By Roger Martin and Hilary Austen

In today's climate of constant change and relentless competition, the key job of a leader is to make robust choices. In an idealized world, leaders are efficient choice factories — processing information, options, and consequences — and rolling decisions off their personal assembly lines every day. However, daily operations rarely run as smoothly as expected, because choices are varied, complex, and demanding. For example, leaders must decide where and on whom they will focus their attention; on what initiatives they will spend resources; how, with whom, and where they will compete; what capabilities they will build upon; what activities they will stop or start doing; and how they will motivate their charges.

These choices inevitably involve tensions — what appears to be a trade-off in which the choosing of one option precludes another attractive option. Or using one resource renders that resource unavailable to others. Tension, by its very nature, compels leaders to make choices of some kind. Maintaining the status quo, typically, is not an option. To move ahead, there's no choice but to choose.

Often these choices are enigmatic, exhibiting a challenging combination of qualities including ambiguity, uncertainty, complexity, instability, uniqueness, and risk. Enigmatic choices with these features demand special consideration. For instance, they involve a vast array of interrelated elements and consequences. Addressing one piece of the choice puzzle means many others are affected, making it impossible to break the puzzle down into small parts and solving each sequentially. Outcomes of initiatives are often difficult to predict, and conditions often change before solutions can be implemented.

Further, such choices typically cannot be made from within narrowly defined functional, regional, or operational boundaries. Different areas of an organization see the issues and the choices that face them from different perspectives. This suggests the need for managers who can attend simultaneously to a vast array of interconnected variables and related choices to deal effectively with enigmatic choices. In short, modern leadership necessitates integrative thinking.

Integrative thinkers work to see the whole problem, embrace its multi-varied nature, and understand the complexity of its causal relationships. They work to shape and order what others see as a chaotic landscape. They search for creative resolutions to problems typically seen by others as a simple ‘fork in the road’ or an irresolvable bind brought about by competing organizational interests.

At its core, integrative thinking is an art, not a formula or algorithm that can be followed routinely from start to finish. Managers who attempt to reduce choice making to an algorithm are quickly overwhelmed by the enigmatic qualities their formula overlooks. As in art, a heuristic, not algorithmic process must guide the integrative choice maker.

INTEGRATIVE CHOICE MAKING

Although integrative decision making can't be reduced to an algorithm, it does typically involve a predictable cascade of four interrelated steps that constitute a heuristic process. Working effectively requires a stance and a supporting set of skills that allows managers to move fluidly through and between the four steps. As illustrated in the diagram (opposite), choice options cascade down from higher-order choices. Higher-order choices both set the context for and constrain lower-order choices. Choices are interrelated, so that if a lower-order choice can't be constructed to fit within the context and constraints of a higher-order choice, then the higher-order choice must be revisited and revised until consistent lower-order choices can be made. When accomplished with insight and intelligence, the revisiting...
and revision of choices produce “integrative integrity”. Choices are adjusted fluidly to become both consistent with and reinforcing of other related choices. Conflicts with other choices are harnessed and each choice improves the effectiveness and power of the other choices around it. Preserving and enhancing the quality of choice in rapidly changing business environments demands both close attention to and ongoing reshaping of integrative integrity over time. In short, integrative choice making is a creative work in progress.

AN INTEGRATIVE THINKING STANCE

A heuristic and integrated approach to choice making requires the cultivation of a somewhat counterintuitive stance. While conventional managerial wisdom often pursues predictable and measurable clarity, the integrative stance embraces an uncommonly high tolerance for, even attraction to change, openness, flexibility and disequilibrium. Managers with an integrative stance expect dynamism in their purposes, attention, capabilities, and understanding of the choices they must formulate and pursue. As described earlier, working through the choice cascade is a dynamic and iterative process where stability, clarity, and any current status quo are short-lived.

Managers with an integrative thinking stance also embrace complexity and seek to weave into complexity rather than try to skirt it. They don’t view imposed simplicity as an unalloyed virtue, but rather as the potential result of narrow thinking.

Finally, the integrative thinking stance places a central value on learning. It welcomes rather than fears surprise, keeping an eye keenly attuned to disconfirming data and using surprise to innovate. It embodies tolerance for the temporary incompetence that comes with the development of new skills. The stance, however, also values the courage, even pig-headedness, to pursue emerging beliefs even as they come up against resistance.

Facility within this integrative stance requires a supporting repertoire of skills, discussed under each step of the choice cascade pictured above. As managers become more skilled at the dynamics of integrative thinking, they become more comfortable with an integrative stance and begin to enjoy discovering the unexpected opportunities these dynamics often present. In each step of the choice cascade, both the stance and the skills that support it are critical when resisting the temptation to lop off the challenging features that make choices enigmatic.
Causality

The second task for the integrative thinker is to develop an understanding of the causal relationships that connect the variables and choices under consideration. In essence, the integrative thinker creates a causal map that links together the variables considered salient in the first step. By taking time to identify critical relationships, the integrative thinker creates the opportunity to make a more robust choice than does the less integrative thinker who relies on an incomplete understanding of important relationships or overlooks these relationships entirely.

In addition to considering fewer variables when assessing salience, less integrative thinkers tend to view the causal relationships between factors to be linear and one-directional, e.g. Their price-cutting influences ours. The stance of the integrative thinker allows them to seek and explore nonlinear and multidirectional causal relationships, e.g. Their price-cutting influences ours, but ours also influences theirs.

The integrative thinker deals with ambiguity by creating multiple causal models and developing many alternative theories, e.g. They may have been reacting to our new product launch, but maybe they were reacting to our other competitor’s new plant announcement. The integrative thinker will embrace mysterious elements, rather than exclude them, even though the causal relevance is not easily identified.

Flexible purposing is a skill required in this step of the choice cascade (and in the subsequent step). This is the skill of maintaining a clear purpose, in this case through the difficult step of mapping out the complex causal interrelationships, while maintaining the flexibility to revise judgments about patterns of causality, even about salience as the causal map develops.

Sequencing

Deciding where and how to cut into the problem is the next step in integrative thinking. Considering all of the salient variables at once is extremely difficult, if not impossible. No one can address all the variables and the relationships between these variables simultaneously; hence, sequencing is critical.

Less integrative thinkers will often try to reduce sequencing to a manageable process. They do this by ignoring complexity and tackling one component of the overall problem first, treating this component as an isolated element. Having solved one sub-problem, they move on to the next sub-problem, considering a limited set of variables, without the benefit of a rich causal map that can guide choices about sequence.

The weakness of this approach is that it does not consider the interrelationships between the sub-problems. For example, a manager may seek to solve a particular marketing problem, e.g. Customers appear to want more variety. Then, when finished, they tackle a manufacturing problem, e.g. Variety equals short and expensive production runs. Unfortunately the non-integrated tackling of the pieces results in the manager not realizing that the solution to the marketing problem — add breadth to the product line — inadvertently constrained the possibilities for the manufacturing solution.

In contrast, the integrative thinker recognizes that many salient variables and the whole causal map must be kept in mind during the entire problem-solving exercise. Although sequencing is still required to manage the complexity of the total causal map, the integrative thinker cuts into the problem by bringing...
some parts of it to the foreground and moving other parts to
the background (much as an artist would as he or she paints a
landscape). Instead of solving an isolated set of sub-problems,
the integrative thinker keeps the whole causal map in mind as he
or she focuses on different parts of it at different times.

A key skill is the ability to select the right cutting-in point.
Not all parts of the map deserve equal attention, but not all are
equally easy to work with, and some are more pivotal than others.
Which one is most important may not be obvious at first glance.
The integrative thinker considers various options for the fore-
ground focus before cutting in. The anxious, less-integrative
thinker will tend to enthusiastically pursue the very first cutting-in
point that strikes him or her and carry on as emergencies arise.

In the process of selecting a cutting-in point, the integrative
thinker’s approach closely mirrors that of the working studio
artist. There are no algorithms for creating a work of art. The
creator must manage a wide range of variables while moving
toward a unique creative solution. Bringing small parts of
the picture into the foreground at different times enables the
integrative thinker to manage the complexities of the causal
map without unproductively fragmenting the problem. The
choice to treat elements as foreground is guided by prior choices
about salience, causality, as well as the integrative thinker’s
immediate interactions with the situation at hand.

While one important creative skill is the ability to work with
selected foreground elements while holding the whole causal
picture in mind, another is the facility integrative thinkers have
for using their experiences to revisit and possibly revise their
earlier assessments of salience and their determinations of
causality. This skill allows them to update their understanding of
the problem and to reorder their choices about sequencing as
things change and as they learn.

Resolution

The last but most critical integrative step is resolution. At a
certain point after the salient variables are identified, the causal
map is built, action is sequenced, and choices must ultimately
be made. This represents a challenge because it isn’t possible to
do everything desired. There are always a few forks in the road.

At this point attitude is critical. The less integrative thinker
will be inclined to see the challenge as a bind — I can do x or y,
but neither is satisfactory — and will tend to focus on developing
a strategy for coping with the bind. An example is a CEO who
sees himself as too busy to deal with the internal pressures of
managing the firm and the external pressures of managing the
shareholders, capital market, etc., but who understands that the two
worlds are inexorably linked. He sees this as a bind and decides to
cope by splitting the job in two and handing off the external job to
a chairperson. This typical non-integrative solution involves accept-
ing the bind and separating two previously integrated activities.

A more integrative thinker would not see the challenge as an
insurmountable bind, but rather as a tension to be creatively
and flexibly managed. A CEO skilled at integrative thinking
would not resort to disintegrating the causal map, but might
recognize the need, for example, to act as the integrative link
between the internal and external worlds. He or she might seek
creative ways to take on a thinner, but higher value-added slice
of each job in order to maintain integration. The integrative
CEO recognizes that tension will not disappear with this solution.

Rather than deliberate an “either/or” choice, the integrative
CEO chooses a course of continued fine-tuning, which makes
the ideal resolution an ongoing process. This is not the same as
not choosing — it is about ensuring that you are solving the
right problem.

Integrative thinking assumes that all trade-off challenges are
tensions to creatively manage, not binds to wrestle with and
agonize over hopefully. The associated skill is to learn not to be
so frightened by challenges that the immediate reaction is to see
a “this or that” bind in which both options feel like an unaccept-
able compromise. Integrative thinkers refuse to accept the bind
and learn to hold tension and fear long enough to continue to
search for the creative solution. This requires a high tolerance
for ambiguity and uncertainty, and an attitude of openness to
continuous optimization, rather than a push toward closure.

CONCLUDING THOUGHTS

Integrative thinking is an art — a heuristic process, not an
algorithm. The integrative thinker develops a stance that embraces
not fears the essential qualities of enigmatic choices. The
integrative thinker is a relentless learner who seeks to develop
the repertoire of skills that enables him or her to engage the
tensions between opposites long enough to transcend duality
and seek out novel solutions. Integrative thinkers understand
that they are engaged in a creative process that avoids easy,
pat, or formulaic answers. In short, integrative thinking is the
management style we need if we are to solve the enigmatic
problems that face our organizations in the new millennium.

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Stanford PhD dissertation examined artistry in business
and other contexts.
Are you I-shaped, T-shaped, or E-shaped?

I is depth, T is breadth, and E executes (Of course there’s overlap, but you get the idea.)

If you think of yourself as a mini-business, can you “execute” your ideas? (either yourself, with others, or through others, and amplify your impact) And, by the way, just how important is the ability to execute? Well, it’s important enough that Gartner uses “Ability to Execute” as a key criteria in its Magic Quadrants.

Ability to execute + high-impact ideas are a recipe for value.

After all, what good are a bunch of ideas if you can’t make them happen.

Keep these mental models in mind as you design your career path and grow your capabilities, skills, and experiences.

With that in mind, let’s explore a little more …

T-Shaped People

Here’s what Wikipedia says about T-shaped people:

"The concept of T-shaped skills, or T-shaped persons is a metaphor used in job recruitment to describe the abilities of persons in the workforce. The vertical bar on the T represents the depth of related skills and expertise in a single field, whereas the horizontal bar is the ability to collaborate across disciplines with experts in other areas and to apply knowledge in areas of expertise other than one's own."

(The earliest reference to T-shaped people is by David Guest in "The hunt is on for the Renaissance Man of computing," in The Independent, September 17, 1991.)
IDEO CEO Tim Brown: T-Shaped Stars: The Backbone of IDEO’s Collaborative Culture

The vertical stroke of the “T” is a depth of skill that allows them to contribute to the creative process. That can be from any number of different fields: an industrial designer, an architect, a social scientist, a business specialist or a mechanical engineer.

The horizontal stroke of the “T” is the disposition for collaboration across disciplines. It is composed of two things. First, empathy. It’s important because it allows people to imagine the problem from another perspective – to stand in somebody else’s shoes. Second, they tend to get very enthusiastic about other people’s disciplines, to the point that they may actually start to practice them. T-shaped people have both depth and breadth in their skills.

I-Shaped People

By contrast, I-shaped people have a very narrow, but expert domain skills in one specific area.

E-Shaped People

According to Sarah Davanzo, E-shaped people are those that “execute”:

“People (workers) today also need to be able to execute. As they say, ‘ideas are like noses, everyone has one.’ I’m tired of people coming to me with a great idea or invention, but with no clue how to bring it to fruition. Real genius is being able to execute ideas.”

4-Es: Experience, Expertise, Exploration, and Execution

According to Sarah Davanzo, “E-shaped” people have a combo of 4 Es:

“E-Shaped People’ have a combination of ’4-E’s: experience and expertise, exploration and execution. The last two traits – exploration and execution – are really necessary in the current and future economy.”
Note – If you want to work on your ability to execute, *Getting Results the Agile Way* is a good way to start (It’s the playbook I wish somebody would have given me long ago.)

**Is Your CQ (Curiosity Quotient) the Key to Your Future Success?**

According to Sarah Davanzo, your CQ matters more than your IQ and EQ:

> “Exploration = curiosity. Innovation and creative problem solving is tied to one’s “curiosity quotient” (CQ). In this day and age of constant change (think: Moore’s Law), one’s CQ is more useful than one’s IQ or EQ.”

Side note – Edward de Bono wrote about how exploring ideas is how to have a beautiful mind.

**Abstract + Concrete = Outstanding**

Outstanding people can **generalize and abstract**, as well as **get specific and make things actually work**. They bridge the head in the clouds and feet on the ground with other people. Bill Buxton writes:

> “I once asked him (Brian Shackel) if he had noticed any particular attributes that distinguished the students that went on to do remarkable things compared with the rest. His answer was as immediate as it was insightful. He said: ‘The outstanding students all had an outstanding capacity for abstract thinking, yet they also had a really strong grounding in physical materials and tools.’ By this, he meant that they could rise above the specifics of a particular problem to think about them in a more abstract, and in some ways, more general way.”

**Expand Your T-Shape with Personal Effectiveness**

One way to grow your T-Shape is to grow your personal effectiveness capabilities. The U.S. department of labor actually has a [Competency Model Clearinghouse](https://www.doleta.gov/oa/competencymodel.cfm). You can easily browse different industries and find a list of Personal Effectiveness capabilities. For example, in the [Information Technology Competency Model](https://www.dol.gov/oa/competencymodel.cfm#infotech), they list the following Personal Effectiveness Capabilities:

- Interpersonal Skills and Teamwork
- Integrity
- Professionalism
- Initiative
- Adaptability and Flexibility
- Dependability and Reliability
- Lifelong Learning
BTW – did you notice that Personal Effectiveness is at the base of the pyramid of the competency model? The higher you go up, the more narrow and specific it gets. The lower you go, the broader and more general the competency model is. Personal Effectiveness is at the base of all the pyramids. That should tell you something.

Note – If you want to work on your personal effectiveness skills, I have a knowledge base at Sources of Insight that focuses on personal effectiveness, personal development, leadership, productivity, emotional intelligence, time management, strengths, motivation, and more.

Additional Resources

• Bill Buxton on Innovation Calls For I-Shaped People
• IDEO CEO Tim Brown: T-Shaped Stars: The Backbone of IDEO’s Collaborative Culture (On “integrators” – “if you have a company full of T-shaped people, you don’t need the facilitator, because everybody can do it anyway.”)
• Sarah Davanzo on Business Trend: “E-Shaped” People, Not “T-Shaped”
• Career Development, Professional Development, and Personal Development
• Getting Results.com (All things “ability to execute”)
• Sources of Insight (Personal Effectiveness)

The following chart is an excerpt from “Break Organizational Dependencies with an ‘E-shaped’ Staff” by Chart Derek Huether at Leading Agile https://www.leadingagile.com/2017/02/e-shaped-staff/