

The Peacemakers • Cosmic Art • Transatlantic Troubles

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The Power of Exercise

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friendly. On the other hand, spending the money in a small, friendly state may be a waste of political capital.

Though there may be many reasons why small, uncompetitive states receive less money—including, perhaps, the fact that they expect less and so don't even apply—the political ramifications stand out to Reeves. "My results show that in these (marginal) cases, small, non-competitive states receive less help because they are just not that important in terms of an election," he says. "If a major tornado runs through the state, they will get aid. But if it's something marginal—a flood, or a windstorm that doesn't cause as much damage—I think those states should be a little irritated." ~BRIAN TARCEY

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THE MINDS, THEY ARE A-CHANGIN'

Pliable Paradigms

IF EVER someone understood the challenges of changing people's minds, it was Charles Darwin. After doing his research in the Galápagos Islands in the 1830s, Darwin spent the next 20 years developing his theory of evolution. He was slow to publish his ideas. Because they contradicted the prevailing creationist view, Darwin realized just how much they would offend fellow scientists and the general public, including his own devoutly Christian wife. In fact, when *On the Origin of Species* eventually appeared in 1859, the backlash was immediate. Scientific colleagues, the clergy, and the public all initially rejected his theory. But over time, thanks to the efforts of vocal defenders like Thomas Huxley, scientists began to change their

minds and accept Darwin's ideas.

What tipped the balance in Darwin's favor? For that matter, how does a CEO get his employees to adopt new quality standards, or a wife convince her husband to quit smoking? How did modernists like Stravinsky, Picasso, and T.S. Eliot overthrow the romanticism of the nineteenth century? Cognitive psychologist Howard Gardner, Hobbs professor of cognition and education at the Graduate School of Education, says the ability to change someone's mind (including your own) depends on seven factors, which he calls "levers." "The more you understand about the levers," he says, "the more you ought to be able to bring about mind-change."

Gardner describes these levers in a forthcoming book, *Changing Minds: The Art*

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and *Science of Changing Our Own and Other People's Minds* (Harvard Business School Press). They are reason; research (collection of data to support an argument); resonance (the ability of a person's story to strike a chord with listeners); representational re-description ("a highfalutin term that means taking the key idea and presenting it in lots of different ways," Gardner explains); real world events; resistance (the process of understanding an audience's opposition); and resources and rewards (the financial means to make a change happen or provide incentives to those who adopt a change). If you have only a brief window in which to sway someone, choose the most effective levers for your situation, Gardner says. In the case of "people who deal with ideas," including artists and scientists like Darwin, understanding the nature of an audience's resistance to a new idea—say, their devotion to a creation story—is particularly important.

Presidential candidates take note: the lever of resonance plays an important role for national leaders. Gardner believes Margaret Thatcher excelled at this. She convinced British voters in 1979 to elect her and accept her plans to reinvigorate Britain because she had a compelling message that echoed her own life history. The daughter of grocers, Thatcher earned a spot at Oxford and later worked her way up the ranks of the Conservative Party leadership. The story not only resonated with the public, but reinforced her message that Britain had lost its way and required hard work and vision to get back on track.

Drawing on decades of research in cognitive psychology, Gardner develops a framework that taps into his previous thinking about leadership and creativity,

and his well-known theory of multiple intelligences. For example, he says teachers change minds most effectively when they convey ideas in multiple ways—like



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MR. BERGH TO THE RESCUE
 THE DECEITFUL GORILLA. "That Man wants to claim my Pedigree. He says he is one of my Descendants."
 Mr. BERGH. "Now, Mr. DARWIN, how could you insult him so?"

In an 1871 Thomas Nast cartoon, ASPCA founder Henry Bergh admonishes Darwin for slighting a gorilla by theorizing that man may be descended from the ape.

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telling stories, showing charts, and leading hands-on activities—to engage different intelligences.

Gardner admits that he's most excited by "the intimate aspects of mind-changing" in one-on-one relationships, such as that between a therapist and patient, an employer and employee, or two old friends. Here again, resonance—the ability to create a bond with another person and take the temperature of that connection—plays a key role. Gardner had been wondering if resonance could be built across a deep divide when he came upon the case of Thomas Jefferson and John Adams, who were bitter political rivals in the decades after the American Revolution. In their seventies, the two men famously changed their minds and reconciled, largely, he notes, by emphasizing their shared experiences.

The most intimate mind-changes may be those that occur in our own heads.

Here Gardner focused on monumental shifts, as when a government leader announces a major policy alteration. "People get emotionally attached to certain ideas, or publicly committed to certain ideas, and that makes self-mind-change especially difficult," he notes. He was particularly fascinated by the case of anthropologist Lucien Levy-Bruhl, who argued when he was young that the minds of primitive humans differed substantially from those of modern humans. During the next 50 years, however, Levy-Bruhl examined his arguments and in his private journals made an honest accounting of his errors and shifts in opinion—significant changes that occurred thanks to the lever Gardner calls reason.

He notes one additional factor—birth order—that may play a role in the ability to change one's mind. Some research suggests that, throughout history, first-born children have been slow to accept new

ideas, Gardner says (see "Born to Rebel," July-August 1995, page 10). "You find that later-borns are much more likely to embrace radically new ideas in science like Darwinism, radically new ideas in religion, like Protestantism, or radically new ideas in politics, like communism."

If you're stuck trying to win over a group of first-borns, you have all the more reason to think about which levers will be most convincing. Even in the best circumstances, Gardner reiterates, mind-change isn't a simple, or swift, proposition. He summons up the example of the New Testament figure who converted to Christianity only after a sudden bout of blindness. "For every Saul on the way to Damascus who has a real change of mind," he says, "there are hundreds of people who don't." ~ERIN O'DONNELL

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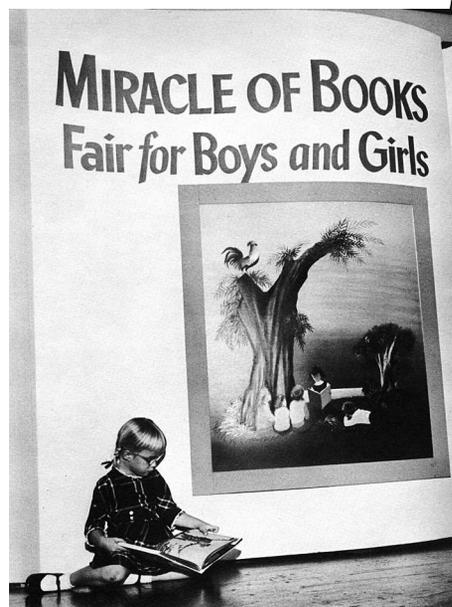
I'M, LIKE, READING

Kids Turn New Pages

PARENTS in the 1960s generally expected their children to be passive observers who did as they were told.

Today's parents are more likely to encourage kids to participate in the world around them, express their ideas, and render judgments. Evidence of this sea change turns up in an unexpected and largely unexamined medium: children's nonfiction books, reports Jay Gabler, Ed.M.'98, M.A.'00, a sociology graduate student whose doctoral dissertation examines various trends in the subject matter of children's nonfiction books between 1960 and 2000.

Children's books, he explains, have always "both explicitly and implicitly embodied social views regarding the world generally and childhood specifically. In the views of parents and publishers, childhood, over the past several decades, has come to be increasingly



associated with an autonomous, thinking individual who can and should make decisions of his or her own—as opposed to having his or her actions dictated by tradition and authority."



Both photographs are from a souvenir guide to the 1966 "Miracle of Books" fair in Chicago.

Using the R.R. Bowker Company's *Subject Guide to Books in Print* (a comprehensive reference that codes each title by subject), Gabler found that juvenile nonfiction subjects have expanded since 1960 to include topics that cast the child as an autonomous and empathetic individual. Conversely, subjects that contradict the idea of childhood autonomy, such as social customs and manners, have waned. "These [latter] books treat the child as a receiver of knowledge," Gabler writes in a paper he presented at the Third World Congress of the International Toy Research Association in 2002. "They explicitly *tell the child what to do*." Nowadays, books on ethics (*It's Up to You...What Do You Do?*) have sup-