

Intuition's Role in Making Decisions

SUMMARY

Typically, managers assume better decisions are a matter of combining better inputs with better analysis, leading to better prediction, planning and execution. These assumptions are based on persistent, fundamental misunderstandings about the inputs to decisions, the outcomes from decisions, and the very nature of "deciding."

Because of these mistaken assumptions, many technologies and business processes actually suppress rather than support the mechanisms for real-time sensing and responding. Structured hierarchies and organizational silos prevent the social construction of organizational knowledge. Technologies and techniques designed to manage the flow of information or intelligence instead constrict perception. Information overload, paralysis-by-analysis, costly mistakes and bad judgment are the inevitable results. Standardization and efficiency remove the variation and serendipity that lead to learning and innovation.

In reality, executives and experts rely on methods of "sense-making" based on internalized or acculturated knowledge that often manifest as intuition because the process happens faster and with more input and memory that we are consciously aware of in ourselves or others. Such skills become increasingly important in urgent, emerging and uncertain conditions and are supported by cultivating, networking and leveraging all intellectual and information resources.

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By Steve Barth & Richard Marrs

What do driving a car and managing an organization have in common?

Both rely more on the unconscious than the conscious mind. If you've ever arrived at your destination without remembering the journey, chances are your non-conscious thought processes took over along the way. Surprisingly, the same is true when you arrive at a decision, but that doesn't make you a bad driver or a bad manager.

Even at the level of the expert or executive, the human brain is capable of reaching conclusions and finding solutions to difficult problems by utilizing and trusting "gut" feelings. When these decisions are based on deep background knowledge and experience, intuition can be just as effective a tool as analysis and considerably faster.

Decisions Confound Us

Supporting better, faster decision-making is a major imperative for organizational practice. Executives tend to stress better, faster decision-making as a critical differentiator for competitive advantage and bottom-line results.

Ralph Shrader, chairman of the consulting firm Booz Allen Hamilton, once put it this way: "Decision-making today places a premium on speed to a degree unprecedented in world history."

To improve the efficiency and effectiveness of their decision-making, companies devise elaborate new structures and systems. Knowledge

management taps tacit expertise, organizational learning stewards intellectual capital, competitive intelligence identifies emerging opportunities and threats, market research identifies trends and scenario planning maps possible futures.

More organizational resources (people, processes and information technology) are being devoted to supporting decisions. Investments in "decision support" deliver sophisticated analytical techniques and advanced technologies devoted to environmental scanning and transaction analysis in the attempt to separate signals from noise.

Nevertheless, stunning institutional failures of intelligence, imagination and integrity question the effectiveness of these efforts. Inevitably, we wonder why we weren't able to make sense of the available information and "connect the dots" in time to avert the catastrophe or seize the opportunity.

A quarter-century ago, John Naisbitt wrote in *Megatrends*, "We are drowning in information but starved for knowledge."

The real truth is that we are drowning in both information *and* knowledge. We are constantly presented with more information and more ideas than we know what to do with. What we really starve for is meaning and actionable belief.

The information overload that results from the acceleration of and addition to new input has both individual and organizational consequences. Not only are we innun-

dated with too much “irrelevant” information, we also suffer from the information “underload” of not enough relevant information.

However, for decision-making, neither overload nor underload is the problem. Good decisions are not always rational or deliberate and, as we will see, expert individuals or teams operate at a much higher bandwidth—in terms of both the volume and speed of input received and considered—than our information systems can support.

Reconsidering Decision Support

Typically, managers assume that better decisions are a matter of combining better inputs with better analysis, leading to better prediction, planning and execution. All these assumptions are incorrect because of the persistent, fundamental misunderstandings about the inputs to decisions, the outcomes from decisions, and the very nature of “deciding.”

The core competency that executives are seeking is not decision-making, but sense-making: maintaining a clear, real-time picture of the situations unfolding around us.

Fortunately human minds are well-adapted to sense-making. Cognitive psychology and complexity science insights demonstrate how knowledge workers individually and collectively interact with information environments and share their perceptions and opinions to determine actions and outcomes.

An Ecology of Information

The information environment in which most knowledge workers operate is very similar to a forest where everything is information. To survive and thrive in such an environment, inhabitants must derive different meaning from the same objects depending on the context of the situation. In the workplace, different knowledge workers behave

differently in the same information environment.

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John Seely Brown, formerly chief scientist at Xerox’s Palo Alto Research Center, explains, “An organization is a knowledge ecology; it is fundamentally dynamic and gains robustness through diversity. But ecologies cannot be designed; they can only be nurtured. The key to nurturing these ecologies is finding the balance between spontaneity and structure.”

Start Making Sense

In many settings, neither executives nor experts really depend on the rational, deliberate analysis supported by disciplines such as competitive intelligence and market research or by technologies such as data mining and predictive modeling. In fact, they are more likely to use analysis to justify their decisions to others.

Because of these mistaken assumptions, many technologies and business processes actually suppress rather than support mechanisms for real-time sensing and responding. Structured hierarchies and organizational silos prevent the social construction of organizational knowledge. Standardization and efficiency remove the variation and serendipity that lead to learning and innovation. Technologies and techniques designed to manage the flow of information or intelligence instead constrict perception. Information overload, paralysis-by-analysis, costly mistakes and bad judgment are the inevitable results.

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based on internalized or acculturated knowledge that often manifests as intuition because the process happens faster and with more input and memory that we are consciously aware of in ourselves or others.

Such skills become increasingly important in urgent, emerging and uncertain conditions and are supported by cultivating, networking and leveraging all intellectual and information resources.

Knowledge, information and data are everywhere in business, but the challenge of synthesizing fragmentary signals into actionable intelligence is really more about human cognition and organizational culture than business technologies and organizational structures.

The Bandwidth of Experience

The higher up you go in the managerial hierarchy, the more intuitive decision-making seems to shape organizational destinies. CEOs almost always base important decisions more on intuition —instincts and insights— than on evidence. The role of the unconscious (it might be better to think of it as non-conscious processing) in judgment is critical to understanding how to support better and faster decisions through sense-making.

Psychologist Gary Klein discovered that when experts are being effective in their elements, they don’t really make decisions at all. What he calls “naturalistic” decision-making is the process of making sense of unfolding circumstances based on rapid recognition of patterns which education, experience and expertise have internalized.

Sense-making happens faster and at a higher bandwidth than we realize. Humans have evolved specifically to handle extremely rich information environments. Individually and socially, we have developed cognitive and cultural functions that help to perpetuate

the species by processing huge amounts of information and acting on opportunities or threats very quickly.

Neurological research conducted during the 20th century explains how this works at the individual level. Through our five senses (hearing, sight, smell, taste and touch) the average human *unconsciously* processes almost a million times more information than we are consciously aware of.

The same bandwidth is available to us in professional situations:

- § Will this job candidate be trustworthy?
- § Will this new product appeal to consumers?
- § Will these weird guys accept this much for their start-up?
- § How will the market react to this bad news?

Intuitive decisions in business are based on the years of accumulated education and experience required to build expertise. Experts can make sense of a situation only if they understand the broader *context* of any given situation. Moreover, intuitive sense- and decision-making only work when the expert can *trust* that gut-feelings are actually based on his or her internalized knowledge, rather than on emotional biases that need to be discounted.

Context and trust are even more important when a community of experts (in the same or different specialties) are working collectively to make sense of unfolding events and choose the best course of action as quickly as possible. Anthropologist **Edwin Hutchins** noted cognition “in the wild” of the real world is always dependent on the environment and is always socially distributed.

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Context and trust, like knowledge, take time to develop. All three must always be constructed in advance of the need for instant sense and decision-making. You see this kind of preparation in high-performing individuals in sports, performance arts and the military. But you almost never see it in business. Fortunately, it can still develop over time and practice. Better yet, it can be stimulated by enlightened leadership, dynamic organizational culture and robust communication networks.

Implications and Applications

This accelerating complexity of modern business means more decisions have to be made faster. So even in situations where careful research, analysis and deliberation would be preferred, they become less appropriate or even liabilities.

What Gary Klein found is that experts simultaneously identify the best pattern matches and unconsciously run simulations of probable outcomes from optional responses. In this way, intuitive decisions are based on more input, not less.

This has important implications for organizational processes ranging from KM and CI to training and IT. The assumption that information is accumulated and analyzed in discrete packets by the conscious mind, while ignoring the non-conscious processing, inevitably overwhelms the capacity of indi-

viduals, organizations and systems to handle the task effectively.

Any approach to determining what to do has to be based on how we think the world works. Data becomes information, and information creates decisions before we are aware of it. This not only applies to individual reflexes and intuition, but also to organizational behavior.

The difficulty of understanding, predicting and controlling situations in a complex adaptive situation is what makes modern decision-making so challenging. Every management decision comes with risk, uncertainty and urgency. In complex situations, cause and effect relationships are non-linear and defy analysis. Patterns emerge that can only be perceived after the fact, and outcomes cannot be predicted because the patterns will not repeat in the same way twice.

In a knowledge-intensive business environment, information is everywhere. Creating value from this abundance of information is more about issues of organizational culture and human cognition than of business technologies and corporate structure.

A Matter of Trust

It is one thing to trust our own intuition, yet an entirely different and difficult matter to trust other people’s intuition without a common context. Therefore, preexisting relationships and shared language are critical for high-bandwidth and real-time organizational behavior.

The goal is to create new value by improving the efficiency and effectiveness of individual and collaborative knowledge work while increasing innovation and sharpening decision-making.

Given such an environment, the opportunity and need to take advantage of sense-making processes is that better, faster decisions can and often should be based on more

information, not less, relying on the network to rapidly separate the signals from the noise.

Though often unnoticed cognitive and cultural behaviors, whether an expert's gut feeling or executives' buzz on the golf course, sense-making cannot be completely separated from decision-making.

Intuition is no replacement for analysis, but both are vastly more valuable when they are allowed to complement each other by executives and organizations that understand how and when to get the most out of each.

Successful Intuition at Work

Billionaire investor, philanthropist, philosopher, political activist and author of *The Alchemy of Finance*, George Soros developed his elaborate "Theory of Reflexivity" to explain how he built his fortune in the volatile arena of currency speculation by anticipating trends with his own decision-making process.

But then Soros admitted that he is just as likely to change his position in a market because of a backache. "I used to treat it as a warning sign that something was wrong in the portfolio. It used to occur before I knew what was wrong, often even before the fund began to decline in value. That is what made it so valuable as a signal. When I finally discovered what was wrong, my backache usually went away," he explained.

Even when making billion-dollar decisions, Soros doesn't have to know how he knows something. In fact, he doesn't even have to know what he knows. He doesn't have to know why his back hurts. He has learned to trust his back. He has learned to trust his intuition.

—SB

A version of this article appeared in Competitive Intelligence magazine May 2007 (www.scip.org).

Further Reading

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