

CHAPTER 12

Self-Reliance in the Twenty-First Century

We need to reclaim our lives from experts and technologies, a challenge that requires faith in ourselves and trust in our instincts—in short, a twenty-first-century self-reliance. We need to restore our faith in our own common sense and overcome our love affair with technology—it’s a tool to supplement, not replace, our thinking. We should keep experts on tap, not on top. We all have the ability and responsibility to see the big picture and connect the dots, because not doing so is likely to create more problems than it solves. But most importantly, we need to come up with a new way to engage experts. To do so requires that we abandon our devotion to depth and reintroduce a greater focus on breadth. It’s the only way we can reclaim the control we’ve mindlessly handed over to the various focus managers discussed in this book.

Fundamentally, self-reliance in the twenty-first century is about thinking for yourself. And even though it was written in 1841, Ralph Waldo Emerson’s words ring as true today as they did then. He basically urged us to think for ourselves: “a man should learn to detect and watch that gleam of light which flashes across his mind from within, more than the lustre of the firmament of bards and sages.”¹ We could easily replace “bards and sages” with “experts and technology” and it would feel relevant.

Just think about the fact that Steve Jobs, product developer extraordinaire, attributed the success of Apple's beautiful typefaces to a calligraphy class he took at Reed College (after he dropped out). He had been taking classes out of pure interest, not because it would count toward a degree. Jobs later noted that, "10 years later, when we were designing the first Macintosh computer, it all came back to me . . . and we designed it into the Mac . . . it was the first computer with beautiful typography. If I had never dropped in on that single course in college, the Mac would never have had multiple typefaces or proportionally spaced fonts. And since Windows just copied the Mac, it's likely that no personal computer would have them." But when Jobs took the calligraphy class, he had no idea it would prove useful. He was pursuing his interests, and as he said, "It was impossible to connect the dots looking forward when I was in college . . . but it was very very clear looking backwards."²

The lesson Jobs articulates is that overly planned and focused thinking today can impair your ability to connect dots tomorrow. Because we don't know which dots may prove useful to connect, it's useful to have a bunch of them in our repertoire. But specialization minimizes our appreciation of the number, type, and range of dots that exist; it limits our awareness of the context. And as society has marched onwards toward ever increasing degrees of specialization, we've come to look down on breadth. The scales of focus currently overweight depth; it's time to rebalance and acknowledge the value of breadth.

Learn from the Feeble-Minded

"Profession" is a fabulous short story written by Isaac Asimov in 1957 and illustrates, perhaps better than more modern anecdotes, the fundamental shortcomings of deep specialization and skills-based education.³ The story, set in the distant future, is about the educational path toward various professions. Although set on Earth, the story includes characters from distant planets known as Outworlds and is about the main character, George Platen, and his quest to become a registered computer programmer.

The development trajectory of humans in this future setting is punctuated with three key days: Reading Day, Education Day, and the Olympics. Reading Day is a day during which eight-year-old boys and girls report to a doctor, who puts wires on their foreheads that are connected to a machine. After several procedures, every child leaves with the ability to read. Education Day take place approximately ten years after Reading Day, and was the be-all, end-all event for parents and children alike, because that's the day that determined what specialization would be installed, not unlike software on a computer, into a child's brain, thereby enabling the individual to have a profession. (Incidentally, Education Day is a bit like the day in South Korea during which students take their university entrance exams, leading the *Economist* to refer to Korea as "The One-Shot Society."⁴) And the Olympics is a day of competition to establish the most capable person within each profession.

George is the son of a registered pipefitter on Earth who desperately wants to be a registered computer programmer so he can potentially find a home on a desirable planet in the Outworlds. During Reading Day, we learn that the doctor who installs George's ability to read notices anomalies in the process . . . the cause of which is unveiled during his Education Day experience.

On Education Day, George fails to be educated and is sent to meet Sam Ellenford, who states: "To begin with, you can't be a Computer Programmer, George. You've guessed that I think."

After acknowledging this bitter reality, he asks "What will I be, then?"

"That's the hard part to explain, George," Ellenford answers. "Nothing. . . . Every once in a while, George, we come up against a young man whose mind is not suited to receiving a superimposed knowledge of any sort."

"You mean I can't be Educated?" George asks.

"That is what I mean." Ellenford then describes to George how he is now a ward of the planet and will be protected. George inquires, "You mean, I'm going to be in a prison?"

"Of course not; You will simply be with others of your kind . . . you need special treatment."

A dejected George asks questions about the shame that will flow to his family. He is assured that they've been told he's been sent away on a special assignment. Eventually, George is paired with another "un-educatable" roommate. The property at which he finds himself is called "A House for the Feeble-Minded." Furious to have been placed there, George remains convinced that a grave mistake has taken place. He escapes and tries to convince others of his capability, refusing to accept that he cannot be educated. Through what appears to be dumb luck, George meets a historian who tries to help him.

In the course of their discussions, the historian answers George's questions about why Education works the way it does:

The turning point came when the mechanics of the storage of knowledge within the brain was worked out. Once that had been done, it became possible to devise Educational tapes that would modify the mechanics in such a way as to place within the mind a body of knowledge ready-made, so to speak. Earth exports Education tapes for low-specialized positions and that keeps the Galactic culture unified . . . and Earth exports high-specialized professionals. . . . Furthermore, tapes and men are paid for in material which we much need and on which our economy depends. Now do you understand why our Education is the best way?

The historian, a self-described social scientist, asks to study George. George refuses, unless the historian can help him. George asks for an interview with an Outworld official, and soon finds himself communicating with one. He tries to convince the official that he's worthy of hiring, telling a story of a friend who failed to learn because of insufficient access to tapes.

George describes: "Tapes are actually bad. They teach too much; they're too painless. A man who learns that way doesn't know how to learn any other way. He's frozen into whatever position he's been taped. Now if a person weren't given tapes but were forced to learn by hand, so to speak, from the start; why, then he'd get the habit of learning and continue to

learn.” He goes on to suggest that by disrupting the cycle of learning via tapes, it would be possible to break the dependency upon Earth.

The official then asks, “And where does everyone get knowledge without tapes? From interstellar vacuum?”

“From books,” George responds. “By studying the instruments themselves. By thinking.”

The Outworld official remains skeptical, suggesting the time needed to acquire proficiency was too great, and that even if proficiency was eventually acquired, it wouldn’t be as good as a competitor who had learned from tapes. He tells George that the self-educated person would not be as capable as a tape-educated one. George attempts to respond: “Wait, let me finish. Even if he doesn’t know something well, it’s the ability to learn further that’s important. He may be able to think up things, new things that no tape-Educated man would. You’ll have a reservoir of original thinkers.”

Although amused by George’s ideas, the official dismisses them as random banter of a wayward human. After the communication screen goes blank, a depressed George drifts off . . . only to awake back in the House . . . where his roommate greets him as his eyes open, informing him the historian was actually sent to help him adjust to his un-educated status.

And the light bulb goes off for George, “Now I see it . . . who makes Education tapes? Special tape-making technicians? Then who makes tapes to train them? More advanced technicians? Then who make their tapes— You see what I mean. Somewhere there has to be an end. Somewhere there must be men and women with capacity for original thought.”

His roommate notes, “The Institute of Higher Studies is the correct name for places like this.”

“Why wasn’t I told this at the beginning?” George asks.

His roommate then reveals that approximately one in ten thousand people show signs of some propensity for original thought during Reading Day, but because there is no known way to detect such a capacity, they are again checked during Education Day. “Those who remain are sent to places like this,” the roommate notes, going on to say that the creative original thinkers are never revealed publicly because “we can’t have all

those [Educated] people considering themselves failures. They aim at the professions and one way or another they all make it. Everyone can place after his or her name: Registered something-or-other.”

He continues, “Nine out of ten of those who come here are not quite the material of creative genius, and there’s no way we can distinguish those nine from the tenth that we want by any form of machinery. . . . We bring you here to a House for the Feeble-Minded and the man who won’t accept that is the man we want. . . . There are ten thousand men like you, George, who support the advancing technology of fifteen hundred worlds.”

Balance Breadth with Depth

Here on Earth, nowhere is the current debate over depth and breadth more active than in the domain of education. For years, policymakers have bemoaned the lack of skills-oriented education, often belittling those who pursue a liberal arts education. Consider President Barack Obama’s 2014 comments while visiting Wisconsin to promote skills-based training to help revitalize US manufacturing: “I promise you folks can make a lot more . . . with skilled manufacturing . . . than they can with an art history degree.”⁵ Or what about Florida governor Rick Scott’s comments about anthropology: after noting that education takes public resources from other uses, he asked, “Is it a vital interest of the state to have more anthropologists? I don’t think so.”⁶ And lastly, there were the comments of North Carolina governor Patrick McCrory, who advised those interested in gender studies to attend a private school, because he didn’t “want to subsidize that if it’s not going to get someone a job.”⁷

I could go on and on . . . but the point is straightforward: the post-2008 economic environment has put a premium on practical training and education. In fact, this usefulness orientation has become so fashionable that politicians and pundits regularly praise vocational and technical education over the liberal arts. It’s best, according to this logic, to become a Registered something or other.

Perhaps this recent debate over the instrumentality of education is due to recent technological advancements that are creating ever-escalating

skills requirements for desirable jobs? Or perhaps twenty-first century globalization is forcing young professionals everywhere to compete with the best minds from everywhere else? Both of these are very logical-seeming explanations for why American pundits and politicians emphatically demand usefulness as a key criteria by which to measure education success.

Consider the following quote, taken from the *Atlantic*: “What can I do with my boy? I can afford, and am glad, to give him the best training to be had. . . . I want to give him a practical education; one that will prepare him, better than I was prepared, to follow my business or any other active calling.”⁸ An excellent sense of the current anxiety felt by every parent today, right? Most parents instantly identify with the angst.

Would it surprise you to learn that the article from which this quote was taken was written in February 1869 by Charles Eliot, a future president of Harvard University? Bottom line: the issue of the practicality of education is simply not new. It’s been around for hundreds (if not thousands) of years, and although it seems a worthy topic of debate, there is ample material to understand how prior debates have gone.

The modern debate on the philosophy of education can be traced back to the “Reports on the Course of Instruction in Yale College” written by a Committee of the Corporation and the Academical Faculty in 1828. Known today as the 1828 Yale Report, the authors suggest that a classical liberal education should focus on “two great points to be gained” from student efforts while at college—namely the development of “the *discipline* and the *furniture* of the mind; expanding its powers and storing it with knowledge.” And for decades after the report was written, those two objectives—teaching students how to think as well as filling their mind with information—dominated the logic of liberal education. Notice the absence of any practicality component to the report. In fact, it even went so far as to say that the point of good liberal arts education was “not to teach that which is peculiar to any one of the professions; but to lay the foundation which is common to them all.”⁹

Looking at the highly practical and research-oriented European polytechnic institutes, Charles Eliot went on to propose in his 1869 piece that

American colleges supplement their classic teaching orientation with a research effort.¹⁰ He felt that the colleges needed to migrate toward universities in which the undergraduate focus remained on teaching and students, and the graduate focus was upon research and the practical benefits of specialization. And for better or worse, that blend of research-focused graduate schools and teaching-oriented undergraduate efforts has remained intact since Eliot's time as Harvard president.

Fareed Zakaria eloquently summarized the Eliot piece in his book *In Defense of Liberal Education* and also went on to highlight an innovative attempt to redesign education for the twenty-first century. The program Zakaria describes as perhaps "the most interesting and ambitious" attempt to redesign a liberal arts education is something I was fortunate enough to participate in during the summer of 2016.¹¹ About as far away from New Haven, CT as possible, a joint venture between Yale and the National University of Singapore (NUS) is seeking to reinvent liberal arts education. Yale-NUS College is an attempt by two of the world's leading universities to design, from the ground-up and free and clear of historical baggage, a residential liberal arts education for the twenty-first century.

After reading the Yale-NUS curriculum report once it was published in April 2013, I immediately reached out to the new college's president, Pericles Lewis, and offered to help however possible . . . and unlike most American universities where they struggle to find a departmental home for me given the variety of my interests, Yale-NUS had no such problem. Why's that? Because Yale-NUS has no departments, viewing them instead as barriers to interdisciplinary and multidisciplinary teaching and learning.

As a result, you won't find a professor of economics at Yale-NUS. Instead, you'll find a professor of social science who happens to spend most of her time focused on economics topics. She may end up coteaching a class on climate change along with a professor of science who happens to focus on environmental topics as well as others. The result, which I was able to witness first hand when I co-taught a class on inequality with my friend Paul Solman at Yale-NUS during 2016, was a more collaborative faculty that brought integrated teaching into each classroom.

It's unclear if Yale-NUS will succeed. Fareed Zakaria, who served as a member of the Yale Corporation, the governing body of the university, when the decision was made to move forward with Yale-NUS, is explicit about the risks: "It may not be able to implement all of its ideas . . . [and] the tensions between freedom of inquiry and the still-closed political system in Singapore might undermine the project."¹² Regardless, Yale-NUS is an ambitious attempt to modernize liberal arts education by delicately tipping the balance (ever so slightly) back in the direction of breadth; as noted by founding president Pericles Lewis, "Especially in an age of commodified information, an important part of our task is furnishing young minds with stories, histories, and patterns of thought from a *variety* of cultures."¹³ Bottom line: Yale-NUS is helping install global furniture in the minds of tomorrow's global leaders while also developing the discipline to think across subjects of inquiry.

But even as the Yale-NUS experiment progresses, further education innovations continue. A September 2017 piece in *The Chronicle of Higher Education* titled "A New Liberal Art" suggests that systems-oriented education may prove to be the future of liberal education. It defines systems thinking as "a discipline that examines the relationships between essential parts of an organization or a problem, and determines how to manage those relationships to get better outcomes."¹⁴ While linear thinkers believe that problems have direct causes and you can optimize the whole by optimizing each of the parts, systems thinkers know that problems can have hidden, indirect causes, and it's the relationship among the parts that matters most.

The article highlights a few practical, career-oriented institutions that ground students in a systems-thinking approach: the California State University Maritime Academy (also known as Cal Maritime), where students learn to keep boats' mechanical elements running and interacting within a chain of command; the Culinary Institute of America, where students learn to confront unexpected problems, try their hand at leadership, and see the interlocking human and technical systems.

And of course, there are many new virtual education efforts aimed at balancing breadth and depth, the most prominent of which is the

Minerva School at Keck Graduate Institute. Minerva's founding dean, Stephen Kosslyn, had previously spent thirty years at Harvard University in positions ranging from professor of psychology to department chair to dean of social sciences.

The Atlantic magazine, in a story titled "The Future of College?" noted the effort is stripping college "down to its essence, eliminating lectures and tenure along with football games, ivy-covered buildings, and research libraries."¹⁵ The model is pretty easy to describe: online education that is supplemented with a global residential living experience. In 2017, it was reported that Minerva Schools accepted a mere 2 percent of the applicants that applied, making it the most selective school in the United States.

But the most interesting part of the Minerva story, in my eyes, is how they are positioning the school. Here is the lead tagline that was on its website in November 2017: "Preparing to succeed in an era of global uncertainty requires developing your intellect, building your character, and learning practical capabilities." The emphasis on practicality is noteworthy, from the very get go, and is supplemented with a strong emphasis on breadth: The school highlights the need for both "broad knowledge and practical skills."¹⁶ Part of this practicality is a global awareness, which Minerva hopes to infuse graduates with through a network of seven residential locations around the world (San Francisco, Seoul, Hyderabad, Berlin, Buenos Aires, London, Taipei). And each concentration listed on the website also had an accompanying list of possible careers that might flow from it. Again, it's too early to tell if this more practically oriented but broad education will be the appropriate balance, but it's worth watching.

Recognize Water

In 2005, MacArthur Fellow, English professor, and writer David Foster Wallace delivered the Kenyon College commencement speech. After welcoming the graduating students and their guests, he dove into a simple yet powerful parable: "There are these two young fish swimming along and they happen to meet an older fish swimming the other way, who

nods at them and says ‘Morning, boys. How’s the water?’ And the two young fish swim on for a bit, and then eventually one of them looks over at the other and asks, ‘What the hell is water?’” The point of the fish story, Wallace noted, is to highlight that “the most obvious, important realities are often the ones that are hardest to see.”¹⁷

Downplaying the importance for furniture of the mind, Wallace went on to note “a liberal arts education is not so much about filling you up with knowledge as it is about quote teaching you how to think . . . this isn’t really about the capacity to think, but rather about the choice of what to think about.” Wallace’s ultimate message was that we all have the capacity to interpret realities in different ways, and the choice of how we do is up to us. We need not default to looking only where the spotlight is shining.

Wallace noted: “The point here is that I think this is one part of what teaching me how to think is really supposed to mean. To be just a little less arrogant, to have just a little critical awareness about myself and my certainties.” He went on to highlight the natural and literal self-centeredness native to all humans: “everything in my own immediate experience supports my deep belief that I am the absolute center of the universe; the realist most vivid and important person in existence. . . . Think about it, there is no experience you have had that you are not the absolute center of. . . . The world as you experience it is there in front of you or behind you, to the left or right of you on your TV or your monitor.”

To illustrate the point, he used a seemingly trivial example to illustrate the power of how we choose to think about what’s happening in front of us:

I can spend time in the end-of-the-day traffic being disgusted about all the huge, stupid, lane-blocking SUV’s and Hummers and V-12 pickup trucks, burning their wasteful, selfish, forty-gallon tanks of gas, and I can dwell on the fact that the patriotic or religious bumper-stickers always seem to be on the biggest, most disgustingly selfish vehicles, driven by the ugliest, most inconsiderate and aggressive drivers.

And while choosing to think these thoughts doesn't seem to bother Wallace, doing so mindlessly does. An automatic, subconscious default setting about how all events affect us as individuals needs to be broken, because it may not be true. We need to entertain other possibilities, because as Wallace observed, there are lots of other, very different, ways to think about or understand such situations. It's possible that "the Hummer that just cut me off is maybe being driven by a father whose little child is hurt or sick in the seat next to him, and he's trying to get this kid to the hospital, and he's in a bigger, more legitimate hurry than I am, and it is actually I who am in his way."

Wallace encouraged us to empathize, considering what another person may be going through before forming our conclusions. "If you're aware enough to give yourself a choice, you can choose to look differently at this fat, dead-eyed, over-made-up lady who just screamed at her kid in the checkout line. . . . Maybe she's not usually like this. . . . Maybe she's been up three straight nights holding the hand of a husband who's dying of bone cancer."

Fundamentally, Wallace wanted us to retake control of our thinking, to not allow our default assumptions and natural self-centeredness to run roughshod over alternative interpretations and to empathize with others. As he concluded his powerful speech, he stated, "The really important kind of freedom involves attention and awareness and discipline. . . . The alternative is unconsciousness, the default setting, the rat race, the constant gnawing sense of having had, and lost, some infinite thing." We must, Wallace noted, be aware of "what is so real and essential, so hidden in plain sight all around us, all the time, that we have to keep reminding ourselves over and over: this is water . . . this is water."

One of the most "water-aware" people I know is Bruce Grewcock, chairman and former chief executive officer of Kiewit Corporation. Kiewit is one of the country's leading construction firms and also happens to be an employee-owned company. As the company has prospered over the past few decades, so too have the employee shareholders benefited.

When I was teaching my seminar on business ethics at Yale, I invited Bruce and a few of his colleagues to join my class for a discussion of whether Kiewit should be a public company. The facts presented were compelling—Kiewit shareholders would likely see the value of their shares double, the company would obtain a lower cost of funding, and the extra money would enable more competitive bidding for large projects. Further, having publicly traded equity would probably allow the company to acquire other companies on advantageous terms if it chose to do so.

After allowing the students to debate the topic and a variety of views to surface, I turned to Bruce. “So what do you actually think?” I asked. What he revealed in the brief discussion that followed indicated a deep awareness of how he and the current shareholders fit into the storied history of an amazingly successful business. He first indicated that he doubted any Kiewit employee would ever suggest the company go public because everyone realized it would change the company’s culture. . . . They all understood it was their money at risk and made decisions differently than they would if they were just employees and not owners.

Then Bruce reached into his battered briefcase and pulled out a page he had clearly ripped from a magazine. The page was crumpled, faded, and frayed; it had clearly been with him for a long time. I also assumed he would keep digging for something else. But he didn’t. He lifted the page for all to see.

It was an advertisement for Patek Philippe, the iconic Swiss watch. The picture had a father and a son with a caption that Bruce read: “You never actually own a Patek Philippe. You merely look after it for the next generation.” He indicated that was how he felt about Kiewit. Sure, he was the company’s chairman, chief executive officer, and its largest shareholder at the time, but he felt he was merely looking after it for the next generation. Unlike lots of other successful executives, Bruce understood the company’s ownership structure and the historical context played a role in his and the company’s success. He was also unlike others in that the default self-centeredness that Wallace highlighted was absent. He and the dozens of other Kiewit leaders I’ve met have a deep appreciation that they

are part of something bigger than themselves. They recognize the water around them, and I suspect that such awareness is one of the main reasons Kiewit has outperformed most of its peers.

He might as well have said, “This is Kiewit. . . . This is Kiewit.”

See Specialness Everywhere

David Foster Wallace’s speech was intended to knock Kenyon’s graduates out of their default position of self-centered interpretations of events transpiring all around them. A few years later, in wealthy Boston suburb, David McCullough Jr. attempted to deliver a similar message to the graduates of Wellesley High School.

Over the course of an approximately twelve-minute speech, McCullough observed to the graduates: “Your ceremonial costume . . . shapeless, uniform, one-size-fits-all. Whether male or female, tall or short, scholar or slacker, spray-tanned prom queen or intergalactic Xbox assassin, each of you is dressed, you’ll notice, exactly the same. And your diploma . . . but for your name, exactly the same. All of this is as it should be, because none of you is special. You’re not special. . . . You’re not exceptional.” He went on to note the empirical evidence. Three point two million high school graduates across the United States from around 37,000 high schools: “That’s 37,000 valedictorians . . . 37,000 class presidents . . . 92,000 harmonizing altos . . . 340,000 swaggering jocks . . . 2,185,967 pairs of UGGs.”¹⁸

As the audience nervously laughed during his speech, McCullough continued, noting that even being one in a million meant there were thousands of others of comparable uniqueness. And he noted that in a world where everyone is special, no one is. “If everyone gets a trophy, trophies become meaningless.”

Realizing this was a far greater phenomenon than one exclusive to Wellesley, McCullough went on to say that “We have of late, we Americans, to our detriment, come to love accolades more than genuine achievement. We have come to see them as the point—and we’re happy to compromise standards, or ignore reality, if we suspect that’s the quickest

way, or only way, to have something to put on the mantelpiece, something to pose with, crow about, something with which to leverage ourselves into a better spot on the social totem pole.” And in the résumé wars typical of college-bound students, “building a Guatemalan medical clinic becomes more about the application to Bowdoin than the well-being of Guatemalans.” Worthy endeavors, McCullough noted, get cheapened by the epidemic of ubiquitous specialness.

His ultimate advice is to change our focus. To look inward for motivation, to think for ourselves, to not allow the sentiment of others drive our behavior: “Climb the mountain not to plant your flag but to embrace the challenge, enjoy the air, and behold the view. Climb it so you can see the world, not so the world can see you. Go to Paris to be in Paris, not to cross it off your list and congratulate yourself for being worldly. . . . The sweetest joys in life, then come only with the recognition that you’re not special . . . because everyone is.”

McCullough’s message is about shifting our focus. It’s about trying to minimize the Wallace-described default assumptions, natural self-centeredness, and to see the world with different eyes. See the specialness everywhere.

Embrace Fresh Eyes

No self-respecting book these days, it seems, can be written without a witty quote from Mark Twain . . . and so I’m thrilled that I can fulfill that obligation while also providing a truly insightful comment. Twain said, “It ain’t so much the things that people don’t know that makes trouble in this world, as it is the things that people know that ain’t so.”¹⁹ This is the main reason that an outsider’s or a novice’s perspective can be so valuable, a concept widely accepted among philosophers. Zen master Shunryu Suzuki notes that “the mind of the beginner is empty, free of the habits of the expert, ready to accept, to doubt and open to all possibilities.”²⁰ Experience and expertise close our mind to certain possibilities, thereby creating unwarranted confidence in what we think we know.

This problem, I suggest, is one of the most pressing challenges in our current quest to restore common sense, achieve a twenty-first-century self-reliance, and reclaim our lives from the ubiquitous focus filters that hold us hostage. While we believe we are free, our existences may be more managed than any of us fully appreciates. This is not to suggest that we should not outsource our attention to others. If we do so mindfully, so be it. But the kind of unquestioning, blind obedience to focus filters is antithetical to any vision of freedom, self-reliance, or restored autonomy. It's what David Foster Wallace called "an imprisonment so total that the prisoner doesn't even know he's locked up."²¹

Don't Squander Ignorance

The key to breaking free is to somehow get out of your entrenched patterns and begin questioning what you know for sure. A fresh perspective is almost always difficult to proactively obtain, because it requires a meta-awareness and mindfulness that breaks the rigid routines that tend to dominate our lives. This is why it's important to step back and recognize that it's possible to get fresh perspectives by changing your field of attention, even within your area of focus. Is your job focused on equities? Consider debt, maybe even in other countries. Are you a cardiothoracic surgeon? Read a bit about dermatology, nutrition, or even diseases affecting nonhumans. Simple attention shifts like these increase the potential to generate fresh eyes to address problems. Only after taking such detours might we be able to revisit existing challenges with an open-mindedness that may generate a much-needed breakthrough.

To illustrate the power of ignorance and fresh eyes, let's go back in time to the ancient Egyptian city of Thonis-Heracleion. Supposedly a key religious center and trade hub for the ancient world (as well as the place where the Trojan prince Paris brought the kidnapped Helen of Troy), archaeologists and experts found little evidence of the city where it supposedly at one point had existed.²² Now it's one thing to not find evidence of a specific artifact, or a specific building, but of an entire city? Some surmised the city disappeared through a set of natural disasters including rising sea levels and a series of earthquakes. Others doubted it ever existed.

Enter Franck Goddio, a financial and economic consultant who had conducted numerous missions for the United Nations in Laos, Cambodia, and Vietnam. He even assisted the French Foreign Ministry and served as a financial advisor to the Kingdom of Saudi Arabia, among other nations. But Goddio was fascinated by underwater archaeology and had been involved in finding shipwrecks in the Philippines and other locations.²³

When Goddio had heard of an apparently undiscovered city supposedly near Alexandria, Egypt, he couldn't resist the challenge. So he took his mathematical mind and applied it to a problem that had puzzled professionals for hundreds, if not thousands, of years. He began with a review of ancient texts referencing the city to help guide his instincts on probable locations. Goddio then mathematically and systematically, over a period of approximately five years, mapped an area of the sea the size of Paris off the coast of Alexandria. His early findings nudged him in a direction that professionals had dismissed as unlikely. He conducted dozens of samples via minor excavations, and used the data acquired to refine his mathematically guided exploration.²⁴

Then in 2000, he discovered the lost city of Thonis-Heracleion, an archaeological find that has been called the greatest discovery, perhaps ever.²⁵ The treasure trove he found is gigantic and will likely take decades to fully uncover. And all of this from a mathematically inclined financial consultant. Is it possible that it's precisely because Goddio was not trained as an archaeologist that he was able to find the lost ancient city? Might the experiences of professional archaeologists have created glaring blind spots that prevented them from achieving what Goddio did?

How we might celebrate ignorance and the idea that an absence of knowledge may in fact be better than knowledge based on questionable assumptions. Consider the case of PayPal, where cofounder Peter Thiel noticed that the more experience someone had in banking, the more certain they were that PayPal could never succeed. The intellectual freedom that emerges from ignorance is an amazing untapped resource, one historically stumbled upon rather than conscientiously developed or embraced.

So if unadulterated vision can help us navigate uncertainties by identifying risks and spotting opportunities, how can we go about freshening our eyes? The first is to embrace and seriously consider professional opportunities that may not seem consistent with your existing career trajectory. It's like Suzuki stated: "In the beginner's mind there are many possibilities, in the expert's mind there are few."²⁶

Think about the story I shared earlier about David Swensen, who arrived at Yale University to run the endowment with exactly . . . drum-roll please . . . zero days of experience as a professional money manager. In fact, David has told me multiple times that he originally thought it was a joke that they had hired him, made more believable by the fact that his first day on the job was April 1, 1985. But his academic advisors at Yale (where he had completed his PhD a few years earlier) convinced him to take an 80 percent pay cut and move from NYC to New Haven. His fresh perspective was, in all likelihood, responsible for his return to first principles and independent thinking—both of which were critical to the development of what has since become the Yale model of long-term investing.

It's worth noting that the professional world can sometimes be less hospitable than the academic, with a more cutthroat approach to employment decisions. But that doesn't mean fresh perspectives aren't possible—they are. Every hiring (and firing) is an opportunity to change the embedded default assumptions of a leader. Think about Steve Jobs, who was fired from Apple at the age of thirty. Although he was devastated at the time, he later commented that "getting fired from Apple was the best thing that could have ever happened to me." How's that? Freed from the spotlight of senior corporate leadership, Jobs noted that "the heaviness of being successful was replaced by the lightness of being a beginner again, less sure about everything."²⁷ Less sure about everything? Sure sounds like the medicine that Dr. Twain would prescribe for successfully navigating uncertain times!

The fresh perspective obtained from having his assumptions shaken, Jobs said, "freed me to enter one of the most creative periods of my life; during the next five years, I started a company called NeXT, another

company named Pixar, and fell in love with an amazing woman who would become my wife.”²⁸ Pixar went on to become the world’s most successful animation studio, and NeXT (which was bought by Apple, enabling Jobs’s return to the company) is believed to have been behind the revival of Apple’s products and technologies. The fresh perspective, de-cluttered from day to day burdens of managing Apple, that Jobs obtained by being fired likely contributed to his breakthrough thinking.

When you think about the approach that most people adopt when thrown into a role for which they don’t have a deep background, it usually begins with studying up on the issues of relevance. But let’s look at how Nikki Haley, a governor who had limited experience in foreign affairs, prepared for her new role as US ambassador to the United Nations: “I was a foreign policy novice, who faced a learning curve when I became Ambassador. I studied a lot before coming to New York . . . but I purposely didn’t study the United Nations itself . . . and here’s why: I wanted to preserve my ability to see the UN through new eyes with a fresh perspective.”²⁹

Fresh perspectives on old challenges can also identify opportunities in business as well. Consider the case of Herb Kelleher, the maverick lawyer turned entrepreneur who founded Southwest Airlines. Airline executive Rollin King was having a drink with Kelleher when they devised the idea for Southwest Airlines. It all began with a sketch of a triangle on the back of a cocktail napkin. The points of the triangle represented Houston, Dallas, and San Antonio. They believed that the hassles of travel between these three cities were annoying enough that customers would opt to fly over driving if given an inexpensive option.³⁰

The swashbuckling, chain-smoking, Wild Turkey–drinking Kelleher had a different focus than others in the industry.³¹ While most analysts and industry insiders thought about dividing the existing pie of air passengers into smaller and smaller pieces, Kelleher and King believed their low-cost offering could compete with those who might otherwise drive. They focused on potential customers, looking to grow the pie; it was wrong to assume, they believed, that the market for travel between these cities was limited to those who currently flew between them. Southwest

decided to compete against buses and drivers as well as other airlines. In some ways, Kelleher was like Sheldon Adelson, thinking about potential customers rather than relying on dividing the pie of existing customers. Their offering would grow the pie by attracting new flyers. And like Swensen, Kelleher didn't turn to HBS case studies or existing models to form his business model; he thought for himself. And with little experience in the airline industry, he and King frankly didn't know any better. They had fresh eyes.

So what happened? Wherever Southwest goes, three things tend to occur rapidly and simultaneously. First, airfares for the routes they enter plunge immediately. Second, traffic spikes dramatically as the pie of travelers expands. And third, the airline develops a loyal fan base. The success is so consistent that it's become common for cities to petition Southwest Airlines to service their airports. All of it made possible by fresh thinking.³²

Let's now turn to a situation where one with absolutely no experience in the field was given a seemingly impossible task. Not knowing any better, he went after a solution with dogmatic persistence. The result was hailed as a modern-day miracle, but for those who think through the dynamics, it was really a fresh perspective that saved the lives of thirty-three men who had been buried alive.

The Guillotine of Granite

People have been mining for gold and copper in the San José Mine since 1889. The mine produces around the clock, situated deep inside a lifeless mountain in Chile's Atacama Desert. The only noticeable living presence in the desert is the flow of miners in trucks and buses headed to the mines. (I've been to the Atacama Desert, and despite the striking beauty of the place, it definitely feels lifeless and extremely remote.)

In contrast to the vast expanse of the dessert, life in the mine is restricted to a series of tunnels and ramps that descend from the surface for several hundred meters. And on August 5, 2010, a block of stone weighing seven hundred thousand tons broke loose, leading to a mining disaster

as the mountain collapsed upon itself. Thirty-three miners were buried alive.³³

Hundreds of miles away, the newly appointed minister of mines, Laurence Golborne, received a text at 11 p.m. that evening: “Mine cave-in Copiapó; 33 victims.”³⁴ A former business executive with no mining experience, Golborne decided to travel to the disaster site, despite his chief of staff advising him against it. Her research showed no mining minister had ever visited the site of an ongoing crisis; further, the political risks were incalculably high.

“Mining is my subject in the government,” Golborne later explained. “Although I do not come from the mining world and was questioning myself what I could do in the mine—how I could help in the rescue given the magnitude of the problem?—I understood I had to be there.”³⁵

On August 7, the day of his arrival, one of the rescue crewmembers privately shared his thoughts with Golborne: “They must be dead . . . and if they are not dead, they will die.”³⁶ The rescue crew found that a fresh cave-in had blocked any direct access to the miners and further, continued geologic instability made it unsafe for rescuers to reenter the mine. Despite the grim prognosis, Golborne refused to give up.³⁷

After an emotional, rollercoaster experience of promise and failure, one of the multiple rescue drilling efforts managed to penetrate the refuge area where the miners would likely be. When the drill was raised, a newly painted red mark was found near the bit—along with a few scraps of paper. One of the scraps read: “We are all well in the refuge, the 33 miners.”³⁸

But Golborne didn’t stop there. He now shifted his focus from finding the miners to saving the miners. He consulted with America’s NASA and the Chilean Navy to learn about the psychology and physiology of living in cramped quarters and to plan for an extraction tube to lift the miners to safety. Nutritionists considered vitamin D deficiencies, and doctors recommended regular sleep schedules to help manage moods.³⁹ Golborne employed multiple drilling contractors from around the world, creating a *de facto* race among them. And sixty-nine days after the mine collapse, as more than a billion people globally watched their ascent from the newly drilled shaft, all thirty-three miners returned to the surface

of the planet.⁴⁰ Golborne's star skyrocketed, and he was briefly a presidential candidate, with 95 percent popularity rankings. ("Even the communists supported me!" he noted during a phone call I had with him in 2017.⁴¹)

The rescue was celebrated, books were written, movies made. It was a miracle, and fundamentally one that was due to the fresh, unadulterated perspective that Golborne brought to the task. In fact, it's possible to suggest that it's precisely Golborne's lack of mining knowledge that led him to be so successful. Given most mining rescue efforts fail, what if Golborne had had decades of experience in mining and even participated in multiple mining disasters from which there were no survivors? Or what if he had the mining industry experience to think he knew how to coordinate the effort rather than to tap into a wide variety of experts that had specialized knowledge?

Golborne was, in many ways, not well prepared to lead the rescue. While he had studied civil engineering at one of Chile's top universities, he was a businessman. Before joining the government a mere months prior to the mining disaster, he had been chief executive of Cencosud, Chile's largest retail chain.⁴² When Golborne stepped down as CEO in 2009, the company employed more than 100,000 people and reported revenue of more than \$10 billion. Impressive to be sure, but running a retail company is a far cry from trying to save thirty-three men who were buried alive. But might his ignorance of mining have formed his open-minded approach?

During one of my conversations with Golborne, I asked him to reflect on some of the key learnings from the experience, noting the value of some distance from the events. One of his answers captures the essence of his calibrated, open-minded approach. "I let the experts talk." He then described an instinct of his that enabled him to retain control while tapping into the expertise he needed and lacked: "I have this ability to tell when people understand what they're talking about, and when they're bluffing."⁴³ Bottom line: he shifted his focus from the content to the people.

Golborne noted his sister was a Communist who hastily burned her Marxist literature after the 1973 coup that brought Augusto Pinochet to power. His brother was a right-wing extremist with ties to the paramilitary group *Patria y Libertad* (Fatherland and Freedom). Golborne said he considers himself lucky to have come from a discordant background: "It teaches you how to live with different points of view. I think that as a result I have a very well-developed sense of tolerance. I'm open to different ideas."⁴⁴

His childhood experience with strikingly different viewpoints may have primed Golborne to entertain ideas that others would have dismissed straight away, like consulting psychics or attaching panic buttons to rats before sending them into the mine.⁴⁵ He received emails with many ideas, some good, some . . . less good. He read all of them. Golborne's open-minded approach, due in large part to the fresh perspective of being a nonminer facing a mining challenge, was clearly instrumental in saving the lives of the buried men.

Druck's Luck

In 1977, a disgruntled graduate student studying economics found his course of study "overly quantitative and theoretical, with little emphasis on real-life applications."⁴⁶ He dropped out and took a position as a management trainee at the Pittsburgh National Bank. After several months on the job, he received a call from the manager in the trust department. He was asked if he had an MBA and the trainee answered that he didn't. The manager responded: "That's even better! Come on up; you're hired."⁴⁷

And so our the management trainee got offered a position as a stock analyst, with responsibility for bank and chemical stocks, an offer he rapidly accepted because because the head of the loan department told him he didn't have what it took to be a loan officer. And so Speros Drelles, the director of investments at Pittsburgh National Bank, had a new analyst, Stanley Druckenmiller.

A year after starting as an analyst, Drelles summoned Druckenmiller to this office and told him that he was getting a promotion. At the age of twenty-five, the young analyst became the head of equity research for the bank. As Druckenmiller later explained, "This was quite a bizarre move, since my boss was about fifty years old and had been with the bank for over twenty-five years . . . moreover, all the other analysts had MBAs and had been in the department longer than I had."⁴⁸ The rationale, as recounted by Druckenmiller to Jack Schwager, in *The New Market Wizards: Conversations with America's Top Traders*:

"You know why I'm doing this, don't you?" he asked.

"No," I replied.

"For the same reason they send eighteen-year olds off to war."

"Why is that?" I asked.

"Because they're too dumb to know not to change." Drelles continued. "The small cap stocks have been in a bear market for ten years and I think there's going to be a huge, liquidity-driven bull market sometime in the next decade. Frankly, I have a lot of scars from the past ten years, while you don't. I think we'll make a great team because you'll be too stupid and inexperienced to know not to try to buy everything. That other guy out there," he said, referring to my boss, the existing director of equity research, "is just as stale as I am."⁴⁹

A year later, when Drelles left the bank, the young director of research was surrounded by more experienced and older executives seeking to fill the hole. It was widely assumed that Druckenmiller would be lucky to even keep his job, let alone get promoted. But as Druckenmiller noted, good luck combined with his inexperience to generate the perfect conditions for his star to rise further. Shortly after Drelles left, Iran bubbled over. The shah was overthrown. As he recalls, "Here's where my inexperience really paid off. . . . I decided that we should put 70% of our money in oil stocks and the rest in defense stocks; the course of action

seemed so logical to me that I didn't consider doing anything else. At the time, I didn't yet understand diversification."⁵⁰ Within a year, Druckenmiller was given the title of director of investments.

After being mentored by Drelles, Druckenmiller went on to work with George Soros. After doing careful analysis of the British pound's value relative to the German deutsche mark, Druckenmiller decided it was time to make a big bet. As he recalled during a speech in 2015, Druckenmiller's conversation with Soros about increasing the bet did not go as expected. After explaining to Soros the rationale and indicating that he was going to sell \$5.5 billion worth of pounds that night and buy marks, meaning 100 percent of the fund would be in this one trade, Soros responded: "This is the most ridiculous use of money management I ever heard. What you described is an incredible one-way bet. We should have 200 percent of our net worth in this trade, not 100%. Do you know how often something like this comes along? Like once in twenty years. What's wrong with you?"⁵¹ So much for learning about diversification!

Eventually, Soros told Druckenmiller, as recounted in Sebastian Malaby's book *More Money Than God*, that he "should go for the jugular" and short \$15 billion.⁵² The trade went on to break the British pound, netting the fund a gain of over a billion dollars.

Since that trade Druckenmiller has continued to post an unrivaled investment record through 2010, when he stopped managing money for others. According to those that know him well and have seen his performance reports, money invested with "Druck" would have outperformed money invested with Warren Buffett or virtually any other money manager between 1980 and 2010. So what accounts for this repeated series of success? I suspect one of the main reasons that Druckenmiller has been so successful is that he is constantly refreshing his perspective. And he's learned to trust his insights, rather than rely on others, enabling a greater authenticity in behavior than most people achieve. But if it weren't for his initial luck (or was it ignorance?) in getting promoted, or his inexperience in money management, might he have turned out to be a loan officer at the Pittsburgh National Bank instead of one of America's most respected financiers (and most charitable people)? Perhaps we can all learn

from his experience and do our best, as Peter Thiel urges, to not squander our precious ignorance.⁵³

Might Breadth Trump Depth?

When it comes to someone who's made a career out of figuring out what matters to who and when, Matthew Winker is one of the most accomplished and well-informed people I know. As the founding editor in chief of Bloomberg News, Matt made a conscious effort to cater to those with the most at stake. And his approach is worth understanding because I believe it has broad relevance for all of us in many scenarios.

I've had the pleasure of getting to know Matt over the course of almost ten years in numerous situations. He's joined me and students for discussions at both Yale and Harvard, we've had numerous meals and coffees, and have spent time debating market dynamics and economics. But what I've enjoyed most about my interactions with Matt is his breadth of perspective and knowledge. It's truly stunning. We've talked about functional medicine and the potential of injectable vitamins to help individuals overcome chronic health conditions, we've debated the prospects for a large Indian middle class (and its corresponding implications for emerging markets investors), and he's shared lessons learned from building a news organization from scratch. He even titled a talk he gave to a seminar I was running at the Harvard Kennedy School "Truth in an Age of Twitter," a fabulous session in which he carefully disentangled the cross currents of accuracy and the need for speed in today's hyper-connected global economy.

He is such a clear thinker on the business of journalism that his manifesto, *The Bloomberg Way: A Guide for Reporters and Editors*, has been reprinted and updated more than a dozen times since 1990 when he first put thoughts to paper.⁵⁴ Matt has won lots of awards for his impact on the fields of business and financial journalism, including the New York Financial Writers Association's Elliot V. Well Award for providing a "significant long-term contribution to the profession of financial journalism,"⁵⁵

the National Academy of Television Arts and Sciences “Emmy” Lifetime Achievement Award for business and financial reporting, the Gerald Loeb Foundation Lifetime Achievement Award for “exceptional career achievements in business, financial and economic news writing,” and a list of other honors too numerous to mention here.⁵⁶

The key, I believe, to Matt’s success, is that he’s been a generalist. Generalists are those who have broad knowledge but do not claim to be a deep expert at anything, making them psychologically more receptive to ideas distant or different from their own. Instead, they tap into those with knowledge in areas that they may need to learn more about. They are, it seems, more aware of what they do not know and understand that there is a large body of information that they do not know they do not know.

Matt put it best in one of our 2019 conversations about the relative value of breadth and depth in navigating uncertainty. He said, “If the news business essentially is harvesting and bringing perspective to myriad surprises, generalists are advantaged by the self-awareness of never knowing enough about anything. This makes them perpetually curious and willing to challenge prevailing assumptions.”⁵⁷ Not only is Matt someone who balances breadth with depth while habitually connecting dots that many others dismiss as irrelevant, he’s also helped thousands of others do the same. And by doing so, he is responsible for growing Bloomberg News from an idea in Michael Bloomberg’s head into what some would call the most powerful economic, business, and financial news organization the world has ever encountered.

We can all learn from Matt. The idea of being broad enough to contextualize information is critical; it helps generate awareness that there are those who know more than we do and allows us to place the inputs of experts and specialists in perspective. Such intellectual humility also leaves us open-minded to surprises and new information, spurring the supposedly naïve inquiries that question basic assumptions. As the world gets increasingly interconnected and complex, might breadth soon trump depth?

Key Takeaways

- **In an age of experts and artificial intelligence, depth of expertise must be balanced with breadth of perspective.** In educating future leaders, this means we must focus on developing critical thinking capabilities that allow us to evaluate our default operating assumptions. Liberal general education must retain a role and must not be sidelined by today's short-term infatuation with skills-based training.
- **Use empathy to remain humble.** As noted by Wallace and McCullough, the blunt reality is that we are definitionally self-centered in how we experience the world. Others have different perspectives and trying to consider them can help us calibrate our thinking. Recall the example of Kiewit.
- **Celebrate ignorance and fresh eyes.** Independent, unbiased thinking that is free from the baggage of historical experience need not be dismissed as useless. In fact, some of the most impressive individuals in numerous walks of life were successful precisely because they lacked the experience that might otherwise have prevented their differentiated thoughts.