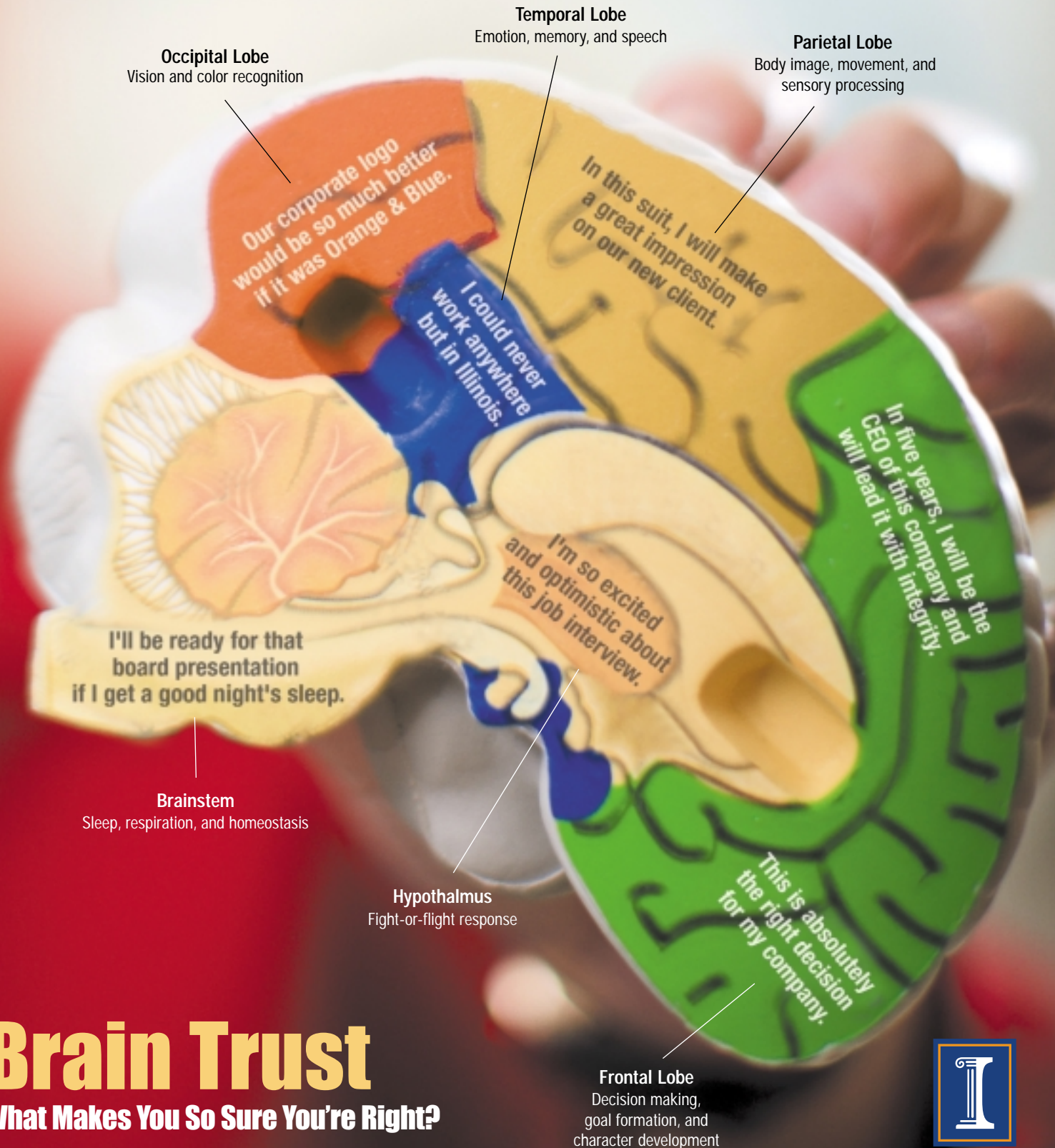


PERSPECTIVES

College of Business at the University of Illinois at Urbana-Champaign

Fall 2010

Volume 9, Number 2



Brain Trust

What Makes You So Sure You're Right?





Brain Trust

**How do you
know what you
know?**

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-Ira Solomon

Think back to where you were when you heard about the attack on the World Trade Center on September 11, 2001. If you're like most people, you're probably certain that your memories of what happened that day are accurate because of the dramatic nature and universality of the event. But really, if you're like most people, you'll find that the reliability of such memories is often suspect.

A 1992 study of students' recollections of the Challenger explosion is a case in point. Psychologist Ulric Neisser asked students in his class to write down their memories about the space shuttle's explosion the day after it happened. He wanted to know what they remembered about where they were and what they were doing as well as how they heard the news and how they felt when they heard it. When the same students were interviewed two years later, only 10 percent of them gave the same account as they had the day after the explosion. But what is even more interesting is that when faced with the inconsistencies in their accounts, many of the students were certain that the newer recollections were correct, even when they were shown their earlier handwritten versions of the day's events. They chose the newer accounts that their brains had rewritten over the original account written in their own hand.

If memories as powerful and dramatic as the Challenger disaster can be unreliable, how can we be certain about the mundane, everyday occurrences? And, more importantly, how can we make decisions based on what we believe are truths when their reliability is less than certain? Is certainty based on a set of facts that you know and can repeat, or is it more of an emotional response? In short, how do we know what we know and what should we do with that knowledge?



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— J. BROOKE HAMILTON

Neurologist Robert Burton explores these questions in his book, *On Being Certain: Believing You Are Right Even When You're Not*, and recently shared his work at a two-day Roundtable hosted by the College's Center for Professional Responsibility in Business and Society and attended by a group of accomplished business professionals and academicians from across the country. It's a topic that has broad implications for business because the concept of "certainty" impacts all decision making, from hiring practices to corporate strategy to professional responsibility and ethical compliance, which is a specific focus of the Center's initiatives.

"Businesses have spent a lot of time, money, and thought establishing and ensuring compliance with ethical systems, and yet the general assessment is that they haven't been highly successful," says Ira Solomon, professor of accountancy and a member of the Center's Board of Advisors. "This Roundtable explored the possibility that the answer to why this is true might have to do with the disconnect between the way ethical systems are designed and implemented and the way human beings actually make decisions."

Challenging Your Certainty

What is it exactly that influences our decision-making process? Maybe that sounds like a no-brainer: you examine the evidence, evaluate the options, and arrive at a reasonable conclusion. This process of conscious deliberation allows

us to feel certain about our choice. But that would mean that each of us, when presented with the same evidence, would come to the same conclusion, and we know that doesn't happen.

Burton suggests another possibility. "Actually, about 95 percent of cognition occurs unconsciously, which means that despite how certainty feels, it is not a conscious choice or even a thought process." Instead, he says, certainty is more like love or angst. It relies on experience and emotion that are part of the involuntary mechanisms of the brain, rather than reason and analysis. In fact, says Burton, "Certainty, which I call the 'feeling of knowing,' will trump reason every time."

So if people rely more on intuition, gut feelings, and emotion to make decisions, how do business leaders use that information to build a better organization, a stronger corporate culture, and a more ethical environment?

According to J. Brooke Hamilton, a Roundtable participant who teaches management and organizational behavior as well as ethics at the University of Louisiana at Lafayette, it begins with a challenge. "One of the chief obstacles for people to overcome in organizational settings is their conviction that they are right and others are wrong," he says. "The first step in this process is to challenge people to identify their feelings of certainty and to encourage them to consider where those feelings come from. It's difficult to get people to connect and reach agreement if they don't understand why



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they believe what they do. To do that, you have to question your own certainty.”

Duane Farrington, senior vice president at State Farm Insurance Companies, agrees. After the Roundtable, he incorporated that kind of challenge into his work with his peers, who represent some of State Farm’s top management and strategy officers.

“We shared the information with our peers to create a conversation around the idea that just because you’re confident doesn’t mean you’re right,” says Farrington. “We encouraged everyone to assess how they know what they know. Personally, it led me to suspend my own assumptions as I talk about strategic issues at work and instead to spend more time listening. Now when I go to my peers or they come to me and say, even tongue in cheek, ‘How do you know what you know?’ it’s a deliberate approach that says we need to explore the idea further and get a deeper understanding before we make a decision. It’s a strategy that creates an environment where collaboration is favored over debate. And it has allowed us to have more robust dialogue about strategic issues.”

But when employees are encouraged to question their certainty does the organization become more vulnerable to group think? And if so, is that necessarily a negative?

Farrington doesn’t think so. “In strategic situations, you want that kind of creative thinking that comes with

questioning,” he says. “But there are also times when having everyone on the same page is truly important for a company. From the standpoint of an insurance company, for instance, we have an ethical obligation to pay what we owe and to use sound pricing practices. To have anyone thinking contrary to this could not be tolerated. As a result, we have established a culture or a group thinking that says: ‘At State Farm, we pay what we owe, and you are definitely an outsider if you don’t think that way.’ We have this collective thought process about losses and how we pay and how we price our products; we don’t want creativity in that arena.”

The duality presents its own challenge. “We want people to think the same way to a point, but then we want

them to step forward and be leaders,” says Anne Farrell, an assistant professor of accountancy whose recent research focuses on the role of emotions in financial decision making (see page 5). “We have to accept this duality. A leader must be able to function as both a group thinker and an individual thinker.”

High Stakes, High Emotions

But what about those decisions that need to be made in a split second, where there is no time for deliberation or collaboration?

Cathy Bodnar, the chief compliance officer for the Cook County Health & Hospitals System, knows that environment well and says that self-awareness is important in managing that type of decision making. “In health care, you have to react quickly and decisively. Often, that means acting on instinct or your gut feeling. And although those kinds of decisions are made unconsciously, they’re based on more than just emotion. They’re based on years of professional experience as well.”


That’s an important distinction, says Burton. “When it comes to gut feelings, intuition, and split-second decisions, we have to have criteria to know when to trust those feelings.”

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“OUR RESEARCH EXAMINES WHETHER PARTICULAR ACCOUNTING TOOLS CAN GET PEOPLE TO SHIFT FROM USING THEIR BRAINS’ AFFECTIVE PROCESSING SYSTEMS TO THE ANALYTICAL PROCESSING SYSTEMS WHEN MAKING DECISIONS. WE DON’T WANT PEOPLE TO IGNORE THEIR EMOTIONS—RATHER, WE SEEK WAYS TO GET THEM TO WEIGH THEIR EMOTIONS APPROPRIATELY.”

—ANNE FARRELL

MindReader

What Can MRIs Tell Us About Financial Decision Making?

Consider the following scenario. You are looking for a general contractor to build your new home. You’ve interviewed several and have narrowed it down to two builders; each has 20 years of experience, comes very highly recommended, and has provided you with the same exact bid for the work. With the first contractor, you made an immediate and friendly connection; with the second, you came away confident of his ability but far less impressed with his interpersonal skills. Who would you choose to build your new home?

A quick poll would most likely favor the friendly contractor, the one you have a good “gut feeling” about. That’s because our affective, or emotional, reactions often weigh heavily in such decisions. However, what if the second contractor told you that he would guarantee your satisfaction by establishing a solid completion date and reimbursing you \$500 per day for any day beyond that date? Would that change the way you process the information when making your decision?

In other words, would your analytical reasoning intervene in your emotional response? Anne Farrell, assistant professor of accountancy, and Brian White, a Ph.D. student, are researching that very question. Their project focuses on investment decisions rather than personal ones, but the premise is the same.

“We are looking at the cognitive processes we use when we make

decisions,” says Farrell. “In a work environment, people often find themselves in emotion-laden situations, where the affective system of our brain is engaged and our reaction to ‘go with our gut’ is automatic. Our research examines whether particular accounting tools can get people to shift from using their brains’ affective processing systems to the analytical processing systems when making decisions. We don’t want people to ignore their emotions—rather, we seek ways to get them to weigh their emotions appropriately.”

Decisions, Decisions

How does this research aid business? According to Farrell, when we know how the brain processes such information, “It enriches our understanding of the influence of emotion on managers’ decisions and on how that influence can be impacted by the decision context.”

White adds that “Shifting between affective and analytical processing modes can be beyond our consciousness and can take an imperceptible amount of time. The only way we can truly see whether accounting can prompt a processing shift is to look inside the brain.”

Therefore, one phase of Farrell and White’s study is a web-based task, where participants review investment proposals, some of which are designed to create emotional responses, and make decisions on which proposals to accept. They

investigate whether different accounting tools provided with the investment proposals change the decisions participants make.

“The web-based data we gathered has provided a lot of rich, valuable information regarding actual decisions,” explains Farrell. “The second phase of the research is an MRI task that replicates the scenarios we use in the web-based task but that allows us to examine differences in the actual cognitive processes through which these decisions are made. Using this imaging technology, we’ll be able to see whether there is an observable change in the way information is processed in the brain.”

The opportunity to extend and complement prior research with brain imaging technology is novel in accounting. In fact, the chance to collaborate with the University’s Beckman Institute for Advanced Science and Technology, an interdisciplinary institute devoted to leading-edge research in the physical sciences, computation, engineering, biology, behavior, cognition, and neuroscience, “has been a great opportunity for us to work with some exceptional people from very different fields,” says White. “We hope that ours will be the first of many collaborations between the College of Business and the Beckman Institute.”

—Cathy Lockman

When the Light Bulb Goes On

To get a firsthand sense of what Robert Burton means by “the feeling of knowing,” consider the following excerpt from *On Being Certain: Believing You Are Right Even When You’re Not*. Read the passage through from beginning to end without skipping to the bottom for an explanation.

A newspaper is better than a magazine. A seashore is a better place than the street. At first it is better to run than to walk. You may have to try several times. It takes some skill, but it is easy to learn. Even young children can enjoy it. Once successful, complications are minimal. Birds seldom get too close. Rain, however, soaks in



very fast. Too many people doing the same thing can also cause problems. One needs lots of room. If there are not complications, it can be very peaceful. A rock will serve as an anchor. If things break loose from it, however, you will not get a second chance.

The paragraph may seem to be incomprehensible until you consider a single clarifying word (refer to the bottom of this box to view that key word). Now, reread the paragraph and feel how your previous sense of confusion turns into understanding. You’ve experienced “the feeling of knowing.”

Clarifying word: Kite

Bodnar says that’s something that became even more apparent to her from the certainty discussion and that she’s been able to apply it in her job. “I’m still new to the Cook County system, so I’ve been focused on developing policy. The Roundtable experience prompted me to look at our departmental policies and to add appendices to guide our team as they perform investigations.” She stresses that there’s real value in having a finite set of steps people can follow as they conduct investigations. “It gives them the framework they need to evaluate their gut check. And although it’s impossible to take the emotionality out of it completely, such procedures help them trust that they are making decisions based on an established set of facts as well.”

Train the Brain

For organizations, the dualities of facts and feelings and of independent and group thinking raise another interesting challenge: How do we establish an environment that encourages both individual and group thinking, and what does that mean in terms of creating an ethical culture in our organization?

“Rules promote group thinking,” says Farrell. “So organizations have to determine when and how they promote rules or choice. And then the question becomes: Is ethics a rule or a choice?”

Experts say there are elements of both in ethical decision making. Organizations often provide a set of rules that guide employees and then through training and modeling convey those rules;

however, choice often trumps rules, so there also has to be an innate sense, a feeling, that there is a reason to think and act ethically.

Again, this is where brain processing comes into play. Brian White, a Ph.D. student in accountancy who is coauthoring research with Farrell, says both analytical and emotional processing are involved when employees face ethical dilemmas.

“People often assume that the analytical system will always lead to a better decision, but that’s not the case,” White explains. “Emotional, or heuristic, processing is more commonly called ‘going with your gut.’ Because we often store knowledge as feelings, going with your gut is an efficient and effective way of applying relevant knowledge to a decision, even if you can’t explicitly articulate it. Because ethics-related decisions are seldom black and white, they are exactly the decisions that can benefit most from incorporating intuition into judgment.”

But can you teach the intuition that leads to ethical decision making? White thinks so, but only with a long time horizon and mainly by example. “I have far more confidence in my ability to train my three children to be ethical than in my ability to do so for students that I teach for 12 or 15 weeks. Having said that, I think the way in which we integrate professional responsibility into the accounting



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— BRIAN WHITE

curriculum at ILLINOIS is very effective. My students take it seriously, and they understand that the professionalism component of their coursework prepares them for careers in accounting.”

Hamilton agrees. “The challenge as I teach professional ethics to my students is to cull the best ideas from moral psychology, neuroscience, philosophy, and topics like certainty, which Burton raises, to give them something very practical,” he says. “The goal is to take their natural inclination to do the right thing and make that interest more sophisticated so they can employ it in their careers.”

Beyond the classroom, Hamilton suggests companies find ways to encourage introspection by designing workplace training programs that include a discussion of how the brain functions and the roles that reasoning, emotion, and certainty play in decision making.

“If you want to learn to golf, you have to understand the five basic parts of the golf swing. Once you understand each part, you can put them together. We need to take the same approach in ethics training courses,” Hamilton says. He explains that by understanding how the brain processes information, people are more prepared to recognize their own patterns of thinking both individually and in a group environment. With that information, they can take the next step of determining how they can personally commit themselves to being ethical and then who or what they can rely on to help carry out that commitment.

“When you play golf, you keep score to see how you’re doing and how your golf swing is progressing,” Hamilton says. “It’s important to have personal tests and measurements to see how you’re progressing as an ethical person, too. Understanding ‘how you know what you know’ helps the individual make and measure progress and helps businesses devise more effective systems for ethical decision making.”

—Cathy Lockman



How do you create an environment for new thinking that challenges existing thinking?

Are people aware of their decision-making styles and frameworks?

How has the culture's focus on second-guessing and blame influenced people's ability to make decisions?

What are the signals that a decision is taking you down the wrong path?

How do we teach people to recognize they are going down the wrong path before an ethical collapse?

How do certainty and doubt drive the dynamics of group interaction?

Do we make better decisions when we act quickly or when we take time to deliberate?

Like any good think tank, the Roundtable hosted by the Center for Professional Responsibility in Business and Society raised a variety of questions about decision making and

certainty, some of which are listed here. The Center’s leadership is examining additional programming to encourage further exploration of these questions and how certainty impacts business.

“We’re looking at ways to translate the ideas of the Roundtable participants into language that will work in business and professional settings,” says Gretchen Winter, the Center’s executive director. “We believe that the dialogue that began by bringing together academic researchers and business professionals to consider the

topic of certainty has the potential to pay real dividends as we advance concepts of professional responsibility in business and educational settings.”