

## CONTENTS

*List of Illustrations* ix

*Acknowledgments* xi

*Introduction* xiii

1	The Case for Gullibility	1
2	Vigilance in Communication	15
3	Evolving Open-Mindedness	30
4	What to Believe?	47
5	Who Knows Best?	63
6	Who to Trust?	78
7	What to Feel?	95
8	Demagogues, Prophets, and Preachers	113
9	Propagandists, Campaigners, and Advertisers	128
10	Titillating Rumors	146

viii CONTENTS

11	From Circular Reporting to Supernatural Beliefs	166
12	Witches' Confessions and Other Useful Absurdities	181
13	Futile Fake News	199
14	Shallow Gurus	217
15	Angry Pundits and Skillful Con Men	240
16	The Case against Gullibility	257

*Notes* 273

*References* 307

*Index* 351

# 1

## THE CASE FOR GULLIBILITY

FOR MILLENNIA, people have accepted many bizarre beliefs and have been persuaded to engage in irrational behaviors (or so it appears). These beliefs and behaviors gave credence to the idea that the masses are gullible. In reality I believe the story is more complicated (or even completely different, as we'll see in the following chapters). But I must start by laying out the case for gullibility.

In 425 BCE, Athens had been locked for years in a mutually destructive war with Sparta. At the Battle of Pylos, the Athenian naval and ground forces managed to trap Spartan troops on the island of Sphacteria. Seeing that a significant number of their elite were among the captives, the Spartan leaders sued for peace, offering advantageous terms to Athens. The Athenians declined the offer. The war went on, Sparta regained the edge, and when a (temporary) peace treaty was signed, in 421 BCE, the terms were much less favorable to Athens. This blunder was only one of a series of terrible Athenian decisions. Some were morally repellent—killing all the citizens of a conquered city—others were strategically disastrous—launching a doomed expedition to Sicily. In the end, Athens lost the war and would never regain its former power.

In 1212, a “multitude of paupers” in France and Germany took the cross to fight the infidels and reclaim Jerusalem for the Catholic Church.<sup>1</sup> As many of these paupers were very young, this movement was dubbed the Children’s Crusade. The youth made it to Saint-Denis, prayed in the cathedral, met the French king, hoped for a miracle. No miracle happened. What can be expected of an army of untrained, unfunded, disorganized preteens? Not much, which is what they achieved: none reached Jerusalem, and many died along the way.

In the mid-eighteenth century the Xhosa, a pastoralist people of South Africa, were suffering under the newly imposed British rule. Some of the Xhosa believed killing all their cattle and burning their crops would raise a ghost army that would fend off the British. They sacrificed thousands of heads of cattle and set fire to their fields. No ghost army arose. The British stayed. The Xhosa died.

On December 4, 2016, Edgar Maddison Welch entered the Comet Ping Pong pizzeria in Washington, DC, carrying an assault rifle, a revolver, and a shotgun. He wasn’t there to rob the restaurant. Instead, he wanted to make sure that no children were being held hostage in the basement. There had been rumors that the Clintons—the former U.S. president and his wife, then campaigning for the presidency—were running a sex trafficking ring, and that Comet Ping Pong was one of their lairs. Welch was arrested and is now serving a prison sentence.

## BLIND TRUST

Scholars, feeling superior to the masses, have often explained these questionable decisions and weird beliefs by a human disposition to be overly trusting, a disposition that would make the masses instinctively defer to charismatic leaders regardless of

their competence or motivations, believe whatever they hear or read irrespective of its plausibility, and follow the crowd even when doing so leads to disaster. This explanation—the masses are credulous—has proven very influential throughout history even if, as will soon become clear, it is misguided.

Why did the Athenians lose the war against Sparta? Starting with Thucydides, chronicler of the Peloponnesian War, many commentators have blamed the influence of demagogues such as Cleon, a parvenu “very powerful with the multitude,” who was deemed responsible for some of the war’s worst blunders.<sup>2</sup> A generation later, Plato extended Thucydides’s argument into a general indictment of democracy. For Plato, the rule of the many unavoidably gives rise to leaders who, “having a mob entirely at [their] disposal,” turn into tyrants.<sup>3</sup>

Why would a bunch of youngsters abandon their homes in the vain hope of invading a faraway land? They were responding to the calls for a new crusade launched by Pope Innocent III, their supposed credulity inspiring the legend of the Pied Piper of Hamelin, whose magic flute grants him absolute power over all the children who hear it.<sup>4</sup> People’s crusades also help explain the accusations that emerged in the Enlightenment, by the likes of the Baron d’Holbach, who chastised the Christian Church for “deliver[ing] mankind into [the] hands of [despots and tyrants] as a herd of slaves, of whom they may dispose at their pleasure.”<sup>5</sup>

Why did the Xhosa kill their cattle? A century earlier, the Marquis de Condorcet, a central figure of the French Enlightenment, suggested that members of small-scale societies suffered from the “credulity of the first dupes,” putting too much faith in “charlatans and sorcerers.”<sup>6</sup> The Xhosa seem to fit this picture. They were taken in by Nongqawuse, a young prophetess who had had visions of the dead rising to fight the British, and of a

new world in which “nobody would ever lead a troubled life. People would get whatever they wanted. Everything would be available in abundance.”<sup>7</sup> Who would say no to that? Apparently not the Xhosa.

Why did Edgar Maddison Welch risk jail to deliver nonexistent children from the nonexistent basement of a harmless pizzeria? He had been listening to Alex Jones, the charismatic radio host who specializes in the craziest conspiracy theories, from the great Satanist takeover of America to government-sponsored calamities.<sup>8</sup> For a time, Jones took up the idea that the Clintons and their aides led an organization trafficking children for sex. As a *Washington Post* reporter put it, Jones and his ilk can peddle their wild theories because “gullibility helps create a market for it.”<sup>9</sup>

All of these observers agree that people are often credulous, easily accept unsubstantiated arguments, and are routinely talked into stupid and costly behaviors. Indeed, it is difficult to find an idea that so well unites radically different thinkers. Preachers lambaste the “credulous multitude” who believe in gods other than the preachers’ own.<sup>10</sup> Atheists point out “the almost superhuman gullibility” of those who follow religious preachers, whatever their god might be.<sup>11</sup> Conspiracy theorists feel superior to the “mind controlled sheeple” who accept the official news.<sup>12</sup> Debunkers think conspiracy theorists “super gullible” for believing the tall tales peddled by angry entertainers.<sup>13</sup> Conservative writers accuse the masses of criminal credulity when they revolt, prodded by shameless demagogues and driven mad by contagious emotions. Old-school leftists explain the passivity of the masses by their acceptance of the dominant ideology: “The individual lives his repression ‘freely’ as his own life: he desires what he is supposed to desire,” instead of acting on “his original instinctual needs.”<sup>14</sup>

For most of history, the concept of widespread credulity has been fundamental to our understanding of society. The assumption that people are easily taken in by demagogues runs across Western thought, from ancient Greece to the Enlightenment, creating “political philosophy’s central reason for skepticism about democracy.”<sup>15</sup> Contemporary commenters still deplore how easily politicians sway voters by “pander[ing] to their gullibility.”<sup>16</sup> But the ease with which people can be influenced has never been so (apparently) well illustrated as through a number of famous experiments conducted by social psychologists since the 1950s.

### PSYCHOLOGISTS OF GULLIBILITY

First came Solomon Asch. In his most famous experiment he asked people to answer a simple question: Which of three lines (depicted in figure 1) is as long as the first line?<sup>17</sup> The three lines were clearly of different lengths, and one of them was an obvious match for the first. Yet participants made a mistake more than 30 percent of the time. Why would people provide such blatantly wrong answers? Before each participant was asked for their opinion, several participants had already replied. Unbeknownst to the actual participant, these other participants were confederates, planted by the experimenter. On some trials, all the confederates agreed on one of the wrong answers. These confederates held no power over the participants, who did not even know them, and they were providing plainly wrong answers. Still, more than 60 percent of participants chose at least once to follow the group’s lead. A textbook written by Serge Moscovici, an influential social psychologist, describes these results as “one of the most dramatic illustrations of conformity, of blindly going along with the group, even

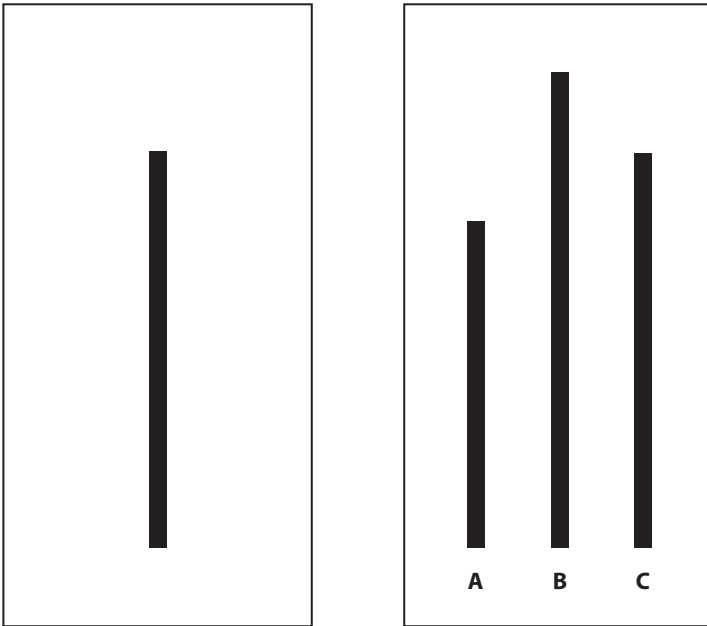


FIGURE 1. The lines in the Asch conformity experiments. *Source:* Wikipedia.

when the individual realizes that by doing so he turns his back on reality and truth.”<sup>18</sup>

After Solomon Asch came Stanley Milgram. Milgram’s first famous study was, like Asch’s experiments, a study of conformity. He asked some of his students to stand on a sidewalk, looking at a building’s window, and counted how many of the people passing by would imitate them.<sup>19</sup> When enough students were looking in the same direction—the critical group size seemed to be about five—nearly all those who passed by followed the students in looking at the building. It was as if people could not help but follow the crowd.

But Milgram is best known for a later, much more provocative experiment.<sup>20</sup> In this study, participants were asked to take



part in research bearing ostensibly on learning. In the lab, they were introduced to another participant—who, once again, was actually a confederate. The experimenter pretended to randomly pick one of the two—always the confederate—to be the learner. Participants were then told the study tested whether someone who was motivated to avoid electric shocks would learn better. The learner had to memorize a list of words; when he made a mistake, the participant would be asked to administer an electric shock.

The participants sat in front of a big machine with a series of switches corresponding to electric shocks of increasingly high voltage. The confederate was led slightly away, to an experimental booth, but the participants could still hear him through a microphone. At first, the confederate did a good enough job memorizing the words, but as the task grew more difficult, he started making mistakes. The experimenter prompted the participants to shock the confederate, and all of them did. This was hardly surprising, as the first switches were marked as delivering only a “slight shock.” As the confederate kept making mistakes, the experimenter urged the participants to increase the voltage. The switches went from “slight shock,” to “moderate shock,” then “strong shock,” and “very strong shock,” yet all the participants kept flipping the switches. It was only on the last switch of the “intense shock” series—300 volts—that a few participants refused to proceed. All the while, the confederate expressed his discomfort. At some point, he started howling in pain, begging the participants to stop: “Let me out of here! You can’t hold me here! Get me out of here!”<sup>21</sup> He even complained of heart problems. Yet the vast majority of participants kept going.

When the “extreme intensity shock” series began, a few more participants stopped. One participant refused to go on when the

switches indicated “danger: severe shock.” At this stage, the confederate had simply stopped screaming and was begging to be freed. He then became completely unresponsive. But that didn’t stop two-thirds of the participants from flipping the last two switches, 435 volts and 450 volts, marked with an ominous “XXX.” Milgram had gotten a substantial majority of these ordinary American citizens to deliver (what they thought to be) potentially lethal electric shocks to a fellow citizen who (they thought) was writhing in pain and begging for mercy.

When learning of these results, and of a litany of historical cases seemingly attesting to similar phenomena, it is hard not to agree with the sweeping indictment leveled by political philosopher Jason Brennan: “Human beings are wired not to seek truth and justice but to seek consensus. They are shackled by social pressure. They are overly deferential to authority. They cower before uniform opinion. They are swayed not so much by reason but by a desire to belong, by emotional appeal, and by sex appeal.”<sup>22</sup> Psychologist Daniel Gilbert and his colleagues concur: “That human beings are, in fact, more gullible than they are suspicious should probably ‘be counted among the first and most common notions that are innate in us.’”<sup>23</sup>

If you believe that humans are by nature credulous, the natural question to ask is: Why? Already in 500 BCE Heraclitus, one of the first recorded Greek philosophers, was wondering:

What use are the people’s wits  
who let themselves be led  
by speechmakers, in crowds,  
without considering  
how many fools and thieves  
they are among, and how few  
choose the good?<sup>24</sup>

Heraclitus was echoed twenty-five hundred years later in a less poetic but more concise manner by this headline from the BBC: “Why are people so incredibly gullible?”<sup>25</sup>

## ADAPTIVE CREDULITY

If social psychologists seem to have been bent on demonstrating human credulity, anthropologists have, for the most part, taken it for granted.<sup>26</sup> Many have seen the persistence of traditional beliefs and behaviors as unproblematic: children simply imbibe the culture that surrounds them, thereby ensuring its continuity. Logically, anthropologists have devoted little attention to children, who are supposed to be mere receptacles for the knowledge and skills of the previous generation.<sup>27</sup> Critical anthropologists have described the assumption that people absorb whatever culture surrounds them as the theory of “exhaustive cultural transmission,”<sup>28</sup> or, more pejoratively, as the “‘fax model’ of internalization.”<sup>29</sup>

For all its simplicity, this model of cultural transmission helps us understand why people would be credulous: so they learn the knowledge and skills acquired by generations of their ancestors. Biologist Richard Dawkins thus explains the “programmed-in gullibility of a child” by its “useful[ness] for learning language and traditional wisdom.”<sup>30</sup>

While it is easy to think of “traditional wisdom” one would rather not inherit from one’s elders, from the belief in witchcraft to the practice of foot binding, these harmful customs are the exception. On the whole, most culturally acquired beliefs are sensible enough. Every day, we engage in culturally influenced behaviors too numerous to count: being able to speak, for a start, but also brushing our teeth, getting dressed, cooking, shopping, and so on.

Archaeological and anthropological evidence also suggests that cultural skills have been crucial to human survival for a very long time. Members of small-scale societies rely on traditional knowledge and know-how for foraging, hunting, processing food, making clothing, and producing the variety of tools indispensable to their survival.<sup>31</sup>

If the simplicity of this “fax model” of cultural transmission highlights the many benefits of learning from one’s surrounding culture, its limits are also obvious. For one thing, it vastly underestimates the degree of cultural variation present even in the smallest, most self-contained societies. If some behaviors might be performed by all group members in a very similar fashion—some ritual, say—most activities exhibit significant variation. Not every hunter draws the same lessons from a set of tracks. Not every forager has the same techniques for finding berries. Not every artist creates equally appealing songs or sculptures or drawings. So even an individual bent on blindly copying the previous generation must make decisions: Who to copy from?

One of the most advanced frameworks for answering this question has been created by an anthropologist, Robert Boyd, and a biologist, Peter Richerson.<sup>32</sup> Known as *gene-culture co-evolution*, this theory suggests that genes and cultures have influenced each other in the course of human evolution. In particular, Boyd and Richerson claim that culture has shaped our biological evolution. If choosing which bits of one’s culture to copy is so important, then we should have evolved, through natural selection, mechanisms that help solve this problem as effectively as possible. We already have evolved dispositions that tackle a variety of issues our ancestors faced: forming a broadly accurate representation of our surroundings, picking edible food, avoiding predators, attracting mates, forming friendships, and so forth.<sup>33</sup> It would make sense that we had also evolved mecha-

nisms to help us acquire the culture of our peers and our elders.

To solve the problem of who to learn from, we can start by looking at who performs well. Alex is an excellent cook; Renée is great at maintaining good social relationships; it makes sense to learn from them. But even when we have narrowed down the problem in this way, we're left with many potential actions to imitate. How do we work out exactly how and why Alex was able to cook such a great dish? Our intuitions help us rule out some factors—it probably wasn't his hairdo—but there remain many possibilities, ranging from the most obvious, such as the ingredients or the cooking time, to the least, such as the specific type of onions used or how the rice was stirred. As we find out when we try replicating a cook's recipe, the determinants of success can sometimes be quite opaque.<sup>34</sup>

To help us learn better from others, Boyd, Richerson, and their colleagues—such as anthropologist Joe Henrich or biologist Kevin Laland—suggest that humans are endowed with a series of rough heuristics to guide their cultural learning.<sup>35</sup> One of these rules of thumb extends our ability to learn from the most successful. Because it can be difficult to tell which of a successful individual's actions are responsible for their success—why Alex was able to produce a given dish well, say—it might be safer to copy indiscriminately everything successful people do and think, down to their appearance or hairdo. We can call this a *success bias*.

Another heuristic consists in copying whatever the majority does—the *conformity bias*.<sup>36</sup> This bias makes sense under the reasonable assumption that, if each individual has some independent ability to acquire valuable information, then any idea or behavior that is widely accepted is likely to be worth adopting.

It is possible to imagine many other such heuristics. For instance, Henrich and his colleague Francisco Gil-White have

suggested using a variation of the conformity bias to improve on the success bias.<sup>37</sup> They point out that even figuring out who is successful can be difficult. For instance, in small-scale societies, which hunter brings in the most game varies widely from one day to the next.<sup>38</sup> In the midst of this statistical noise, how can we decide which hunter to imitate? We can turn to others. If many people look up to a given individual—if that individual has prestige—then imitating them might be worthwhile. For Henrich and Gil-White, such a *prestige bias* is highly adaptive.

Boyd, Richerson, Henrich, and others have built sophisticated models showing how reliance on rough heuristics allows individuals to make the best of their surrounding culture. Another advantage of these heuristics is that they are cognitively cheap, with no need for complex cost-benefit calculations: figure out what most people believe and adopt the same beliefs, or figure out who does something best and imitate everything they do.<sup>39</sup>

But what happens when the majority is wrong, or when the most successful or prestigious individual was just lucky? If these rough heuristics provide a good bang for the buck—decent results at a cheap cost—they also lead to systematic mistakes.

Boyd, Richerson, and Henrich are ready to bite the bullet. The self-sacrifice of the Japanese kamikaze is accounted for through a type of conformity bias, which allows cultural elements that are beneficial for the group, but detrimental to the individual, to spread.<sup>40</sup> The prestige bias would explain why people appear more likely to kill themselves after a celebrity has committed suicide.<sup>41</sup> Less dramatically, success bias predicts that people will buy underwear advertised by basketball star Michael Jordan, even though his athletic prowess is likely unrelated to his taste in undergarments.<sup>42</sup>

Not only do gene-culture coevolution theorists bite the bullet, but they do so gleefully. They accept that “to get the benefits of social learning, humans have to be credulous, for the most part accepting the ways that they observe in their society as sensible and proper.”<sup>43</sup> Indeed, the fact that reliance on rough heuristics predicts the spread of absurd beliefs and maladaptive behavior, as well as useful ones, is an “interesting evolutionary feature of these rules.”<sup>44</sup> The novelty of this idea—maladaptive culture spreads because we are adapted for culture—makes it all the more attractive.

### THE CASE AGAINST GULLIBILITY

Many theories in the social sciences can be roughly recast in the terms of this gene-culture coevolution framework. “The ideas of the ruling class are in every epoch the ruling ideas,” as Marx and Engels suggested: success bias.<sup>45</sup> People blindly follow the majority: conformity bias. Charismatic leaders go from being worshipped by their faction to controlling the masses: prestige bias. An incredible array of intellectual traditions—centuries-old political philosophy, experimental psychology, biologically inspired modeling—converge on the notion that humans are, by and large, credulous, overly deferential toward authority, and excessively conformist.

Could this be all wrong?

Throughout this book, I will chip away at the support for the idea that the masses are gullible. Here’s the argument in a nutshell.

Once we take strategic considerations into account, it becomes clear that gullibility can be too easily taken advantage of, and thus isn’t adaptive. Far from being gullible, humans are endowed with dedicated cognitive mechanisms that allow them to

carefully evaluate communicated information. Instead of blindly following prestigious individuals or the majority, we weigh many cues to decide what to believe, who knows best, who to trust, and what to feel.

The multiple mass persuasion attempts witnessed since the dawn of history—from demagogues to advertisers—are no proof of human gullibility. On the contrary, the recurrent failures of these attempts attest to the difficulties of influencing people en masse.

Finally, the cultural success of some misconceptions, from wild rumors to supernatural beliefs, isn't well explained by a tendency to be credulous. By and large, misconceptions do not spread because they are pushed by prestigious or charismatic individuals—the supply side. Instead, they owe their success to demand, as people look for beliefs that fit with their preexisting views and serve some of their goals. Reassuringly, most popular misconceptions remain largely cut off from the rest of our minds and have few practical consequences, explaining why we can be relatively lax when accepting them.



## INDEX

Page numbers in italics refer to figures.

- absurd ideas, of scientists, 217–18
- Acerbi, Alberto, 208, 299n36
- action, false rumors and lack of, 153–54
- Adaptation and Natural Selection* (Williams), 22
- adaptations, 22; in communication, 18
- adaptive credulity, 10–13; anthropologists on, 9
- adversarial relationships, communication and, 22–23
- advertisers, xviii; celebrities and, 142–43; cost of, 141; negligible effects from, 141–42; political campaigns and, 141; preconceived opinions and, 141; television cigarette, 142; Tellis on, 143
- Against Democracy* (Brennan), 264
- aggregation: majority opinion and, 71; Munroe *xkcd* “Bridge” comic strip on, 71, 72; Surowiecki on, 71
- alarm calls, 21; of Arabian babbler, 22, 23; kin selection and, 22
- alignment, of incentives, 84–85, 86, 88, 92, 282n24, 283n29
- Allcott, Hunt, 213
- Allport, Gordon, 147
- analytic thinking, 45; Gervais and Norenzayan on, 37–38
- animal behavior: of Arabian babbler, 16–17, 22, 23; of baboons, 71–72; of bees, 17–18, 19; of bowerbird, 16, 26–27; of chimpanzees, 40–41; pregnancy and, 17; of Thomson’s gazelles, 16, 24–25, 28, 101; of vervet monkey, 18–19, 20, 40, 275n11
- Anthony, Dick, 123–24
- anti-Semitic propaganda, 128–29
- anxiety, rumors and, 147–48
- Arabian babbler, 16–17; alarm calls of, 22, 23
- Arceneaux, Kevin, 137
- Arendt, Hannah, 232
- argumentation: common ground and, 62; counterintuitiveness and, 221–22; beyond plausibility checking, 50–55; small group discussion and, 113
- arguments: challenging, 55–58; confidence in, 55; logical problems and, 51–52; reasoning in, 52–53; strength of, 56
- arms race analogy, for open vigilance mechanisms, 31–32, 38, 41, 46

- Art of Deception, The* (Mitnick), 249–50
- Asch, Solomon, 5–6, 6, 74–75
- automatic cognitive mechanisms, 100, 101–2, 105
- baboons, majority opinion and, 71–72
- backfire effect, 278n3; of Bush and Iraq War, 48–49; Nyhan and Reifler on, 48–49; vaccination opponents and, 49; Wood and Porter, E., on, 49
- Bad Medicine* (Wootton), 202
- Bad Writing Contest, 218
- Barker, Eileen, 122–23
- Barrett, Justin, 222–23
- Bataclan attacks, 111–12
- Baumard, Nicolas, 229
- bees, animal behavior of, 17–18, 19
- beliefs: argumentation and plausibility checking, 50–55; causal effects, 214–16; challenging arguments and, 55–58; contrary opinions and, 48–50; costly actions and, 261; false rumors and, 151–55; intuition and, 58–62, 152; intuitive, 152, 178, 260, 261; justifications for, 214; misconceptions and, 260; preexisting, 47–48; reflective, 152, 178–79, 189–90, 196, 260–61; self-incriminating statements and, 197–98; social transmission of religious, 175, 177; Sperber on, 152
- believers, 175–78
- bias: frequency-based, 275n36; prestige, 12–13; success, 11–13
- blind trust, 2–5
- bloodletting practice: culture and, 203; Galen on, 199–200, 201, 207, 228–29
- Bordia, Prashant, 149
- bowerbird, 16; costly signaling of, 26–27
- Boyd, Robert, 10, 275n32; on celebrity advertising, 142; on cultural learning and success, 11
- Boyer, Pascal, 220; on information, 226–27
- brainwashing, xviii; Gallery on, 33; McCarthyism, 32; open-mindedness and, 32–38, 42–46; of POWs, 32–33, 42–43
- Brennan, Jason, 8, 264
- Brexit, 35; fake news and, 200–201, 298n7
- Broockman, David, 138, 140
- Bryan, William Jennings, 116
- Burgess, Thomas, 99
- burning-bridges strategy, 192, 194; extreme beliefs defense in, 196–97; extreme flattery and, 191, 193; extreme views and, 195; intelligence or moral standing and, 195; reflective beliefs and, 196; self-incriminating statements in, 197–98
- Burns, Justine, 254–55
- Bush, George W., 212; backfire effect and, 48–49; Iraq War justification by, 172–74; 2000 presidential election, 137–38
- Butler, Judith, 218
- cable news networks, taking sides strategy of, 242–43
- Cacioppo, John, 98
- Cambridge Analytica, 139
- campaigners, 134, 141, 290n53; ambiguous results of, 135–36; Arceneaux and Johnson on, 137; Cambridge Analytica and, 139; effectiveness experiments, 138; Gelman and King on, 140; inefficiency of, 139–40; Kalla and Broockman on, 138, 140; Klapper on, 136; lab-based techniques and, 136–37; media influence, 136–37, 140; 2000 presidential election and, 137–38; in U. S. politics, 135

- Canetti, Elias, 97
- Caplow, Theodore, 149, 150
- cascade, of influence, 285n56
- Catholic Church: Children's Crusade and, 2; Enlightenment and, 264; mass persuasion and, 144; preachers and, 124–25, 127
- celebrities: advertisers and, 143; Boyd and Richerson on advertising and, 142; prestige bias and suicide of, 12; relevant cultural products and, 156–57
- challenging arguments, 55–58
- charismatic authority, xiv; counterintuitiveness and, 225–26; of Lacan, 225
- Chiarella, Sabrina, 103–4
- children: culture continuity and, 9, 274n27; Dawkins on gullibility of, 9; gullibility of, 9, 45–46; incentives and, 86–87; intuition displayed by, 68–69; open vigilance mechanisms and, 248; selective ignorance of, 103
- Children's Crusade, 2; Pope Innocent III influence on, 3
- chimpanzees, communication signals of, 40–41
- China Cultural Revolution, 132–34, 289n37
- Chopra, Deepak, 238–39, 303n59
- Christians: millenarian movements, 120–21; Stark on, 122
- Cleon, 114–16
- Clinton, Bill, 2
- Clinton, Hillary, 2, 212, 260; fake news on, 201, 205
- Clooney, George, 142–43
- coarse cues, for trust, 240–41, 247–50, 254, 255
- cognitive mechanisms: automatic and mandatory, 100, 101–2, 105; to find allies, 241; gullibility and, 257
- cognitive sophistication: credulity and, 35; gullibility association with, 38; open-mindedness and, 38–42
- commitment signals, 89; epistemic modals for, 90; Tenney on, 90–91
- communication: adaptations in, 18; adversarial relationships and, 22–23; animal behavior and, 16–18; conflicts and evolution of, 18–20; cues in, 18–19; diligence in, 92; emotional signals in, 104–5; failures in, 20–22; omnivorous diets evolution analogy, 39–42; signals in, 18, 25–28; success in, 22–25; vigilance in, 15–29
- Communist Party, Chinese, 133
- Company of Strangers, The* (Seabright), 240
- competence: best knowledge and, 76–77; in performance, 68; preschoolers on, 76; in wide audience, 113
- con men: 419 Nigerian scam, 250–51; in *The Sting*, 248–49; Thompson as, 249–50
- Condorcet, Marquis de, 3, 71
- Condorcet jury theorem, 71, 73
- confessions: eyewitness testimony and, 182; interrogators and, 184, 295n14; in Japan, 185; Kassir and Wrightsman on, 184; shame and, 295n23; of witches, 185–90
- conformity: Asch experiments on, 5–6, 6, 74–75; Gallup on, 75–76; Milgram experiments on, 6–8, 75, 232–33; Moscovici on, 5–6
- conformity bias, 13; cultural learning and, 11; Japanese kamikaze and, 12
- Conis, Elena, 60
- conspiracy theories, 164, 172, 269–70; of Jones, 4, 228; as threat, 158

- contagion analogy, 105, 108; on crowds, 96; Espinas on, 98; in New York, 95; pathogens and, 97, 106–7; Sighele on moral, 96; social media and, 96–97; in Tanganyika, 95–96; transmission of emotions and, 106
- contrary opinions, beliefs and, 48–50
- control, of facial expressions, 100, 284n26
- Correa, Angela, 181
- costly actions, beliefs and, 261
- costly signals: bowerbirds and, 26–27; in communication, 25–26, 241–42; Zahavi on, 26
- counterempathy, 105
- counterintuitive scientific theory, 231–33, 237–38, 270
- counterintuitiveness, 218; argumentation and, 221–22; charismatic authority, 225–26; concepts and, 219–20; on inertia, 224, 224; in intuition, 222–23; intuitive thinking and, 222–23; reflective beliefs and, 261; religious concepts and, 220, 222–23; scientific concepts and, 220–21, 223, 224; shallowness and, 225
- credulity: adaptive, 9–13; cognitive sophistication and, 35; Gilbert experiments on, 36–37, 43–44; gullibility compared to, 273n4; Heraclitus on, 8–9; observers on, 4
- crisis, rumors of, 147–48, 158–59
- Crowd in the French Revolution* (Rudé), 108–9
- crowd psychology: Heraclitus on, 34; Le Bon, Tarde and Taine on, 34, 96; politics and, 34
- crowds: contagion of feelings in, 96; panic in, 111–12; rational, 108–12
- Crucible, The* (Miller), 185
- crusades, 2, 3, 126
- cues, 161; for changing mind, 259; coarse, for trust, 240–41, 247–50, 254, 255; in communication, 18–19; evolutionarily valid, 73, 74; liars nonverbal, 78–79
- cultural learning: conformity bias and, 11; success bias and, 11; from successful individuals, 11
- culture: bloodletting practice and, 203; children and continuity of, 9, 274n27; exhaustive cultural transmission and, 9; human survival and, 10; maladaptive practices in, xiv, 13; religious beliefs and, 294n21
- Cunningham, Steven, 181
- curiosity, about rumors, 155–59
- Dalai Lama, 294n15
- Dao, David, 146, 165, 292n2
- Darjeeling landslide, Sinha on rumor of, 147
- Darwin, Charles, 99
- Dawkins, Richard, 9
- death penalty, justifications for, 210
- deception detection, 78
- demagogues: of Bryan and Long, 116; Cleon, 114–16; existing opinions relied on by, 114–18; of Hitler, 116–21
- democracy, 210, 211, 264; Plato on, 3
- Democrats, MSNBC and liberal, 242–43
- Deskovic, Jeffrey, 181, 183
- Dezacache, Guillaume, 98, 102
- DiFonzo, Nicholas, 149
- Diggory, James, 150–51
- diligence, 83–84, 92, 282n20
- Dimberg, Ulf, 97–98
- discussion groups, polarization in, 209

- Dockendorff, Martin, 71
- Duna, 294n16; reflective beliefs of, 178; religious beliefs of, 176–77; San Roque on, 176
- Echols, Catharine, 86–87
- economic games experiments, on trust, 254–55, 304n28
- Eich, Ritch, 147
- Ekman, Paul, 79–80
- Emotional Contagion* (Hatfield, Cacioppo, Rapson), 98
- emotional signals, in communication, 104–5
- emotional vigilance, 104; automatic and mandatory mechanisms in, 101–2, 105; children selective ignorance and, 103
- Engels, Friedrich, 13, 124
- Englis, Basil, 97, 105
- Enigma of Reason, The* (Sperber), 57
- Enlightenment, 3, 126, 263; Catholic Church and, 264
- entertainment, Acerbi on fake news, 208, 299n36
- epistemic modals, for commitment, 89–90
- epistemic vigilance, Sperber on, 31
- Eriksson, Kimmo, 231–32
- Espinass, Alfred, 98
- Eusebius, 122
- Evans-Pritchard, E. E., 186
- evidentials: of Duna, 176–77; of Kaluli language, 178–79; in language, 168–69
- evolution: of communication, 18–20; by natural selection, 19; of omnivorous diets analogy, 39–42
- evolutionarily valid cues, 73, 74
- exonerations, in false confessions, 182
- extreme beliefs defense, in burning bridges strategy, 196–97
- extreme flattery, in burning bridges strategy, 191, 193
- extreme views, in burning bridges strategy, 195
- eyewitness advantage, 65; informational access and, 64
- face recognition, 156
- facial expressions, 79, 80, 98–99; control of, 100, 284n26
- failures, in communication, 20–22
- fake news, 199; Acerbi on entertainment of, 208, 299n36; beliefs causal effects and, 214–16; of Brexit, 200–201, 298n7; on Clinton, H., 201, 205; *Collins* dictionary on, 200; justifications and, 206–8; polarization and, 208–11; political, 207–8; sensationalism and, 215–16; in social media, 207, 298n11, 299n32; Trump election and, 200–201, 204–5, 207, 215, 298n7; U.S. polarization, 211–14
- false beliefs, 202, 266; from trust, 245
- false confessions, 197; coerced, 182; of Deskovic, 181, 183; exonerations and, 182; persuasion and, 182; voluntary, 182
- false rumors, 148–50, 263, 269, 292n13; belief in, 151–55; lack of action following, 153–54; social costs of, 161–62, 171–72; about threats, 157–58; on Twitter, 158
- fax model of cultural transmission, 9, 10
- feelings: of anger, 100; contagion of, 95–98, 105–8; Darwin on, 99; emotional vigilance, 101–5; expression of, 100; Frank on, 99–100; passion without reason, 98–101; pathogens and, 97, 106–7; rational crowds and, 108–12

- Fershtman, Chaim, 254  
Fiorina, Morris, 211  
flattery, extreme, 191, 193, 296n40  
flattery inflation, Márquez on, 195  
419 Nigerian scam, 250–51  
Fox News Channel: conservative  
    Republicans and, 242–43, 245–46;  
    studies on politics effects of, 245–46  
Frank, Robert, 99–100  
French Revolution, 108–9  
frequency-based bias, 275n36  
Freud, Sigmund, 78  
friction and flooding, Roberts on, 133  
Galen: bloodletting practice by, 199–200,  
    201, 207, 228–29; humoral theory of  
    disease support by, 199–200  
Gallery, Daniel, 33  
Gallup, Andrew, 75–76  
Galton, Francis, 71  
Gardner, Howard, 68  
gazelles. *See* Thomson's gazelles  
Gelman, Andrew, 140, 246  
Gendelman, Max, 86  
gene-culture coevolution, 13; Boyd and  
    Richerson on, 10  
Gentzkow, Matthew, 212–13  
German soldiers studies, and Nazi  
    propaganda, 130–31  
*Germinal* (Zola), 262–63  
Gervais, Will, 37–38  
Gilbert, Daniel: credulity experiments  
    on, 36–37, 43–44; on gullibility, 8  
Gil-White, Francisco: on prestige bias,  
    12; on success bias, 11–12  
Gneezy, Uri, 254  
God: Barrett on canonical features of,  
    223; omniscience of, 217, 223, 230,  
    302n34; religious concept of, 220  
Gödel, Kurt, 56  
Goebbels, Joseph, 128, 129, 135  
Goldman, Alvin, 238  
Gore, Al, 33, 212; 2000 presidential  
    election, 137–38  
groups: affiliation signals for, 241;  
    argumentation and small group,  
    113; membership costs in, 191–92;  
    polarization in discussion, 209  
gullibility, 13–14; of children, 9, 45–46;  
    cognitive sophistication association  
    with, 38; credulity compared to,  
    273n4; Dawkins on children, 9;  
    examples of, xiii–xiv; Gilbert on, 8;  
    gullible about, 262–65; Trump  
    election and, 35, 276n15  
guru effect, 238; Lacan and, 234–36;  
    obscure statements and, 234;  
    Sperber on, 234  
Haig, David, 21  
*Handbook of the Law of Evidence*  
    (McCormick), 182  
Hatfield, Elaine, 98  
Henrich, Joe: on cultural learning and  
    success, 11; on prestige bias, 12; on  
    success bias, 11–12  
Hepach, Robert, 104  
Heraclitus: on credulity, 8–9; on crowd  
    psychology, 34  
hidden dependencies: open vigilance  
    mechanisms and, 174; religious  
    beliefs and, 176; sourcing and, 172–75  
historical evidence, 56–57  
*History of the Peloponnesian War*  
    (Thucydides), 167  
Hitler, Adolf, 34; as demagogue, 116–21;  
    as propagandist, 128; Selb and  
    Munzert on, 116  
*Hitler Myth, The* (Kershaw), 116  
Ho Chi Minh, 191

- humoral theory of disease, 202–4,  
214–15; Galen support of, 199–200
- Hussein, Saddam, 48–49, 173, 190
- Iannaccone, Laurence, 124
- Icke, David, 172
- ideological polarization, 212–13
- illusion of unanimity, 112
- imitation, reliable expertise and, 66–67
- immigration, Trump on, 268
- incentives, 282n26; alignment of, 84–85,  
86, 88, 92, 282n24, 283n29; children  
and, 86–87; Gendelman and  
Kirschner example, 86; reputation  
monitoring, 88; Reyes-Jaquez and  
Echols experiment on, 86–87;  
Sniezek study on, 85–86; social  
alignment of, 89; trust and, 84–87
- inclusive fitness, 19, 20
- individuals: cultural learning from  
successful, 11; signals for affiliation of,  
241; stock in majority opinion, 70–71
- inefficiency, of campaigners, 139–40
- inferences, 59, 170
- influence: cascade of, 285n56; difficulty  
of, xvi; power of, 15
- information: Boyer and Parren on,  
226–27; gains, trust and, 252–54; re-  
jection, 93; relevance of, 159–60; social  
cost of inaccurate, 246; social rel-  
evance of, 159–60; spread of, 160, 161
- informational access: experiments on,  
64, 65; eyewitness advantage and,  
64; Robinson on, 64
- informational environment, open  
vigilance mechanisms and, xvii
- InfoWars website, 228
- Innocent III (pope), Children's  
Crusade influenced by, 3
- insight problems, 51
- intelligence, 68, 195
- interlocutors: opinion of, 283n31;  
sourcing and, 166, 170–71
- interrogators, confessions and, 184,  
295n14
- intuition, xvii, 277n22; beliefs and,  
58–62, 152; children display of,  
68–69; counterintuitiveness and  
thinking in, 222–23; soundness of, 54
- intuitive beliefs, 152, 261; misconcep-  
tions of, 260; religious beliefs and, 178
- intuitive physics, 223–24, 224
- Iraq War: backfire effect and, 48–49;  
Bush justification for, 172–74
- Japan: confessions in, 185; kamikaze,  
conformity bias of, 12
- Johnson, Martin, 137
- Jones, Alex: conspiracy theories of, 4,  
228; Welch influenced by, 4
- Jordan, Michael, 142
- justifications, 237; for alternative  
treatments, 206–7, 214; for beliefs,  
214; competition and, 207; for death  
penalty, 210; fake news and, 206–8;  
of Iraq War, by Bush, 172–74; for  
negative judgments, 206; polariza-  
tion and, 208–9; reputation credit  
and, 227–29
- Kahneman, Daniel, 35–36, 37
- Kalla, Joshua, 138, 140
- Kaluli language, evidentials of, 178–79
- Kassin, Saul, 184
- Kay, Jonathan, 153
- Kershaw, Ian, 116, 118; on Nazi  
propaganda, 129–30, 131, 259
- Kierkegaard, Søren, 70
- Kim, Eunji, 205
- Kim, Jin Woo, 205

- Kim, Young Oon, 123  
Kim Jong-il, xiv, xviii, 190–91, 195;  
extreme flattery and, 193, 296n40  
Kim Jong-un, 190, 296n40  
kin selection, alarm calls and, 22  
King, Gary, 140, 246  
Kirschner, Karl, 86  
Kishinev accusations, rumors on, 200,  
204, 215  
Klapper, Joseph, 136  
knowledge, best: competence and,  
76–77; eyewitness advantage, 64–65;  
majority pull and, 74–76; past  
performance, 67–69; rationality,  
70–74; reliable expertise, 65–67  
Koji, Aoki, 110  
Korean War, POWs brainwashing in,  
32–33, 42–43  
Lacan, Jacques, 218, 238, 239; charismatic  
authority of, 225; guru effect and,  
234–36; obscurity of, 234–36;  
teachings of, 219  
Laland, Kevin, 11  
language: and evidentials, 168–69; and  
Kaluli evidentials, 178–79; Wanka  
Quechua, on sourcing, 168–69  
Lanzetta, John, 97, 105  
Latour, Bruno, 219  
leaders, charismatic, xiv, 225–26  
learning: cultural, 11; open vigilance  
mechanisms for, 258–59; transfer  
effects in, 280n11  
Le Bon, Gustave, 34, 96  
Le Roy Ladurie, Emmanuel, 125  
Levine, Tim, 82  
Lévi-Strauss, Claude, 225, 236  
liars, 282n17; detection of, 78; Levine  
on, 82; nonverbal cues of, 78–79;  
Reid on, 82  
*Lie to Me* television show, 79  
logical problems, arguments and, 51–52  
Long, Huey, 116  
Luther, Martin, 58  
lying, trust and, 81–82  
Lysenko, Trofim, 266  
Madden, Joah, 27  
majority opinion, xiv; assembly  
example, 70–71, 72, 73; of baboons,  
71–72; Dockendorff, Schwartzberg,  
Mercier on, 71; evolutionarily valid  
cues and, 73, 74; Galton on  
aggregation and, 71; individuals  
stock in, 70–71; Kierkegaard on, 70;  
Morgan experiment on, 72–73;  
Munroe *xkcd* “Bridge” comic strip  
on, 71, 72; resistance to, 74–76;  
Twain on, 70  
maladaptive cultural practices, xiv, 13  
mandatory cognitive mechanisms, 100,  
101–2, 105  
Mao Zedong, 266–67  
*Maps of Meaning* (Peterson), 238  
Márquez, Xavier, 133; on flattery  
inflation, 195  
Marx, Karl, 13, 124  
mass conversions, from preachers, 122  
mass persuasion, xviii, 14, 259; Catholic  
Church and, 144; patterns of, 143;  
plausibility checking and, 113–14;  
resistance and, 144  
mass psychogenic illness, 106–8  
McCain, John, 205  
McCarthy, Jenny, 60  
McCarthyism, 32  
McCloskey, Michael, 223  
McCormick, Charles, 182  
media: campaigners influence and,  
136–37, 140; Gelman and King on



- politics influenced by, 246; mass, 160. *See also* fake news; social media
- Mein Kampf* (Hitler), 128
- membership costs, in groups, 191–92
- Meno* (Plato), 53
- Mercier, Hugo, 71, 73
- microexpressions, trust and: Ekman on, 79–80; Porter, and ten Brinke on, 80–81
- Milgram, Stanley, 6–8, 75, 232–33
- millenarian movements: Christian, 120–21; prophets and, 119–20; Weber on, 120
- Miller, Arthur, 185
- minimal plausibility, rumors and, 160–62
- misperception, of partisanship and polarization, 244
- Mitnick, Kevin, 249–50
- Miton, Helena, 74
- Moonies, 121, 123; Barker on, 122
- moral contagion, 96
- Moreau, Sabine, 63, 64
- Morgan, Thomas, 72–73
- Morin, Edgard, 167
- Mormonism, 121, 122
- Moscovici, Serge, 5–6
- movements: Cattle-Killing, 118–19; millenarian, 119–21; New Religious Movements, 121–24; in public opinion, 268; Truth, 153
- MSNBC, liberal Democrats and, 242–43
- Munroe, Randall, 71
- Munzert, Simon, 116
- Mussolini, Benito, 34
- natural selection, 28; evolution by, 19
- Nazi propaganda, 143–44; Kershaw on effectiveness of, 129–30, 131, 259
- negligence, 83–84
- New Religious Movements, 121, 122; Anthony on, 123–24
- 9/11 terrorist attacks: rational crowds and, 111–12; reflective beliefs on, 260; rumors of, 165
- Nongqawuse, Xhosa influenced by, 2–4, 118
- nonverbal cues: Freud on, 78; for liars, 78–79
- Norenzayan, Ara, 37–38
- Nyhan, Brendan, 48–49, 205
- Obama, Barack, 146, 205–6
- omniscient God, religious beliefs of, 217, 223, 230, 302n34
- omnivorous diets evolution analogy, 39–42
- open vigilance mechanisms, xv, 292n20; arms race analogy for, 31–32, 38, 41, 46; burning bridges and, 191–98; children and, 248; confessions and, 182–90, 295n23; cues for, 18–19, 73–74, 78–79, 161, 240–41, 247–50, 255; current informational environment and, xvii; hidden dependencies and, 174; information rejection and, 93; for learning, 258–59; mass persuasion and, xviii, 14, 113–14, 133, 143–44, 259; motivations for, xviii; open-mindedness and, 30–46, 54, 58, 63; plausibility checking in, 47–48, 50–55, 113–14, 221; psychological experiments on, 144–45; reasoning and, 52–54, 58, 98–101; sourcing and, 166–75, 238n38
- open-mindedness, 30–31, 63; cognitive sophistication and, 38–42; reasoning and, 54, 58

- opinion: advertisers and preconceived, 141; beliefs and contrary, 48–50; convergence of, 174; demagogues' reliance of existing, 114–18; of interlocutors, 283n31. *See also* majority opinion; public opinion
- Origgi, Gloria, 179
- Osborne, Sarah, 185–86
- Osnos, Evan, 132
- overconfidence: reputation and, 91–93; trust and, 90–92, 283n37
- panic, in crowds, 111–12
- pareidolia, 157
- Parren, Nora, 226–27
- partisanship: of cable news networks, 242; misperception of, 244
- Passions within Reason* (Frank), 99
- past performance: best knowledge and, 67–69; evaluation of, 66; reliable expertise and, 65–66; reputation credit and, 226
- pathogens: Canetti on, 97; contagion analogy and, 97, 106–7
- Peires, Jeff, 118
- Peloponnesian War, 1
- performance: examples of, 69; observations of, 68; from observed to competence, 68; past, 65–69, 226
- persuasion: false confessions and, 182. *See also* mass persuasion
- Peterson, Jordan, 238
- Planck, Max, 56
- Plato, on democracy, 3
- plausibility checking, 47–48, 221; argumentation beyond, 50–55; insight problems and, 51; mass persuasion and, 113–14
- polarization: on death penalty, 210; in discussion groups, 209; fake news and, 208–11; Gentzkow and Shapiro on ideological, 212–13; justifications and, 208–9; misperception of, 244; political, 210, 213; social media and, 210–11
- polarization, U.S., 214; Fiorina on, 211; impression of increased, 212; in politics, 211; social media users and, 212–13, 244
- politics: advertisers and campaigns in, 141; crowd psychology and, 34; fake news in, 207–8; Gelman and King on media influence on, 246; polarization in, 210, 213; public opinion and, 267–68; trust and, 94; U.S. polarization in, 211
- Porter, Ethan, 49
- Porter, Stephen, 80–81
- Postman, Leo, 147
- Poulin-Dubois, Diane, 103–4
- Pound, John, 149
- Powell, Colin, 173
- preachers: Catholic Church and, 124–25, 127; crusades and, 2, 3, 126; Eusebius on, 122; mass conversions and, 122; Mormonism and, 121, 122; New Religious Movements, 121, 122, 123–24
- predator-deterrent signals, 23–24
- preexisting beliefs, 47–48
- pregnancy, 17, 20, 21, 28
- prestige bias, 13; celebrity suicide and, 12; Henrich and Gil-White on, 12
- prisoners of war (POWs), 32–33, 42–43
- propagandists, 264–65; China Cultural Revolution, 132–34, 289n37; failures of, 133; Goebbels, 128, 129; Hitler as, 128; Soviet, 131–32; threats and, 134
- prophets, 117, 121; millenarian movements of, 119–20; Xhosa and Nongqawuse as, 2–4, 118–19

- Psychology of Rumor, The* (Allport and Postman), 147
- public opinion: movements in, 268; politics and, 267–68; thermostatic model of, 268
- punishment, for unreliable messages, 88
- Putin, Vladimir, 265, 305n18; Trump and, 267
- Rapson, Richard, 98
- rational crowds: Koji on, 110; Bataclan attacks and, 111–12; England peasant revolt and, 109–10; in French Revolution, 108–9; illusion of unanimity and, 112; 9/11 terrorist attacks and, 111–12; panic and, 111–12; Red Guards spontaneous mobs, 110; Shays' Rebellion, 110; soldiers and, 112
- reasoning: in arguments, 52–53; open-mindedness, 54, 58; vigilance and, 54
- reflective beliefs, 152; burning bridges strategy and, 196; counterintuitiveness and, 261; of Duna, 178; on 9/11 terrorist attacks, 260; Origgi on, 179; religious beliefs and, 178; in witchcraft, 189–90
- Reid, Thomas, 82
- Reifler, Jason, 48–49
- reliable expertise: best knowledge and, 65–67; imitation and, 66–67; past performance and, 65–66; preschoolers on, 76
- religious beliefs, 288n68, 288n75; Baumard on, 229; culture and, 294n21; of Duna, 176–77; hidden dependencies and, 176; of omniscient God, 217, 223, 230, 302n34; reflective instead of intuitive, 178; social transmission of, 175, 177; variety of, 217; in world religions, 230
- religious concepts: counterintuitiveness and, 220, 222–23; of God, 220
- religious people, trust in, 247
- #Republic: Divided Democracy in the Age of Social Media* (Sunstein), 210
- Republicans, Fox News Channel and conservative, 242–43, 245–46
- reputation: incentives and monitoring of, 88; overconfidence and, 91–93; trust and, 87–90
- reputation credit, 230, 237; justifications and, 227–29; past performance and, 226; threats in, 226–27, 228; valuable information and, 226
- Reyes-Jaquez, Bolivar, 86–87
- Rice, Condoleezza, 173
- Richerson, Peter, 10, 275n32; on celebrity advertising, 142; on cultural learning and success, 11
- rituals, 10
- Roberts, Margaret, 133
- Robinson, Elizabeth, 64
- Romans, Humbert de, 125–27
- Rothbard, Murray, 194
- Rudé, George, 108–9
- rumeur d'Orléans*, 146, 148, 153–55, 161–64, 200; Morin on, 167; sources and, 166, 171
- rumors: acting on, 165; anxiety and, 147–48; of crisis, 147–48, 158–59; about Dao and United Airlines, 146, 165, 292n2; on Darjeeling landslide, 147; escape from reality and, 162–64; exaggerated threats and, 261–62; on Kishinev accusations, 200, 204, 215; metarumors and, 295n40; minimal plausibility and, 160–62; of 9/11 terrorist attacks, 165; about Obama, 146, 205–6; rabies outbreak, 150–51; rewarding relays of, 159–60; of

- rumors (cont.)  
*rumeur d'Orléans*, 146, 148, 153–55, 161–64, 166–67, 171, 200; sourcing quality and, 166–67; spontaneous tracking of, 150–51; unfettered curiosity and, 155–59; about University of Michigan strike, 147, 151; wartime, 149; workplace, DiFonzo and Bordia on, 149; on World War II Japanese treason, 151, 153
- Salem witch trials: Osborne and, 185–86; Tituba's confessions in, 186, 189
- San Roque, Lila, 176
- Schieffelin, Bambi, 179
- Schwartzberg, Melissa, 71
- scientific concepts, counterintuitive-ness and, 220–21, 223, 224
- scientific theory, counterintuitive, 231–33, 237–38, 270
- scientists, absurd ideas of, 217–18
- Scott, James, 127
- Scott-Phillips, Thom, 102
- Seabright, Paul, 240
- Selb, Peter, 116
- selective ignorance, of children, 103
- self-deception, 280n18
- self-incriminating statements, 197–98
- sensationalism, fake news and, 215–16
- Shapiro, Jesse, 212–13
- Shays' Rebellion, 110
- Sighele, Scipio, 96
- signals, in communication, 18, 27–28; automatic emotional reactions, 97–98; of chimpanzees, 40–41; commitment, 89–90; costly, 25–26, 241–42; for individual or group affiliation, 241; predator deterrent, 23–24; unreliable, 20, 25–26, 88, 104; of vervet monkeys, 40
- Signer, Michael, 114
- Sinha, Durganand, 147
- Snizek, Janet, 85–86
- social alignment, of incentives, 89
- social cost: of false rumors, 161–62, 171–72; of inaccurate information, 246
- social media: Allcott on political polarization and, 213; contagion analogy and, 96–97; fake news in, 207, 298n11, 299n32; polarization in, 210–11; U.S. polarization and users of, 212–13, 244
- social relevance, of information, 159–60
- social transmission, of religious beliefs, 175, 177
- Socratic questioning, 53
- sourcing: hidden dependencies, 172–75; interlocutors and, 166, 170–71; rumors and quality of, 166–67; trust and, 283n38; two degrees of separation, 171–72. *See also* evidentials
- Soviet propaganda, 131–32, 143
- Sperber, Dan, 31, 57; on beliefs, 152; on face recognition, 156; on guru effect, 234
- spontaneous tracking, of rumors, 150–51
- Stalin, Joseph, 32
- Stark, Rodney, 122
- Sternberg, Robert, 68
- Stimson, James, 267
- Sting*, *The* film, con men in, 248–49
- stotting, of Thomson's gazelles, 24–25, 28, 101
- Strandburg-Peshkin, Ariana, 71–72
- strangers, trust in, 240, 241, 247–51
- subliminal influence, xviii, 43, 263, 278n46; brainwashing and, 33–34

- success bias: athletic products and, 12;  
Henrich and Gil-White on, 11–12;  
Marx and Engels on, 13
- suggestibility, cost of, xv
- Sun Myung Moon, 122
- Sunstein, Cass, 210
- Surowiecki, James, 71
- sycophant, credible, 190–91
- System 1 and System 2 thought processes, 35–38, 44–45, 277n20
- Taine, Hippolyte, 34
- taking sides strategy: of cable news networks, 242–43; to gain audiences, 243; with minimal costs, 242; misrepresentations spread by, 243
- Tamis-LeMonda, Catherine, 103
- Tanganyika, 107; contagion of feelings in, 95–96
- Tarde, Gabriel, 34, 96
- Tellis, Gerard, 143
- ten Brinke, Leanne, 80–81
- Tenney, Elizabeth, 90–91
- thermostatic model, of public opinion, 268
- Thinking, Fast and Slow* (Kahneman), 35–36
- Thompson, Samuel, 249–50
- Thomson's gazelles, 16; stotting of, 24–25, 28, 101
- threats, 237; conspiracy theories as, 158; false rumors about, 157–58; propagandists and, 134; in reputation credit, 226–27, 228; rumors about exaggerated, 261–62
- Thucydides, 3, 167
- Tituba, Salem witch trials confession by, 186, 189
- transfer effect, in learning, 280n11
- Trump, Donald, 212; fake news and election of, 200–201, 204–5, 207, 215, 298n7; gullibility and election of, 35, 276n15; on immigration, 268; Putin and, 267
- trust, 78, 93–94, 222; blind, 2–5; calibration of, 255–57; coarse cues for, 240–41, 247–50, 254, 255; damage from breakdown in, 94; economic games experiments, 254–55, 304n28; effective irrational, 251–55; fragile chains of, 269–71; incentives and, 84–87; information gains and, 252–54; lying and, 81–82; negligence and, 83–84; overconfidence and, 90–92, 283n37; reputation and, 87–90; sourcing and, 283n38; in strangers, 240, 241, 247–51; taking sides strategy and, 244–45; in the wrong people, 240–41
- Truth movement, Kay on, 153
- Twain, Mark, 34–35; on majority opinion, 70
- Twitter, false rumors and, 158
- two degrees of separation, 171–72
- 2000 presidential election, of Bush and Gore, 137–38
- Unification Church, Stark and Lofland on, 123
- United Airlines, Dao and, 146, 165, 292n2
- United States, polarization in, 211–14
- University of Michigan strike rumor, 147, 151
- unreliable signals, 20, 25–26, 88, 104
- vaccinations, 61, 269; backfire effect and opponents of, 49; Conis on, 60; Wakefield and McCarthy on, 60
- variety, of religious beliefs, 217
- vervet monkey, 18–19, 20, 40, 275n11

- Veyne, Paul, 265
- vigilance: in communication, 15–29;  
epistemic, Sperber on, 31; need for,  
28–29; in omnivorous diets, 39–40;  
reasoning and, 54
- viral marketing, 96
- Voigtländer, Nico, 128–29
- Voltaire, 202
- voluntary false confessions, 182
- Voth, Hans-Joachim, 128–29
- Wakefield, Andrew, 60
- Wang, Shaoguang, 132
- Wanka Quechua language, on  
sourcing, 168–69
- “War of the Worlds” broadcast, of  
Welles, 96
- wartime rumors, 149
- Weber, Eugen, 120
- Weinberg, Sandord, 147
- Weisberg, Deena, 232
- Welch, Edgar Maddison, 2, 4, 154–55
- Welles, Orson, 96
- Williams, George, 22
- Wisdom of Crowds, The* (Surowieski), 71
- witchcraft: confessions of, 185–90;  
Evans-Pritchard study on, 186;  
reflective beliefs for, 189–90. *See also*  
Salem witch trials
- Wood, Thomas, 49
- Woods, Tiger, 94
- Wootton, David, 202
- workplace rumors, 149
- world religions, 230
- World War II, Japanese treason rumor,  
151, 153
- Wray, Margaret, 17–18
- Wrightsman, Lawrence, 184
- Xhosa: Cattle-Killing movement, 118–19;  
ghost army and, 2; Nongqawuse  
influence on, 2–4, 118
- xkcd* “Bridge” comic strip, of Munroe,  
71, 72
- Yamagishi, Toshio, 252–53
- Zahavi, Amotz, 26
- Zeckhauser, Richard, 149
- Zola, Émile, 262–63