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# The Thought Leader

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BY KEN FAVARO AND  
AMY D'ONOFRIO

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# The Thought Leader Interview: Loran Nordgren

The cofounder of unconscious thought theory explains how taking a break and distracting the mind can lead to higher-quality decision making.

BY KEN FAVARO AND AMY D'ONOFRIO



**C**ould you boost the quality of decision making and innovation at your company by encouraging a more structured form of intuition? Loran Nordgren thinks you could. Indeed, the associate professor of management and organizations at Northwestern University's Kellogg School of Management argues that adopting new approaches to how we process thought is the remedy that will free organizations from the shackles of traditional strategic planning.

Nordgren, who grew up in Chi-

cago, cofounded a body of work called unconscious thought theory with Ap Dijksterhuis, a professor at Radboud University in Nijmegen, Netherlands, while getting his Ph.D. in social psychology at the University of Amsterdam. Based on in-depth studies of the impact of different ways of merging analytical thinking and strategic intuition, this theory proposes, in effect, that some forms of thought processing consistently lead to more beneficial choices and more effective problem solving.

As Nordgren's crossover from psychology to business school might suggest, unconscious thought theory is finding a receptive audience among pragmatic, day-to-day decision makers. Over the past two decades, many managers have come to recognize that decisions made solely through rational analysis, especially in conventional strategic planning exercises, tend to lead to failure. That realization opened a door through which a large number of right-brain boosters and intuition specialists squeezed in to promote themselves, with even spottier results. It's understandable that many business leaders throw up their hands and say, "It doesn't matter what process we use to make decisions. Let's just muddle through." Unfortunately, those outcomes are also unreliable.

Nordgren and his colleagues have sought a more deliberate way to combine rational and intuitive decision-making processes. This makes the research inherently interdisciplinary; as Nordgren notes, it stands "at the intersection of experimental psychology, behavioral economics, and neuroscience." The optimal approach they discovered, and confirmed through a long series of re-

search studies, seems simple at first glance. They advise setting aside periods of time to let the unconscious parts of the brain process information. Go for a walk. Sleep on it. Turn off your attention. (Their most influential paper, published in *Science* in 2006, is called “On Making the Right Choice: The Deliberation-Without-Attention Effect.”) But putting the approach into practice, which has been the subject of Nordgren’s more recent research, requires some sophisticated and often counterintuitive design of the decision-making and strategy formation experience, and a unique way of thinking about (and welcoming) distraction.

We sat down with Nordgren in Booz & Company’s New York offices in June 2013—first in a workshop session on enterprise strategy, and then in a follow-up interview. The conversations flowed naturally together; both were focused on the implications of Nordgren’s approach to the practice of strategy.

**S+B: What is unconscious thought theory?**

**NORDGREN:** It’s really a general theory of how the mind works. It tries to explain how people form decisions, where new ideas come from, how problems can be solved effectively. The empirical work focuses on the processes of thought that take place when people choose among alternatives, and when they come up with new ideas.

When you ask people how they approach the most important executive decisions that they have to make—and especially how they expect to get the best results from the decision—you find out that people gravitate toward one of two approaches. Some are basically ratio-

nalists. They think that the best decisions, the most innovative ideas, and the most effective solutions to problems come through a systematic, rational, deliberative process. Other people say that the best solutions are intuitive. There’s wisdom in your gut feeling.

This is the continuum most of us have in mind when we think about the decision process. I teach a decision-making session at Kellogg’s executive education program, and I start off by asking, “How do you approach decisions?” Without my having to bring it up, most people put themselves somewhere on this continuum. Most tend to be rationalists, but a sizable minority favor the intuitive approach.

But there’s actually a third way that we can think about decisions, a way that doesn’t neatly fit on this continuum. And this third way, at least in many situations, will lead to more innovative ideas and more effective solutions.

**S+B: And that third way is...?**

**NORDGREN:** It’s a combination of conscious and unconscious thinking. The processes of the mind can be divided up in a lot of different ways, but one very useful distinction is between conscious and unconscious mental processes. I often use an iceberg metaphor to describe the mind. Conscious processes are those that people observe, above the waterline. People can access them introspectively. For example, when writing a letter to someone and choosing a word, you are aware of your thinking process.

Below the waterline, there are many unconscious mental processes, such as those that regulate breathing, sensory perception, and the storage and retrieval of memory.

These processes are part of you, but you’re really a stranger to them because you can’t observe them; you can’t communicate with them. You have no introspective access to them.

For a long time, scientists and philosophers viewed the conscious thought processes, above the surface of consciousness, as the really important stuff. They said that while basic behavior gets regulated behind the scenes, the things that make us uniquely human—the higher-order functions—are conscious, deliberative processes.

However, we know from contemporary neuroscience and cognitive science that a lot of things that were once thought to be higher-order functions are really unconscious. One example is learning. Suppose you got into a really contentious interaction, let’s say a fistfight, with a man who is an amnesiac—someone who can’t form new memories. When you meet him the next day, he will have no conscious awareness of you, no matter how hard you press him to remember, no matter how many times you say, “Have we met before?” But if we could measure his heart rate, or other relevant physical responses, we would see indicators of a sense of threat. The unconscious still remembers. It has coded the negative interaction.

There’s a fascinating literature called person perception: the study of how people evaluate others. You tend to do this very, very quickly—within minutes of meeting a person, you’ve already sized him or her up. More than 90 percent of the evaluations you make are based on just two dimensions. The first is your perception of people’s competence. Do they seem to know what they’re talking about? Are they on time and reliable? The second is warmth: es-

**Ken Favaro**

*ken.favaro@booz.com*  
is a senior partner with Booz & Company and global head of the firm's enterprise strategy practice. He is based in New York.

**Amy D'Onofrio**

*amy.donofrio@booz.com*  
is a Booz & Company associate in New York, aligned with the enterprise strategy practice.

Also contributing to this article were Booz & Company partners Matthew Egol and Elizabeth Powers, senior executive advisors Shaun Holliday and Nadim Yacteen, chief marketing and knowledge officer Thomas A. Stewart, and head of global media and communications Margaret Kashmir.

sentially, how much do you like them? Elements like posture and all kinds of other things that you might say don't matter to you will inform that judgment.

**Value of Unconscious Thought**

**S+B:** Doesn't this depend on context? A shirttail being out could be evidence of slovenliness in one context, but evidence of genius in another.

**NORDGREN:** Absolutely. It's very contextualized. Exuberant joy might seem like warmth in some contexts, but if you're with a group of jaded hipsters, that kind of sincerity won't be appreciated.

So Ap Dijksterhuis and I started wondering, if unconscious operations do so much mental heavy lifting, can we harness that power in the decision-making process? That initial insight led to our work on unconscious thought. We have concluded from our empirical studies that unconscious thought is always involved in decision-making processes. Even when your conscious attention is involved, the mental processing of information—evaluation, weighing, aggregation, consolidation, and so on—occurs while

your conscious attention is directed elsewhere.

Let's say you're at your desk, analyzing a major decision. You get partway, and then you take a break: You go to a meeting, or start daydreaming, or "sleep on it." Your mind continues to work on the problem subconsciously. When you return to it consciously, your thinking will have advanced. The information will have been consolidated and restructured, even though you don't notice it.

**S+B:** Do you mean that before making a decision, it's a good idea to take time off and allow the unconscious to weigh in?

**NORDGREN:** In most cases, yes, but it depends on the nature of the choice. This is the more provocative claim of unconscious thought theory. In many cases, decisions made in a way that combines conscious and unconscious thought are superior to those made deliberately.

Consciousness is like a flashlight in a dark room. It can sharply focus attention onto a particular issue or a narrow subset of information. But it has very constrained capacity. Try counting backward by threes while simultaneously putting

together your grocery list for the week. You can't do it; the processing capacity of conscious thought is so small that it is rapidly overwhelmed.

Unconscious thought, on the other hand, has a much higher processing capacity. This makes it particularly good at broad comparisons of large amounts of information, where some has more natural weight than others. If you're choosing between two consumer products that are more or less the same—two oven mitts, say, with different colors—conscious attention alone will be adequate. For a more complex decision, you want to give your unconscious an opportunity to get involved.

Ap and I have tested this idea in many situations, both in the field and in the lab. In one experiment, for instance, we gave people information about four apartments in the Jordaan neighborhood in Amsterdam, and asked them to pick one apartment to recommend. Each apartment has positive and negative attributes—qualities like size, being next to the train tracks (and thus noisy), or having a desirable view of the canals. Choosing the apartment is a complex activity, and the quality of the choice can be tracked: By any

objective measure, one of the apartments has more positive attributes than the others.

We've conducted this experiment in many different ways. We ask people to choose for themselves or for someone else. We give some people a lot of information and time to study it. We give others only a short amount of time, not enough to study the information. We ask some subjects to decide while counting backward by threes into a microphone, so they're distracted.

The results have been fairly consistent. In general, people who spend time thinking over the options and studying them tend to do better than people who take no time, and who rely on an immediate gut feel. But a third group does better still. The best deciders study the information but then have their attention distracted. For example, if we give people information about the apartments, and ask them to take their time and think about it, and then, after a delay, we distract them, we see increased performance.

We've had similar results in other domains—for example, in betting on World Cup matches, expert predictions, making a car purchase, hiring people, or asking people to come up with innovative ideas. If the amount of expertise is basically the same, then those who engage in an incubation process—conscious, rational study followed by distraction and delay, during which unconscious processing kicks in—outperform those who just analyze. The unconscious is simply better at aggregating all the pros and cons associated with a decision, and dealing with that complexity.

**S+B:** Where does motivation fit in? If people care more about the

decision, do they do better with unconscious thought?

**NORDGREN:** Yes. Unconscious thought tends to do better when the stakes are high. One aspect that relates to the issue of motivation is that most unconscious processes are driven by goals. These are consciously formed goals.

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**“Those who engage in an incubation process—conscious, rational study followed by distraction and delay—outperform those who just analyze.”**

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For example, when we give people information on the apartments, we can provide different types of distraction. When we give them the counting-back tasks, which overwhelm the conscious mind, they perform at a higher level than if they weren't distracted. But when we distract them by giving them a goal—telling them that they'll have to make a choice within 10 minutes—we see a higher level still.

### **The Relevance for Business**

**S+B:** Isn't the act of “using” your unconscious thought itself a conscious act? How do you set that up without polluting the process with conscious thought?

**NORDGREN:** We addressed this problem in one experiment where we asked people to act as real estate agents. “Your job,” we told them, “is to select the best apartment for your client.” We gave them rules in terms of pricing or features—the bedroom had to be on the first floor, for example. There were only two apartments with the best attributes that

didn't violate the rules, and we wanted to see who selected those.

Consistent with what we've seen elsewhere, those who favored unconscious thought were generally much better at choosing the apartments with better attributes. But those who relied on conscious thought were better at avoiding the

rule-breaking apartments. In other words, the rule violation aspect undercut the advantage of unconscious thought.

But the people who first thought consciously and then were given the goal with distraction still outperformed the others by far.

**S+B:** Why is it important for businesspeople to know about this theory?

**NORDGREN:** The decisions that executives make are invariably complex decisions where they have to weigh many different factors, integrating large amounts of information. These decisions are precisely the ones where unconscious thought proves particularly useful.

But unconscious thought also has limits. For example, it does not know how to handle ephemerals. Math equations aren't going to be solved this way.

Conscious thought is also superior for the kind of information gathering that leads to an effective decision. And it is good at detecting rule violation—the sort of “if-then”

logic problems that come up when we're trying to evaluate a set of alternatives. "If the rent is that high, we can't afford it. If we shut down that project, it's going to have these negative consequences."

The focus of our most recent research has been on getting the best of both modes of thought. How do you leverage their strengths?

**S+B:** How would you use these insights to design, say, a strategic planning process—which is (after budgeting) probably the second most hated exercise in large companies?

**NORDGREN:** Maybe the first principle is to only engage in that kind of effortful process when a decision needs to be made, as opposed to when the calendar has turned over and a new strategic planning review is on the schedule.

Another big implication for decision making is to have a two-step process, separating the information acquisition phase, when conscious thought is emphasized, from the decision phase.

First, you have a structured, facilitated discussion where you gather information—ideally, canvassing people ahead of time. I'm a huge advocate of the private collection of information. If you want to tap into the unique expertise in the room, you should try to get information from the relevant people in advance, before some sense of a majority viewpoint is created.

Then, when you meet, you apply conscious thought to these logic problems by establishing criteria and weighing trade-offs. What would success and failure look like? What attributes of the decision need to be in place for it to be successful? You eliminate unacceptable alterna-

tives—what we call "rule-breaking" alternatives. If you're looking at business schools, you might say tuition has to be lower than a certain figure. You eliminate those that are too high. You want a very explicit disconfirming climate so that people are comfortable with dissent.

Once that information is considered, before making the decision, you need a period for people to sleep on or incubate the ideas, to give the unconscious mind what it needs to participate. You need to set a goal and take a break—to force a delay and some distraction. For instance, you might say, "We're going to stop for dinner now. We've narrowed our five options down to three. Come back tomorrow, and we'll make a decision in the morning." That would lead to better decisions than weighing the pros and cons and going straight to a vote.

You could also try to structure group meetings to really take advantage of the process: Get together, discuss ideas as a group, and then have a period of distraction or come back the next day.

## Innovation and Influence

**S+B:** Earlier, you mentioned idea formation. What does the theory say about practices for encouraging innovation?

**NORDGREN:** Both conscious and unconscious thinking are essential for generating good ideas. A big part of innovation is analysis: thinking through problems, detecting hidden flaws in a plan, articulating problems in the status quo, and detecting what it is you're doing now that could be better is really the domain of conscious deliberation.

But in generating new ideas and coming up with creative solutions

and creative insights, our research suggests that allowing for some distraction is, again, better than pure analytics. These two modes of thought can work in harmony.

You want to develop a culture in which innovation is valued. That requires creating a climate where people feel encouraged to suggest new ways of doing things. They should not be punished for coming up with new ideas, particularly ideas that after some scrutiny might turn out to be not great.

You also need a leader who explicitly works on innovation and validates it. The unconscious is goal driven, and this reinforces the goal of coming up with new ideas. That reinforcement will naturally trigger the unconscious.

There are a number of structured techniques for running innovation sessions. You'll often see the most successful ones have a structured process that is not purely analytical. This typically involves an orientation toward visual design, which is at least partly intuitive.

Finally, opportunities for delay and distraction are important because people are struggling to conceive an idea. When they pause to look out the window, and then return to the struggle, a better idea is more likely to pop into their mind. Now they can scrutinize it. Does it meet their criteria? If not, they know they need to come up with something better, and they'll look out the window again. In an office climate where the expectation is to generate fresh, innovative ideas, this approach is going to be particularly powerful.

**S+B:** What about influencing others? Does the theory of unconscious thought suggest a better way

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to communicate a decision to other people after it's been made, and helping them see the reasons to buy into it?

**NORDGREN:** Coming up with rationales for a decision is easy, because people are natural-born rationalizers. If someone stimulated a part of your brain to make you laugh, and then asked, “Why are you laughing?”—even if you didn't know why, you would immediately have a plausible reason. You'd say, “Oh, it's because I remembered this funny thing that happened to me once.”

That's one reason that unconscious processes are a little elusive to study. As soon as people have an inkling of what the right choice is, they're armed with conscious reasons that support that decision, even if they arrived at it unconsciously.

In our work with MBA students, we talk about the difference between an influence goal and a decision-making goal. When you don't have a preconceived idea about the right course of action, you might bring people with varied functional expertise into a room. You try to bring their unique expertise to the surface, to arrive at the best alternative. That's a decision-making goal.

When you have a vision of

where you want to go, and you go into the meeting looking for buy-in, that's an influence goal. You would do very different things to reach each of those two goals.

Of course, if you're really trying to influence people, it harms you to be seen as having an agenda. One of the tricks of influence is the ability to walk in with an influence goal but appear to have a decision-making goal. Even when everyone knows you have an influence goal—say you've been brought in to cut costs—you want to do what you can to assuage their concern that you only have one type of goal in mind. So you might say something like “You all know I've been brought in here to cut costs, but you also need to know I have a bigger goal: to make decisions for the long-term health of the company. And there are different ways to do this. What are your ideas?”

**S+B:** Suppose you can't tap into the unconscious. Is there a way to improve conscious decision making—say, by breaking a complex issue down into three or four smaller issues?

**NORDGREN:** The problem with that approach is that it disrupts natural

weighing. If you think of consciousness like a spotlight, it's always illuminating a subset of the information. Imagine that you're looking at a car and deciding whether to buy it or not. If you evaluate each part of it separately—kicking the tires, checking the dashboard, clocking the acceleration—the data shows that your weighing of that information will be relatively poor. If the last thing you look at is the trunk size, your decision might hinge on that, when, in reality, trunk space might be a relatively unimportant factor.

## Why Not Sleep on It?

**S+B:** What led you to your own interest in this field of research?

**NORDGREN:** I came into experimental psychology at a time in which a new field was emerging called the new unconscious. Its mission was to understand the extent to which behavior is guided by processes outside of conscious awareness. When I started my Ph.D., this field had considerable steam. A lot of fascinating work had come out of it, about the way people's goals get primed outside conscious awareness. That intrigued me, and it seemed it might apply to the one realm that

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## “Sleep seems to be very important for consolidation and memory—for taking complex information and restructuring it.”

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seems most governed by conscious forces: decisions, reasoning, and the higher-order mental functions.

I got my Ph.D. in psychology and had never considered joining a business school faculty, but there has been a movement at Kellogg to bring in people from other disciplines: social network theory, sociology, “big data” analysis, and so on. Once you’re there, you find the connections to business. I think it’s a great way to bring new ideas into the MBA curriculum.

**S+B:** What are some of the most common mistakes that business leaders make when they’re trying to either drive a group to a decision or make one themselves?

**NORDGREN:** One is forcing a decision to be made right after the discussion, as opposed to pausing for delay and distraction—a period of incubation to allow the mind to sift through the information, sort it out, and make sense of it.

Another mistake is placing too great an emphasis, before a decision is made, on the need you will have to justify your rationale to others.

When people feel forced to scrutinize their reasons up front, it has ways of disrupting the decision.

An example of this is found in wine tasting. Judging the quality of wine is a subjective experience and a complex judgment. When we ask people in studies to deconstruct that preference—to not only say which is their favorite but give their criteria for picking a favorite—it disrupts the quality of the decision. People end up choosing wines that are objectively seen (to the extent this can be objective) as being of lesser quality. Instead, allow people to make a general evaluation and then talk about their reasons afterward.

Another mistake is not having clear, explicit goals for any decision that everyone agrees is important. For some people the goal might be to do the best job possible, while for others it might be to avoid investing too much time in this endeavor. If people don’t agree, trouble arises.

Another mistake is overlooking sleep. Sleep seems to be very important for consolidation and memory—for taking complex information and restructuring it. We’ve done in-

teresting studies where we look at how well people organize all their different ideas. After sleep and periods of unconscious thought, ideas seem to take more orderly shape.

**S+B:** Is high-quality decision making that simple: “Let’s sleep on it”?

**NORDGREN:** I’m not suggesting that any of this is a magical or effortless process. In many cases, people associate the word “unconscious” with mysticism and unreliability—something they can’t explain. But we think it can be explained, and even measured. Nonetheless, when we’re leading a decision-making session, we don’t always tell people, “We’re going to pause right now to tap into the unconscious mind.” We just say we’re stopping for a bit of incubation time—time to integrate what we’ve heard. When they’re prompted to take the time by someone who does it authoritatively, people tend to recognize that the decision will be better as a result. +

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