

CHAPTER 1

The Case for Teaching Critical Reading and Fighting Fake News

“If people don’t have the facts, democracy doesn’t work.”

—Federal Judge Amy Berman Jackson

“It is always easy to question the judgment of others in matters of which we may be imperfectly informed.”

—P. D. James

“Anyone who can make you believe absurdities can make you commit atrocities.”

—Voltaire

Recent events and their aftermaths have made us even more committed and devoted to the project of this book. As we prepare it now for publication, we are roiled by the wake of the 2020 election and the Capitol riot on January 6, 2021, the Congressional investigation into it, the Facebook files and whistleblower, the continuing misinformation of various kinds about vaccinations and public health policy as COVID and its variants evolve, fake Twitter accounts, mal-information from Russia regarding the war in Ukraine, and the ongoing use of information pollution by various parties across the political spectrum in relation to issues that profoundly impact American lives, social policy, education, and—we’d contend—the future of democracy.

False and distorted “news” material can’t really be said to be anything like a new thing. This kind of subterfuge has been a part of media history long before the advent of social media. It’s what makes us pause in the grocery line to look at tabloid headlines from *The National Enquirer*, *Us*, *The Sun*, *In Touch*, and

many others. On the internet, headline forms that are called *clickbait* tempt and tease us to read more, yanking our proverbial interest chains through surprise, shock, and awe. From the fake news (“Remember the Maine!”) that speciously set off the Spanish-American war to the McCarthy era and the “Red Scare” of the 1950s, the fake WMD in Iraq, to the QAnon of today, the United States has been particularly susceptible to information pollution of all kinds.

The problem at hand: Fostering both open-minded and critical readers in an age of partisanship and rampant information pollution. We argue that *something must be done and done now*, and this book is designed to meet three goals to move us forward:

1. To help learners become highly competent critical readers of all kinds of texts and critical consumers of data who understand how credible and objective fact is reasonably established—and how it can be responsibly used.
2. To help students recognize, interrogate, and responsibly deal with what is often called “fake news,” the “New Propaganda,” or “information pollution” and help them understand how these kinds of mis-, dis-, and mal-information work and how they are powerfully tailored, curated, and disseminated *to them* in highly targeted and manipulative ways by artificial intelligence (AI) and social media.
3. To help recognize and fight what we’d call *fake skepticism*—or perhaps *ungrounded skepticism*: the ignorance or dismissal of established, credible data from reliable sources, including the pretense that science does not exist or that established scientific findings can be roundly discounted; the suppression of historical understandings based on data and grounded experiences from across different peoples and across time; or the pretense that data about many of the issues facing us are not available or should not be believed.

These three goals are essential to fostering responsible reading, composing, disciplinary engagement, thinking, knowing, and doing. And they are essential to much more: navigating our personal lives and relationships intelligently, creating community and effective social policy, working toward the common good, and robustly engaging in democratic life. The challenges of and the need for critical reading and thinking are not new. It is well known that in ancient Rome, paid political hacks called Panegyrist spread mis-, dis-, and even mal-information, playing the part of influencers in service of various politicians and political interests. What *is* new is the powerful digital technologies that now exist and that can be used by political and business interests to amplify their manipulation by personally targeting us with tweets, short-form videos, and posts that are tailored by AI to our personal psychology and our biases with the purpose of manipulating us to do and think what is in the interest *not of ourselves or our communities, but of some hidden entity*.

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Reflection Questions

- What topics do you or your students find particularly captivating or even triggering—topics you just can't help pursuing?
- What topics do you or your students have anxiety about (note well that any form of anxiety makes you particularly susceptible to information pollution—as we will explore)?

Tristan Harris, formerly a design ethicist at Google and now the leader of the Center for Humane Technology, expresses it this way: “News feeds on Facebook or Twitter operate on a business model of commodifying the attention of billions of people per day . . . They have led to narrower and crazier views of the world” (Applebaum & Pomerantsev, 2021, p. 44). In the same article, the authors write:

The buttons we press and the statements we make online are turned into data, which are then fed back into algorithms that can be used to profile and target us through advertising. Self-expression no longer necessarily leads to emancipation: The more we speak, click, and swipe, the less powerful (and more controlled and manipulated) we are. Shoshana Zuboff, a professor emerita at Harvard Business School, coined the term *surveillance capitalism* to describe this system. (p. 44)

Harris calls social media AI a “race to the bottom of the brain stem” because AI activates our deepest primordial fears and biases to self-select information that will make our views even more entrenched and extreme and that will isolate us over time. (This process works through *confirmation* and then *availability bias*, see Chapters 2 and 3.) Retweeting and “like buttons” create isolated worlds of our own, detached from reality and undermining our capacity to encounter different perspectives and to discern the truth. This undermines common bonds with those even slightly different from us and keeps us from tapping readily available and established sets of knowledge. This process creates an *echo chamber*, and this problem and attendant dangers are exacerbated by other cultural forces of truth suppression and misdirection.

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This system does not work to the benefit of us, our personhood, or for greater goods like the promotion of democratic culture, the creation of community, or the preservation of the environment. It does not serve a search for truth or work toward positive and transformative ways of engaging, knowing, doing, thinking, and being, which are the pillars of what cognitive scientists now define as *understanding* (Wilhelm, Bear, et al., 2020; Wilhelm, Miller, et al., 2020). As things stand, the system will not help us, but will instead hinder us in addressing the problems that most threaten us, our country, world, and environment.

It's important to understand, as various commentators vigorously argue, that we are losing our freedoms and agency by providing our data to powerful interests; these interests, in turn, use that data to manipulate us to their ends. Experts like Harris have been sounding the alarm for years about how these powerful forms of AI become ever more powerful and manipulative and invisible to us. They change as our behaviors and thinking change, leading us ever deeper down the primrose paths of extremism plotted for us by deeply hidden interests. We are fed ideas that do not test us, dialogue with us, or help us outgrow ourselves, but rather confirm our preexisting cognitive and conceptual biases and intensify them. It's a truism

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that you can't learn by looking in the mirror or by listening to like-minded dude-bros and bots. AI provides us only with highly personalized lenses and curated posts that submerge us into predispositions and lead to mob-think. These AI platforms are essentially authoritarian, imposing their will on us, demanding compliance, and refusing to show alternatives or enter into open conversation. Suffice it to say that any inter-

net or social media user is now subject to a giant set of social-engineering experiments on their brains.

In this book, we argue that we must have a clear-eyed view of the current situation and the significant challenges facing us. We also argue for hopefulness and a way forward by cultivating awareness that works toward alternative possibilities—through our own raised consciousness and “wide-awake” activity, our mindful interactions with others both on- and offline, and the conscientiously cultivated ways in which we can teach and learn from others.

TODAY'S NEWS

Though the specific problems of the “New Propaganda” and the instructional tactics and solutions we explore cover all evolving aspects of modern life, for the moment let's focus just on examples that currently dominate the news—though new ones will take their places. What is at stake in the political arena? The historian Snyder (2017) argues that when we give up trying to establish and verify objective facts and be informed by them for political decision making and social policy, tyranny is soon to follow. The future of the democratic project is in peril. If you doubt it, consider “The Big Lie” about electoral fraud in 2020–2021, vis-à-vis Nazi Germany, and their use of propaganda over the Volksradio; or Fascist Italy and their fascist art propaganda projects. Better, read what accomplished historians have to say in “America's Self-Obsession Is Killing Its Democracy” (Klaas, 2022) or in *How Democracies Die* (Levitsky & Ziblatt, 2018).

It's not just politics and elections that are so fraught. If we can't establish, verify, and believe something approaching the “truth”—or at least accept the existence of evidence patterns and objective facts and the reality of basic scientific understandings—then we cannot possibly have informed political decisions, wise and effective public policies for issues like pandemic preparation and vaccinations, or informed ways of moving forward to address education, climate change,

food and water safety, or anything else that affects our daily lives and that will determine our future quality of life and even survival.

Let's take the example of public health policy. At the time this chapter was first drafted, according to *The New York Times* (Leonhardt, 2021) there was widespread resistance to the coronavirus vaccines with up to 50% of the American public (including many health workers and teachers) saying they would refuse a vaccination if available on this date. This article appeared 1 year after the onset of the COVID pandemic in the United States. This vaccine resistance was attributed to mistrust and misunderstandings about basic science:

“The coronavirus vaccines aren't 100 percent effective. Vaccinated people may still be contagious. And the virus variants may make everything worse. So don't change your behavior even if you get a shot . . .”

On the day of final edits (August 28, 2022), just as was the case in 2020, “much of this [anti-vaccine] message (like much mis-information and mis-interpretation) has some basis in truth, but it is fundamentally misleading” (Leonhardt, 2021). The evidence so far suggests that full doses of mRNA vaccine effectively eliminate the risk of COVID-19 death from Omicron or any other variant, nearly eliminate the risk of hospitalization, and drastically reduce a person's ability to infect somebody else. Current science indicates that when a vaccinated person is first infected their viral load is equivalent to that of an unvaccinated person. But personal health effects are vastly better, and viral load/infectivity decreases much more rapidly. Although the situation is complicated (as science and life always are) and misinformation about vaccinations (or anything else) often contains some elements of truth, this kind of information pollution and the facile unsubstantiated claims that follow cause great harm.

Takeaway: *Misinformation often grows from a kernel of truth.*

“The alarmism and profound misconceptions continue to exercise a powerful influence on individual behavior and social policy. By now we have seen the real-world costs: Many people don't want to get the vaccine partly because it sounds so ineffectual” (Leonhardt, 2021). And this has a very real effect on the health not just of individuals, but of the community and its interests, for example, on school policy, on responding to new health crises like monkeypox, and on the economy.

We recount this story in part to illuminate the complexity of scientific understanding: It evolves over time because as data collection methods, resulting data sets, peer review leading to the social construction of knowledge, and other aspects of science are brought to bear, understandings will evolve and become more nuanced. This does not mean that science was initially “wrong,” only that scientific understandings develop through a time-tested process for “the constitution of knowledge” (i.e., through agreed-on methods and social networking of a disciplinary “community of practice” [Rauch, 2021]). But this process is generally not understood by the public,

Misinformation often grows from a kernel of the truth.

and it makes nuanced scientific understanding susceptible to cognitive biases for simplicity and for single causality (Lakoff, 2008).

The problem is widespread. Eric, a graduate student of Jeff's, shared this story:

During the last presidential election, my mom taught a unit about democracy. She talked to me about having her students find articles and resources about both candidates and their policy plans. She wanted them to be able to identify reliable resources versus bogus resources, such as highly ideological “news sites.” She asked her students to compare and contrast the agendas of the candidates, find, and evaluate the evidence supporting their positions, and talked with [her students] about looking at both sides of all issues and digging into actual confirmed evidence before making a decision on who to back.

Then a few weeks ago she sent me and some family members a text with the following video link in an effort to warn us about COVID and getting a vaccine: <https://bit.ly/3gBKPhE>

We are all susceptible to fake news.

[When we clicked on the link, we found that the video had been removed from YouTube “for violating community guidelines”!] One of her friends had found this video on Facebook and forwarded it. I talked to my mom about how this New American organization is an extreme non-mainstream media company proceeding from extreme ideological positions, that they are not journalists using accepted methods and evidence of the kind she demanded of her students!

Yet Eric's mother, the history teacher, was not persuaded—in large part, Eric thought, *because she agreed with the position being promoted.*

Takeaway: *We are all susceptible.*

The costs of this susceptibility are profound in any area of democratic life and every subject area in school. If we do not know what news sources to trust, or what kinds of research are authoritative, then we will be subject to the whims of anyone who wants to influence us. In public policy, we are guided by preexisting beliefs and loyalties instead of current data patterns. We become subject to intense emotional manipulations and may think and then act irresponsibly. If we do not understand how research works and are not persuaded by confirmed findings accepted across a discipline, then we will make personally and culturally destructive decisions. And on it goes, with no end in sight. For these reasons, we think that it is critical to learn to consciously recognize and deal with (1) our own cognitive biases and (2) information pollution and data manipulation.

We also believe it is our responsibility to critically read—and to access and interrogate and justify evidence and then make use of evidentiary reasoning. This is the bailiwick of every teacher (and every citizen!) of every subject, K–college.

This critical reading project can easily be incorporated and should be included in units of study across all subject areas and at all grade levels. And it must be: because we are all so vulnerable—and because the stakes are so high for all of us personally and collectively.

Critical reading is a kind of “threshold knowledge” (Meyer & Land, 2003)—even an anchor form of threshold knowledge—that is, knowledge that transforms our lives by taking us through gateways to new, more responsible, and expert ways of engaging, knowing, thinking, and doing—now and forevermore. It is important to understand that only when we teach deliberately and systematically, again and again, can we overcome deeply embedded cognitive biases. We need repeated deliberate practice with this skill set over time (Ericsson & Pool, 2016). If even just a few K–12 teachers in every school take this project on, the mindsets and capacities of our students can and will be transformed.

For example, what if every one of us and every one of our students learned to silently ask this question: “Am I truly seeking the truth right now, or am I just trying to justify something preexisting within myself?” Such a question can raise conscious awareness of the aim and contents of thinking, and reasons for our feelings during a disagreement, a critique, when confronting claims or data patterns that conflict with our perspective, or when something turns out differently than hoped or desired. In such scenarios we are all tested to move from the pursuit of self-justification to the pursuit of truth. What if we continuously reminded ourselves that learning and improvement always involve change, often include discomfort, and nearly always include profound changes in outlook, understanding, and action?

REMAINING CURIOUS

Let’s be clear: We are not against differences of opinion and honest debate. We argue here that our default position should always be curiosity, before evaluating and perhaps dismissing or revising a point of view. But we do want curiosity to be followed by a demand for evidence from credible sources and across sources. Fabricated data and faulty reasoning harm others, oneself, and the social fabric. We need what Michael (Smith et al., 2012), following Toulmin’s call for the kind of evidence that is adequate and satisfactory to our audience (1958), calls “safe” evidence (that which can be accepted on its face by all reasonable parties), and the kinds of reasoning and thinking about evidence that are used in the ways of disciplinary experts. And we need self-awareness about our trust in or doubt of the sources we find and even more so of those that find us.

Our default position should always be curiosity.

Curiosity and openness are essential to learning. Part of maturity is not only knowing how and why your own positions have value but also understanding that other positions—many at odds with your own and the justifications for them—also have value. But it doesn’t end there. Our own positions are always limited, and many cannot be justified; the same is true of the positions of others.

We must hold all our positions as “categorically tentative,” just like a scientist.

After asking for evidence with an open mind, confirming it, and evaluating the reasoning about the evidence (or the lack of it), we must be prepared to accept, revise, or discount certain positions—even long-standing ones of our own or our family and friends. We must, in other words, hold all our positions as “categorically tentative,” just like a scientist, who always knows that new data collection techniques, new data, and new ways of reasoning are always evolving. (Do you remember when Pluto was still a planet? Well, scientific methods, data, and then understandings changed, and thus Pluto’s redesignation!)

In Milton’s (1644) famous formulation in *Areopagitica*, truth cannot be bested by a bad argument unless all the arguments are not made. If we are right, we should want to correct others. If we are wrong, we should want to be corrected. If, as is most likely, we are partly right and partly wrong, or if there is no absolute right or wrong, or if rightness or wrongness in a specific instance depends on the situation, then the only way to grow and learn is through open and free inquiry, conversation, and the continuous updating of knowledge.

Here’s a brief example from Jeff’s personal life. His wife, Peggy, has undergone a long and arduous health journey due to blood disease. She has suffered thirty-seven major brain bleeds and two extended comas, and on five occasions she was told that she had fewer than 10 days to live. After 16 years, Peg’s condition is still undiagnosed by Western medicine. Jeff and Peggy spent years at various research hospitals like the Mayo Clinic, the National Institute of Health (NIH), the NIH Undiagnosed Disease Program, and others. They were often faced with heart-rending life-and-death decisions. In these cases, they asked for medical articles and studied them, consulted with experts across the world by phone, and made evidence-based decisions about what to do or what not to do. They rejected several experimental therapies as lacking convincing evidence patterns, violating their values, or being too dangerous. After 6 years, and having exhausted Western medicine, they turned to Eastern medicine. Although they had been experimenting with acupuncture, meditation, herbal therapies, diet, and other Eastern medical approaches, turning solely to Eastern medicine was a bold decision, and they received immediate blowback from parents and friends. Peg’s parents asked: Don’t you want to use research-based treatments? To which Jeff replied: Is 3,500 years of documented research from Traditional Chinese Medicine (TCM) not enough for you? Although TCM operates from a different paradigm than Western medicine (with research based on induction and qualitative methodologies vs. hypothetical deduction and quantitative approaches; a focus on holism and energy vs. a focus on specific symptoms of disease, etc.), it is based on research traditions and evidence consistent with its paradigm.

The bottom line: Peggy and Jeff remained curious. But they did so critically. It was a challenge because cognitive research has demonstrated that the more out of control you feel (and they felt very much out of control and often without a way forward), then the more susceptible you are to fake news and snake oil (Whitson

& Galinsky, 2008). The more anxious you are, the more you will actively seek miracle cures. And there is a lot of snake oil out there for people feeling any kind of desperation, from the political realm to the economic to personal health and beyond. The more desperate you feel, the more you revert to automatic reactions and the more you must consciously assert critical thinking. Here's another thing Jeff and Peggy found out: It's actually quite powerful and even exhilarating to be curious. You are always discovering something new and interesting about the world and how people think, even if you end up discarding it.

The good news: Peggy has been on a mostly consistent trajectory toward greater health since embracing Eastern medicine 10 years ago, and no one talks about her dying from her condition any longer. In retrospect, the two wish they had been more open to TCM earlier, but in desperation (and due to confirmation and availability bias—more on that in a bit) they stuck with what they knew—and what others around them knew and did. They should have been more curious earlier. And they hasten to add that they still go to their Western doctors and embrace Western medicine for parts of Peggy's condition because the evidence supports that move.

To summarize: We want to promote free thinking, open exploration, open debates, and honest exchanges of perspective, *but* we also want to reinforce that you can't have tennis without lines and a net (i.e., without agreed-on rules for engagement). If "anything goes," then you can't have a productive game or any game at all. There are standards for arguments of fact and arguments of judgment, definition, and interpretation. There are established processes and standards for "constituting knowledge" from across different disciplines (Rauch, 2021). We need to adhere to these standards. The same is true when engaged in intellectual debate and policy discussion and personal conversation—all topics we touch on in this book. As Rosling (2018) argues: "A fact-based worldview is more useful for navigating life, just like an accurate GPS is more useful for finding your way in the city" (p. 255). Usually, the most powerful and useful action we can take is to understand existing authoritative data clearly and to discard the positions attempting to manipulate us.

That said, there is much social science research about emotion, intuition, bias, and the way these all both guide and misguide us. Decades ago, the poet Muriel Rukeyser (1968) spoke of the "verifiable and the unverifiable fact." Sometimes we know things and navigate from positions that are not strictly fact-based, and these positions can be of value. There is power in different ways of knowing. But it is important to distinguish feelings and intuition from fact. We need to find ways to acknowledge, name, and honor the feelings of others (including our students) so that they will be open to the critical inquiry we're calling for. We need to help our students recognize and privilege the unique powers and susceptibilities of different ways of knowing. Following the example of Peggy and Jeff, we recommend a reworking of Ronald Reagan's famous injunction to "trust (feelings, intuitions, loyalties), but verify" by testing these against the best of what is thought and known out in the world, and against multiple

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perspectives—truth, after all, cannot be bested unless all the arguments are not made and heard.

We make the case that the most important elements of our approach can and should become throughlines of all teaching in all subject areas and grade levels; namely, by making inquiring into how to understand part of our teaching by exploring

- How to read and respond to various kinds of texts in different contexts
- How to establish the credibility of textual information
- How to responsibly establish and interpret patterns of evidence
- How to mindfully engage in one's own research, myth-busting, and truth-testing
- How to consider the effect of perspective, positionality, and context in all that we read

In this book we therefore

- Suggest ways to use our lessons as a natural part of any unit that involves inquiring, reading, and composing in any curricular area
- Show that success can be achieved by introducing and returning repeatedly to central strategies and expert mental models for critical reading and conscious problem solving—and by structuring learning so that students will get the deliberate practice they need to develop the habits of mind possessed by critical and responsible inquirers, readers, and writers
- Demonstrate the vital importance in all disciplines of discerning the difference between what is real and what is fake or polluted through critical reading, inquiry, and discernment
- Show how such teaching can be naturally integrated into any classroom and into any topic of instruction in ways that will enliven that classroom—and in ways, because it is integrated into ongoing instruction for preexisting goals, that will not cost us extra energy or time

THE COMMITMENTS OF TEACHERS

We are all, first and foremost, teachers. We have all spent substantial parts of our careers as schoolteachers. Although currently working in higher education, we all also continue to work in schools with teachers and with students. Throughout our careers we have certainly been committed to teaching our students how to be better readers, to engage with and be transformed by the unique and powerful ways of knowing offered through literature, and to become competent composers and users of language. But even more than this, in a way that includes and transcends the project of any teacher, we want our students equipped to develop their fullest capacities as human beings, to live healthy and satisfying lives, and to

become wide-awake and wide-aware democratic citizens and workers. We work consciously to make our teaching matter beyond reading, writing, and language to the application of these capacities for joy, equity, social justice, civic discourse, democratic work, and personal and social transformation. Therefore, as is obvious to us all at this cultural moment and for the foreseeable future, we must teach our learners to be inquirers, to develop metacognition and mind-sight, to become critical readers of the news, critical consumers of online information, and critically aware digital citizens.

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We see teaching as a way to do what psychologist Gardner and his colleagues (2001) call *good work*. Good work serves compelling personal agendas and larger social purposes (e.g., helping learners be critical readers and thinkers who are involved productively in community issues; participating in promoting deep commitments to equity, social-emotional learning, and mutual respect; proceeding from trust in people's strengths, potential, and possibilities instead of drawing attention to their deficits).

We want our teaching to matter in the here and now—and into the far-off future. We want to nurture lifelong attitudes and habits of mind that lead our students and others around them to thrive. And at this moment we can think of no more powerful way to fulfill these commitments than to teach our students to be critical readers who consciously take on the challenge of social media and the New Propaganda.

We pursue this project with a compelling sense of urgency—but we think this urgency will remain unabated, though the reasons for it might change. As President Biden remarked after Trump's second impeachment acquittal:

This sad chapter in our history has reminded us that democracy is fragile. That it must always be defended. That we must be ever vigilant . . . And that each of us has a duty and responsibility as Americans, and especially as leaders, *to defend the truth and to defeat the lies* [emphasis added]. (BBC News, 2021)

As many scholars and commentators have made clear: There will *always* be demagogues who manipulate populist sentiment with partial truths and outright propaganda. Even if we navigate this moment, the challenge will reappear (Levitsky & Ziblatt, 2018). Demagoguery has been with us throughout recent U.S. history (Barry Goldwater and Joseph McCarthy) and the histories of other 20th-century democracies. Hitler was legally elected to the German Parliament and was legally appointed Chancellor by President Hindenburg. But this led immediately to the Reichstag fire used as a pretext to suspend all civil liberties. And thus, the Nazi era began. Mussolini was legally elected to the Italian Parliament and was asked to form a government by the Italian King Victor Emmanuel III after thousands of his armed followers marched on Rome and seized control of many local governments (January 6th, anyone?). There will also be new pandemics, new social dilemmas, and compelling—even life-threatening—issues to address. Such is life for human beings on planet Earth. We must prepare ourselves.

Democracies are fragile things, and there will always be threats from inside their workings. So the question becomes: What must be done to strengthen and shore up a commitment to democracy and to democratic ways of thinking, democratic institutions, and values? That is why we take up the call to teach critical reading, thinking, composing, and problem solving in service of democracy and democratic living. The stakes are high. A governor of Virginia, William H. Cabell, asserted in 1808 that education “constitutes one of the great pillars on which the civil liberties of a nation depend” (Albert and Shirley Small Special Collections Library, n.d.). Fake news is now part of the bigger historical family of propaganda.¹ This New Propaganda, its propagation by AI used by business interests, foreign powers, and biased “news” services, and the use by young people of TikTok, Snapchat, Instagram, YouTube, and other ever-evolving platforms to disseminate news to friends and play the role of “influencers” all make the situation even more fragile and fraught and makes us all even more fallible. The current moment (and our future) requires us all, and especially our students, to understand what’s at stake, to understand how their minds work and how the mind can be manipulated, and to understand the promises and pitfalls of social media and digital technologies.

Fake news is now part of the bigger historical family of propaganda.

The good news is while the horse is leaving the barn, it hasn’t yet escaped. In an online survey of 853 ten- to eighteen-year-olds (592 of them teens), Robb (2017) found that nearly half of them reported that they value the news. Indeed, 77% of teens reported getting news stories or headlines from social networking sites. Now here’s the bad news: McGrew and colleagues (2017) report that their analysis of “thousands of students” responding to “dozens of tasks” found that those students confessed that they were “easily duped” when it came to “evaluating information that flows through social media channels” (p. 5). Something needs to be done. We think that it is every teacher’s job to do it. We turn now to some aspects of the challenge facing us as we pursue this project.

DIGITAL READING IS DIFFERENT FROM, THOUGH RELATED TO, LINEAR READING

After reading our call to focus more on digital reading, a teacher might say, “Okay, I’ll buy that digital reading is important. But I do teach them to be critical readers. All they need to do is transfer what I taught them to their new digital reading. Isn’t that enough?”

Short answer: A Hard No.

Why? In the first place, as Perkins and Salomon (1988) explain, “A great deal of the knowledge students acquire is ‘inert’” (p. 23). More recently (2012) they put it this way: “People commonly fail to marshal what they know effectively in situations outside the classroom or in other classes in different disciplines. The

¹ Propaganda is meant to PROVOKE not persuade, it promotes a single point of view and uses SEED (simplification, exploitation, exaggeration, divisiveness).

bridge from school to beyond or from this subject to that other is a bridge too far” (p. 248). If students have inert knowledge, then that means they don’t apply it in new problem-solving situations. This bridge is just too far.

The reading of digital texts is indeed something new. Turner and Hicks (2015) put it simply: “Digital texts *function differently*” (p. 99). Let’s take a moment and think about why.

Perhaps the most influential formulation of reading is Rosenblatt’s (1938, 1978) Transactional/Reader Response theory, which frames the reading experience as a unique transaction between a *reader* and a *text* in a given *context*. In digital reading, all three elements of Rosenblatt’s formulation are changed in fundamental ways.

Linear Texts vs. Digital Texts

Let’s start by thinking about texts. Rosenblatt notes that the decoding done by a listener or speaker creates a new event through a “to-and-fro spiral” between the reader and the “signs on the page” (Rosenblatt, 1938, p. 26). On the one hand, then, with linear texts, all readers engage with the *same text* or set of symbols, though they inevitably create different “poems” (meaning-making responses) from their transactions with those symbols. On the other hand, readers make *unique texts* when they read digital texts by virtue of how they engage with the features of those digital texts.

- Digital texts may have links; linear texts do not.
- Digital texts are likely to have visual elements; many linear texts do not.
- Digital texts may have embedded video; linear texts do not.
- Digital texts will use data from your responses to send you future texts; linear texts cannot do this.

Linear Readers vs. Digital Readers

Now let’s turn to readers. As a consequence of the character of digital texts, readers have to play a vastly different role than readers of linear texts. We’d argue that readers of digital texts have a transaction with a text that at least to some extent they author. Do I watch an embedded video? If so, when? Do I click a link? If so, when? When I go to a linked site, how do I engage with that site? And on and on. Coiro (2015) points out that the cognitive demands of online reading differ from those of linear reading as digital readers have to “move between rapid reading-to-locate processes (that occur, for example, when skimming search engine results and navigating through levels of websites) and deeper processes of meaning construction” (p. 56).

In addition, readers of digital texts tend to select the texts they read rather than being given them, as is typically the case in school. Hartman and others (2018) explain: “Online, readers must find and construct their own sets of texts to read

closely after searching for and evaluating a potentially infinite set of texts for relevance and trustworthiness” (p. 62).

Linear Contexts vs. Digital Contexts

And now context. Rosenblatt (1938) argues that meaning exists in the transaction between the reader and the text. But that transaction doesn't occur in a vacuum. Readers of linear texts bring what Rosenblatt called a “linguistic-experiential reservoir,” organized by schemata (a mental model of how something works and how the various parts relate), to readings of texts. Moreover, the social situations in which transactions occur provide a further variable: Reading for class is surely different from reading on a beach. And reading in science is different than reading like a historian or a literary reader (which is why we all must teach reading and digital reading in our own classrooms and in all subjects). These aspects of context are similar across linear and digital reading experiences. But Rosenblatt doesn't take up the textual context in which reading occurs. The act of selection, which we touch on in the previous paragraph, significantly affects the way that readers, in Turner and Hicks's (2015) words, *encounter* texts. Hartman and colleagues (2018) explain:

Algorithmic technologies that personalize information serve to create the impression of a vast information landscape when, in truth, every internet reader may be gathering information on a very small information island that is used by, built by, and maintained by people who are just like them (Rainie & Anderson, 2017). When access to ideas, to information, to facts is filtered, synthesized conclusions will reflect those filters too. A necessary part of the critical positioning required for synthesis may be a recognition of how this big-C Context is deliberately designed to predict, to restrict, and to selectively disseminate ideas in ways that further economic, political, or ideological interests. (p. 68)

This process creates what is known as an *echo chamber*. Readers tend to be attracted to texts from perspectives that match their own—and AI makes these kinds of text more available to them. This tendency means that the context of online reading operates in specific ways so that our reading, due to selection algorithms, probably doesn't challenge or test our thinking but rather reinforces it.

THINKING ABOUT TRANSFER OF LEARNING

So what have we established thus far?

- Teaching critical *digital reading* is crucially important.
- We can't count on our students effectively applying what we've taught them about linear texts because their knowledge may well be inert and because digital texts are manifestly different from linear texts.

- If we want transfer to occur, then we have to teach for transfer and provide repeated deliberate practice with it—in this case, we have to teach specifically *how to critically read digital texts*.

Haskell (2000) provides a framework that has long helped us think about how this transfer can be achieved. He presents eleven conditions that foster transfer, which we think can usefully be reduced to four that reflect the notion of what cognitive scientists often call 4D (4-dimensional) teaching and learning for *engaging, knowing, thinking, and doing*:

1. **Engaging/Knowing.** Learners must deeply understand the knowledge that is to be transferred and the purposes served by using this knowledge (i.e., the conceptual principles, as well as the purposes and payoffs of using that knowledge must be clear).
2. **Thinking/Doing.** Learners must understand the principles and processes of practice to be transferred (i.e., students must have a mental model and map for applying the principles).
3. **Thinking/Doing and Reflecting.** The classroom (or learning) culture must cultivate a spirit of transfer; learners must be continually considering and rehearsing how the knowledge can be used both immediately and in the future.
4. **Deliberate Practice of Engaging, Knowing, Thinking, and Doing** in actual contexts of use over time. Learners must deliberately and repeatedly practice applying the meaning-making and problem-solving principles to new situations.

To achieve these conditions, we have to address, as a specific focus, critical digital reading, and to do so explicitly and deeply. Quick fixes such as assigning students to use digital sources in one report or another just aren't enough. But in our experience few teachers do any—or at least not much—of the explicit teaching that students need. Our perceptions jibe with those of Turner and Hicks (2015) who explain that “[e]ven our colleagues who use technology regularly and for purposeful learning in their classroom have told us that, sadly, they don’t spend much time teaching the skills needed for students to comprehend digital texts” (p. 6). Why? We think the answer is that time is a zero-sum game.

TIME IS A ZERO-SUM GAME

Think of how much we teachers are expected to teach. Just take a look at the ELA Common Core State Standards (CCSS). Our states have each created their own versions of the CCSS (Idaho and Pennsylvania) that are very similar to the CCSS themselves or they are in the process of doing so (Minnesota). ELA teachers are supposed to teach kids to read literature and informative texts; to write arguments, information texts, and narratives; to master the conventions of academic English; to listen open-mindedly and with comprehension; and to speak effectively.

To be sure the CCSS mention digital texts twice. The ninth- and tenth-grade bands call for students to be able to

Gather relevant information from multiple authoritative print and digital sources, using advanced searches effectively; assess the usefulness of each source in answering the research question; integrate information into the text selectively to maintain the flow of ideas, avoiding plagiarism and following a standard format for citation.

and to be able to

Make strategic use of digital media (e.g., textual, graphical, audio, visual, and interactive elements) in presentations to enhance understanding of findings, reasoning, and evidence and to add interest.

However, neither standard mentions the explicit addressing of the unique characteristics of digital texts and in any event, the emphasis on digital texts is dwarfed by the attention paid to the other aspects of the ELA curriculum. We have to recognize that already burdened teachers deeply understand that every minute devoted to teaching digital reading is a minute one can't spend teaching the close reading of a complex literary text, having a writing conference, and so on.

So whatever is done in teaching digital reading has to be done with an awareness of a teacher's myriad responsibilities. It has to be integrated into what they already must do, and in ways that serve their deepest hopes, commitments, and desires for their students and our shared future.

THE PLAN FOR THIS BOOK

Our plan for this book is to share strategies, including model lessons, that demonstrate how we can help our students become more critical consumers of their digital reading, and that do so by embedding instruction on digital reading into the instruction we already provide to achieve more long-standing academic aims. The lessons we share are designed both to demonstrate explicit instruction in digital reading and to suggest the extent to which explicit instruction can complement what we already do as well as what we are already deeply devoted and dedicated to. We explore how these lessons are flexible and generative and how they can therefore be adapted for different unit topics, age levels, and subject areas.

In **Chapter 2** we explore the nature of information pollution: what it is in general, its various formulations, how it works, and how it exploits our minds, especially through the manipulation of our cognitive biases. We explore why and how the new digital propaganda/fake news work in the personal and public arenas, and also how these affect disciplinary work and understandings in the social sciences, science, art, STEM, STEAM, and other areas. We focus especially on confirmation, availability, and overdramatization biases, exploring how search algorithms and recommendation protocols leverage our natural vulnerabilities and then deepen these.

Part II of this book, *Lessons for Critical Reading and Fighting Fake News* begins with **Chapter 3**. In this part of the book, we turn to lessons, easily adapted to various situations, for recognizing and working around cognitive biases. These lessons focus on

1. Helping students know their own minds and recognize their areas of susceptibility, especially regarding various cognitive biases
2. Helping learners develop an ethic of responsibility in reading and posting
3. Encouraging lateral reading and the use of mental models for considering textual credibility

Each of these chapters contains two sections. **Part I** lays out the general problem, topic, or focus of the lessons to come, and **Part II** provides adaptable lessons focused on teaching the critical reading of digital texts that can be applied to traditional topics and emphases of instruction. Teachers can embed these in reading and writing lessons across Grades 4 through 12 and in most subject areas.

Chapter 3 provides foundational lessons for getting started with critical reading of media designed to help students recognize and overcome the cognitive biases we all share.

Chapter 4 focuses on transferring understandings about the close reading of linear literary and nonfiction texts to the close reading of digital texts, using *rules of notice* as a mental model of expert reading practice. Rules of notice (Wilhelm & Smith, 2016) are the conventional understandings experienced readers employ as a way to identify what is most important in a text. More specifically, the lessons introduce students to the importance of noticing direct statements of generalization, calls to attention, ruptures, and language and images designed to evoke a reader's response and then engage students in using what they have noticed to develop critical understandings of what they read.

Chapter 5 examines point of view in both literary and nonliterary texts. It explores how to evaluate the reliability of narrators and other information sources, helping students develop a mental model that they can apply to a wide variety of texts. Lessons focus on the criteria that experienced readers apply when they evaluate the reliability of an information source as well as on what to do when the reliability of a source of information is in question.

Chapter 6 focuses on the power of using critical lenses as a tool for understanding literary fiction as well as a wide variety of digital and social media texts. More specifically, the chapter focuses on how the different critical lenses can enliven the teaching of all texts, including digital ones, providing the grounds for rich and varied interpretations and compelling classroom discussions about positioning and credibility. Perhaps even more important, the lessons demonstrate how critical lenses help students detect, critique, and if necessary, resist the biases and ideological positions of authors of nonfiction, news, literary fiction, and digital texts.

Chapter 7 focuses on helping students become more critical readers of both linear and digital arguments as they mine texts in service of the process of reading to write (Greene, 1992). More specifically, the lessons focus on identifying what kind of evidence from within and outside literary texts provide a solid foundation on which to build an argument. Because of the prevalence of references to “research” in support of even the most problematic kinds of information, lessons are also designed to help students develop a mental model for evaluating research.

The book concludes by reprising the importance of addressing the new electronic propaganda and information pollution in classes across the curriculum and at all grade levels and by arguing that doing so can be accomplished in ways that will enrich and not overburden teachers’ current practices.

Moving Beyond (available at resources.corwin.com/fightingfakenews) goes from thinking about individual lessons to the planning of a larger unit of study. The online component illustrates how teachers can employ the mental model of EMPOWER (see Wilhelm, Bear, et al., 2020; Wilhelm, Miller, et al., 2020) (Envision, Map, Prime, Orient, Walkthrough, Extend/Explore, Reflect) for planning units that put a variety of nonfiction texts, news items, and literary and digital texts into meaningful conversation in ways that help learners consider issues of positionality evidence, truth value, and cognitive bias.

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