

*We look for lessons in the actions of great leaders. We should instead be examining what goes on in their heads – particularly the way they creatively build on the tensions among conflicting ideas.*

# How Successful Leaders Think

by Roger Martin

WE ARE DRAWN to the stories of effective leaders in action. Their decisiveness invigorates us. The events that unfold from their bold moves, often culminating in successful outcomes, make for gripping narratives. Perhaps most important, we turn to accounts of their deeds for lessons that we can apply in our own careers. Books like *Jack: Straight from the Gut* and *Execution: The Discipline of Getting Things Done* are compelling in part because they implicitly promise that we can achieve the success of a Jack Welch or a Larry Bossidy – if only we learn to emulate his actions.

But this focus on *what a leader does* is misplaced. That's because moves that work in one context often make little sense in another, even at the same company or within the



experience of a single leader. Recall that Jack Welch, early in his career at General Electric, insisted that each of GE's businesses be number one or number two in market share in its industry; years later he insisted that those same businesses define their markets so that their share was no greater than 10%, thereby forcing managers to look for opportunities beyond the confines of a narrowly conceived market. Trying to learn from what Jack Welch did invites confusion and incoherence, because he pursued – wisely, I might add – diametrically opposed courses at different points in his career and in GE's history.

So where do we look for lessons? A more productive, though more difficult, approach is to focus on *how a leader thinks* – that is, to examine the antecedent of doing, or the

certainly not every good leader exhibits this capability, nor is it the sole source of success for those who do. But it is clear to me that integrative thinking tremendously improves people's odds.

This insight is easy to miss, though, since the management conversation in recent years has tilted away from thinking and toward doing (witness the popularity of books like *Execution*). Also, many great integrative thinkers aren't even aware of their particular capability and thus don't consciously exercise it. Take Jack Welch, who is among the executives I have interviewed: He is clearly a consummate integrative thinker – but you'd never know it from reading his books.

Indeed, my aim in this article is to deconstruct and describe a capability that seems to come naturally to many



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ways in which leaders' cognitive processes produce their actions.

I have spent the past 15 years, first as a management consultant and now as the dean of a business school, studying leaders with exemplary records. Over the past six years, I have interviewed more than 50 such leaders, some for as long as eight hours, and found that most of them share a somewhat unusual trait: They have the predisposition and the capacity to hold in their heads two opposing ideas at once. And then, without panicking or simply settling for one alternative or the other, they're able to creatively resolve the tension between those two ideas by generating a new one that contains elements of the others but is superior to both. This process of consideration and synthesis can be termed integrative thinking. It is this discipline – not superior strategy or faultless execution – that is a defining characteristic of most exceptional businesses and the people who run them.

I don't claim that this is a new idea. More than 60 years ago, F. Scott Fitzgerald saw “the ability to hold two opposing ideas in mind at the same time and still retain the ability to function” as the sign of a truly intelligent individual. And

successful leaders. To illustrate the concept, I'll concentrate on an executive I talked with at length: Bob Young, the colorful cofounder and former CEO of Red Hat, the dominant distributor of Linux open-source software. The assumption underlying my examination of his and others' integrative thinking is this: It isn't just an ability you're born with – it's something you can hone.

### **Opposable Thumb, Opposable Mind**

In the mid-1990s, Red Hat faced what seemed like two alternative paths to growth. At the time, the company sold packaged versions of Linux open-source software, mainly to computer geeks, periodically bundling together new versions that included the latest upgrades from countless independent developers. As Red Hat looked to grow beyond its \$1 million in annual sales, it could have chosen one of the two basic business models in the software industry.

One was the classic proprietary-software model, employed by big players such as Microsoft, Oracle, and SAP, which sold customers operating software but not the source code. These companies invested heavily in research and development, guarded their intellectual property jealously, charged high prices, and enjoyed wide profit margins because their customers, lacking access to the source code, were essentially locked into purchasing regular upgrades.

The alternative, employed by numerous small companies, including Red Hat itself, was the so-called free-software

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model, in which suppliers sold CD-ROMs with both the software and the source code. The software products weren't in fact free, but prices were modest – \$15 for a packaged version of the Linux operating system versus more than \$200 for Microsoft Windows. Suppliers made money each time they assembled a new version from the many free updates by independent developers; but profit margins were narrow and revenue was uncertain. Corporate customers, looking for standardization and predictability, were wary not only of the unfamiliar software but also of its small and idiosyncratic suppliers.

Bob Young – a self-deprecating eccentric in an industry full of eccentrics, who signaled his affiliation with his company by regularly sporting red socks and a red hat – didn't like either of these models. The high-margin proprietary model ran counter to the whole philosophy of Linux and the open-source movement, even if there had been a way to create proprietary versions of the software. "Buying proprietary software is like buying a car with the hood welded shut," Young told me. "If something goes wrong, you can't even try to fix it." But the free-software model meant scraping a slim profit from the packaging and distribution of a freely available commodity in a fringe market, which might have offered reasonable returns in the short term but wasn't likely to deliver sustained profitable growth.

Young likes to say that he's not "one of the smart guys" in the industry, that he's a salesman in a world of technical geniuses. Nonetheless, he managed to synthesize two seemingly irreconcilable business models, placing Red Hat on a path to tremendous success. His response to his strategic dilemma was to combine the free-software model's low product price with the proprietary model's profitable service component, in the process creating something new: a corporate market for the Linux operating system. As is often the case with integrative thinking, Young included some twists on both models that made the synthesis work.

Although inspired by the proprietary model, Red Hat's service offering was quite different. "If you ran into a bug that caused your systems to crash," Young said of the service you'd buy from the big proprietary shops, "you would call up the manufacturer and say, 'My systems are crashing.' And he'd say, 'Oh, dear,' while he really meant, 'Oh, good.' He'd send an engineer over at several hundred dollars an hour to fix his software, which was broken when he delivered it to you, and he'd call that customer service." Red Hat, by contrast, helped companies manage the upgrades and improvements available almost daily through Linux's open-source platform.



Young also made a crucial change to what had been the somewhat misleadingly dubbed free-software model: He actually gave the software away, repackaging it as a free download on the Internet rather than as an inexpensive but cumbersome CD-ROM. This allowed Red Hat to break away from the multitude of small Linux packagers by acquiring the scale and market leadership to generate faith among cautious corporate customers in what would become Red Hat's central offering – service, not software.

In 1999, Red Hat went public, and Young became a billionaire on the first day of trading. By 2000, Linux had captured 25% of the server operating system market, and Red Hat held more than 50% of the global market for Linux systems. Unlike the vast majority of dot-com era start-ups, Red Hat has continued to grow.

What enabled Young to resolve the apparent choice between two unattractive models? It was his use of an innate but underdeveloped human characteristic, something we might call – in a metaphor that echoes another human trait – the opposable mind.

Human beings are distinguished from nearly every other creature by a physical feature: the opposable thumb. Thanks to the tension that we can create by opposing the thumb and fingers, we can do marvelous things – write, thread a needle, guide a catheter through an artery. Although evolution provided human beings with this potential advantage, it would have gone to waste if our species had not exercised it in ever more sophisticated ways. When we engage in something like writing, we train the muscles involved and the brain that controls them. Without exploring the possibilities of opposition, we wouldn't have developed either its physical properties or the cognition that accompanies and animates it.

Analogously, we were born with opposable minds, which allow us to hold two conflicting ideas in constructive, almost dialectic tension. We can use that tension to think our way toward new, superior ideas. Were we able to hold only one thought or idea in our heads at a time, we wouldn't have access to the insights that the opposable mind can produce.

Unfortunately, because people don't exercise this capability much, great integrative thinkers are fairly rare. Why is this potentially powerful but generally latent tool used so infrequently and to less than full advantage? Because putting it to work makes us anxious. Most of us avoid complexity and ambiguity and seek out the comfort of simplicity and clarity. To cope with the dizzying complexity of the world around us, we simplify where we can. We crave the certainty of choosing between well-defined alternatives and the closure that comes when a decision has been made.

For those reasons, we often don't know what to do with fundamentally opposing and seemingly incommensurable models. Our first impulse is usually to determine which of the two models is "right" and, by the process of elimination, which is "wrong." We may even take sides and try to prove that our chosen model is better than the other one. But in rejecting one model out of hand, we miss out on all the value that we could have realized by considering the opposing two at the same time and finding in the tension clues to a superior model. By forcing a choice between the two, we disengage the opposable mind before it can seek a creative resolution.

This nearly universal personal trait is writ large in most organizations. When a colleague admonishes us to "quit complicating the issue," it's not just an impatient reminder to get on with the damn job – it's also a plea to keep the complexity at a comfortable level.

To take advantage of our opposable minds, we must resist our natural leaning toward simplicity and certainty. Bob Young recognized from the beginning that he wasn't bound to choose one of the two prevailing software business models. He saw the unpleasant trade-offs he'd have to make if he chose between the two as a signal to rethink the problem from the ground up. And he didn't rest until he found a new model that grew out of the tension between them.

Basically, Young refused to settle for an "either-or" choice. That phrase has come up time and again in my interviews with successful leaders. When asked whether he thought strategy or execution was more important, Jack Welch responded: "I don't think it's an 'either-or.'" Similarly, Procter & Gamble CEO A.G. Lafley – when asked how he came up with a turnaround plan that drew on both cost cutting and investment in innovation – said: "We weren't going to win if it were an 'or.' Everybody can do 'or.'"

## The Four Stages of Decision Making

So what does the process of integrative thinking look like? How do integrative thinkers consider their options in a way that leads to new possibilities and not merely back to the same inadequate alternatives? They work through four related but distinct stages. The steps themselves aren't particular to integrative thinking: Everyone goes through them while thinking through a decision. What's distinctive about integrative thinkers is how they approach the steps. (See the exhibit "Conventional Versus Integrative Thinking.")

**Determining salience.** The first step is figuring out which factors to take into account. The conventional approach is to discard as many as possible – or not even to consider some of them in the first place. In order to reduce our exposure to uncomfortable complexity, we filter out salient features when considering an issue.

We also do this because of how most organizations are structured. Each functional specialty has its own narrow view of what merits consideration. Finance departments haven't traditionally regarded emotional factors as salient; similarly, departments concerned with organizational behavior have often ignored quantitative questions. Managers pressure employees to limit their view of what's salient to match the department's doctrine, leaving people with only a subset of the factors to which they might otherwise have productively paid attention.

When our decisions turn out badly, we often recognize after the fact that we've failed to consider factors that are significant to those outside the immediate reach of our jobs or functional specialties. We say to ourselves, "I should have thought about how the employees in our European operation would have interpreted the wording of that memo" or "I should have thought about the state's road-repair program before choosing a site for our new distribution center." The integrative thinker, by contrast, actively seeks less obvious but potentially relevant factors. Of course, more salient features make for a messier problem, but integrative thinkers don't mind the mess. In fact, they embrace it, because it assures them that they haven't dismissed anything that may illuminate the problem as a whole. They welcome complexity, because that's where the best answers come from. They are confident that they'll find their way through it and emerge on the other side with a clear resolution.

## Conventional Versus Integrative Thinking

When responding to problems or challenges, leaders work through four steps. Those who are conventional thinkers seek simplicity along the way and are often forced to make unattractive trade-offs. By contrast, integrative thinkers welcome complexity – even if it means repeating one or more of the steps – and this allows them to craft innovative solutions.

	1 Determining Saliency	2 Analyzing Causality	3 Envisioning the Decision Architecture	4 Achieving Resolution
CONVENTIONAL THINKERS	Focus only on obviously relevant features	Consider one-way, linear relationships between variables, in which more of A produces more of B	Break problems into pieces and work on them separately or sequentially	Make either-or choices; settle for best available options
INTEGRATIVE THINKERS	Seek less obvious but potentially relevant factors	Consider multidirectional and nonlinear relationships among variables	See problems as a whole, examining how the parts fit together and how decisions affect one another	Creatively resolve tensions among opposing ideas; generate innovative outcomes

In his thinking about a new business model for Red Hat, Bob Young added into his calculations something ignored both by software companies generally and by Linux suppliers in particular: the day-to-day concerns of corporate CIOs and their systems administrators. Doing this allowed him to envision an innovative model that tapped into an entirely new market for Linux-based products and services.

As a whole, the software industry disdains CIOs' reluctance to buy the newest and best technology, attributing it to timidity or strict adherence to the "you'll never get fired for buying IBM" mantra. Young not only empathized with the CIOs but found their caution understandable. "It's *not* FUD – fear, uncertainty, and doubt," he said. "It's sensible."

Linux software was an entirely new product for corporate buyers, one that didn't follow any familiar rules. It was free. No one supplier controlled it. Thousands of versions were out there, and each one changed nearly every day. From the CIOs' perspective, that Linux was cheaper and better than Windows-based products – the basic sales message delivered by Red Hat's rivals – played a relatively small part in the calculation. The CIOs were thinking about whether their investment would be in a stable and consistent platform that would work across their organizations and whether their suppliers would still be around in ten or 15 years. Systems administrators worried that the complexity of Linux – with

its random and almost daily upgrades – would create a management nightmare, since different teams of people throughout the company would have to maintain the software packages.

Viewing these concerns as salient helped lead Young to conclude that, in the case of Linux, service was a bigger selling point than product and that a vendor's long-term credibility was crucial.

**Analyzing causality.** In the second step of decision making, you analyze how the numerous salient factors relate to one another. Conventional thinkers tend to take the same narrow view of causality that they do of saliency. The simplest type of all is a straight-line causal relationship. It's no accident that linear regression is the business world's preferred tool for establishing relationships between variables. Other tools are available, of course, but most managers shun them because they're harder to use. How many times has a superior scolded you for making a problem more complicated than it needs to be? You protest that you're not trying to complicate anything; you just want to see the problem as it really is. Your boss tells you to stick to your job, and a potentially complex relationship becomes a linear one in which more of A produces more of B.

When we make bad decisions, sometimes it is because we got the causal links between salient features wrong. We may

have been right about the direction of a relationship but wrong about the magnitude: “I thought that our costs would decrease much faster than they actually did as our scale grew.” Or we may have gotten the direction of a relationship wrong: “I thought that our capacity to serve clients would increase when we hired a new batch of consultants, but it actually shrank, because the experienced consultants had to spend a huge amount of their time training the new ones and fixing their rookie mistakes.”

The integrative thinker isn’t afraid to question the validity of apparently obvious links or to consider multidirectional and nonlinear relationships. So, for example, rather than simply thinking, “That competitor’s price-cutting is hurting our bottom line,” the integrative thinker may conclude, “Our

Young create a more nuanced picture of the industry’s future than his competitors were able to.

**Envisioning the decision architecture.** With a good handle on the causal relationships between salient features, you’re ready to turn to the decision itself. But which decision? Even the simple question of whether to go to a movie tonight involves deciding, at the very least, which movie to see, which theater to go to, and which showing to attend. The order in which you make these decisions will affect the outcome. For example, you may not be able to see your preferred movie if you’ve already decided you need to be back in time to relieve a babysitter who has plans for later in the evening. When you’re trying to invent a new business model, the number of decision-making variables explodes. And with that comes



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product introduction really upset our rivals. Now they’re cutting prices in response, and our profitability is suffering.”

The most interesting causal link that Young identified was the rather subtle one between the free availability of Red Hat software’s basic components and the likely – or inevitable, in Young’s view – evolution of the industry. The relationships he saw between pricing, profitability, and distribution channel drove his company in a different direction from its Linux competitors, which saw a perfectly good market for their “free” software. This is what allowed him to create and then lock up the new corporate market.

For example, Young recognized the vulnerability of a product based on freely available components. Whatever you charged for the convenience of getting a Linux operating system bundled together on one CD-ROM, inevitably “someone else would come in and price it lower,” he said. “It was a commodity in the truest sense of the word.” He also realized that a company that wasn’t a current rival – say, a big electronics retailer – could put together a Linux product of its own and then push it through its own well-developed distribution channel, leaving Red Hat and other suppliers out in the cold. “I knew I needed a product I had some control over so I could make CompUSA a customer” – that is, a corporate purchaser of Red Hat’s service package – “rather than a competitor” with its own CD-ROM product.

The causal relationships spotted by Young weren’t earth-shattering on their own, but putting them together helped

the impulse not only to establish a strict sequence in which issues will be considered but also to dole out pieces of a decision so that various parties – often, different corporate functions – can work on them separately.

What usually happens is that everyone loses sight of the overriding issue, and a mediocre outcome results. Suppose that Bob Young had delegated to different functional heads questions concerning the pricing, enhancement, and distribution of Red Hat’s original software product. Would their individual answers, agglomerated into an overall Red Hat strategy, have produced the spectacularly successful new business model that Young came up with? It doesn’t seem all that likely.

Integrative thinkers don’t break down a problem into independent pieces and work on them separately or in a certain order. They see the entire architecture of the problem – how the various parts of it fit together, how one decision will affect another. Just as important, they hold all of those pieces suspended in their minds at once. They don’t parcel out the elements for others to work on piecemeal or let one element temporarily drop out of sight, only to be taken up again for consideration after everything else has been decided. An architect doesn’t ask his subordinates to design a perfect bathroom and a perfect living room and a perfect kitchen, and then hope that the pieces of the house will fit nicely together. A business executive doesn’t design a product before considering the costs of manufacturing it.

Young held simultaneously in his head a number of issues: the feelings and the challenges of chief information officers and systems administrators, the dynamics of both the individual and the corporate markets for operating system software, the evolving economics of the free-software business, and the motivations behind the major players in the proprietary-software business. Each factor could have pushed him toward a separate decision on how to address the challenge. But he delayed making decisions and considered the relationships between these issues as he slowly moved toward the creation of a new business model, one based on the belief that dominant market share would be critical to Red Hat's success.

**Achieving resolution.** All of these stages – determining what is salient, analyzing the causal relationships between the salient factors, examining the architecture of the problem – lead to an outcome. Too often, we accept an unpleasant trade-off with relatively little complaint, since it appears to be the best alternative. That's because by the time we have reached this stage, our desire for simplicity has led us to ignore opportunities in the previous three steps to discover interesting and novel ways around the trade-off. Instead of rebelling against the meager and unattractive alternatives, instead of refusing to settle for the best available bad choice, the conventional thinker shrugs and asks, "What else could we have done?"

"Much else," the integrative thinker says. A leader who embraces holistic rather than segmented thinking can creatively resolve the tensions that launched the decision-making process. The actions associated with the search for such resolution – creating delays, sending teams back to examine things more deeply, generating new options at the 11th hour – can appear irresolute from the outside. Indeed, the integrative thinker may even be dissatisfied with the fresh batch of options he's come up with, in which case he may go back and start over. When a satisfactory outcome does emerge, though, it is inevitably due to the leader's refusal to accept trade-offs and conventional options.

The outcome in the case of Red Hat was completely unconventional – not many companies suddenly decide to give away their products – and ultimately successful. Young's gradual realization that only one player in his industry would have leverage with and support from corporate customers – and that such leverage and support could reap attractive service revenues from totally free software – shaped the dramatically creative decision he made.


The thinking that he intuitively engaged in is very different from the thinking that produces most managerial decisions. But, he said, his experience was hardly unique: "People are often faced with difficult choices – for instance, 'Do I want to be the high-quality, high-cost supplier or the low-quality, low-cost supplier?' We're trained to examine the pros and cons of such alternatives and then pick one of them. But

really successful businesspeople look at choices like these and say, 'I don't like either one.'" Using that recurring phrase, he added: "They don't accept that it's an 'either-or.'"

## Born and Bred

The consequences of integrative thinking and conventional thinking couldn't be more distinct. Integrative thinking generates options and new solutions. It creates a sense of limitless possibility. Conventional thinking glosses over potential solutions and fosters the illusion that creative solutions don't actually exist. With integrative thinking, aspirations rise over time. With conventional thinking, they wear away with every apparent reinforcement of the lesson that life is about accepting unattractive trade-offs. Fundamentally, the conventional thinker prefers to accept the world just as it is, whereas the integrative thinker welcomes the challenge of shaping the world for the better.

Given the benefits of integrative thinking, you have to ask, "If I'm not an integrative thinker, can I learn to be one?" In F. Scott Fitzgerald's view, only people with "first-rate intelligence" can continue to function while holding two opposing ideas in their heads. But I refuse to believe that the ability to use our opposable minds is a gift reserved for a small minority of people. I prefer the view suggested by Thomas C. Chamberlin, a nineteenth-century American geologist and former president of the University of Wisconsin. More than 100 years ago, Chamberlin wrote an article in *Science* magazine proposing the idea of "multiple working hypotheses" as an improvement over the most commonly employed scientific method of the time: testing the validity of a single hypothesis through trial and error. Chamberlin argued that his approach would provide more accurate explanations of scientific phenomena by taking into account "the co-ordination of several agencies, which enter into the combined result in varying proportions." While acknowledging the cognitive challenges posed by such an approach, Chamberlin wrote that it "develops a habit of thought analogous to the method itself, which may be designated a habit of parallel or complex thought. Instead of a simple succession of thoughts in linear order...the mind appears to become possessed of the power of simultaneous vision from different standpoints."

Similarly, I believe that integrative thinking is a "habit of thought" that all of us can consciously develop to arrive at solutions that would otherwise not be evident. First, there needs to be greater general awareness of integrative thinking as a concept. Then, over time, we can teach it in our business schools – an endeavor that colleagues and I are currently working on. At some point, integrative thinking will no longer be just a tacit skill (cultivated knowingly or not) in the heads of a select few. 

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