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When Our Brains Short-Circuit

By NICHOLAS D. KRISTOF

Our political system sometimes produces such skewed results that it's difficult not to blame bloviating politicians. But maybe the deeper problem lies in our brains.

Evidence is accumulating that the human brain systematically misjudges certain kinds of risks. In effect, evolution has programmed us to be alert for snakes and enemies with clubs, but we aren't well prepared to respond to dangers that require forethought.

If you come across a garter snake, nearly all of your brain will light up with activity as you process the "threat." Yet if somebody tells you that carbon emissions will eventually destroy Earth as we know it, only the small part of the brain that focuses on the future — a portion of the prefrontal cortex — will glimmer.

"We humans do strange things, perhaps because vestiges of our ancient brain still guide us in the modern world," notes Paul Slovic, a psychology professor at the University of Oregon and author of a book on how our minds assess risks.

Consider America's political response to these two recent challenges:

1. President Obama proposes moving some inmates from Guantánamo Bay, Cuba, to supermax prisons from which no one has ever escaped. This is the "enemy with club" threat that we have evolved to be alert to, so Democrats and Republicans alike erupt in outrage and kill the plan.

2. The climate warms, ice sheets melt and seas rise. The House scrounges a narrow majority to pass a feeble cap-and-trade system, but Senate passage is uncertain. The issue is complex, full of trade-offs and more cerebral than visceral — and so it doesn't activate our warning systems.

"What's important is the threats that were dominant in our evolutionary history," notes Daniel Gilbert, a professor of psychology at Harvard University. In contrast, he says, the kinds of dangers that are most serious today — such as climate change — sneak in under the brain's radar.

Professor Gilbert argues that the threats that get our attention tend to have four features. First, they are personalized and intentional. The human brain is highly evolved for social behavior ("that's why we see faces in clouds, not clouds in faces," says Mr. Gilbert), and, like gazelles, we are instinctively and obsessively on the lookout for predators and enemies.

Second, we respond to threats that we deem disgusting or immoral — characteristics more associated with sex, betrayal or spoiled food than with atmospheric chemistry.

“That’s why people are incensed about flag burning, or about what kind of sex people have in private, even though that doesn’t really affect the rest of us,” Professor Gilbert said. “Yet where we have a real threat to our well-being, like global warming, it doesn’t ring alarm bells.”

Third, threats get our attention when they are imminent, while our brain circuitry is often cavalier about the future. That’s why we are so bad at saving for retirement. Economists tear their hair out at a puzzlingly irrational behavior called hyperbolic discounting: people’s preference for money now rather than much larger payments later.

For example, in studies, most Americans prefer $50 now to $100 in six months, even though that represents a 100 percent return.

Fourth, we’re far more sensitive to changes that are instantaneous than those that are gradual. We yawn at a slow melting of the glaciers, while if they shrank overnight we might take to the streets.

In short, we’re brilliantly programmed to act on the risks that confronted us in the Pleistocene Age. We’re less adept with 21st-century challenges.

At the University of Virginia, Professor Jonathan Haidt shows his Psychology 101 students how evolution has prepared us to fear some things: He asks how many students would be afraid to stand within 10 feet of a friend carrying a pet boa constrictor. Many hands go up, although almost none of the students have been bitten by a snake.

“The objects of our phobias, and the things that are actually dangerous to us, are almost unrelated in the modern world, but they were related in our ancient environment,” Mr. Haidt said. “We have no ‘preparedness’ to fear a gradual rise in the Earth’s temperature.”

This short-circuitry in our brains explains many of our policy priorities. We Americans spend nearly $700 billion a year on the military and less than $3 billion on the F.D.A., even though food-poisoning kills more Americans than foreign armies and terrorists. We’re just lucky we don’t have a cabinet-level Department of Snake Extermination.

Still, all is not lost, particularly if we understand and acknowledge our neurological shortcomings — and try to compensate with rational analysis. When we work at it, we are indeed capable of foresight: If we can floss today to prevent tooth decay in later years, then perhaps we can also drive less to save the planet.

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