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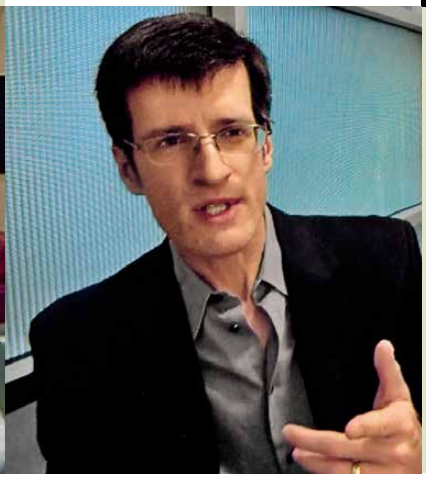
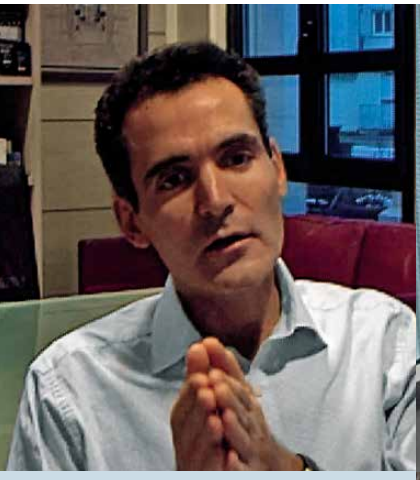
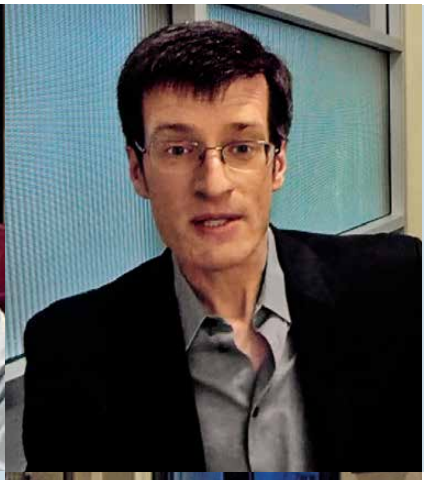
Chip Heath is a professor of organizational behavior at the Stanford Graduate School of Business. He is the coauthor (along with his brother, Dan) of *Made to Stick*, *Switch*, and, most recently, *Decisive: How to Make Better Choices in Life and Work*.



Making great decisions

Stanford's Chip Heath and McKinsey's Olivier Sibony discuss new research, fresh frameworks, and practical tools for decision makers.





Olivier Sibony is a director in McKinsey's Paris office. He has published numerous articles on business strategy and decision making in *Harvard Business Review* and *McKinsey Quarterly.*

Every few years, Stanford University professor Chip Heath and his brother, Dan, a senior fellow at Duke University's Center for the Advancement of Social Entrepreneurship (CASE), distill decades of academic research into a tool kit for practitioners. The bicoastal brothers offered advice on effective communications in *Made to Stick*, on change management in *Switch*, and now, in their new book, *Decisive*, on making good decisions. It's a topic that McKinsey's Olivier Sibony has been exploring for years in his work with senior leaders of global companies and in a number of influential publications.[1]

Chip and Olivier recently sat down to compare notes on what matters most for senior leaders who are trying to boost their decision-making effectiveness. Topics included Heath's new book, research Sibony and

[1] See, for example, Dan Lovallo and Olivier Sibony, "The case for behavioral strategy," mckinseyquarterly.com, March 2010; and Daniel Kahneman, Dan Lovallo, and Olivier Sibony, "Before you make that big decision," *Harvard Business Review*, June 2011, Volume 89, Number 6, pp. 50–60.

University of Sydney professor Dan Lovallo have under way on the styles of different decision makers, and practical tips that they've found make a big difference. The discussion, moderated by McKinsey's Allen Webb, represents a state-of-the-art tour for senior executives hoping to help their organizations, and themselves, become more effective by benefiting from the core insight of behavioral economics: systematic tendencies to deviate from rationality influence all of our decision making.

The *Quarterly*: *What's the current state of play in real-world efforts to improve decision processes through behavioral economics?*

Olivier Sibony: The point we haven't conveyed effectively enough is that however aware you are of biases, you won't necessarily be immune. You should see yourself as the architect of the decision-making process, not as a great decision maker enhanced by the knowledge of your biases.

Chip Heath: The analogy I like is how we handle problems with memory. The solution isn't to focus harder on remembering; it's to use a system like a grocery-store list. We're now in a position to think about the decision-making equivalent of the grocery-store list.

Olivier Sibony: We're doing ourselves a disservice by calling it a decision-making process, because the word *process*, as you point out in your book—

Chip Heath: —It's boring.

Olivier Sibony: It immediately conjures up images of bureaucracy and slowness and decisions by committee—all things associated with bad management.

Chip Heath: Early in the history of decision making, people were optimistic about a better process called decision analysis. But nobody ever used it, because very few people have the math chops to fold back probabilities in a three-layer decision tree. The process that we're advocating runs away from decision analysis and bureaucracy. We wanted some tools that someone could use in five or ten minutes that may not make the decision perfect but will improve it substantially.

Olivier Sibony: There are individual solutions and organizational solutions. Perhaps because we're a consulting firm, we tend to look for organizational solutions. In an article you wrote long ago, Chip, you quote somebody who asks something like, "If people are so bad at making decisions, how did we make it to the moon?" Your answer was that individuals didn't make it to the moon; NASA did.[2] That insight has been translated into all sorts of operational decision making. It is the fundamental insight behind work in continuous improvement—for instance, when people are trained to go beyond the superficial, proximate cause of a problem by asking "five whys."

But we don't apply that insight when we move from shop floors to boardrooms. Partly, that's because of a lack of awareness. Partly, it's because the further up the hierarchy you go, the harder it becomes to say, "My judgment is fallible." Corporate cultures and incentives reward the kind of decision making where you take risks and show confidence and decisiveness, even if sometimes it's really overconfidence. Recognizing uncertainty and doubt—it's not the style many executives have when they get to the top.

Chip Heath: Yes, but we're never really sure when we're being overconfident and when we're being appropriately confident. That's where we go back to processes.

Olivier Sibony: It's a lot easier to say, "Let's build a good process so your direct reports have better recommendations for you" than "Let's come up with a process for you to be challenged by other people."

Chip Heath: I love that emphasis: "We're going to help others get you the right recommendations." We all tend to believe "*I'm* not subject to biases." But we can easily believe that *others* are. I'm curious about your batting average, Olivier. Suppose you walk into an executive group and start talking about the behavioral research and how they could change their processes to overcome biases. Are a third of the people interested? Five percent?

Olivier Sibony: If we tell the story like that, it's zero. But exactly as you just suggested, a lot of executives are open to discussing how their teams could help them make better decisions. So we will say,

[2] See Chip Heath, Richard Larrick, and Joshua Klayman, "Cognitive repairs: How organizational practices can compensate for individual shortcomings," *Research in Organizational Behavior*, 1998, Volume 20, pp. 1–37.

for example, “Let’s talk about what works and what doesn’t work in your strategic-planning process.” We don’t talk about biases, because no one wants to be told they’re biased; it’s a word with horrible, negative connotations. Instead, we observe that people typically make predictable mistakes in their planning process—for instance, getting anchored on last year’s numbers. That’s OK because we are identifying best practices. We end up embedding this thinking into processes that generate better strategic plans, R&D choices, or M&A decisions.

Chip Heath: The process changes don’t have to be very big. Ohio State University professor Paul Nutt spent a career studying strategic decisions in businesses and nonprofits and government organizations. The number of alternatives that leadership teams consider in 70 percent of all important strategic decisions is exactly one. Yet there’s evidence that if you get a second alternative, your decisions improve dramatically.

One study at a medium-size technology firm investigated a group of leaders who had made a set of decisions ten years prior. They were asked to assess how many of those decisions turned out really well, and the percentage of “hits” was six times higher when the team considered two alternatives rather than just one.

Olivier Sibony: You can make a huge number of those small changes. One thing we did, which worked quite well, was to always ask people making an investment recommendation to present their second-best choice. It’s rarely better than the first. But both might actually be good, and both recommendations of another business unit might not be. Considering just one recommendation from every business unit will deprive you of many investment opportunities you’d get if you asked for two.

The *Quarterly*: *Is the right approach to suggest a couple of simple things senior executives can do or to recommend that they take a step back and look at a whole checklist or framework to create a healthier process?*

Chip Heath: I’m a fan of frameworks, but you don’t have to be 100 percent there to improve dramatically. One legitimate criticism

of the decision-making field is that we have this overwhelming zoo of biases. In our most recent book, *Decisive*, we therefore came up with 4 intervention points in the decision process. Others propose 40 intervention points. Nobody will be successful intervening at 40 decision points.

Olivier Sibony: We too have looked at this zoo of biases and tried to sort out what really matters to executives. When people ask me what will make a difference as they build decision processes, I emphasize three things. First, recognize that very few decisions are one of a kind. You are not the first person to decide on an acquisition. Lots of M&A happened before, and you can learn many things from that experience.

Second, recognize uncertainty—have alternatives, prepare to be wrong, and have a range of outcomes where the worst case is real and not "best case minus 5 percent," which is very common. Creating a setting where it's OK to admit uncertainty is very difficult. But if you achieve that, you can make headway.

Third, create a debate where people speak up. It's the most obvious but also the most difficult. If you're the decision maker, when you get to the debate you've already got an idea of where you want it to lead. And if you're an experienced executive, you've already influenced your people, consciously or unconsciously. A good intervention point, for instance, is to ask subordinates if anyone disagreed with them about a recommendation they bring to you. If everybody agreed, that's a sign that there may have been "groupthink."[3]

Chip Heath: All of the things you've highlighted are things we grappled with in designing the WRAP process we propose in our book (see sidebar, "Four principles for making great decisions"). A *Wider* set of options means you're going to have more debate. By *Reality-testing* assumptions, you look at the reference class of events. If you make a decision about restaurants, you read reviews because that's your reference class. Yet if you're making a merger decision, you won't look at the reference class of companies in similar situations. Why do this research for a $200 dinner but not a $200 million

[3] For more on this, and 11 other useful questions senior executives can ask, see Daniel Kahneman, Dan Lovallo, and Olivier Sibony, "Before you make that big decision," *Harvard Business Review*, June 2011, Volume 89, Number 6, pp. 50–60.

acquisition? Then there is the process of actually making a decision. It's now slightly more complicated because instead of one option you've got two, and you've done some due diligence on both. When you find yourself agonizing about a choice, it's important to step back and *Attain* some distance. Finally, you should be *Preparing* to be wrong at the end of the process—that's about hard-to-acknowledge uncertainty.

Olivier Sibony: How do you envision people using your WRAP framework—as a checklist when they make decisions, or as a tool to coach other people making decisions?

Chip Heath: We've heard from people doing both. One person had a career decision and had gone through the list blow by blow. "What are my alternatives? Can I ask disconfirming questions? How do I step back and make this decision?" In many situations, you could work through the WRAP framework in 30 minutes. And you can also have it running in the back of your mind as you're coaching others.

Olivier Sibony: I find people asking when to get the facts and figures for a decision. Usually, they assume that you get all the facts first and then discuss them, which is not the way to go. Only when you create a debate and identify what it would take to believe one option versus another will you look for facts that would disprove your initial hypothesis. Save time for fact finding at a later stage.

Chip Heath: That's really important. The trick is collecting information in the context of actual experience. At Intuit, founder Scott Cook developed what they call a culture of experimentation. As he put it, most decisions are based on "politics, persuasion, and PowerPoint," and none of these "three Ps" are fully trustworthy. So Intuit bases decisions on experiments.

For example, they had a team with an idea for a service that would let Indian farmers use their cell phones to get information about market prices in surrounding towns. The top-leadership team was unanimous in thinking it was a bad idea. Scott Cook said he thought it was the most ridiculous thing he'd ever heard—why would people in the markets give you this information, since it might be used to undermine them? Others said the information should be

valueless because in competitive markets, the price should be the same, controlling for transportation costs.

Nonetheless, Intuit has a culture of experimentation, and the leadership team said, "OK, run your experiment." Twenty experiments later, they have 1.3 million Indian farmers using this service. It's been tremendously successful. It has raised the income of typical farmers using it by 20 percent—enough to afford books and tuition fees for their kids.

Olivier Sibony: How did he create this culture?

Chip Heath: For years they've had it at the lower levels of the firm. Before they add a feature, say, to TurboTax, they will test out variations and see how people respond. They call it "Fake-O-Backend." Imagine that they put up a Web page for a new "deduction analysis" service, and when people plug in their information on the Web site, the company goes to a tax attorney for the answers instead of programming all the computations. The back end is fake. The front end tests whether people would purchase a new service.

This tradition of testing, of collecting data that allows you to be surprised by the outcomes, helps cultures of debate evolve in certain firms. I don't think it has to come from the very top of the organization. But as a CTO or a CFO, you can develop that culture within your area. Any manager at any level can start. If you create that culture in your team and you get into a disagreement, somebody will eventually say, "Look, it's an empirical question. We can run a test." If more people at more levels of organizations said that, the culture would start to change.

Olivier Sibony: I want to go back to this notion of helping people see when they've been wrong and helping them get better at learning from their own experience. We've tried to do this through the idea of decision-making styles (see "Early-stage research on decision-making styles," on mckinseyquarterly.com), which is still at an early stage. Rather than telling someone he's hopelessly biased, you say, for example, "Look, you're a certain kind of decision maker—a real visionary—so you make fast decisions breaking with convention. The downside is that you could be wrong, so when you

make an unusual decision you might want to stop and listen a bit." Whereas someone else will tend to fall into the opposite trap.

We're trying to build a language that would help people see how to get better at making decisions. The hope is that it would make individuals more conscious of their own style and also enable debate. If you and I are around the same table, rather than telling you that you're out of your mind, I can tell you, "We know that you're a visionary, right? So you would see things in this way. Well, I've got a different style, so here's how I think about it." A bit like the Myers–Briggs Type Indicator.[4] Does that sound like a promising idea? Again, I don't want to get too excited about it, because it's early stage.

Chip Heath: I think that's very promising. I love the idea that you can create a language for helping people introspect about their decision process. People love personality approaches. Psychologists have always had this approach–avoidance relationship with them because we can't get them to be as predictive as we want, but they provide this tremendous social language.

I got to be at a dinner one time when I was in graduate school, where Danny Kahneman and Amos Tversky listened to a group of consultants telling them about the Myers–Briggs. The consultants didn't know they were talking to two Nobel-caliber psychologists, so they were a little condescending as they explained Myers–Briggs to their dinner companions, who should have known about it already. Kahneman and Tversky listened. And they weren't telling the consultants, "Decades of social-psychology research says that it's really hard to design a personality test that predicts anything useful about behavior." Danny Kahneman walked out of the room and turned to Amos Tversky and said, "You know, that was a brilliant feat of social engineering. Instead of saying, 'So-and-so is a jerk,' they say, 'Oh, he's an INTP.'"[5]

The *Quarterly*: *Let's talk about points in the business system where people can attack these problems. Start with budgeting and planning.*

[4] The Myers–Briggs Type Indicator (MBTI) is a personality-assessment questionnaire that probes how individuals perceive the world. MBTI describes a personality type for an individual based on his or her expressed preferences.

[5] INTP is one of the 16 personality types expressed by the Myers–Briggs Type Indicator. *I* refers to "Introversion," *N* to "Intuition," *T* to "Thinking," and *P* to "Perceiving."

Olivier Sibony: Clearly, the dominant bias is inertia—doing a budget that's too close to last year's, largely because of anchoring.[6] You can re-anchor the budget around something different, typically a vision of the future, like where the growth will be. Usually, the discussion with a business unit would start, "Your budget last year was 100. You're telling me it should be 105. I think it should be 95. Let's argue." Instead, start with something like, "Your budget last year was 100. My model says it should be 375. Let's discuss why 105 is better than 375."

The *Quarterly*: *What about M&A?*

Chip Heath: M&A is a classic confirmation-bias situation. Something becomes available or draws you to a target. You'll start gathering data to confirm or deny that choice, but on average you'll be tempted to confirm it because you were interested in the first place.

Olivier Sibony: We tried to address that in one large company by adding something to the existing routine, which was superb. A month before the anticipated time of the final decision, when everyone still has a cool head, we suggested that the M&A team write a memo to the CEO entitled "Reasons you would say no to this deal." The CEO will look at the memo in a month and ask whether these questions have been fully addressed. In effect, you have a dialogue between yourself a month ago and yourself now.

Chip Heath: I've seen procedures for getting distance by picturing yourself in the future looking back on a decision. Your idea is to have a present self look back at a past one. I love that.

The *Quarterly*: *Let's move to personnel choices for the senior team.*

Chip Heath: A headhunting firm that had done 20,000 executive placements at the C-suite level went over its records and found that about 40 percent are pushed out, fail, or quit within 18 months. That's a shockingly high failure rate. Lots of confirmation biases kick in here. People who are taller or more attractive do exceptionally well in interviews. Those qualities have little to do with the job.

[6] For more on the problem of strategic inertia, see Stephen Hall, Dan Lovallo, and Reinier Musters, "How to put your money where your strategy is," mckinseyquarterly.com, March 2012.

The research says you can improve the interview process by treating it less like a conversation and more like a job sample. You can ask CFO candidates, say, to grapple with the financial decisions you've made over the last five years—what they would have thought about, what information they would have collected, what they would have done.

The *Quarterly*: *What about new-product launches?*

Chip Heath: Saras Sarasvathy, a professor at the Darden School, at the University of Virginia, has researched the differences between how entrepreneurs and very good senior managers at Fortune 500 firms think. She gives them a scenario about a new-product introduction. The typical Fortune 500 manager will run projections from the market data. But the entrepreneur says, "I don't trust the data. I'd find a customer and try to sell the product." The entrepreneur's reaction is, "I'm gonna experiment. I'll find my way into the market as opposed to project my way into it." The entrepreneurs' impulse to experiment is right. We don't breed that enough in corporate America.

The *Quarterly*: *Last question—there hasn't been much work done on decision making and organizational structure. The classical view is that structure rationally follows strategy. Yet we know that's not always the case. Should we be applying behavioral economics to this realm?*

Chip Heath: Dan and I are actually thinking about it. I think there's a systematic set of biases. For example, we favor division of labor over thinking about coordination. That underemphasizes the difficulty of coordinating across specialists that speak different business languages. I think that's a really interesting set of questions.

This discussion was moderated by **Allen Webb,** editor in chief of *McKinsey Quarterly*, who is based in McKinsey's Seattle office.

Four principles for making better decisions

Authors (and brothers) Chip and Dan Heath propose four steps for improving decision making. Below is an overview of that process, whose initials spell "WRAP." It's elaborated in their new book, *Decisive: How to Make Better Choices in Life and Business* (Crown Business, March 2013).

For example: Consider at least two robust options for every decision.

Important because: Adding just one alternative makes very good strategic decision making more likely—*six times* more likely, according to one research study.

For example: Enforce vigorous debate on both sides of an issue and resolve debates with data by running small experiments to test assumptions.

Important because: We are two times more likely to consider information that tends to confirm our assumptions than information that tends to disconfirm them.

For example: "Fire" yourself and ask what your successor would do. That's how Andy Grove broke through Intel's indecision in the mid-1980s about whether to divert resources from the company's long-standing core business in memory chips and go full force into microprocessors.

Important because: The status quo is powerful. Research shows that over time, even arbitrary choices are regarded as valuable and right.

For example: Set a clear tripwire now: "If we don't achieve a market share greater than 20 percent in the first year, we'll revisit our idea of entering the Southern market."

Important because: Our predictions are often incorrect, even when made with high confidence. In one study, doctors who expressed complete certainty in a diagnosis were wrong 40 percent of the time.