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The Roots of Fear

The evolutionary primacy of the brain's fear circuitry makes it more powerful than reasoning circuits.

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For the candidate whose slogans include "Got Hope?" the question was so perfect he might have dreamed it up himself. At an appearance this month at Wartburg College in Waverly, Iowa, a foreign student asked Barack Obama about the fear that has gripped the American psyche since September 11, 2001, and which a number of politicians are hoping to ride to victory. A recent Mitt Romney mailing in New Hampshire, for instance, shows a chain-link fence and warns that the next president's "policies on illegal immigrants will define America for generations to come." A new Tom Tancredo ad declares that Central American gangs "now on our soil" are "pushing drugs" and "raping kids." And Rudy Giuliani rarely misses a chance to evoke images of crashing planes, collapsing towers and 2,973 dead Americans.

So when the student asked about America's climate of fear, Obama pounced. "We have been operating under a politics of fear: fear of terrorists, fear of immigrants, fear of people of different religious beliefs, fears of gays that they might get married and that somehow that would affect us," he declared. "We have to break that fever of fear ... Unfortunately what I've been seeing from the Republican debates is that they are going to perpetuate this fearmongering ... Rudy gets up and says, 'They are trying to kill you' ... It's absolutely true there are 30,000, 40,000 hard-core jihadists who would be happy to strap on a bomb right now, walk in here and blow us all up. You can't negotiate with those folks. All we can do is capture them, kill them, imprison them. And that is one of my pre-eminent jobs as president of the United States. Keep nuclear weapons out of their hands."

The fact that a candidate whose campaign is built on optimism and a positive message is not above evoking terrifying images of suicide bombers and nuclear bombs—and doing so two breaths after he denounces fearmongering—reveals the power of fear to sway voters. Half a century of research has shown that fear is one of the most politically powerful emotions a candidate can tap, especially when the fears have a basis in reality; jihadists, of course, are indeed bent on suicide bombings. Candidates who exploit voters' fears and anxieties grab attention in a way that other appeals, such as those to experience, competence, vision or even anger (a close second to fear in its power to move voters) do not. "In politics, the emotions that really sway voters are hate, hope and fear or anxiety," says political psychologist Drew Westen of Emory University, author of the recent book "The Political Brain: The Role of Emotion in Deciding the Fate of the Nation." "But the skillful use of fear is unmatched in leading to enthusiasm for one candidate and causing voters to turn away from another."

That qualifying "skillful" underlines psychologists' more-sophisticated understanding of the use of fear in politics. New studies show that the genie of fear is most effective if let out of its bottle with more finesse than by yanking off the stopper and wildly flinging the contents all over Iowa and New Hampshire. Through surveys of voters, lab experiments that simulate voting and, now, brain-imaging studies that pinpoint which regions switch on when people weigh political decisions, a new generation of political psychologists and campaign strategists is refining the understanding of the power of fear. The result is new insights into how voters respond to having their anxieties stoked; how playing to fears and anxieties can affect voters' views on issues seemingly unrelated to those that incite fear; how fear is wielded most effectively as a scalpel rather than a cudgel, and how the power of fear can be squared with the political truism that the candidate who best

projects hope tends to win.

It's as pointless for Obama or anyone else to rail against the use of fear to sway voters as it is to bemoan humans' inability to hear pitches as high as dogs can. The brain structure that processes perceptions and thoughts and tags them with the warning "Be afraid, be very afraid!" is the amygdala. Located near the brain's center, this almond-shaped bundle of neurons evolved long before the neocortex, the seat of conscious awareness. There is good reason for the fear circuitry to be laid down first, explains neuroscientist Joseph LeDoux of New York University. Any proto-humans who lacked a well-honed fear response did not survive long enough to evolve higher-order thinking; unable to react quickly and intuitively to rustling bushes or advancing shadows, they instead became some carnivore's dinner. Specifically, fear evolved because it promotes survival by triggering an individual to respond instantly to a threat—that is, without cogitating on it until the tiger has pounced. Human brains that detect fear and act on it "behave in ways that are ultimately in our interest," writes Westen in "The Political Brain." "They lead us to protect ourselves and our family."

The evolutionary primacy of the brain's fear circuitry makes it more powerful than the brain's reasoning faculties. The amygdala sprouts a profusion of connections to higher brain regions—neurons that carry one-way traffic from amygdala to neocortex. Few connections run from the cortex to the amygdala, however. That allows the amygdala to override the products of the logical, thoughtful cortex, but not vice versa. So although it is sometimes possible to think yourself out of fear ("I *know* that dark shape in the alley is just a trash can"), it takes great effort and persistence. Instead, fear tends to overrule reason, as the amygdala hobbles our logic and reasoning circuits. That makes fear "far, far more powerful than reason," says neurobiologist Michael Fanselow of the University of California, Los Angeles. "It evolved as a mechanism to protect us from life-threatening situations, and from an evolutionary standpoint there's nothing more important than that."

Fear is not only more powerful than reason, however. It is also (sometimes absurdly) easy to evoke for reasons that also lie deep in our evolutionary past. Reacting to a nonexistent threat, such as fleeing from what you thought was a venomous snake that turned out to be a harmless one, isn't as dangerous as failing to react to actual threats. The brain is therefore wired to flinch first and ask questions later. As the 18th-century political theorist Edmund Burke observed, "No passion so effectually robs the mind of all its powers of acting and reasoning as fear." And when a candidate reminds voters of their fears about one issue, it can have a powerful spillover effect: "Fear that you cannot provide for your family because of an economic downturn can translate into hatred for immigrants," notes Emory's Westen.

The results of targeting the amygdala in a way that overrides the thoughtful cortex can be ludicrous or tragic, but frequently irrational. In a classic experiment, scientists compared people's responses to offers of flight insurance that would cover "death by any cause" or "death by terrorism." The latter, of course, is but a small subset of the former. Yet the specificity of the word "terrorism," combined with the stark images the word evokes, triggers the amygdala's fear response in a way that "by any cause" does not. Result: people are willing to spend more for terrorism insurance than death-by-any-cause insurance. The power of fear to overrule reason would have come as no surprise to the late Supreme Court justice Louis Brandeis. When "men feared witches," he wrote in 1927, they "burned women."

Fear makes people more likely to go to the polls and vote, which reflects the power of negative emotions in general. "Negative emotions such as fear, hatred and disgust tend to provoke behavior more than positive emotions such as hope and happiness do," says Harvard University psychology researcher Daniel Gilbert. Perhaps paradoxically, the power of fear to move voters can be most easily understood when it fails to—that is, when an issue lacks the ability to strike terror in citizens' hearts. Global warming is such an issue. Yes, Hurricane Katrina was a terrifying example of what a greenhouse world would be like, and Al Gore's "An Inconvenient Truth" scared some people into changing their light bulbs to energy-miserly models. But barely 5 percent of voters rank global warming as the issue that most concerns them. There is little public clamor to spend the kind of money that would be needed to change our energy mix to one with a smaller carbon footprint, or to make any real personal sacrifices.

A big reason is that global warming, as an issue, lacks the characteristics that trigger fear, says Gilbert. The human brain has evolved to fear humans and human actions (such as airplane bombers), not accidents and impersonal forces (carbon dioxide, even when it is the product of

human activities). If global warming were caused by the nefarious deeds of an evil empire—lofting military satellites that deliver carbon dioxide into the stratosphere, say, rather than the "innocent" actions of people heating their homes and driving their children to school—"the war on warming would be this nation's top priority," Gilbert wrote in the Los Angeles Times.

Besides needing that human component, events loom scariest when they pose a threat next week, not next decade or beyond. Climate change is already here, but the worst of it would arrive if the Antarctic and Greenland ice sheets melt, which is decades away. "The brain is adapted to deal with the here and now," says Gilbert—the lethal-tusked mastodon *right over there*, not the herd of them that will migrate through your encampment next spring. It's little wonder, then, that warnings about the eventual insolvency of Medicare or Social Security fail to move voters, and that global warming "fails to trip the brain's alarm," he says. But the prospect of illegal immigrants' changing the face of neighborhoods today does.

The primitive nature of fear means that it can be triggered most powerfully not by wordy arguments but by images that make a beeline for the brain's emotion regions. In Lyndon Johnson's 1964 "daisy" commercial, for instance, a little girl plucking the petals off a flower suddenly hears a boom and sees, in the distance, a mushroom cloud. The voice-over intones, "These are the stakes ... Vote for President Johnson"—and not, implicitly, nuclear-war-mongering Barry Goldwater. The power of the now iconic ad was such that LBJ's campaign ran it only once. Not only was the ad endlessly discussed, but the mushroom-cloud image was firmly embedded in voters' memories.

George W. Bush's media strategists used imagery to evoke fear effectively in the closing weeks of the 2004 campaign when they aired the "wolf" ad. It showed a pack of hungry-looking wolves in a dark forest, apparently about to attack, as a dulcet-toned female voice claimed that "John Kerry and the liberals in Congress voted to slash America's intelligence operations. By \$6 billion. Cuts so deep they would have weakened America's defenses. And weakness attracts those who are waiting to do America harm." There is no question that raising primal fears of weakness, and scary carnivores with big teeth, pushed voters' fear buttons much more effectively than a straight-on recitation of Kerry's voting record would have.

Words that evoke images rather than abstractions are powerful triggers of fear, too. When making the case for invading Iraq in 2003, Bush asked America to "imagine with me this new fear"—as he raised the specter of the mushroom cloud, as LBJ had. "The key to emotional language is its simplicity and clarity," says Republican pollster Frank Luntz. "It has to be immediately believable and authentic. If it requires you to think, it's less powerful; if it requires you to explain, it's less powerful." The most effective fear-inducing language and images speak to the amygdala, not the cortex.

The "Willie Horton" ad that helped George H.W. Bush win the White House 12 years before his son stands out for its then-pioneering use of images, verbal and visual, to bore its way directly into the electorate's amygdala. Horton was serving a life sentence for murder in Massachusetts when he received a weekend pass from prison. While free, he stabbed a man and raped a woman, something Bush's ad tied to the prison-furlough policies of his opponent, Massachusetts Gov. Michael Dukakis. Brain-scanning techniques such as functional magnetic resonance imaging show that when whites—including those who profess not to be racist—view black faces, the more Afrocentric the face (darker skin, broader nose, Afro haircut), the more active the amygdala. Showing Horton's face was therefore much more powerful, and a greater incitement to fear, than just talking about him.

Fear fades, of course. Even New Yorkers who ran for their lives as the cloud of debris tore through the streets of the financial district on September 11 don't feel the acute terror they did in the immediate aftermath of the attacks. But memories of profoundly frightening experiences differ from other memories in a way that candidates can exploit. Most memories come with a date stamp, telling us when the event occurred. But when we store a terrifying memory, that mechanism fails. As a result, when we recall the memory, the event feels recent or even as if it were happening in the present. That's good news for Giuliani. He regularly invokes September 11, telling audiences that another attack is a virtual certainty ("I think probably the way I have to say it is, *when* we're attacked") and using vivid imagery to bring listeners back to that day. One of his fund-raisers in California asked supporters to contribute \$9.11. (The campaign disavowed that ploy but did not return the money.)

Candidates who rely on crude scare tactics may be in for a surprise, however. New research has brought a more nuanced understanding of the power of fear: it can drive voters away from the protective authority figures who seem like its logical beneficiaries. Just days before Spanish voters went to the polls in March 2004, terrorists linked to Al Qaeda bombed four trains in Madrid, killing 191 people. Until then, polls had shown the ruling Conservatives leading their Socialist challengers. But when the ballots were counted, the Socialists had won, not the hard-liners who had enlisted in the U.S. War on Terror by sending troops to Iraq. That outcome reflected, in part, what happens when voters are reminded of the inevitability of death even by something as seemingly innocuous as passing a funeral cortege, let alone by 191 murdered commuters. That reminder makes people "go to ground" psychologically. That is, they become more committed to and identify more strongly with something that will endure long after they are gone. That can be an ideology, or it can be a larger entity such as one's nation, ethnicity or religion. In Spain, enough voters retreated to a Eurocentric, nationalistic world view opposing America's invasion of Iraq to tip the electoral balance.

Americans got their own brutal reminder of mortality before the 2004 election, but in this case American nationalism benefited the authority figure who had most effectively positioned himself as the nation's protector. In the final days of the race, most polls showed Kerry leading Bush by about 2 percentage points nationally and edging ahead in such key states as Ohio (50-46), Florida (49-45) and Iowa (48-47, according to the CNN/Gallup poll). On the Friday before voters went to the polls, however, the Arabic satellite channel Al-Jazeera broadcast excerpts from a videotape of Osama bin Laden speaking into the camera to Americans, proudly taking responsibility for September 11 and patronizingly explaining "the best way to avoid another Manhattan." Clips of the diatribe were broadcast repeatedly on American stations over the weekend and described in newspapers. Four days later, the president won re-election. Ohio, Florida and Iowa put him over the top. "When we're insecure, we want our leaders to have what's called an 'unconflicted personality'," says political psychologist Jeff Greenberg of the University of Arizona. "Bush was very clear in his beliefs and had no doubts, but Kerry was painted as a flip-flopper. Bush had another key advantage: he emphasized the greatness of the nation." Voters whose fears of terrorism were reignited by the bin Laden tape, and who reacted by seeking solace in an entity that would survive their own inevitable demise, found it in the idea of a strong, enduring America as promised by Bush.

That real-world observation has been replicated in lab studies. In one experiment Greenberg and colleagues ran during the 2004 campaign, volunteers who completed a questionnaire that reminded them about their own inevitable death (how thoughts of their own death made them feel and what they thought would happen to them physically after they died) expressed greater support for Bush than voters of similar leanings who were not reminded of mortality. The researchers also found that subliminal reminders of death increased support for Bush (and decreased support for Kerry) even among liberals. It's not clear if such responses in the lab would endure in an actual voting booth. So perhaps one should not be too cynical about the decision by the Department of Homeland Security to raise the terror-threat level on Election Day 2004. "Political use of fear is not something new," says NYU's LeDoux. "But certainly the ante has been upped. We've gone from 'vote for me or you'll end up poor' to 'vote for me or you'll end up dead'."

The effect of fear is not limited to obvious issues such as homeland security. It spills into other political judgments: fear drives voters to cling more desperately to all of their core values. For example, in one experiment volunteers who identified themselves as political conservatives were given reminders of mortality. After that prompt, they rated gay marriage, abortion and "sexual immorality" as greater threats to the nation than they had before the reminders. "When you remind people of their mortality, they defend their world view more strongly and reject those who challenge it," says Greenberg. By laying a foundation of fear and then raising cultural issues, the GOP in 2004 got more traction from the latter than they would have without the former.

That doesn't mean that evoking voters' fears will cause them all to support, say, security measures that trample civil liberties or American exceptionalism at the expense of international diplomacy. If a voter's world view values human rights and global cooperation, then activating his amygdala will make him more supportive of those traditionally liberal views. That response may have pushed voters into the Democrats' column in the 2006 elections despite Bush's warning that "the Democrat approach" means that "the terrorists win and America loses." Paradoxically, by playing to fears so crudely, Bush may have driven enough voters to embrace views associated with the Democrats to give them control of Congress.

The failure of brute-force scare tactics, of course, reflected the times, too: by 2006, more voters than in 2004 were fed up with the Iraq War and terrorism alerts that had begun to sound like crying wolf. But something more fundamental was at work. Simply put, candidates do themselves little good by reminding voters of their fears and leaving it at that, for evoking fears without also raising hopes is rarely a winning strategy. "Successful candidates understand voters' fears and anxieties and speak to it," says Matthew Dowd, a former political strategist for Bush and now a contributor to ABC News. "Clinton did this in 1992, saying he understood voters' anxieties about the economy better than Bush 41 did, and [George W.] Bush did it in 2004 when he said he understood their fears and anxieties related to terrorism and security." To close the deal, these successful candidates took the next step: Bill Clinton offered hope by vowing to address economic problems more competently than George H.W. Bush was doing, and the current president offered hope when he said he would protect Americans better than John Kerry could or would. "Politicians who speak only to the fear and anxiety part without transitioning to something more optimistic don't win," says Dowd. "You can't leave voters stuck in their fear and anxiety. If you tear the bandage off the wound, you need to salve it." Candidates who offer that salve have been moving up in the polls. Obama paints himself as a candidate of hope, recognizing voters' fears about, say, the fragility of health insurance but, crucially, taking the next step by offering a promise that things will improve if he wins the White House.

It works both ways. Just as fear without hope is seldom a winning strategy, so failing to remind voters of their fears can leave even the most optimistic candidate on the short end of the ballot count. "Voters need to believe you understand their fears and anxieties," says Dowd. "If you just give optimistic speeches, voters don't feel that you understand their circumstances." Obama's promises about universal health coverage will therefore gain traction only if he deftly invokes voters' fears about not having or losing coverage. John Edwards, after a period in which he came across as more angry than optimistic, has in recent weeks returned to his message of hope, particularly on the economic front. But if his "America Rising" message clicks, it will be in large part because he has long played to voters' fears of an economic downturn, or of falling into the poor one of his "two Americas."

A big unknown in this presidential race is how fear—of terrorism, of illegal immigration, of an economic downturn—will shape voters' decisions. Psychologists don't even agree on how another terrorist attack would affect voters: make them turn from the party of the president who failed to prevent it, or make them embrace Bush's GOP as the current symbol of national power and pride? What's clear, though, is that continued exposure to a threat that never materializes diminishes its hold on the amygdala. "Slowly, when what we have feared does not come to pass, our logic turns back on," says NYU's LeDoux. "The prefrontal cortex tells the amygdala to stand down." In Bush's final appeal for his party's candidates in the 2006 midterm elections, he said, "If you want this country to do everything in its power to protect you ... vote Republican." That surely moved some voters into the GOP column, but for the majority—who returned control of Congress to the Democrats—the power of fear had dissipated. Something similar may partly explain why Giuliani's polling numbers have been falling recently, even as he continues to raise fears of the country's vulnerability to attack, and why Edwards reversed course to emphasize optimism once again even as he subtly reminds voters of all they are right to be afraid of. Ham-fisted scare tactics may have lost their power. But a candidate who neglects the fear factor should have a concession speech ready to go.

With Anne Underwood, Richard Wolffe and Suzanne Smalley on the campaign trail, and Jeneen Interlandi

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