a seminar, managing an office meeting, coaching a baseball team, or writing an article, there's always more to learn. Although I've been studying communication all my life, I still take classes on teaching and constantly get ideas from my fellow teachers and students.

Flex Your Neurons!

Pursuing the Point of Know Return

1. Go ahead, use this as an excuse to find the song "American Pie" and listen to it in its entirety. What do you make of it?
2. Think of a song that you've never completely understood. Do some research (as I did with "American Pie") to try to find
 - a. if it has an intended meaning and
 - b. if so, what it is.
3. When your teachers (present or past) wax eloquent on the "hidden meanings" of various pieces of literature, do you ever question their confident assertions? If so, how might you determine whether there's sufficient evidence for their claims?
4. Would people describe your verbal communications (formal and informal) as clear and lively? What are one or two ways you might improve your speaking so as to be a more interesting person?
5. How could you hone your writing to make it more clear, lively, and interesting?

Making It More Personal Practical Takeaways

What are one or more ideas provoked by this chapter that you can apply to help you think more critically?

What are one or more ideas that you can apply to help you think more creatively?

What else do you want to make sure you don't forget?

Recommended Trails For the Incurably Curious and Adventurous

1. If you're pursuing writing or (more broadly) communications, consider joining a writers' group or speakers' group (e.g., Toastmasters) or communication group (e.g., a Meetup group—www.meetup.com—or campus organization for communicators) to learn from one another.
2. To find the most useful articles and books on understanding literature, ask a couple of English professors or search such terms as "understanding literature," "interpreting literature," "exegesis," "hermeneutics."
3. On clear and lively writing, find articles by your favorite authors (authors who write in a style you wish to emulate) on how they write. And don't forget to study screenwriters. They seem to be more likely to write in groups or give mutual input. Do their processes tend to differ from that of journalists and authors? If so, what elements of their writing would you like to incorporate?
4. On clear and lively communications (beyond writing), find articles by your favorite communicators and discover ways to improve your own communications.

