Interview

Strategic decisions: When can you trust your gut?

Nobel laureate Daniel Kahneman and psychologist Gary Klein debate the power and perils of intuition for senior executives.

For two scholars representing opposing schools of thought, Daniel Kahneman and Gary Klein find a surprising amount of common ground. Kahneman, a psychologist, won the Nobel Prize in economics in 2002 for prospect theory, which helps explain the sometimes counterintuitive choices people make under uncertainty. Klein, a senior scientist at MacroCognition, has focused on the power of intuition to support good decision making in high-pressure environments, such as firefighting and intensive-care units.

In a September 2009 *American Psychology* article titled "Conditions for intuitive expertise: A failure to disagree," Kahneman and Klein debated the circumstances in which intuition would yield good decision making. In this interview with Olivier Sibony, a director in McKinsey's Brussels office, and Dan Lovallo, a professor at the University of Sydney and an adviser to McKinsey, Kahneman and Klein explore the power and perils of intuition for senior executives.

The *Quarterly*: In your recent *American Psychology* article, you asked a question that should be interesting to just about all executives: "Under what conditions are the intuitions of professionals worthy of trust?" What's your answer? When can executives trust their guts?

Gary Klein: It depends on what you mean by "trust." If you mean, "My gut feeling is telling me this; therefore I can act on it and I don't have to worry," we say you should never trust your gut. You need to take your gut feeling as an important data point, but then you have to consciously and deliberately evaluate it, to see if it makes sense in this context. You need strategies that help rule things out. That's the opposite of saying, "This is what my gut is telling me; let me gather information to confirm it."

Daniel Kahneman: There are some conditions where you have to trust your intuition. When you are under time pressure for a decision, you need to follow intuition. My general view, though, would be that you should not take your intuitions at face value. Overconfidence is a powerful source of illusions, primarily determined by the quality and coherence of the story that you can construct, not by its validity. If people can construct a simple and coherent story, they will feel confident regardless of how well grounded it is in reality.

The *Quarterly*: Is intuition more reliable under certain conditions?

Gary Klein: We identified two. First, there needs to be a certain structure to a situation, a certain predictability that allows you to have a basis for the intuition. If a situation is very, very turbulent, we say it has low validity, and there's no basis for intuition. For example, you shouldn't trust the judgments of stock brokers picking individual stocks. The second factor is whether decision makers have a chance to get feedback on their judgments, so that they can strengthen them and gain expertise. If those criteria aren't met, then intuitions aren't going to be trustworthy.

Most corporate decisions aren't going to meet the test of high validity. But they're going to be way above the low-validity situations that we worry about. Many business intuitions and expertise are going to be valuable; they are telling you something useful, and you want to take advantage of them.

Daniel Kahneman: This is an area of difference between Gary and me. I would be wary of experts' intuition, except when they deal with something that they have dealt with a lot in the past. Surgeons, for example, do many operations of a given kind, and they learn what problems they're going to encounter. But when problems are unique, or fairly unique,

then I would be less trusting of intuition than Gary is. One of the problems with expertise is that people have it in some domains and not in others. So experts don't know exactly where the boundaries of their expertise are.

The *Quarterly*: Many executives would argue that major strategic decisions, such as market entry, M&A, or R&D investments, take place in environments where their experience counts—what you might call high-validity environments. Are they right?

Gary Klein: None of those really involve high-validity environments, but there's enough structure for executives to listen to their intuitions. I'd like to see a mental simulation that involves looking at ways each of the options could play out or imagining ways that they could go sour, as well as discovering why people are excited about them.

Daniel Kahneman: In strategic decisions, I'd be really concerned about overconfidence. There are often entire aspects of the problem that you can't see—for example, am I ignoring what competitors might do? An executive might have a very strong intuition that a given product has promise, without considering the probability that a rival is already ahead in developing the same product. I'd add that the amount of success it takes for leaders to become overconfident isn't terribly large. Some achieve a reputation for great successes when in fact all they have done is take chances that reasonable people wouldn't take.

Gary Klein: Danny and I are in agreement that by the time executives get to high levels, they are good at making others feel confident in their judgment, even if there's no strong basis for the judgment (see sidebar, "Overconfidence in action?").

The *Quarterly*: So you would argue that selection processes for leaders tend to favor lucky risk takers rather than the wise?

Daniel Kahneman: No question—if there's a bias, it's in that direction. Beyond that, lucky risk takers use hindsight to reinforce their feeling that their gut is very wise. Hindsight also reinforces others' trust in that individual's gut. That's one of the real dangers of leader selection in many organizations: leaders are selected for overconfidence. We associate leadership with decisiveness. That perception of leadership pushes people to make decisions fairly quickly, lest they be seen as dithering and indecisive.

Gary Klein: I agree. Society's epitome of credibility is John Wayne, who sizes up a situation and says, "Here's what I'm going to do"—and you follow him. We both worry about leaders in complex situations who don't have enough experience, who are just going with their intuition and not monitoring it, not thinking about it.

Daniel Kahneman: There's a cost to *not* being John Wayne, since there really is a strong expectation that leaders will be decisive and act quickly. We deeply want to be led by people who know what they're doing and who don't have to think about it too much.

The *Quarterly*: Who would be your poster child for the "non–John Wayne" type of leader?

Gary Klein: I met a lieutenant general in Iraq who told me a marvelous story about his first year there. He kept learning things he didn't know. He did that by continuously challenging his assumptions when he realized he was wrong. At the end of the year, he had a completely different view of how to do things, and he didn't lose credibility. Another example I would offer is Lou Gerstner when he went to IBM. He entered an industry that he didn't understand. He didn't pretend to understand the nuances, but he was seen as intelligent and open minded, and he gained trust very quickly.

The *Quarterly*: A moment ago, Gary, you talked about imagining ways a decision could go sour. That sounds reminiscent of your "premortem" technique. Could you please say a little more about that?

Gary Klein: The premortem technique is a sneaky way to get people to do contrarian, devil's advocate thinking without encountering resistance. If a project goes poorly, there will be a lessons-learned session that looks at what went wrong and why the project failed—like a medical postmortem. Why don't we do that up front? Before a project starts, we should say, "We're looking in a crystal ball, and this project has failed; it's a fiasco. Now, everybody, take two minutes and write down all the reasons why you think the project failed."

The logic is that instead of showing people that you are smart because you can come up with a good plan, you show you're smart by thinking of insightful reasons why this project might go south. If you make it part of your corporate culture, then you create an

interesting competition: "I want to come up with some possible problem that other people haven't even thought of." The whole dynamic changes from trying to avoid anything that might disrupt harmony to trying to surface potential problems.

Daniel Kahneman: The premortem is a great idea. I mentioned it at Davos—giving full credit to Gary—and the chairman of a large corporation said it was worth coming to Davos for. The beauty of the premortem is that it is very easy to do. My guess is that, in general, doing a premortem on a plan that is about to be adopted won't cause it to be abandoned. But it will probably be tweaked in ways that everybody will recognize as beneficial. So the premortem is a low-cost, high-payoff kind of thing.

The *Quarterly*: It sounds like you agree on the benefits of the premortem and in your thinking about leadership. Where don't you see eye to eye?

Daniel Kahneman: I like checklists as a solution; Gary doesn't.

Gary Klein: I'm not an opponent of checklists for high-validity environments with repetitive tasks. I don't want my pilot forgetting to fill out the pretakeoff checklist! But I'm less enthusiastic about checklists when you move into environments that are more complex and ambiguous, because that's where you need expertise. Checklists are about if/then statements. The checklist tells you the "then" but you need expertise to determine the "if"—has the condition been satisfied? In a dynamic, ambiguous environment, this requires judgment, and it's hard to put that into checklists.

Daniel Kahneman: I disagree. In situations where you don't have high validity, that's where you need checklists the most. The checklist doesn't guarantee that you won't make errors when the situation is uncertain. But it may prevent you from being overconfident. I view that as a good thing.

The problem is that people don't really like checklists; there's resistance to them. So you have to turn them into a standard operating procedure—for example, at the stage of due diligence, when board members go through a checklist before they approve a decision. A checklist like that would be about process, not content. I don't think you can have checklists and quality control all over the place, but in a few strategic environments, I think they are worth trying.

The *Quarterly*: What should be on a checklist when an executive is making an important

strategic decision?

Daniel Kahneman: I would ask about the quality and independence of information. Is it coming from multiple sources or just one source that's being regurgitated in different ways? Is there a possibility of group-think? Does the leader have an opinion that seems to be influencing others? I would ask where every number comes from and would try to postpone the achievement of group consensus. Fragmenting problems and keeping judgments independent helps decorrelate errors of judgment.

The *Quarterly*: Could you explain what you mean by "correlated errors"?

Daniel Kahneman: Sure. There's a classic experiment where you ask people to estimate how many coins there are in a transparent jar. When people do that independently, the accuracy of the judgment rises with the number of estimates, when they are averaged. But if people hear each other make estimates, the first one influences the second, which influences the third, and so on. That's what I call a correlated error.

Frankly, I'm surprised that when you have a reasonably well-informed group—say, they have read all the background materials—that it isn't more common to begin by having everyone write their conclusions on a slip of paper. If you don't do that, the discussion will create an enormous amount of conformity that reduces the quality of the judgment.

The *Quarterly*: Beyond checklists, do you disagree in other important ways?

Gary Klein: Danny and I aren't lined up on whether there's more to be gained by listening to intuitions or by stifling them until you have a chance to get all the information. Performance depends on having important insights as well as avoiding errors. But sometimes, I believe, the techniques you use to reduce the chance of error can get in the way of gaining insights.

Daniel Kahneman: My advice would be to try to postpone intuition as much as possible. Take the example of an acquisition. Ultimately, you are going to end up with a number—what the target company will cost you. If you get to specific numbers too early, you will anchor on those numbers, and they'll get much more weight than they actually deserve. You do as much homework as possible beforehand so that the intuition is as informed as it can be.

The *Quarterly*: What is the best point in the decision process for an intervention that aims to eliminate bias?

Daniel Kahneman: It's when you decide what information needs to be collected. That's an absolutely critical step. If you're starting with a hypothesis and planning to collect information, make sure that the process is systematic and the information high quality. This should take place fairly early.

Gary Klein: I don't think executives are saying, "I have my hypothesis and I'm looking only for data that will support it." I think the process is rather that people make quick judgments about what's happening, which allows them to determine what information is relevant. Otherwise, they get into an information overload mode. Rather than seeking confirmation, they're using the frames that come from their experience to guide their search. Of course, it's easy for people to lose track of how much they've explained away. So one possibility is to try to surface this for them—to show them the list of things that they've explained away.

Daniel Kahneman: I'd add that hypothesis testing can be completely contaminated if the organization knows the answer that the leader wants to get. You want to create the possibility that people can discover that an idea is a lousy one early in the game, before the whole machinery is committed to it.

The *Quarterly*: How optimistic are you that individuals can debias themselves?

Daniel Kahneman: I'm really not optimistic. Most decision makers will trust their own intuitions because they think they see the situation clearly. It's a special exercise to question your own intuitions. I think that almost the only way to learn how to debias yourself is to learn to critique other people. I call that "educating gossip." If we could elevate the gossip about decision making by introducing terms such as "anchoring," from the study of errors, into the language of organizations, people could talk about other people's mistakes in a more refined way.

The *Quarterly*: Do you think corporate leaders want to generate that type of gossip? How do they typically react to your ideas?

Daniel Kahneman: The reaction is always the same—they are very interested, but unless they invited you specifically because they wanted to do something, they don't want to apply anything. Except for the premortem. People just love the premortem.

The *Quarterly*: Why do you think leaders are hesitant to act on your ideas?

Daniel Kahneman: That's easy. Leaders know that any procedure they put in place is going to cause their judgment to be questioned. And whether they're fully aware of it or not, they're really not in the market to have their decisions and choices questioned.

The *Quarterly*: Yet senior executives want to make good decisions. Do you have any final words of wisdom for them in that quest?

Daniel Kahneman: My single piece of advice would be to improve the quality of meetings—that seems pretty strategic to improving the quality of decision making. People spend a lot of time in meetings. You want meetings to be short. People should have a lot of information, and you want to decorrelate errors.

Gary Klein: What concerns me is the tendency to marginalize people who disagree with you at meetings. There's too much intolerance for challenge. As a leader, you can say the right things—for instance, everybody should share their opinions. But people are too smart to do that, because it's risky. So when people raise an idea that doesn't make sense to you as a leader, rather than ask what's wrong with them, you should be curious about why they're taking the position. Curiosity is a counterforce for contempt when people are making unpopular statements.

About the author(s)

Daniel Kahneman is a Nobel laureate and a professor emeritus of psychology and public affairs at Princeton University's Woodrow Wilson School. He is also a fellow at the Hebrew University of Jerusalem and a Gallup senior scientist. **Gary Klein** is a cognitive psychologist and senior scientist at MacroCognition. He is the author of *Sources of Power: How People Make Decisions, The Power of Intuition,* and *Streetlights and Shadows: Searching for the Keys to Adaptive Decision Making.*