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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.[1] 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.[2] 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.[3]

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.[4] 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."[5]

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."[6] 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."[7] 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.[8] 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."[9]

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.[10] Atheists point out "the almost superhuman gullibility" of those who follow religious preachers, whatever their god might be.[11] Conspiracy theorists feel superior to the "mind controlled sheeple" who accept the official news.[12] Debunkers think conspiracy theorists "super gullible" for believing the tall tales peddled by angry entertainers.[13] 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."[14]

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."[15] Contemporary commenters still deplore how easily politicians sway voters by "pander[ing] to their gullibility."[16] 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?[17] 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

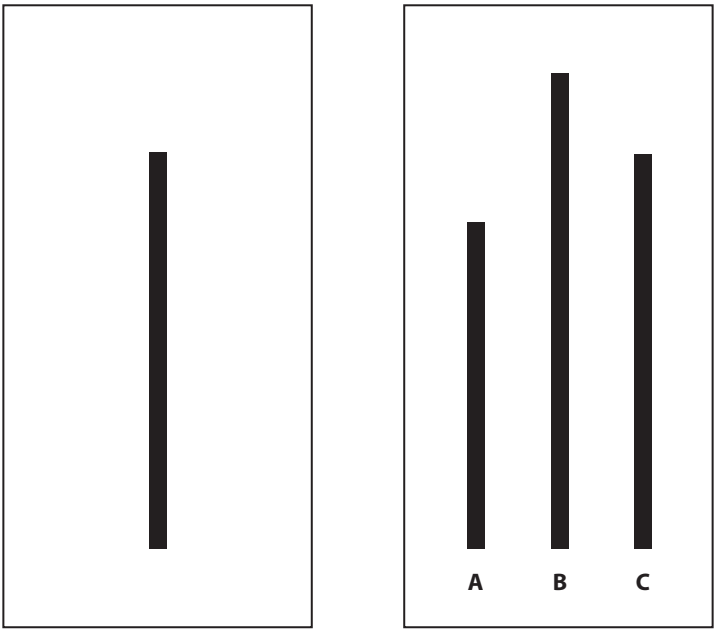

FIGURE 1. The lines in the Asch conformity experiments. *Source:* Wikipedia.

when the individual realizes that by doing so he turns his back on reality and truth."[18]

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.[19] 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.[20] 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!"[21] 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."[22] 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.'"[23]

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?[24]

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?"[25]

Adaptive Credulity

If social psychologists seem to have been bent on demonstrating human credulity, anthropologists have, for the most part, taken it for granted.[26] 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.[27] Critical anthropologists have described the assumption that people absorb whatever culture surrounds them as the theory of "exhaustive cultural transmission,"[28] or, more pejoratively, as the "'fax model' of internalization."[29]

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."[30]

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.[31]

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.[32] Known as *gene-culture coevolution*, 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.[33] 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.[34]

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.[35] 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*.[36] 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.[37] 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.[38] 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.[39]

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.[40] The prestige bias would explain why people appear more likely to kill themselves after a celebrity has committed suicide.[41] 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.[42]

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."[43] 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."[44] 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.[45] 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.

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