CHAPTER 2

Fake News: What It Is, Why It Works, and What We Can Start Doing About It

"If you want to teach people a new way of thinking, don't bother trying to teach them. Instead, give them a tool (or tools), the use of which will lead to new ways of thinking."

—R. Buckminster Fuller

"When conventional reality emerges, absolute reality submerges; When absolute reality emerges, conventional reality submerges."

—Buddhist Sage, Mahāsī Sayādaw

After this fall's high school parent night, a father hung around to talk to Jeff. He came up, introduced himself as "Hal's dad," and then launched in:

Dad: I've been wondering what you and this school are doing about all the CRT [critical race theory] and liberal brainwashing that is going on in this school.

Jeff: It sounds to me like you are really concerned about this. Can you tell me more about it?

Dad: I've been reading about all this CRT stuff and how schools are brainwashing kids into thinking that being White* is bad and that American history is bad and how many kids are being humiliated for being White and being made to feel bad.

* Note from authors: This text follows the style conventions outlined by the Center for the Study of Social Policy (Nguyễn & Pendleton, 2020; https://cssp.org/2020/03/recognizing-race-in-language-why-we-capitalize-black-and-white).

Jeff: I hear you saying that you want your son to be valued and respected and for his values to be honored. Am I hearing you correctly?

Dad: (pause) Well, yeah, but more than that, I don't want him to feel bad about himself. I don't want him learning stuff that just isn't true.

Jeff: I hear your concern and I share it. I want your son to come as himself, and leave this class as himself, just being a little more educated and informed as a reader, writer, and thinker. I know every teacher in this school is devoted to teaching what counts and can be justified as a form of true expertise. Every student is going to be valued and respected in this school and in my classroom. This is what we do here: We value each other, we value knowledge that counts in the disciplines and world of work, we listen to each other, and value informed opinions of all kinds. We value diversity because that energizes learning. No one is going to be silenced or made to feel bad. But we will work hard to test out our ideas and find evidence that backs them up.

Dad: I still want to know what you are doing about all this brainwashing!

Jeff: You are going to have to help me out here. I have never heard of CRT being taught in this school or any other school I know of. I have not heard of students being disrespected by teachers. I just don't know of any evidence that it is happening. Do you know where this is occurring?

Dad: Well, no, but I know it is happening.

Jeff: I share your concerns. Here's a tool I use: I look for respected journalists writing on an issue. I've been reading the Idaho newspapers and the *Idaho Education News*, and they have some good stories from reputable journalists who have done a lot of research and investigative reporting. And they conclude that CRT is not taught in Idaho schools or American schools for that matter. I can send you a link if you want. You should read it for yourself! I get daily updates from them, and it keeps me up to date on what is really going on in our schools. Because I'm a concerned dad, just like you!

Dad: Yeah, okay. But there's a lot of smoke for there not to be a fire!

Jeff: (laughing) I work with kids so I know there's often a lot of smoke without a fire! But if you read or hear something specific that is concerning, please let me know.

Dad: And how do you know you are getting your news from a good place?

Jeff: That's a great question. Here is another tool I use. It's a website called Allsides; it tells you if your source is slanted one way or the other. [Jeff shows him on his phone.] I know that I like to get news from sources that I agree with—which is a basic human tendency—so I use Allsides to monitor myself to make sure I'm getting mainstream views based on real journalism and established facts. There is a lot of misinformation out there so I try to be careful. I'll send you a link and then you'll have my email, too. Let's stay in touch. I know we are on the same team when it comes to Hal's welfare.

Maybe you've had this kind of conversation or one similar to it. In this chapter and Chapter 3 you will learn strategies for helping yourself and others deal with information pollution, including what Jeff did during this conversation:

- Engaging in deep listening and uptake
- Acknowledging there is information pollution and that we are all susceptible to it
- Recognizing our biases and being open to new learning
- Asking respectfully for evidence; expressing respect for evidence-based journalism, science, and disciplinary work; and committing to using facts to inform positions and decisions

Reflection Questions

- From what sources do you—and your students—typically get "news" or other information about specific topics and about the world in general?
- To what degree do you—and your students—seek validation and verification for previously established positions, values, and commitments versus engaging in open exploration and continuing to test what you think and believe?
- What do you do—or could you do—to confirm or disconfirm significant claims about issues that matter as well as the evidence supporting them—and to check the slant of the information sources you use?

In this chapter we also focus on

- What information pollution/fake news is, why we believe and spread it, and how it exploits the basic default functions of our minds
- How being conscious of our cognitive biases and vulnerabilities can help us exercise some level of mindful control that focuses our minds and energy
- How this transformation in consciousness can help us monitor information pollution/fake news and consciously decide what is worth believing or acting on
- How this consciousness will help us deeply listen and productively respond to people influenced by fake news
- How these insights lay the groundwork for the lessons in Chapter 3 that will operationalize them

WHAT IS NEWS?

The issue of "fake news" requires us to consider the nature of "real news." News is generally considered to be an accurate account of a recent, interesting, and significant event (Kershner, 2005) to provide citizens with the information they need "to be free and self-governing" (Kovach & Rosenstiel, 2007, p. 17). It can

also be seen as a dramatic account of something novel, and therefore interesting, of an outlier event or phenomenon (Jamieson & Campbell, 1997). News is seen as the professional output of journalism, a field that has established binding standards and processes for providing accurate, objective, and cross-checked reports leading to "independent, reliable, accurate and comprehensive information" (Jamieson & Campbell, 1997, p. 11). Legitimate professional journalism is transparent about its funding, ownership, and professional practices. Professional journalists examine all credible sides of an issue. They make corrections and issue retractions if they make mistakes. Real news informs versus persuades; it presents versus compels. (See the infographic "Is It Legit?," https://newslit.org/educators/resources/is-it-legit/.) This said, "news," like any other kind of understanding or representation of information, is socially constructed and therefore vulnerable not only to journalists' own biases and preferences but also to external entities and forces such as advertisers, paying audiences, government regulators, and so on (Shoemaker & Reese, 2013). News is sold to audiences, and audiences are sold to advertisers (McManus, 1992), a phenomenon that makes news increasingly vulnerable with the rise of digital media and artificial intelligence.

Wardle (2017) of *First Draft News* pointedly rejects the term "fake news." She "censors it in conversation" because it is "woefully inadequate" to describe the issues now at play with social media use (SMU). In part this is because "news" cannot be "fake," or it is not news. She suggests the term "information pollution," which has various forms based on different source problems. In this book, we continue to use the term "fake news" since it is in current use, but also use the terms "new propaganda" and "information pollution."

KNOW YOUR OWN MIND OR BE MANIPULATED!

When Jeff was growing up in rural Ohio there was a county highway near his home with a series of Burma Shave signs that read:

> Don't lose your head
>
> To save a minute
>
> You need your head
>
> Your brains are in it!

This is something our students (like any democratic citizen) need to understand—don't lose your head! The consequences are dire—personally and for us all socially. And yet most of the time every one of us has decidedly lost their head—because our minds mostly operate automatically and without our conscious control. This, in short, is what makes us susceptible to information pollution.

Jeff often asks his students what they should do before making a major purchase, one that's going to require a considerable financial sacrifice. They generally say something along the lines of: Do your homework. Check *Consumer Reports*. Talk to friends who are in the know. Read reviews and see what experts have to

say. Jeff asks what might happen if we fail to do our homework. Everyone has stories of buyer's remorse, of relatives and their money-pit cars or homes bought without the proper inspections.

Jeff then asks why they would "buy" something as big as their deepest commitments and values, ideas, philosophies, political orientations, hopes, and dreams—which constitute one's identity and way of being in the world—without doing their homework (i.e., reading laterally, checking with experts, and verifying the "influencer's" actual authority and expertise). He demonstrates to his students that everything they have ever heard or read—from an advertisement to a political ad to a tweet to an Instagram post to a poem—is an attempt by somebody with a very specific position on an issue to manipulate you into engaging with, knowing, believing, thinking, or doing something that is in *their* interest. So before we buy or believe anything, we better do our due diligence, or we have unconsciously given the power over our lives, thinking, influence, and our very being to someone else. Yet this is what happens when we are affected by any version of information pollution.

In the last chapter, we took a look at Louise Rosenblatt's (1978) transactional theory of reading, which argues that reading involves the coming together of reader and text in a specific context of use that results in the construction of some kind of meaning. Part of the reader's contribution to this meaning making is their background, personal history, cultural context, experience and facility as a reader, and much else, as well as the purposes of the reader and the reader's life context (both the immediate personal context and purpose, as well as the more general layers like the state of the community or country in which she lives).

The notion of reading as a transaction is consistent with socio-cultural theories of teaching and learning that have held sway in cognitive science and in discussions of effective teaching and learning, communication, and much else over the past 50 years (see Wilhelm, Bear, et al., 2020; Wilhelm, Miller, et al., 2020). These theories hold that all meaning is socially constructed. In other words, we construct our own realities based on our social conditioning, known as *mind conditioning* in Buddhist psychological traditions. To quote Mahāsī Sayādaw, "What and how we understand depends upon how we think." And how we think is deeply influenced by the micro- and meso-cultures we grew up in as well as those we choose to inhabit.

If we want to transform our students and the way they read and understand, if we want to work toward health and productivity, then we must be critical teachers willing to examine and transform ourselves and the way we teach—moving beyond what Zeichner and Tabachnick (1981) call "the salience of the traditional." We must be willing to help learners transform their ways of engaging, thinking, knowing, and doing in school and in their wider lives. Challenges cannot be solved or alleviated by the mindsets that created them. We must constantly ask: *What if it were otherwise?* In what ways could my practice be improved? How could my teaching be more transformative, powerful, and on-point for my students' current life challenges?

Although we like to think of ourselves as rational, we are in fact social animals wired for basic survival.

This chapter is about knowing our own minds and understanding how they evolved in ways that mislead us. Throughout this book, we explore how to approach and operate on texts so that we can consider how they are trying to manipulate us, how we can understand those manipulative moves and control them, and then compose a mindfully constructed meaning and a justified position of our own.

But first, a brief introduction to the problem.

WHY DO WE *ALL* BELIEVE AND SPREAD INFORMATION POLLUTION?

It's a big question: *Why are misperceptions about contentious issues in politics, history, and even science seemingly so persistent and difficult to correct?* It's certainly not for want of good information, which is readily available. We know that exposure to good information does not reliably promote accurate and justifiable thinking. Why not? According to a growing body of evidence, the ultimate culprits are

- Cognitive and memory limitations, including deeply embedded cognitive biases
- Preexisting commitments, beliefs, and identities
- Directed motivations to defend or support our identity and group affiliations
- Messages from other people, usually close to us and exercising influence on us, and the views of prominent influencers and political elites (Nyhan & Reiflet, 2010)

A summary of the evidence shows that people become even more prone to information pollution when these factors are in play (e.g., from Allport & Postman, 1947, all points continue to be supported by current research):

1. There is uncertainty causing fear and anxiety.
2. The information/information pollution is important to the consumer and believable to them. Allport and Postman's (1947) *basic law of rumor* posits that spreading rumors depends on the *ambiguity* of the situation and the *importance* of the misinformation.
3. Believing and spreading the information pollution stakes one's identity by promoting a self-image of "knowing insider"—and it strengthens social connections to one's "tribe."

So, in other words, information pollution is spread and believed when uncertain conditions make people anxious or fearful, creating a greater need for "in-grouping"—a belief that their social identity is a source of superiority, strength, and protection—and that other groups can be blamed and scapegoated for their problems. Although we like to think of ourselves as rational, we are in fact social animals wired for basic survival. In times of perceived uncertainty, danger, conflict, or social change, we seek security by identifying as members

of like-minded groups. This situation makes us eager to consume and spread information, both true and false, that puts a lens on the world as a conflict pitting our "righteous" and correctly informed in-group against a threatening out-group. (This is akin to what is known as the *third person bias*—*I* know how to deal with this situation; e.g., fake news, *you* better be careful, *they* are all getting hoodwinked!)

The situation is exacerbated by high-profile political or media figures promoting identity-affirming misinformation. (Intense all-out conflict rallies followers and provides short-term benefits of attention and political clout to these figures.) Another factor is our inherent cognitive biases that short-circuit rational thought. And a final compounder is the use of social media, which exponentially multiplies all previous risk factors. As Fisher (2021) writes, "In an ecosystem where that sense of identity conflict is all-consuming . . . 'belonging is stronger than facts,'" quoting sociologist Zeynep Tufekci.

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This chapter and the next explore the following:

- What part do we, *we* as human beings, play in this manipulative dance?
- What are the foibles and weaknesses that are hard-wired into *all our* brains that allow us to be so susceptible to the new propaganda and all forms of information pollution?
- How should we operationalize these understandings to study, test, and monitor ourselves and our role as we transact with different kinds of texts?

Next, let's consider the forms of information pollution that we are assailed with.

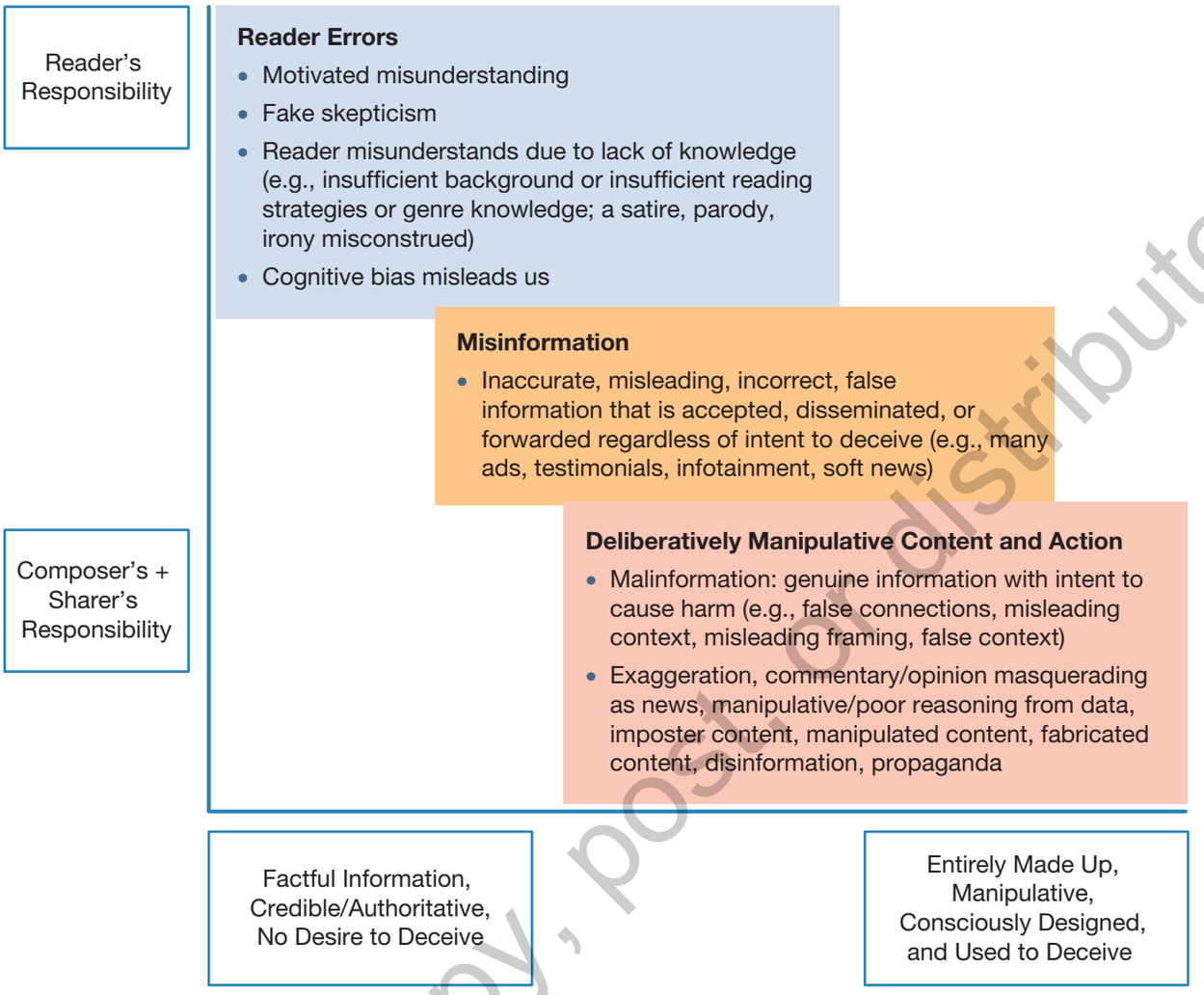
WHAT ARE THE FORMS OF THE NEW PROPAGANDA AND INFORMATION POLLUTION?

To identify and deal with information pollution, it's useful to have a clear understanding of its different forms and the effects of each. After researching numerous typologies of fake news or information pollution, we offer our own continuum of information pollution/manipulation based on the indices of responsible parties (reader to composer and anyone who reposts), factfulness (fact-based to totally fabricated), and desire to deceive (no intent to deceive to malicious intent) (see Figure 2.1).

The bottom line: Every utterance and every text has been constructed by someone to induce or manipulate us into engaging, knowing, believing, or doing something that fits the composer's purposes. Therefore, we better always ask

- Who constructed this text and why (i.e., what do they want *me* to think, believe or do—and why)?

FIGURE 2.1 Scatter Plot



- Do I want to go along with them?
- What do I win or lose by going along?
- Who else wins or loses?

This is what we want our students to be convinced of: *If you don't read critically, then you are being manipulated.*

This is what we want our students to be convinced of: *If you don't read critically, then you are being manipulated.* To be critical, we must become consciously aware and skillful. This is particularly true because social media and information pollution exploit the frailties of our brain evolution and the many cognitive biases that unconsciously control our mental activity.

OVERRIDING THE DEFAULT MODE SYSTEM (SYSTEM 1) WITH CONSCIOUS COMPETENCE (SYSTEM 2)

Are ALL human beings susceptible to fake news/the new propaganda/information pollution? The answer is an unqualified hard YES. As Nobel Laureate Kahneman (2013) maintains, based on his lifetime of work in human cognition (see *Thinking Fast and Slow*), you are totally deluded or in extreme denial if you choose to believe otherwise. The cognitive science about issues of cognitive bias could not be more clear or convincing. To what degree are we susceptible? Much greater than we would ever suppose.

Are we susceptible to fear, gossip, emotional appeals, identity and group affiliation pressures, and general irrationality in positioning ourselves, making decisions, and deciding what to believe and how to act? YES. YES. YES. And YES!

And further: Are Americans especially susceptible to fake news? We answer yes to this question as well, due to so many factors:

- Our historical divisions since the settlement of North America (e.g., Virginia planters vs. Puritans)
- Our fractured political discourse
- The privileges/oppressions baked into American culture since First Contact
- How we get our news from different and often slanted media/information sources
- A cultivated culture of distrust by politicians and political outlets
- Segregation on many different dimensions of ethnicity, class, culture, and ideology
- Traditions of scapegoating, shaming, and calling out
- The pervasive influence of social media (see, e.g., Anderson, 2017)

As we argued in Chapter 1, this general susceptibility to fake news and information pollution is a great danger to

- Personal and mutual understanding
- Comprehending the world as it is
- Establishing truth, and valuing it
- Developing expertise in any domain
- Wise decision making and accountability

- Productive community and communal life
- Healthy personal and social relationships
- The work of any discipline or profession
- Democratic values and democracy itself

It is our argument that as teachers and responsible citizens we must recognize this problem and directly address it with our students *repeatedly over time* in various contexts and from every possible angle—both direct and indirect—going through the front door, the back door, the side windows, and even the attic and basement!

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The problem, in short: Our brains have evolved to operate many basic functions and routines automatically. According to cognitive research, our brains have evolved to use what neuroscientists call the default mode network, and what Kahneman (2013) calls *System 1*.

System 1 uses automatic heuristics (shortcuts) that replace conscious thought. We use this kind of nonthinking in many situations where the risks greatly outweigh the benefits of automaticity. *The most significant issues in life should not be left to mindless defaults*. Kahneman's *System 2*, in contrast, is much slower, more methodical, highly conscious, and thoughtfully process oriented.

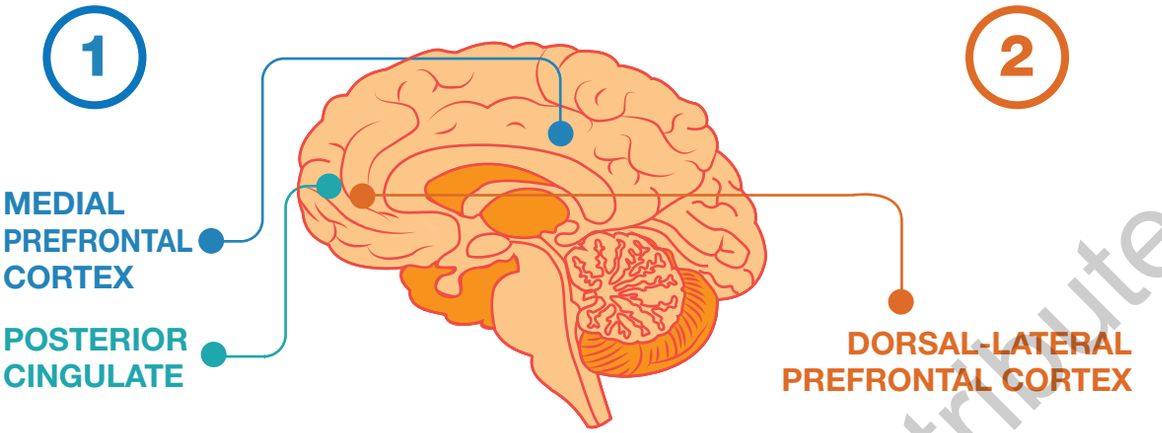
Winston Churchill is reputed to have said, "Fear is a reaction. Courage is a decision." Although he wouldn't have known it at the time, Sir Winston was describing the two operating systems of our minds. He was also describing why social media is so powerful (it preys on our fears, prior attachments, and affiliations) as well as what to do about information pollution (proceed deliberately with courage and conscious awareness, mindfully addressing and thinking through the issue at hand).

Over the past 20 years, descriptions of these two systems—Default Mode/System 1 and System 2—and their functions have been widely explored in both scientific and popular publications. This work helps us understand how our basic comprehension, problem, and decision-making processes work—and how they are so often derailed.

The basic problem is this: We are equipped with instincts and thought patterns and biases that were helpful to our ancestors, who lived tribally as hunters and gatherers in a wild natural world. But these instincts make people in the modern world jump to conclusions, react to nonexistent dangers, and make enemies of our potential allies. Instead of mindful attention, we use shortcuts. We stake identity and group affiliation in privileged ways (us vs. them) over thinking hard about what might actually be true, useful, helpful, or functional in any given situation.

The Default Mode System (DMS) and Kahneman's System 1 are essentially the same and reside in the same brain regions. The DMS was discovered when brain researchers were exploring baseline mental activity, which they found to be very fast, highly engaged with emotions, largely self-referential, and highly automatized (see Figure 2.2).

FIGURE 2.2 System 1 vs. System 2



SYSTEM 1 DEFAULT MODE NETWORK	SYSTEM 2
• FAST	• SLOW
• DEFINING CHARACTERISTICS: unconscious, automatic, effortless, irrational and often emotionally involved	• DEFINING CHARACTERISTICS: deliberate and conscious, effortful, controlled mental processes, rational thinking and use of mental maps
• WITHOUT self-awareness, conscious control, or any kind of monitoring or inquiry: "What you see is all there is."	• WITH self-awareness or control, logic and skepticism, looks at multiple positions and possibilities
• ROLE: automatic assessment of the situation, takes shortcuts to get through the problem without mindful attention or energy	• ROLE: seeks new/missing information, asks for justification and verification, makes mindfully considered decisions, uses conscious competence with expert mental maps for solving problems, and revises and improves these maps as needed for new challenges
• Makes up 98% of all our thinking	• Makes up 2% of all our thinking

SOURCE: Illustration by Joel Wilhelm.

System 1 makes us jump to conclusions and respond the same way, no matter the situation. An apt metaphor is how we tend to ski down the same ski tracks (i.e., how we comprehend and address problems repeatedly in the same way) over and over because it's just easier that way—the trail is already cut for us. We engage, know, think, and do the same things in the same ways out of ease and habit. To counter this habit energy, we need to groom the mountain of our mind so we can find new ways to proceed—new ways to frame and interpret problems and to engage with, think about, and address complex issues. This is akin to the Buddhist idea of learning to read the world with a "beginner's mind," that is, an unfettered mind open to all possibilities, not just the ones previously prepared for us—or by us.

System 1 is an evolutionarily ancient, largely primitive, and excessively emotional system. System 1 bypasses all conscious and rational thought and is automatized, mostly subconscious, and immediate. Our fight-or-flight response to perceived danger is an example. Its speed is both its great attribute and its dangerous, delusional downside. The posterior cingulate is the brain part that runs System 1, and interestingly, it is where identity, our sense of self, and ego largely reside.

We operate in System 1 almost all the time.

Takeaway: *Kahneman has famously declared that System 2 is notoriously lazy and prefers to defer all its work to System 1.*

And it turns out that the more fearful or stressed we are, the more this seems to be the case. Interestingly, SMU promotes anxiety, depression, and fear (Taylor-Jackson & Moustafa, 2021), and in an infuriating feedback loop, the more afraid we are and the less control we feel, the more we tend to engage with SMU (Reed, 2020). Just as when you are tired and stressed, simple disagreements can become emotional arguments, when you see an Instagram post of a person with flawless skin you can be moved by the comparative mindset to think, "My skin sucks! I need to find a way to improve my skin!" and start clicking away.

SMU promotes anxiety, depression, and fear (Taylor-Jackson & Moustafa, 2021), and the more afraid we are and the less control we feel, the more we tend to engage with social media.

Social media uses artificial intelligence (AI) to specifically target the fears, prior attachments, and affiliations that promote more SMU and that deepen commitments to System 1 and our vulnerability to cognitive bias.[1]

There are, in mundane quotidian situations or the rare dangerous ones, advantages in relying on System 1. But System 1 is not the system for navigating the challenges and complexities of the high-stakes issues of modern life. Relying on the creaky old whispers of the evolutionary brain will not help you navigate an argument with your spouse, much less the nonroutine analytical and interactive tasks required by the modern workplace and the challenges of modern cultural life. Neither fighting nor fleeing is an appropriate response here. We must deeply understand our challenges and mindfully address them over time.

As noted earlier in this chapter, Kahneman's System 2, in contrast to System 1, is much slower, more methodical, highly conscious, and thoughtfully process oriented. This fits the theory that early brain regions like the limbic system were built to be reactive and automatic to avoid the serpent in the grass and ensure survival. (Snake! Run! Enemy! Throw spears!) Our capacities to reason and consciously override instinct are due to the increasingly complex world and the evolution of our brains

[1] Kahnemann does assert that System 2—for all its deliberation—can be based on intuited flaws (e.g., some of our most treasured political beliefs are, he argues, profoundly rooted in personal history). So a political affiliation that I might make quickly, intuitively, with the gut of me, is something that's been so ingrained in me that it's as easy as 2 + 2 = 4 for me, built on a pattern of selected and trusted narratives on which I've placed authority. And any deliberation I do based on this history will necessarily be flawed.

over time. But these System 2 capacities take tremendous energy and willpower to use, and they are undermined by the attractive ease offered by System 1—and by SMU and information pollution, which bids to do our thinking for us. If we do not mindfully and consciously read, write, and act, then we are quite literally using *the bottom of our brainstem*. And we do this instead of using the most recently evolved and powerful parts of our brain—including the mindful tools of cognition these new brain parts afford us. (When we ask what a teen could have possibly been thinking after they have done something stupid or harmful, the answer is always: They weren't! They weren't thinking, that is! They were using System 1.)

COGNITIVE BIAS RULES THE DAY

Bottom line: We are far less rational and far less correct in our thinking than we'd like to give ourselves credit for. The side effect of System 1 is that we all suffer from *cognitive bias*. A cognitive bias refers to a systematic pattern of deviation away from justified and mindful reason—a lapse of rationality in judgment or problem solving.

Kahneman (2013) discovered not only the two operating systems of our brain. His discovery of the bandwidth of each system and the different results produced by each made his research even more significant. These were breakthrough insights into the typical lack of reasoning in human decision making. He showed how the two thought systems arrive at different results even given the same inputs. His work foregrounds the power of the subconscious mind and automatic nonthinking in our daily lives. We tend to consider ourselves rational human beings who carefully consider our decisions and actions. Kahneman proved this wrong and showed that our mental activity is almost entirely irrational.

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AVAILABILITY, CONFIRMATION, AND OVERDRAMATIZATION BIASES

Two of the most prevalent shortcut biases are *availability bias* and *confirmation bias*. These come into play when we are making judgments and decisions.

Availability Bias

- This bias provides us with a mental shortcut that relies on the immediate cases that come most easily to our minds.
- We value information that springs to mind quickly as being more significant.
- When making decisions, we automatically think about related events or situations from our own limited immediate experience.
- We judge those events to be more frequent and probable in all cases.
- We overestimate the probability and likelihood of similar things happening in the future.

Availability bias examples

My neighbor's chihuahua bit me, so all small dogs are dangerous! I know someone who won a big prize in the lottery, so I can win, too!

Availability cascades

When a story about any topic, like "the election was stolen," goes viral, which triggers further posts, stories, and discussions making the information pollution (or justified news in some cases) more "available" and therefore influential on us and others.

Availability bias takeaways

When images are placed side-by-side or in a collage, it's nearly impossible not to draw connections between them—because possible connections (which are likely nonexistent) have been invited and made available to us.

Presenting genuine photos or videos in false contexts is one of the most common tactics used to spread misinformation online—because it exploits availability bias.

Confirmation Bias

- This is our bias to adhere to preconceptions and to attend only to information that confirms these preconceptions, leading us to ignore, immediately dismiss, or reshape any information that does not confirm our a priori positions and commitments.
- We interpret situations and information in ways that confirm preexisting beliefs.
- The bigger the emotional charge related to the preconception, the more System 1 is engaged and the worse the bias.

This is a reason why it is difficult to have a serious conversation about abortion, climate change, political alliances, gun control, race relations, vaccinations, and many other issues to which we have deeply committed and emotionally charged positions.

Confirmation bias examples

I am committed to the idea that chihuahuas are dangerous, and I saw one barking at my neighbor and I can see that he is dangerous and will viciously bite!

or

I think chihuahuas are lovable and loyal, and I see the barking as protective of the household.

Types of confirmation bias

Biased information searches, biased interpretations of information, and biased information recall

Confirmation bias takeaways

If it feels TOTALLY AND UNDENIABLY true to you, then confirmation bias certainly has you!

If it strongly confirms what you think, then your enthusiastic interpretation probably stinks!

OVERDRAMATIZATION BIASES

The famous public health policy expert Hans Rosling (2018) poses a scheme of cognitive biases that he maintains are hard-wired into our brains, all centered on what he calls the *overdramatization bias*—that we evolved to notice and focus on what is most dramatic. (The stock market is going down so it is going to continue to go down and will crash! Sell! Sell! Sell!) This is System 1 survival thinking. Rosling's antidote, proposed in his book *Factfulness: Ten Reasons We're Wrong About the World—and Why Things Are Better Than You Think*, is to monitor ten aspects of this bias and to test them against the facts that are available (see the lessons in Chapter 3).

Again, we see that what is necessary to fight cognitive bias is

- The ability to access, evaluate, and value good information
- The ability to monitor our cognitive biases as we consider, interpret, and make use of this information

We repeat: *Everyone* is affected by cognitive bias. *Literally everyone*. It's part of our humanity and our evolution. But who is most susceptible? It turns out that the people who are especially anxious, fearful, emotionally charged, or who are feeling out of control of their lives are most prone to manipulation (e.g., Our elections are rigged! There is no coronavirus!). Writing in the journal *Science*, researchers Whitson and Galinsky (2008) found that people who lack a sense of control are more likely to perceive conspiracies, develop superstitions, and see images that don't exist. "When individuals are unable to gain a sense of control objectively, they will try to gain it perceptually" (2008). We seek and make up patterns to simplify the reasons for our lack of control, they write, creating "distortions of objective reality" (2008).

> Everyone is affected by cognitive bias. Literally everyone. It's part of our humanity and our evolution.

Many historians and psychologists also make the case that Americans are particularly susceptible to conspiracy theories.[2] Anderson (2022) argues that the capacity

[2] Anderson (2022) argues that "[t]here is an American instinct to believe in make-believe, from the Pilgrims to P. T. Barnum to Disneyland to zealots and fantasists of every stripe . . . to Donald Trump." "America was founded by wishful dreamers, magical thinkers, and true believers, by impresarios and their audiences, by hucksters and their suckers. Believe-whatever-you-want fantasy is deeply embedded in our DNA" (Anderson, 2022).

for blurring delusion and verifiable reality is a deeply held American predilection. (Tupac is alive! Vaping is safe if it's not nicotine!) Much psychological and psychiatric research (e.g., Friedman, 2020) agrees, though the problem is seen as a generalized human failing, with Americans being perhaps especially susceptible—and these psychological researchers see education as the remedy:

> We are cognitively hard-wired for plausibility, not for truth or accuracy. Thus, conspiracy theories and misinformation will always have a receptive audience. We can help our patients to counter this all-too-human tendency by encouraging their capacity for critical thinking and skepticism. As a society, our survival depends on it. (Friedman, 2020, n.p.)

For some, according to historian Richard Hofstadter writing in the 1960s, susceptibility to information pollution and the "paranoid style" of American culture is due to anti-intellectualism and an associated distrust of experts that he thought was due in part to an American "passion for equality." Because we believe that knowledge should be accessible and understandable by all, if we do not understand something then it is suspect, and we think it is probably being used for perverse purposes. (Don't get vaxxed! Bill Gates is putting computer chips into your body! "Climate scientists" are corrupt and can't clearly explain climate change so it must be a hoax!)

The strongest indicators of conspiratorial belief aren't ignorance or political leaning, they found, but a belief in the struggle between good and evil.

We also become more susceptible the more we segregate ourselves physically and intellectually. In *The Big Sort: Why the Clustering of Like-Minded America Is Tearing Us Apart*, Bishop (2009) demonstrates how Americans are segregating not just by social class, but by belief and ideology. He shows how this segregation leads to increased availability and confirmation bias.

Intellectual laziness is another culprit. University of Chicago researchers Oliver and Wood (2014) found the belief in conspiracy theories is commonplace in America (52% of Americans "consistently endorse some kind of conspiratorial narrative" in surveys conducted from 2006 to 2011). The strongest indicators of conspiratorial belief aren't ignorance or political leaning, they found, but a belief in the struggle between good and evil. American culture simply leans into that sort of thinking. "For many Americans, complicated or nuanced explanations for political events are both cognitively taxing and have limited appeal," they write, so we believe conspiracies because they are easier to grasp, "more accessible and convincing." System 1, anyone? (For other factors, see 10 Factors That Shape a Rumor's Capacity for Online Virality: https://bit.ly/3TP8A3R.)

And then there is social media. Because they are advertisement driven, social media platforms will use any means necessary to keep users engaged, making great use of cognitive bias to manipulate us. In an op-ed, researcher Zeynep Tufecki (2018) described YouTube as "the great radicalizer." After viewing Trump rallies on YouTube as part of her research, she found that White supremacist

videos began auto-playing for her. Inquiring into this phenomenon she found that viewing Bernie Sanders videos led to feeds of anti-Bush 9/11 conspiracy videos, vegetarianism to veganism, jogging to ultramarathons—every new feed confirmed what was assumed to be her bias and made more extreme views of it available. YouTube, she concludes, "promotes, recommends and disseminates videos in a manner that appears to constantly up the stakes," Tufecki writes. "Given its billion or so users, YouTube may be one of the most powerful radicalizing instruments of the twenty-first century" (Tufecki, 2018).

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There are surprises in the research about those who are especially susceptible. Research indicates that people will go to great lengths to

> use their intellectual abilities to persuade themselves to believe what they *want* to be true rather than attempting to actually discover the truth. According to this view, political passions essentially make people unreasonable, even—indeed, especially—if they tend to be good at reasoning in other contexts. (Roughly: The smarter you are, the better you are at rationalizing.) (Kahan et al., 2012)

Some of the most striking evidence used to support this position comes from an influential 2012 study in which Kahan and colleagues "found that the degree of political polarization on the issue of climate change was greater among people who scored higher on measures of science literacy and numerical ability than it was among those who scored lower on these tests" (see also Kahan, 2013, 2021; Kahan et al., 2012). In other words, the more adept you were at scientific reasoning, the better you were at offering different interpretations of the data to serve your own a priori position.

The implications here are as profound as they are astonishing: Intelligence, the capacity to analyze and reason, can—when combined with prior partisan commitments and/or passions tinged with emotional charge—worsen the problem of cognitive bias and disputes over facts and their meaning. No one is immune. We must take on, as Alastor "Mad-Eye" Moody (Professor of Defense Against the Dark Arts in the Harry Potter series) urges his students: "Constant vigilance!" (Jeff has only read the books in German, where Moody yells "Sei Wachsam!" or "Be awake!") *We are all susceptible!*

In Buddhist psychology, much is made of skillful means, skillful knowing, and skillful response. These terms are synonymous with *mindfulness* or *conscious awareness*. Karma means you can't get away with doing nothing because doing nothing or not deciding is also an action and decision. So we must exercise agency, skillfully come to know our own mind, and move forward toward an aspirational future. Skillful effort is activating System 2 and exerting conscious competence. This resonates with Ericsson and Pool's (2016) (Ericsson is the world's expert on expertise, a title we'd like to have!) notion of deliberate practice. Expertise

is developed through skillful effort to develop the mental models and maps of expert activity. Deliberate practice must be System 2 because it consciously works to always correspond more closely to more expert and comprehensive ways of engaging, knowing, doing, thinking, and being—aka 3D/4D teaching and learning (Wilhelm, Bear, et al., 2020; Wilhelm, Miller, et al., 2020). Jeff's friend, Tom Facziewicz, is a Buddhist teacher, and he is fond of saying that social media preys on the unaware mind. "Everything is fake until you're awake —awake to how your mind works and doesn't work!"

To move forward, we must

1. Acknowledge our situation, including the ways the sections of our primitive brains work and the ways social media works on our primitive brains
2. Set an aspiration to do better and to become more conscious, aware, and skillful
3. Use the tools and practices that will lead us toward that aspiration. That is, know how to access good information and have ways to verify it and be internally persuaded through openness (beginner's mind), lateral reading, and other processes

The lessons in our next chapter seek to achieve these goals.

Reflection Questions

- In what situations and conditions have you been especially susceptible to confirmation, availability, or overdramatization bias? Why do you think this is the case?
- In what situations and conditions have your students been especially susceptible to confirmation, availability, or overdramatization bias? Why do you think this is the case?