

# Science of Decisions

## At the Kennedy School, the art of decision making is brought into the lab

January 8, 2009

by Madeline Drexler

*Originally published in the winter 2009 issue of the Harvard Kennedy School Bulletin.*

Jennifer Lerner's favorite emotion — intellectually speaking — is anger.

Partly that's because anger courses through American political rhetoric: capturing the attention of media and citizens and conferring higher approval ratings for leaders who display it. Partly it's because anger's stark effects on judgment are measurable in a controlled lab setting, where Lerner — director of the Harvard Decision Science Laboratory and professor at the Harvard Kennedy School — does much of her research.

But it's also because anger as a topic of philosophical inquiry has smoldered in scholars' minds for thousands of years. "Anyone can become angry — that is easy," wrote Aristotle in *Nicomachean Ethics*. "But to be angry with the right person, and to the right degree, and at the right time, and for the right purpose, and in the right way — that is not easy." At the Kennedy School, Lerner hopes to apply fundamental research on the hidden mechanisms of decision making to help leaders recognize their own cognitive and emotional biases, avoid those pitfalls, and set up environments that can help whole organizations avert individuals' fallibilities. As she put it, "I want to add data to Aristotle's speculation."



Subjects' hands are hooked up in three spots to measure blood pressure (wrist) galvanic skin response (palm), and skin temperature (finger).

*Lerner's work rests on the tenet that most people can't fathom why they make the decisions they do. As President John F. Kennedy himself observed: "The essence of ultimate decision remains impenetrable to the observer — often, indeed, to the decider himself."*

The science of decision making is relatively new, operating at the nexus of psychology, economics, and neuroscience. And Lerner, 40, is one of its pioneers. Small, trim, her hair pinned up in a practical style, she is often mistaken for a student. A standard part of her academic "uniform," as she calls it, are a prim pearl necklace and set of earrings handed down from her mother. The combination of outward composure and

animating passion seems typical of Lerner.

She punctuates careful explanations of theory with a deep, ironic laugh. And her main area of inquiry, exploring how emotions color and often skew judgment and decision making, has rattled a discipline long in thrall to the rational ideal of Homo economicus.

Lerner's publications have been cited in scholarly articles more than 2,000 times. In 2004, she won the Presidential Early Career Award for Scientists and Engineers, from the National Science Foundation. But Lerner has reached far beyond academic outlets to communicate her ideas, having presented in such policy arenas as NATO Headquarters and in such public forums as Good Morning America. "My ultimate question is: How does the mind work? That's what wakes me up in the morning," she said. But her ultimate application is public policy and society.

At the Kennedy School, where the seismic impact of good and bad decisions is well appreciated, Lerner feels she is in her element. What can she do here that she can't anywhere else? "A lot," she replied. "We have approximately 3,000 executive education students come through each year — over and above the enrolled students. The executive ed students are often leaders of governments around the world. And

many of our enrolled students will go on to lead governments or multinational corporations. In one capacity or another, they will have international influence. I get to reach people who are in a position to structure the decision environments of their governments. I cannot think of another place in the world where I could do that.”

Lerner’s work rests on the tenet that most people can’t fathom why they make the decisions they do. As President John F. Kennedy himself observed: “The essence of ultimate decision remains impenetrable to the observer — often, indeed, to the decider himself.”

First at the University of California at Berkeley, then at Carnegie Mellon University, Lerner shined light on that disconnect. She’s best known for teasing apart the effects of specific emotions on judgment and choice — particularly when the emotion is “incidental,” meaning it has no inherent relevance to the decision being made.

One study showed that, contrary to expectations, volunteers who were sad and self-absorbed (after watching a tear-jerker video clip) dramatically increased the amount of money they would pay to acquire something (in the experiment, a sports water bottle); the finding, which Lerner dubbed the “misery is not miserly effect,” brings psychological insight to theories of consumer behavior. Another experiment demonstrated that volunteers primed to anger reduced the amount of government assistance in a hypothetical case, while those primed to sadness chose to increase government largesse. Lerner has also delved into the physiological underpinnings of emotion — linking, for instance, fine muscle movement in the face to secretion of the



The laboratory contains 36 cubicles where subjects participate in numerous research studies.

stress hormone cortisol.

At the Kennedy School, she plans to broaden her field of investigation while continuing to explore the biological substrates of emotions. Admittedly, launching a state-of-the-art decision science laboratory — where researchers take saliva samples, chart blood pressure, and measure skin temperature, as well as map the cognitive path of volunteers' decisions — has been a stretch for some resident scholars. "There's a tendency to think that emotion is not something we can study rigorously, scientifically, experimentally," Lerner said. "People ask, 'How can you study trust, emotion, ethics, and morality in a lab?' They think I'm being too reductionistic."

Some of the fiercest skeptics are CEOs and other powerful alumni — often those who have learned, through escalating career challenges, to trust their "gut," not to observe their mind. "I had one person say to me: 'What does this have to do with public policy?'"

What *does* her work have to do with public policy? "Emotion is a huge driver of human behavior," Lerner said, her voice rising. "And a lot of the problems that we have in the world today come from non-rational human behavior. We have technological solutions that aren't working — because of human behavior. We have the technologies that we need to improve national security — but not the human performance to carry them out. We have energy solutions — but not the political will to enact them."

"To say that you can exclude emotion..." She looked dumbstruck. "It's like saying you're going to exclude oxygen from CO<sub>2</sub>."

At the Kennedy School, students and faculty often approach Lerner — the only tenured psychologist in their midst — with a commonplace question: "What should I do when I'm really mad and have to make a decision?"

Lerner can quickly tell them what not to do. For example, "The idea that you can hit a punching bag and feel better: That's wrong. Generally speaking, aggression leads to more aggression. Another

thing that doesn't work is telling people: 'Don't be mad.'"

What does work, Lerner has found, is altering the environment in which angry people make decisions. The technical term is: "predecisional accountability to an audience with unknown views." In one study, volunteers who were primed to anger (by watching a video) were asked to render a judgment in a fictional tort case. When asked to explain their decisions to a well-informed audience whose views they did not know in advance, their anger did not lead them to be more punitive — as it did when they weren't asked to justify their decisions. Being accountable created the conditions by which they could consciously monitor their thinking and perceive the issue with more nuance and complexity. In other words, context matters. The environment in which a decision is made turns out to be more important than the decider. Traditionally experts assumed that good decision making stemmed from individual personality traits — some people naturally made smart choices, others did not. They assumed that great leaders were great decision makers. And they assumed that the smarter the decision maker, the better the decisions.

Lerner takes the opposite tack. "What we find is that there are situations that affect all of us in similar ways, leading us to be biased, and that personality doesn't matter in those cases. It's not so much about finding people with the right personal characteristics as it is changing the judgment and decision context."

Which takes her back to anger. "Anger is a more positive emotion in the States than it is in cultures that are more interdependent and collectivistic," she explained. In America, anger pervades political culture and many styles of organizational leadership. Indeed, research shows that the effects of being in power resemble the effects of being angry. So if any emotion needs to be contextually de-fanged, it's anger.

One of Lerner's best-known papers is titled "Portrait of the Angry Decision Maker." Though the 2006 article was not connected to the Bush presidency, the picture she paints almost uncannily describes

President George W. Bush's behavior leading up to the invasion of Iraq. Lerner is careful to say that scientific findings about decision making in general can't be proven determinative in any specific instance. Still, the Bush Administration's process in going to war in Iraq mirrors her findings about angry deciders: "Not feeling you need more information. Underperceiving risks. Being prone to taking risks. Attributing causality to individuals rather than situations. Simplistic thought."

In her own life Jenn Lerner has had plenty of reason to harbor a sense of grievance and anger, but apparently has avoided those sentiments. At the age of 16, she was diagnosed with lupus, a chronic autoimmune disease that can affect the joints and almost every major organ in the body. Typically lupus causes joint inflammation, fever, and fatigue. For Lerner, the condition has brought ceaseless pain, advanced osteoporosis, and problems with her eyes, lungs, hands, feet, and knees. She takes daily medication to ease the worst symptoms.

Lupus is notoriously capricious, with unpredictable flare-ups and remissions. Though Lerner suffers flare-ups, she has not been lucky enough to experience a remission that would allow her to eliminate the array of medications needed to manage the illness. Over the last 24 years, as a result, she has made extraordinary accommodations to move forward in her career. She's conducted graduate seminars in her home, where she would lecture from a horizontal position on her couch. She's held meetings with students while undergoing intravenous infusions. She has given lectures from a wheelchair. Confined to hospital beds, she's plotted out future lab experiments.

"I have an extremely strong will," she said. "But I don't think I could do it if it were just a matter of will. Here's the way it works — it's actually very simple: Work is a treat for me. Work is a balm. And I feel really lucky to have my work. It is a distraction from pain and fatigue."

Building the Decision Research Laboratory as a Harvard-wide enterprise, Lerner will be collaborating with Associate Directors Iris Bohnet, professor of public policy, HKS; David Laibson, professor of

economics, Harvard University; Chair of the Advisory Board Max Bazerman, professor of business administration, Harvard Business School; and Honorary Chair of the Advisory Board Howard Raiffa, professor of managerial economics emeritus, HKS. At the lab, Lerner intends to broaden the scope of her questions to a vast range of public policy issues.

She wants to know how sadness and disgust affect decisions on whether to donate the organs of a deceased loved one. She will continue to study the physiological underpinnings of emotion. And as part of a recent \$610,000 grant from the National Science Foundation, she will study high-level decision makers — from governments, militaries, nongovernmental organizations, and corporations — to explore whether their knowledge and leadership experience protects them from decision-making biases. When are such leaders, for instance, willing to make “tough calls”: taking actions that improve things in the long term but impose costs in the short term? Do angry leaders focus so much on winning battles that they lose the war? Does anger prompt risk-taking? These and related questions will focus her work in the school’s Center for Public Leadership, where she has brought Professor David Gergen in as a consultant to the grant, bringing real-world experience to the formation of theory-driven hypotheses.

“Most people at the Kennedy School start with the policy problem. I’m unusual here in that I start with: How does the mind work?” Lerner said. “We’re studying basic processes that underlie countless decisions in daily life — in medicine, business, finance, law. There are many different places where I could be. I feel very lucky to be in the place where it will do the most public good.”

*Madeline Drexler is a Boston-based journalist and author, specializing in science, medicine, and public health.*