



EMOTION, INSTINCT AND REASON: THINKING AND DECISION-MAKING IN A TIME OF CRISIS AND UNCERTAINTY

Are We Ready for This?

“We are not rational enough to be exposed to the press,” observes Nicholas Taleb, codirector of the Decision Research Laboratory at the London Business School. Taleb’s provocative observation captures the contradiction between what the press presents and how life is lived. Because people’s thinking seems to be more swayed by events as they are presented in the news than in how they are actually experienced in their lives, individuals tend to respond emotionally rather than rationally to risks and the decision-making that those risks require.

To take one example, in the months following the September 11, 2001 terrorist attacks in the United States, Americans in greater numbers turned to driving long distances rather than taking airplanes. As a result of this emotional or even instinctive response to a new danger and the uncertainty surrounding it, in the 12 months following the attacks, roughly 1,600 more people died in car accidents than in the 12 months before the attacks, a number that was **six times greater** than the number of people who died in the planes used in the terrorist attacks. To avoid a grisly death, these drivers jumped “out of the frying pan into the fire,” explains Gerd Gigerenzer of the Max Planck Institution for Human Development in Berlin. (*New Scientist*, 8/30/08)



In a *Briefing* this past summer, we noted that individuals were getting emotional about their fortunes and their country's prospects. Individuals were sensing then that current economic troubles might not be transitory and that their standards of living were threatened. As a result, **optimism and positive or change-oriented action – two mainstays of America's historical identity – were losing ground to pessimism and a sense of powerlessness.** We suggested that such emotional responses to the economic crisis under way would likely affect how Americans vote in November (see "Fear and Anger in an Election Year: The National Anxiety Attack Seeks Release," **IF 2916**, 7/18/08).

Since that *Briefing*, several U.S. financial institutions have imploded, government leaders have been scrambling to act as if they are on top of the situation and the public has grown more worried that their leaders – both political and corporate – might simply not be up to the trials and tribulations the country faces. Pervasive uncertainty has people worried.



Thinking and Decision-Making

Psychologists and neuroscientists divide the way people respond to uncertainty into two categories: cognitive, which depends on reason and the weighing of evidence, and intuitive, which depends on instinctive or emotional reflexes. When a real danger confronts us – such as a physical attack – the body, which evolved in a world of constant danger, turns to instinctive

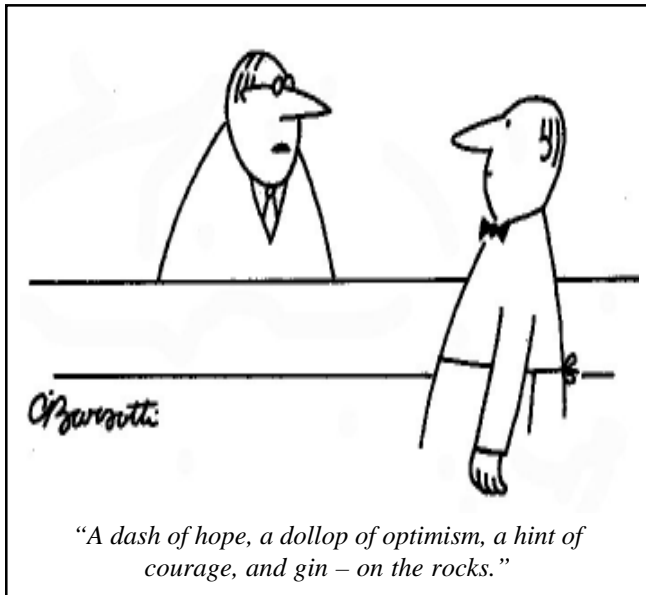
decision-making: fight or flight. However, when fear guides decisions that can benefit from available time and information, emotions and instincts can misread a situation and lead to errors in perception for the person who is making decisions. For instance, in the case of individuals choosing to drive rather than fly in the aftermath of the terrorist attacks, those individuals could have benefited from knowing that driving the length of an average domestic flight (*i.e.*, roughly 900 miles) is **65 times riskier** than flying. But emotions blocked such a complete weighing of available evidence, and 1,600 more people died on the roads that year. (*New Scientist*, 8/30/08)

One of the explanations for why so many people ignored reasoned argumentation and chose to drive in the year after the terrorist attacks is that they were facing **a new kind of risk** – terrorist attacks using hijacked airplanes. New fears, according to psychologists, often trigger emotional or instinctive reactions. "Rather than deliberating about a long-term strategy to counter a risk," says George Lowenstein, who studies decision-making at Carnegie Mellon University, "people often seem to go into a panic mode and take actions that actually exacerbate the problem they are worried about." (*New Scientist*, 8/30/08)

Americans can become emotional in uncertain and stressful times – as we discussed in our *Briefing* on fear and anger (**IF 2916**). But do current or future leaders rely on their instincts and emotions when facing major crises, such as the current financial collapse or a foreign military incursion, or do they weigh the information dispassionately and seek rational answers? Indeed, which approach is desirable in these kinds of situations? How do they approach a new problem in this era of confusion and uncertainty? As we face a period of political transition from one administration to another, in the middle of a period of financial and geopolitical instability, an assessment of the would-be leaders' thinking processes is warranted.

To better understand the parameters of decision-making in a time of uncertainty, we might want to start by looking closely at an area in which decision-making has life-and-death consequences: doctors' diagnoses. According to the Institute of Medicine, doctors' errors result in 98,000 **preventable deaths** each year in the U.S. Moreover, we might want to see if current leaders in the financial crisis and current candidates for the U.S.

presidency are subject to the same kinds of erroneous decision-making practices as the doctors whose mistakes cost the lives of so many patients. (*Investor's Business Daily*, 4/30/07)



come from experience, other times from ideology and often from guessing. According to Gropman, doctors apply such shortcuts often without even knowing they are doing it. Often, he noted, **doctors have two or three diagnoses in mind after just a few seconds with a patient.** The patient might seem pale in a way that triggers a diagnosis, or might seem young and fit, prompting an observational bias and so on. Sometimes, Gropman notes, doctors can focus on confirming these early assessments, even though they are incorrect. This was also the case early in the current financial collapse. The early and quick “diagnosis” circulating among political, commercial and media representatives blamed a few foolish consumers who accepted loans they could not pay and a few “rotten apples” in the mortgage business who exploited ignorant consumers. Such a shortcut answer proved incorrect and kept leaders from acting early in the crisis (see “Return of the Bad Diagnosis: The ‘Asian Flu’ and the ‘Sub-Prime Problem’ in Context,” **Special Briefing**, 8/17/07).

Decisions Without Reason

Jerome Gropman, in his book *How Doctors Think* (2007), asks a deceptively simple question: “When and why does thinking go right or go wrong in medicine?” Interestingly enough, he goes quickly to the heart of an implicit conflict between the two categories of responses to uncertainty – cognitive and intuitive – and how they interact: “Emotion can blur a doctor’s ability to listen and think,” he observes. If a doctor especially likes or dislikes a patient, Gropman notes, then poor diagnosis and treatment can follow, because feelings block an unfettered and honest assessment of the patient’s conditions.

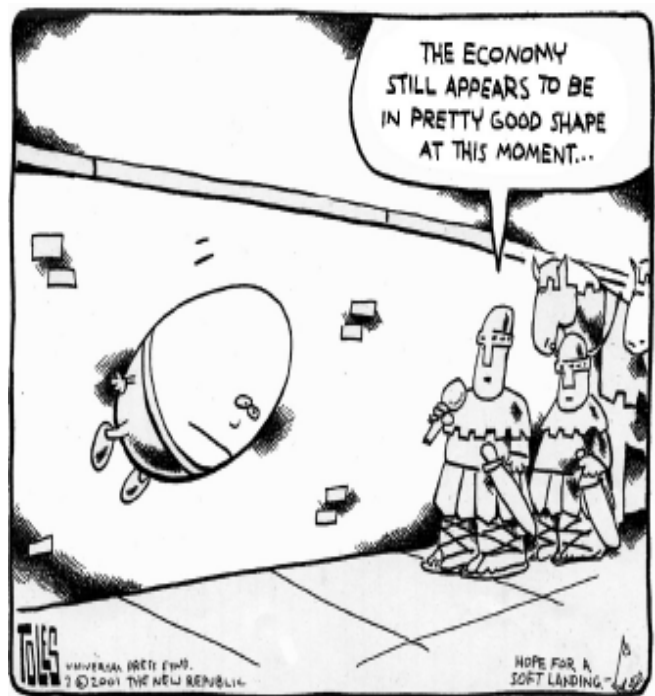
Gropman moves beyond this direct observation, and both by using self-analysis of his own clinical practice and by asking other doctors about their experiences, he is able to identify several kinds of thinking errors that typically lead to incorrect diagnoses – that is, poor decision-making.

Heuristics – Doctors, financial analysts, leaders and voters use heuristics (*i.e.*, **shortcuts**) to direct them to decisions more rapidly. Sometimes the shortcuts



Representativeness—This error results from doctors being **overly influenced by what has been typically true** in the immediate past (*e.g.*, recent patients, or reports from other physicians in the area). For instance, during the Anthrax attacks in 2001, doctors in New Jersey who treated the victims diagnosed their condition as a basic flu, mainly because professionals in the region were reporting an upsurge in patients with the flu. Doctors could not break the “mental template” of a flu diagnosis and applied that popular diagnosis to the symptoms they were seeing, typically ignoring contrary symptoms. As a result, several patients died from the poisoning. Likewise, financial leaders could not break the widely accepted “mental template,” which held that the emerging financial crisis was just another example of simple excess that would take care of itself, a sentiment surfacing in the Washington conversation about the “bailout.” The American economy had thrived after the 1987 stock market “crash,” these leaders insisted and still insist, it had prospered after the dot-com collapse, and it would rise on its own from this crisis as well. “Markets are self-healing,” is a mental template that let the problem evolve into a full-blown crisis. (*New Yorker*, 1/29/07)

Affective Errors – Incorrect diagnoses, according to Gropman, often result from doctors making decisions based on **what they would like to be true rather than what is actually happening**. Gropman cites a doctor who saw something of his younger self in a patient and erroneously concluded that the patient was healthier than actual symptoms indicated. He subconsciously wanted the patient to be fine. Therefore, the doctor did not order special tests that might have uncovered what was wrong with that patient, and that decision nearly cost the patient his life. Likewise, in the current financial crisis, leaders wanted to believe that the economy was solid: “The American people can remain confident in the soundness and resilience of our financial system,” intoned Treasury Secretary Henry Paulson just prior to the collapse of several financial institutions. “Our economy is structurally sound for the long term,” claimed President George W. Bush earlier this year and months after last summer’s financial instability. (*New Yorker*, 1/29/07)



Confirmation Bias—Doctors often accept or reject information presented to them from symptoms or even special tests in order to **confirm a diagnosis or theoretical understanding they are comfortable holding or an idea they prefer to believe**—a kind of informational cherry-picking. Nagging little contradictions to the broader theory get shunted

aside. This is **especially evident when a person whom the listener likes or respects presents such an idea**. The listener accepts that perspective and then seeks evidence to confirm it. To some financial observers, this is the “sunk-cost fallacy” – that is, sticking to a position because so much has been vested in it already. In the current financial situation, the confirmation bias started because the math “wizards” who created new instruments such as collateralized debt obligations (CDOs) enjoyed such a high level of respect in the financial community. Because of the respect, institutional leaders, marketers and even regulators accepted what these wizards told them: The new financial instruments “spread risk,” lowered downside losses and elevated upside rewards. Who was going to challenge the math? Or who was going to second-guess ratings agencies that had allegedly vetted these complicated instruments? As a result, those within the financial institutions charged with marketing the new instruments set about confirming the creators’ perspective by noting with great satisfaction the elevated returns the instruments were making, while ignoring the fact that these instruments had never been subjected to market valuation (see “Leaning on Air’ and ‘Puking Tranches’: Lingering Elevated Expectations Meet Post-Growth Realities,” **IF 2613**, 6/17/05).

Availability – Doctors who fall into this trap depend heavily on information that is readily available and on personal experiences that easily come to mind rather than consider new information. Those who study decision-making refer to “availability cascades,” which occur when people who do not know much about a specific concept – say, global warming, violent crime, terrorism or Iraq – accept readily available ideas from talking heads, political figures and office colleagues. These “facts” become accepted as accurate and lead to generalized misunderstanding – even social myths. According to Cass Sunstein of the University of Chicago Law School and Timur Kuran of Duke University, who have studied this myth-making phenomenon, “On matters ranging from the health consequences of sugar and coffee consumption to the risks of car driving, nuclear power and global warming, each of us depends for information on what other people **seem to know**” [emphasis added]. In the current financial crisis, we should remember Fed Chairman Ben Bernanke in May 2007, long after evidence had surfaced suggesting that all was not well in the financial community, repeating what had become the industry’s, the politicians’ and the media’s perspective – that is, officialdom’s “availability cascade”: “We believe the



effect of the troubles in the sub-prime sector on the broader housing market will likely be limited, and we do not expect significant spillover from the sub-prime market to the rest of the economy or to the financial system.” (*New Scientist*, 8/30/08; see “Return of the Bad Diagnosis,” cited previously)

Together, these errors of thought – heuristics, representativeness, affective error, confirmation bias and availability – encourage false conclusions, mistaken diagnoses and in broad application, societal myths. Beyond the specific errors that address analyses of symptoms and observations, Gropman adds two other problems that have to do not so much with thinking as with the ways individuals function or go about their tasks. First, Gropman notes, doctors sometimes commit a **Satisfaction of Search** error, which means they become so enamored of a specific diagnosis, especially after they have applied it, that they stop considering alternative explanations. Second, other doctors fall victim to what Gropman calls the **Commission Bias**, which simply means a preference for taking action rather than doing nothing, a feeling that the doctor must do something, because doing nothing might frighten or upset the patient even more. (*Newsweek*, 4/23/07)

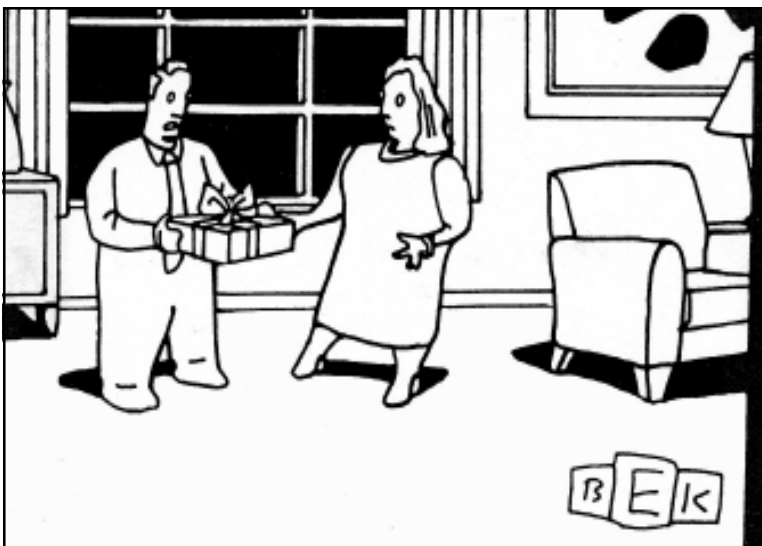
All these errors of thought negatively affect decision-making. Doctors make them, leaders in the current financial crisis make them and corporate leaders make them. **What about current presidential candidates? How do they think and make decisions?**

Their Own Stories

Recent research on the human brain has revealed that the same part of the brain that stores and collates memories also pieces together each person’s vision of the future. “Whatever we’re doing when we remember the past,” notes psychologist Kathleen McDermott of Washington University in St. Louis, “the same things happen when we envision the future.” Research has shown that people with amnesia also have little or no concept of the future. This seems to go beyond the American philosopher George Santayana’s perspective that those who do not know the past are doomed to repeat it. Unlike Santayana’s thought, the new understanding of brain activity suggests that an individual’s past and the way that individual accesses those memories affects his or her thinking about the future. “Episodic memory seems to be important when people think about their personal futures,” explains Harvard psychologist Daniel Schacter, “because it is the source of the details that allow one to build simulations of what might happen.” (*Science News*, 6/21/08)

We note this research because the two presidential candidates have different personal histories and will, therefore, likely have different perspectives on the future, the very future in which one of them will lead the country. The candidates have written autobiographies with oddly similar titles: John McCain’s *Faith of Our Fathers* (1999) and Barack Obama’s *Dreams from My Father* (1995). Both authors detail the importance of their fathers, even as they note the absence of their fathers in daily life, with McCain’s father away on extended cruises as a naval officer and Obama’s father, having completed a Ph.D. at Harvard, returning to his native Kenya, leaving his wife and two-year-old son in Hawaii. Both speak of being dutiful sons, trying to please demanding fathers, a paternal struggle that leads Obama to Kenya, where he hears the family’s history from his grandmother, and that leads McCain to the U.S. Naval Academy, a military institution his father and grandfather had attended and where he penned a term paper describing his grandfather’s military career.

Both “characters” in these autobiographies experience moments of

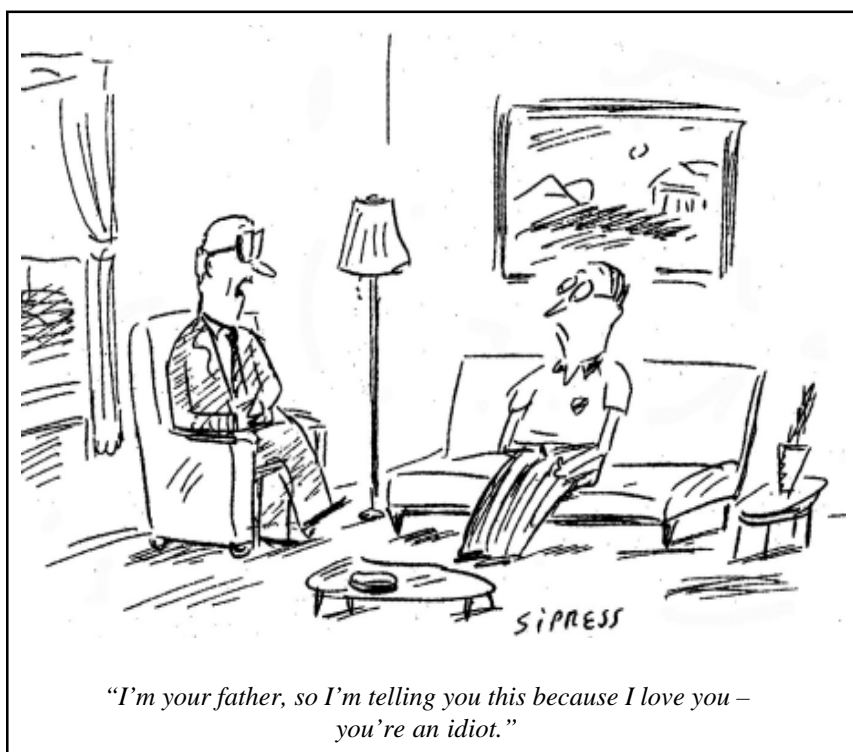


“If you don’t like it you can always use it as another example of how I have no idea who you really are.”

personal insight that they see as critical in making them who they are. McCain's experience came during his captivity in a North Vietnamese prison camp, after being shot down during an air attack in the Vietnam War. Having yielded to his captives' pressure and signed a confession, he stiffened and stubbornly rejected an offer from his captives of early release, insisting that he would remain in captivity until fellow prisoners were released before him. Glory, he learned, belonged "to the act of being constant to something greater than yourself, to a cause, to your principles, to the people on whom you rely, and who rely on you in return." For Obama the moment of insight came in Kenya, after hearing the story of his father's family. It was then that he realized his identity was not something handed down in one piece, but a composite of many different experiences and histories. While visiting a university professor whose daughter spoke several languages but not always separately, he heard the mother explain why she no longer corrected her daughter's multilingual conversations. "I'm less interested in a daughter who's authentically African," he recorded her saying, "than one who is authentically herself." That seems to have stuck with Obama. (*Chronicle of Higher Education*, 9/19/08)

Herbert Leibowitz, professor of English at the City University of New York, wrote in *Fabricating Lives: Explorations in American Autobiography* (1989), "The grand theme of American autobiography, almost its fixation, is the quest for distinction." Both McCain's and Obama's autobiographical personas are celebrations of the distinctive characteristics that each author believes he has developed. For McCain, that distinction revolves around loyalty, faith, honor and courage, attributes that would be expected of a military officer, especially one who is the son of a demanding military officer. For Obama, that distinction revolves around accepting his hybrid identity and a recognition that racial categories can come undone and new formations rise in their place, a postmodern, evolutionary perspective one might expect of a professor of

constitutional law, which he was for 10 years. Thus, when McCain insists on staying the course in Iraq, he is being true to the identity he carved out in his autobiography, and when Obama speaks of change, he, too, is being true to the identity he molded in his autobiography. Conversely, McCain goes against his autobiographical persona when he speaks of forging change, as does Obama when he takes a strident partisan position.



Different Approaches, Different Errors

Beyond their own versions of their lives, a different kind of question emerges: How do the two candidates think? Are they prone to the errors that Groopman outlines in *How Doctors Think*?

McCain noted in his autobiography, "Often, my haste is a mistake," and as Groopman writes, "Haste makes cognitive errors." McCain no doubt trusts his instincts, perhaps using personal heuristics to make quicker decisions in some areas. Yet his "hasty" decision to bring Sarah Palin onto the Republican Party ticket drew a positive response in the days after the selection. Other such decisions have caused him political problems over time. For instance, he insisted that Saddam

Hussein had weapons of mass destruction (**confirmation bias**), that the fundamentals of the financial system are solid (**affective error**) and that the U.S. should react militarily to Russia's aggression in Georgia (**availability cascade**). Based on his autobiography, however, McCain would probably be most prone to commit the **confirmation bias** and the **affective error** – staying loyal to a position in the face of contrary evidence and wanting something good or positive to be true even when the evidence suggests otherwise.

According to his former constitutional-law students at the University of Chicago, Obama is a “ruthless pragmatist,” someone who pushes hard to reach a practical solution, perhaps overlooking more effective and less popular views (**heuristics** and/or **affective error**). His former students speak of his focus on self-examination as well as on new facts. “It was drilled into us from Day 1 [in Obama's class] that you examined your biases and inclinations,” explained his student, who is now practicing law in Houston. “Obama,” added another student, who is currently comptroller of the state of Illinois, “had a way of getting you to think and talk about issues people generally don't like to think and talk about.” Such a focus on avoiding biases and weighing information kept Obama from succumbing to the availability cascade that surrounded the invasion of Iraq. (*New York Times Magazine*, 9/21/08)

Obama would likely be most vulnerable to the **commission bias**, the need to act. He is not instinctive like McCain and is heavily dependent on deliberation and systematic thinking, which can make him seem indecisive, especially when compared to the instinctive reactions of McCain and others. But because Obama's life experiences taught him to believe that change is part of living and that personal identity evolves, he would likely favor doing something over doing nothing when confronted with a problem.

In this regard, the two presidential candidates represent opposite sides of the two categories of human responses to uncertainty: reasoned/cognitive (Obama) and instinctive/emotive (McCain). Needless

to say, this distinction does not mean that McCain never uses reason or that Obama never depends on instincts or emotions when making decisions. Rather, it says that the way the two have operated and the way they have described themselves suggest they are more comfortable with their distinct approaches to decision-making.



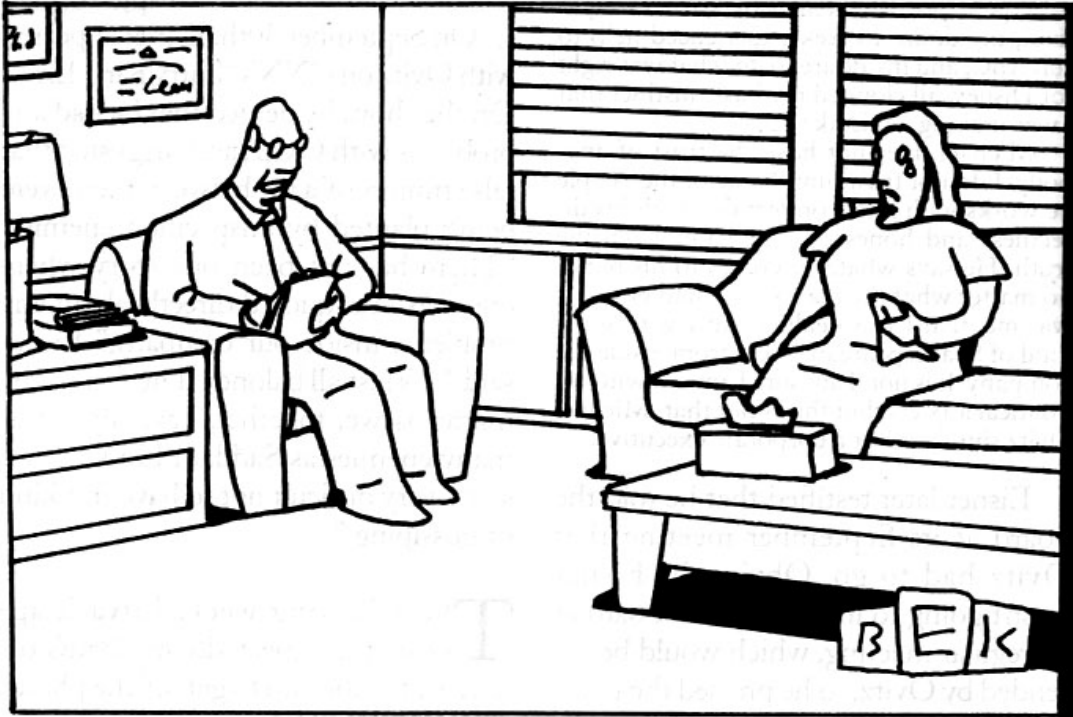
Now What Are You Thinking?

Most of the economic news swirling around the country focuses on what Washington is going to do to help Wall Street and others affected by the collapse of the real-estate market. Issues revolving around **what leaders are doing** differ substantively and qualitatively from concepts involving **how leaders think**. As noted earlier, leaders dealing (or not dealing) with the current financial crisis have committed every kind of thinking error that Groopman identifies as dangerous for doctors to commit. One can imagine similar kinds of errors being committed now as those in Washington and New York discuss various plans to salvage the teetering financial industry. The effects of such errors will not be seen for months.

Both John McCain and Barack Obama have committed some of those errors as well. Their autobiographies suggest that the lives they have led

affect the way they think, and how they think affects the way they approach problems. McCain is quick, intuitive and instinctive, while Obama is methodical, rational and inductive, suggesting that this election may

come down to what voters think about thinking: When confronting new kinds of uncertainty and risks, do citizens favor instinctive and reasoning responses? Moreover, what do they prefer in their leaders?



“Hey, I’m just messing with your head.”