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"You Shall Listen to All Sides and Filter Them From Yourself" Information Literacy and 'Post-Truth' Skepticism

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CHAPTER 5

“You Shall Listen to All Sides and Filter Them from Yourself”

Information Literacy and “Post-truth” Skepticism

Christopher A. Sweet, Jeremy L. Shermak, and Troy A. Swanson

You shall no longer take things at second or third hand nor
look through the eyes of the dead nor feed on the
spectres in books,

You shall not look through my eyes either, nor take things
from me,

You shall listen to all sides and filter them from yourself.

—Walt Whitman, “Song of Myself,” 1855

In the digital era, humans generate more data every two days than was generated during the entire existence of the human race through 2003.¹ In a single day, a human is exposed to as much information as a person living in the fifteenth century was exposed to in a lifetime. Research consistently suggests that these metrics are doubling or even tripling every year.² Content creation has also increased each day. In 2017, Twitter users produced 455,000 tweets per minute, while in that same minute, Facebook users posted 510,000 comments, updated 293,000 statuses, and uploaded 136,000 photos—all significant increases since 2013.³ Once that new content is posted, humans also interact with it at high rates that are only increasing: between 2013 and 2016, the sharing of Facebook posts increased 300 percent. More than four million Facebook posts are “liked” each minute. And whether one is a content creator or a content consumer, 3.8 billion people were online in 2017, a 42 percent increase in just three years that is forecast to continue.⁴ For better or worse, a prodigious age of information—unlike any in human history—is well underway. This new information ecosystem has evolved far more rapidly than the information literacy skills humans rely upon to process it.

Unfortunately, the ubiquity of social media and smartphones means that disinformation and fake news can spread at an astounding rate of speed. In a 2018 groundbreaking study of fake news on Twitter published in *Science*, researchers at MIT found that fake news stories were 70 percent more likely to be retweeted than real stories.⁵ This team also found that it takes six times longer for true stories to reach people than false stories. Crucially, these researchers suggested that “novelty,” rather than truth (or lack thereof), is the strongest indicator of how fast information will spread on Twitter. They noted that novelty “conveys social status on one that is ‘in the know’ or has access to unique ‘inside’ information.”⁶ In other words, it *feels* good to be the first to share something new or different. Problems quickly arise since “new” and “different” information is somewhat hard to come by and, therefore, is frequently false. Skepticism, as it has been traditionally taught, is poorly equipped to handle the psychological complexities that drive information behaviors. Simple skepticism entailing doubt, evaluation of information, and weighing of both sides is easily undermined by the way the human brain processes information and decides what to trust.

In this new information ecosystem, Walt Whitman’s assertion that we should “listen to all sides and filter them from yourself” becomes a tall order. Yet librarians and higher education faculty appropriate this expectation under the assumption that the brain is perfectly capable of measuring the value, utility, and credibility of the thousands of information bits that individuals encounter each day. Reflective dialogue regarding how information literacy educators teach skepticism in the modern information landscape is sorely needed. It is true that being reasonably skeptical triggers evaluating and prioritizing information, but has this gone too far? Is the skepticism that information literacy instructors have been preaching causing individuals to retreat to their “corners” of ideologies, most prominently political, to protect themselves from this overwhelming amount of information?

Have we become so overwhelmed and partisan that we are questioning the very truth of indisputable facts? This chapter will address these questions by exploring information behaviors, delineating the psychological mechanisms of skepticism, and applying these concepts to the way we consume news. Skepticism has been a cornerstone of information literacy instruction, but its core tenets need updating in a “post-truth” era. *Post-truth* can be defined as “Relating to or denoting circumstances in which objective facts are less influential in shaping political debate or public opinion than appeals to emotion and personal belief.”⁷ This is where libraries, information literacy programs, and information literacy scholarship have come up short. Information-seeking behaviors are rather straightforward and easy to teach. They align with our tidy, discrete worldview of teaching learners how to find and evaluate information. Unfortunately, the library profession has not adequately engaged with all of the social, psychological, and emotional aspects of information seeking. The intention of this chapter is to explore some of the internal and psychological issues of information behavior and consumption. We identify problems with current approaches to information literacy instruction and then suggest ways to teach a new twenty-first-century post-truth skepticism to help students better utilize information and recognize misinformation.

Skepticism, Information Behavior, and Information Literacy

When facing problems of this magnitude, is it vanity to suggest that academic libraries and their programs of information literacy instruction have the potential to move the needle on political polarization and open up reflective dialogue? This chapter maintains that if libraries change the way we conceive of, and talk about, information behavior and its relation to skepticism, then, yes, libraries can make meaningful contributions to reducing political polarization. Academic librarians are uniquely positioned to counter the fake news epidemic, not only by teaching critical evaluation of information, but also by helping students recognize internal biases that hinder skepticism. What information we choose to trust and why is far more complicated than most programs of information literacy instruction have made it out to be. Specifically, the psychological and social components of skepticism and information evaluation need to receive far greater attention within information literacy programs.

Fake news, social media use, political polarization, and skepticism are all entwined in a vicious, mutually reinforcing cycle. One way to begin untangling this Gordian knot is to analyze these components through the lens of information behavior. Whether we recognize it or not, information behavior pervades our daily

lives. At the most fundamental level, any stimulus can be considered information that we choose to act upon or ignore. While accurate, this conceptualization of information behavior is so broad as to make it unwieldy (for the purposes of this chapter at least) as an analytical framework. Reining in our scope slightly, we can consider “information behavior” and its effects on political polarization. In *Looking for Information*, the authoritative work on information behavior, authors Donald Case and Lisa Given defined information behavior as “encompass[ing] information seeking as well as the totality of other unintentional or serendipitous behaviors ... as well as purposive behaviors that do not involve seeking, such as actively avoiding information.”⁸ The distinctions made within this definition are important and require some unpacking. Information-seeking behaviors are conscious, intentional efforts to acquire information that fulfills an information need. When you encounter information that you are not sure about and search the web or search within a social media platform for additional information, you are exhibiting a classic information-seeking behavior. However, we also routinely encounter information that we were not actively looking for. Research from the field of mass communication has labeled this phenomenon as “stumble-upon news.”⁹ An example would be a friend sharing unsolicited information with us or our coming across something in a social media feed that we weren’t looking for. Whether we assimilate this new information or ignore it falls under information behavior, but not information-seeking behavior. Lastly, humans are predisposed to avoid information that conflicts with their worldviews. This “selective exposure” or “confirmation bias” is even more pronounced when dealing with political ideologies and new information. We define and explore these theories in more depth later in the chapter. Avoiding information, then, is a common information behavior, but it is not an information-seeking behavior.

Speaking broadly, information literacy principles and the teaching of information literacy have been based on the blind faith that finding quality, authoritative information coupled with healthy skepticism will guide the information-literate to information that they can trust while keeping them from the perils of disinformation. Yet, as we have seen time and time again, this is not the case, as misinformation and disinformation are more rampant now than at any other point in history. The reasons for this are manifold, but using insights based on information behavior can help us to explore problems with authority and skepticism. Authority and skepticism are cornerstones of information literacy. At a simplistic level, authority teaches us to discern good information by examining standing within a field, credentials, times cited, publication record, and so forth. Regarding skepticism in this chapter, we are setting aside discussions of *philosophical skepticism*, where individuals wonder if and when knowledge is possible. In fact, the focus is on quite the opposite. We are thinking about more pedestrian instances where individuals view their knowledge and beliefs as accurate descriptions of the world. This is a more basic definition of skepticism directly from *Merriam-Webster*: “an

attitude of doubt or a disposition to incredulity either in general or toward a particular object.”¹⁰ Skepticism is often put forth as a panacea for the problems of fake news, but that approach oversimplifies the problem since too much skepticism actually enables fake news. Traditional skepticism maintains that if people only took a minute to do some independent research before sharing or retweeting, fake news could be curtailed. If people just scrutinize an image, they might see indications that it has been photoshopped. This all sounds well and good until we consider the power of psychological predispositions to overpower skepticism and the basic evaluation of information. From an evolutionary standpoint, we are hardwired to side with our “tribe.” How we teach and think about skepticism also needs to evolve.

The relationship of authority and skepticism is likewise problematic. The Association of College and Research Libraries’ (ACRL) *Framework for Information Literacy for Higher Education* was adopted by ACRL in 2016. This *Framework* moved the profession from a standards-based guiding document to one based on threshold concepts. One of these concepts is “Authority Is Constructed and Contextual.” This concept is described as follows: “Information resources reflect their creators’ expertise and credibility, and are evaluated based on the information need and the context in which the information will be used.” This is a straightforward definition that situates authority in relation to an information need that triggers information-seeking behavior. The *Framework* further elaborates: “Authority is constructed in that various communities may recognize different types of authority.”¹¹ Here we find one of the root problems of misinformation. The community of anti-vaxxers clearly doesn’t recognize the authority of the medical profession, but rather turns to fringe bloggers and naturopath evangelists. Moreover, if all authority is constructed, how do we discern which construction to trust? President Trump strategically chose not to recognize any source of authority that doesn’t align with his own worldview and narrative.

Similarly, rampant, unbounded skepticism undermines actual authoritative information.

Regarding skepticism specifically, the *Framework* notes that “novice learners come to respect the expertise that authority represents while remaining skeptical of the systems that have elevated that authority and the information created by it.”¹² While this aspirational goal is clearly a nod to the important traditions of critical pedagogy and critical information literacy, it can also be seen as enabling a sort of information paralysis. When students are taught traditional skepticism and begin to question everything and listen to all sides, then deciding what information to actually trust can become difficult. To return to the problem of political polarization, if one political group unquestioningly believes any and all information (and misinformation) generated by that group, while a group on the other end of the spectrum is inherently skeptical of information and authority, then the end result is a fundamental imbalance in the process of democratic deliberations.

There will never be a unified front on important issues if skepticism is applied without boundaries.

Clearly, information literacy requires reasonable skepticism and reasonable questioning of authorities and experts. Nevertheless, experts and authoritative information actually exist and can be discerned through diligent information seeking and application of information literacy principles. Given the rise of fake news, misinformation, and purposeful avoidance of information, it is time for librarians to reexamine the foundation of information behavior and skepticism. This information landscape is driving political polarization in the communities that we serve. This brings key questions to the forefront. Why do logic and rationality not override partisanship? Why are misinformation and fake news so successful? What pressures are undermining the trust in media and journalism? Can libraries use the answers to these questions to build community and open up dialogue?

Skepticism: The Heart of Decision-Making and Reasoning

Librarians and faculty members must recognize that an individual's preexisting beliefs are quite difficult to change. In fact, this belief resistance results in a kind of external doubt that makes individuals skeptical of new ideas or ideas that conflict with one's worldview. This external doubt is at the heart of reasoning and decision-making. Psychologists have worked to define principles that explain this facet of reasoning. Understanding these principles is important for librarians and faculty members who seek to make information literacy more effective in a post-truth world overrun with misinformation.

Three concepts—confirmation bias, defensive avoidance, and selective exposure—are the central mechanisms that make individuals resistant to contradictory perspectives. The first, and best known, is *confirmation bias*, where individuals interpret the world in a biased way by overemphasizing information that agrees with their pre-existing ideas. Confirmation bias also comes into play when individuals interpret ambiguous information in ways that confirm pre-existing beliefs. For example, if one holds the view that private school graduates are more creative than public school graduates, then evidence that supports this view—such as successful artists who went to private schools—will be held up as proof, while contradictory evidence—successful artists who went to public schools—will be ignored. The second defense mechanism is *defensive avoidance*, where individuals purposefully avoid contradictory evidence. For example, if one does not believe that climate change is caused by humans, then that individual will avoid attending a lecture by a climatologist that may offer up evidence that contradicts

this pre-existing belief. The result of confirmation bias and defensive avoidance is *selective exposure*, where individuals avoid contradictory information and come into contact only with information that supports pre-existing beliefs.¹³

More recent research from Kahan has found that the individual's perception of his or her identity is tightly connected to how one interacts with information. This *identity-protective cognition* is activated when individuals come across information that conflicts with their pre-existing beliefs. For instance, there are not great debates in the general public about the nature of gravity, but there are raging debates about evolution and climate science. Gravity as a phenomenon is hotly debated within physics but does not connect to the personal identities of most people. Evolution, on the other hand, directly conflicts with religious beliefs, and climate science has become a charged partisan topic that connects with political identities. When a topic collides with issues connected to identity, individuals are more likely take misinformation at face value and ignore information that may correct their views. As Kahan noted, "When individuals apprehend—largely unconsciously—that holding one or another position is critical to conveying *who they are* and *whose side they are on*, they engage information in a manner geared to generating identity-consistent rather than factually accurate beliefs."¹⁴

Identity-protective cognition offers some context for selective exposure as a phenomenon. Not all topics will impact individuals in the same way. Individuals will approach topics differently based upon how they perceive the topic itself and their own stance toward that topic. This is important in understanding how individuals interact with new information. Some topics will be quite charged while others will not be charged at all.¹⁵

Clearly, individuals are inherently biased toward their pre-existing beliefs and naturally skeptical of counterarguments, but understanding *why* this is the case is difficult. This type of biased skepticism seems almost like a systematic error in how humans think. Something has gone wrong with basic logic. Psychologists Mercier and Sperber challenged us to rethink what we know about *reasoning*. They argued that skepticism is largely misunderstood within the discipline of psychology. They pointed out an essential insight into the evolutionary nature of reason—namely, if reasoning was truly meant to be a decision-making skill, our reasoning should be drawn to counterfactual sources and ideas that contradict our current thinking. Scientific thinking emphasizes the need to find counterexamples to falsify theories. But most people do not think in this way. People seek to hold onto their existing beliefs and will go to great lengths to prevent them from being falsified. Mercier and Sperber argued that reasoning is always set up to support the side that you stand on. It is to justify decisions post hoc. It is not necessarily to *make* decisions. Reasoning is a systematic effort to find ideas that support our beliefs. They called this a "my side bias." The brain heavily relies on intuitions to make decisions and construct the world. *Intuition* is simply a decision or judgment that we make that to us appears to be justified even though we

do not deeply evaluate the reasoning underlying each decision. These intuitive judgments are made and accepted based upon experience, heuristics, desires, and other modules within the brain's makeup. Much of our everyday consciousness is a running string of intuitive judgments.¹⁶

This raises the question, *How can this "my side bias" be a feature of reasoning?* Mercier and Sperber believe that the mental faculty of reason evolved to be social in nature and, as such, reason really serves two functions. First, it justifies intuitive beliefs that one already holds. This enables groups to bond around shared ideas and experiences. Second, and more importantly, it interacts with and evaluates the reasons that other people give. This allows for the thorough interrogation of ideas when group members do not agree, which is highly useful in group settings where trust exists between individuals. Groups with high degrees of trust but also a diversity of perspectives can be very effective at solving problems. This trust allows people who disagree to express their disagreement while releasing their skepticism, which undermines the "my side bias." This enables minds to change and groups to reach agreement. When trust exists, groups can develop better answers and make better decisions. Mercier and Sperber called this the *interactionist perspective* of reasoning. From this perspective, reason serves a function evolutionarily connected with group bonding and coordinating group actions. It is a way for individuals to socialize on an informational level making group decision-making explicit. When we view reasoning as a means of interacting within a group dynamic, the quest for *capital-T Truth* takes a backseat to the strength of the group goals.¹⁷

Of course, the social nature of reasoning lends itself directly to the problems of misinformation. Groupthink is built into the evolutionary nature of reasoning. When arguments arise between groups without a basis of trust, things go awry since the inherent goal of reasoning is to bond one group together against the other group. The healthy side of reasoning is lost. The lone arguer falls back on intuition and utilizes the tools of selective exposure and identity-protective cognition to protect existing beliefs. Thus, in some cases, the social nature of reasoning acts as a strength while in other cases it acts as a weakness.¹⁸

The need for trust between individuals is important for reasoning to be effective. Unfortunately, the current information landscape does not seem to be an environment that builds trust between individuals or between groups. Our identities and our affiliations are tied to the information we share across networks. In many cases, our investments in this information are not in seeking accurate answers but in upholding our affiliations and winning debates. These affiliations emphasize our inherent skepticism and undermine trust.

To ground these theoretical ponderings about information behavior, confirmation bias, selective exposure, and identity-protective cognition in practice, one need only to look at how skepticism is failing in a twenty-first-century news environment.

A Fractured Information Landscape

In a report on modern news consumption, the Pew Internet Research Center stated, "Anyone who wants to understand today's news environment faces a challenge: How to discern the nuances of digital news habits when Americans' attention spans are fractured, human memory is naturally limited and news comes at them every which way."¹⁹ While it should not be used as an excuse, it is no surprise that today's information consumer is overwhelmed and ill-equipped to navigate the mediascape that has developed. In the past, there were few options for news: radio, television, and newspaper, and in the Web 1.0 era, most websites were created by long-standing media powerhouses. Today's maze of information is intimidating, and even the best-intentioned information-seeking patron can be misled.

The traditional models of information literacy assume that individuals must be in an information-seeking mode to come across news, but this is no longer the case. Consumers are now incidentally exposed to news, "stumbling upon it" in nearly every facet of their lives. It can be argued that the availability of news now mimics the omnipresence of advertising. We are being given news when we are not even seeking it, as though we are standing in the middle of Times Square surrounded by flashy LED screens and oversized billboards that, rather than hawking the latest athletic shoes or wireless plans, are instead disseminating news from various sources from many different ideologies with many different intentions. Even in a non-seeking mode, this information still shapes our behavior, thinking, and opinions. For example, the Pew Research Center reported that 78 percent of those who consume news on Facebook often find this news when on the social media platform for some other purpose.²⁰ Kim, Chen, and De Zúñiga found that incidental news exposure increased both offline (e.g. voting, protesting, etc.) and online (e.g. digitally signing a petition) political participation.²¹ However, those utilizing the internet for entertainment-only purposes such as gaming or watching cat videos were less inclined to any political action when incidentally exposed to political news.²² Furthermore, an individual's incidental exposure to like-minded partisan news encourages that person to seek similarly partisan news to reinforce the "stumbled-upon" content, while incidental exposure to ideologically opposing news triggers selective avoidance.²³

No matter the ensuing action to encountering news, it is clear that one does not have to be seeking information to be exposed to information that shapes one's behavior. This totality of news consumption—be it intentional or incidental—only adds to the abundance of information that both consumers and researchers must juggle as they work to discover and evaluate actionable knowledge. Traditional skepticism is rarely up to the task.

Further exacerbating the problem is an information consumer's difficulty discerning fact from fiction, especially when partisanship is at play. A 2018 Pew

Research Center study asked over 5,000 US adults to identify news statements as fact or opinion. Only 26 percent were able to correctly identify facts and only 35 percent were able to identify opinion. Further muddying the waters were confounding factors that vary greatly between individuals. For instance, those with greater political awareness and digital skills were more successful in identifying news as fact or opinion. Regular news consumers and those who expressed trust in the news were also better at the test. And, of course, there were divides among political ideologies: members who identified as either Democrats or Republicans were more likely to label a news item fact or opinion depending on its political underpinnings.²⁴ Rampant skepticism, confirmation bias, and selective exposure are driving ever-deeper levels of political polarization.

The Obliteration of Curiosity

Today's news consumers seem to be less interested in being informed; instead, they are inclined to be "armed" in order to counter arguments, assert their views, and, oftentimes, lash out online, usually through social media. This has obliterated curiosity and the true spirit of research. As Lerner and Tetlock have defined it, information consumers have shifted from exploratory thought to confirmatory thought.²⁵ With exploratory thought, information seekers are open to discovery; they are willing to run trials of keywords through databases, scan background materials, and look at multiple sources of varying viewpoints. On the other hand, confirmatory thought is more directed. Individuals seek only information that confirms their pre-existing positions. This inhibits the discovery of new information and countering viewpoints.

Today's media climate seems to resemble a hoard of confirmatory thought. Selective exposure is employed to engage with agreeable sources and avoid opposition to confirm beliefs. These behaviors create echo chambers and run counter to the very essence of information literacy, including that which is described in the *Framework*. Authority is *deconstructed* and created only when it serves a specific purpose. In many cases, the purpose is to undermine and discredit "the media" with accusations of bias and some sort of "agenda." As poles of the political spectrum populate further, media skepticism and criticism seem to have increased significantly.

Teaching Post-truth Skepticism

As the above sections have established, higher education, and information literacy programs specifically, need to reconsider how we think about and teach skepticism in the twenty-first century. Skepticism remains a core component of critical thinking, but our brains and the modern media landscape combine to undermine

traditional, simplistic notions of skepticism. How might those who teach information literacy move toward teaching a new post-truth skepticism? Any approaches that intentionally highlight the psychological aspects of information behavior and the nuances of modern media would be a step in the right direction. In this section we offer a few practical ideas to use in the classroom. Note that the activities and assignments we suggest are small steps that will only begin to teach students a more robust, updated form of skepticism.

- Have students spend five minutes trying to discover the “Wason Rule” through a simple interactive activity designed by the *New York Times* (David Leonhardt, “A Quick Puzzle to Test Your Problem Solving,” *The Upshot*, *New York Times*, July 2, 2015, https://www.nytimes.com/interactive/2015/07/03/upshot/a-quick-puzzle-to-test-your-problem-solving.html?_r=0). The test provides a sequence of numbers, then allows students to propose additional sequences and tells them whether or not those sequences follow the rule. The Wason Rule is simply that the numbers in the sequence are increasing. Most people will assume that the rule is more complex. After making a guess about the rule, the test goes on to explain the actual rule and then provides information about confirmation bias.
- Read a summary of the MIT fake news study mentioned in the introduction: “The Spread of True and False News Online.”²⁵ Then have students review trending topics on Twitter (<https://twitter.com/whatstrending>). Given the information about the types of news that people are predisposed to share, have the class discuss what can be learned from the stories that are trending that day. Do any of the trending stories meet the criteria of new and novel information (whether it is true or not)? From a psychological perspective, why is this problematic?
- The News Literacy Project and the Facebook Journalism Project combined forces to create Checkology (<https://checkology.org/>). This virtual classroom teaches students to “navigate the challenging information landscape by mastering the skills of news literacy.”²⁷ Lessons help students identify fake news, interpret the First Amendment, identify logical fallacies, and learn about confirmation bias. Basic access to three lessons is free, with the option to purchase access to all the lessons.
- Give students Post-it Notes and have them write three to five news or information sources that they consume regularly. On the board, draw a line across the center to represent the spectrum of partisan sources. Label “Left,” “Middle,” and “Right.” Have students place the Post-it Notes on the board in relation to what they perceive to be their political leaning. Once the notes are placed, direct the students to the website AllSides.com (<https://www.allsides.com/unbiased-balanced-news>), a crowdsourced, scholarly backed news service dedicated to presenting news from varying

sources that categorizes news sources as Left, Center and Right. Once students find their sources on AllSides, have them return to the board and move—if necessary—their sources to where AllSides rates their partisanship. Once finished, discuss the exercise with the students by asking: How many had to move their sources? Were you surprised by the way AllSides rated your sources? Now that you are familiar with the partisan leaning of your source, might you look for countering sources?

- Instruct students to take Pew Research Center's "Quiz: How Well Can You Tell Factual from Opinion Statements?" (<http://www.pewresearch.org/quiz/news-statements-quiz/>). When they have finished, have students share their results in small groups or in a discussion forum. Reveal the national results from the study and compare them to the students' results. The study suggests that most Americans struggle to differentiate fact from opinion in news content and that this is particularly true among partisans. It exemplifies some of the core issues exacerbating problematic skepticism, such as motivated reasoning. This can make students aware of their own biases and the mechanisms in play that trigger skepticism.
- Encourage students to be reflective of their own perspectives by having them take the Implicit Association Test from Project Implicit (<https://implicit.harvard.edu/implicit/takeatest.html>), which measures attitudes and beliefs, or the Political Typology Test from Pew Research (<http://www.people-press.org/quiz/political-typology/>). These tests may be useful tools to help students to be more reflective on their own perspectives. Using them can be a step for students to recognize their own bias and reflect upon how it impacts their information choices.

Most importantly, efforts must be made in the classroom to make selective exposure—and more specifically the confirmation bias component of selective exposure—more apparent to students. From the perspective of information literacy education, "evaluating information" should be as much about the evaluator as it is about credibility of the source or the veracity of the information itself. In his book *Web Literacy for Student Fact Checkers*, Mike Caulfield emphasized the importance of self-monitoring one's emotions as one interacts with information. On this habit of mind, he wrote, "The habit is simple. When you feel strong emotion—happiness, anger, pride, vindication—and that emotion pushes you to share a 'fact' with others, STOP. Above all, these are the claims that you must fact-check."²⁸ To Caulfield, the awareness of emotion (whether positive or negative) within the receiver of information is an important step in making an evaluation of a source. A reflective habit is an essential information literacy skill. Many times, students may not have a strong stance on topics or may not be aware of their own perspectives.

Cook, Lewandowsky, and Ecker moved beyond simple awareness as they explored *inoculation theory*, which is a rhetorical approach that attempts to preempt

fake news or misinformation. The goal is to make students aware of types of arguments in advance of their interaction with these arguments. Research has shown that exposing students to these arguments in advance is more effective than simply giving them counter facts. This addresses the rhetorical structure of misinformation and undermines its affective appeal.²⁹ Chi-Ming argued that early in the educational system it is important to address bias. He suggested following the tradition of philosopher Karl Popper by emphasizing disconfirmation of one's ideas. He sees teaching students "disconfirmatory reasoning" as an important facet of critical thinking that is akin to scientific reasoning. Asking students to consider ways to disprove their own ideas makes them aware of their own weaknesses while also allowing them to see multiple perspectives. He noted that this is hardly foolproof, but it could be a move in the right direction.³⁰

Gibson and Jacobson emphasized the role of librarians in fostering trust within communities of discourse on campuses, whether these are introductory courses, capstone courses, learning communities, or service learning communities. They emphasized that students must grapple with "the highly mutable, uncertain, and fragmented information environment of the present"³¹ while doing so within supporting communities. The approaches they suggested fit well with the need for trust emphasized by the psychologists Mercier and Sperber, mentioned earlier in this chapter. Groups of individuals who create communities with high degrees of trust can overcome their natural skepticism and effectively integrate ideas.³²

Addressing selective exposure and fostering true reflective self-monitoring habits can be very difficult. It is possible for well-intentioned efforts to backfire. Audrey Fisch provided an example of where this happened to her students. She presented a video to her students where it seemed that President Trump at a public event ignored a boy in a wheelchair. This video went viral and solicited condemnation across social media, but the clip had been taken out of context. In fact, the president had spoken to the boy and given him special attention earlier. The earlier edited video elicited strong responses from Fisch's students that in many cases revealed the students' feeling about President Trump. After watching the full video, the students felt duped and recognized their own confirmation bias, which was one of the goals of this lesson. However, Fisch noted that students also expressed strong distrust of media. They did not differentiate the hack video from legitimate news sources. One of the unintended outcomes of the lesson was that students were more aware of their bias, but they fell into a cynicism where they trusted no one.³³

Research such as the seminal work of Lord, Ross, and Lepper from 1979 underscores the potential for rebound effects when confronting worldview. The natural skepticism exhibited toward contradictory information sources makes them elastic. Lord, Ross, and Lepper noted that new information can push individuals toward new perspectives and can impact existing beliefs. But when the new information is undermined, individuals often return to their original beliefs. The

researchers called this the “rebound effect.” The authors noted the circular nature of beliefs that simply adding better facts does not change minds:

If our study demonstrates anything, it surely demonstrates that social scientists cannot expect rationality, enlightenment, and consensus about policy to emerge from their attempts to furnish “objective” data about burning social issues. If people of opposite views can each find support for those views in the same body of evidence, it is small wonder that social science research, dealing with complex and emotional social issues and forced to rely upon inconclusive designs, measures, and modes of analysis, will frequently fuel rather than calm the fire of debate.³⁴

Rebound effects are real. There is no surefire method of “solving” confirmation bias. It is so ingrained in our mechanisms of reasoning that it goes beyond a puzzle that just needs the right solution. It is much more complex since it is caught up in our very identities and worldviews. Yet, as educators, we cannot simply throw our hands in the air and give up. The approaches listed in this section hold possibilities. They are ideas that we offer, but they are not slam dunks by any means. It seems entirely likely that slam dunks do not exist in this game.

Conclusion

You shall no longer take things at second or third hand nor
look through the eyes of the dead nor feed on the
spectres in books,

You shall not look through my eyes either, nor take things
from me,

You shall listen to all sides and filter them from yourself.³⁵

Fake news and propaganda are nothing new; they are just the most recent chapter of a story that began with the invention of the printing press. Fifty years before Whitman’s poem, President John Adams wrote: “There has been more new error propagated by the press in the last ten years than in an hundred years before 1798.”³⁶ Not long after, the *New York Sun* newspaper rose to prominence with a series of stories dubbed “The Great Moon Hoax” about an alien civilization living on the moon. “Yellow journalism” flourished at the very end of the nineteenth century and was characterized by rampant sensationalism and misinformation.

William Randolph Hearst's newspaper, *The Morning Journal*, utilized yellow journalism to lure America into the Spanish-American War, with Hearst famously claiming, "You furnish the pictures, I'll furnish the war."³⁷

Why does Whitman's mid-nineteenth-century poetry ring true for us today when contending with fake news and skepticism? Whitman, of course, isn't indicting journalism and fake news per se in "Song of Myself." The poem was written in a time of extreme political polarization just prior to the Civil War. Whitman implores the reader not to trust second- or third-hand information, which is one component of traditional skepticism. He goes on to demand that "You shall not look through my eyes either."³⁸ Healthy skepticism necessitates seeking information beyond a single source to help negate bias. For the purposes of this chapter, his dictum that we should "listen to all sides and filter them *from* yourself" (emphasis added) has a prescience for us today. As we have argued, one of the root problems of fake news and political polarization lies within ourselves. Developing post-truth skepticism that can match the complexity of the modern information environment requires that individuals be able to filter information *from* themselves. Assimilating new information is a highly charged process. Unfortunately, deciding what information to trust is not just a simple matter of quality and quantity, as some programs of information literacy instruction would have us believe. We come to new information with psychological and emotional baggage that influences our natural skepticism.

It is reasonable to believe that the media and information landscape will continue to shift. It will become increasingly complex. This shifting landscape will drive polarization even further. If society is to find answers to difficult questions, we must reduce current levels of polarization. To do this, there must be forces working to counteract polarization. Libraries and librarians may be positioned to contribute. But first, librarians need to enter into a robust professional dialogue about the connections between identity, skepticism, and reason. Our profession must move beyond the idea that *knowledge* is just information stored in the brain bumping up against emotions. Information is not downloaded into our brains and processed as a computer processes data. Librarians must come to terms with the likelihood that *knowledge does not exist in a meaningful way* as a distinct thing separate from identity. The DIKW hierarchy—data, information, knowledge, wisdom—that many of us learned in our introductory classes at graduate school does not connect with the empirical evidence in the psychology literature.³⁹ The hierarchy may be more accurate as data, information, and then identity. *Identity* is at the center of all our interactions with information and, therefore, is at the center of all information behavior. Reasons, facts, and logic dress up identity-driven decision-making, when decisions are ultimately made at the intuitive level. Most decisions are not deliberative. Decisions are bound up in the pitfalls of selective exposure. This has profound meaning for our profession as we seek to understand how library patrons interact with information tools, with information sources, and with others.

Recognizing the role that identity plays when interacting with information is an initial step in bridging the political divides within our communities. Research suggests that groups made up of individuals holding a diversity of ideas are better equipped to solve challenging problems than groups made of individuals with homogeneous ideas. This is the good news. But the research also suggests that skepticism is the default starting point, especially when it comes to information that contradicts our preexisting beliefs.⁴⁰ Individuals not only vehemently defend beliefs, but also act to reinforce and strengthen those beliefs. This is the bad news. Political polarization cannot be overcome with more and better sources. It will not be overcome with better logic because the inherent skepticism will defeat logic. Overcoming skepticism requires an environment of trust. Reason works best on a social basis when trust connects individuals. This is where ideas flourish. This is how skepticism falls away.

The questions posed at the start of this chapter about the relationship between authority, information behavior, and skepticism remain our focus. The literature clearly demonstrates that the recognition of authority by an individual is deeply connected that individual's identity. The recognition of authority is not based on checklists of credentials or weighing of evidence. It is connected to the intuitions of reasoning that help us navigate our daily lives. As noted in the introduction to this chapter, the *Framework* states that "Authority is constructed in that various communities may recognize different types of authority."⁴¹ While this remains true, the discussion in this chapter highlights that the *Framework* does not go far enough. Noting that communities recognize different types of authority launches us into a skeptical abyss. Librarians such as Lane Wilkinson and Bill Badke have pushed back against the relativistic trend toward socially constructed knowledge where all knowledge is purely created by each of us.⁴² They have both called for a balance between relativism and dominant authority. We agree but further contend that librarians need to take the next step and seek to fill the skeptical void. There is a need for a knowledge or epistemological values statement. This statement should make explicit the values hidden within the *Framework*—and other professional documents—namely the importance of dialogue, evidence, journalistic reporting, and intellectual curiosity, to name just a few possibilities. Librarians rightly shy away from dictating "truth" to the communities they serve. Traditionally, librarians have stayed safely neutral, providing information but not engaging in the debate. As skepticism undermines communities, librarians can work to outline the grounds of the debate. Documents such as the *Framework*, the *Library Bill of Rights*, or the *Core Values of Librarianship* should be updated to better address twenty-first-century post-truth skepticism.

In April 2018, a video of former President Obama making a public service announcement appeared on YouTube. In this short video, Obama implores that, "Moving forward we need to be more vigilant about what we trust on the internet.... It may sound basic, but how we move forward in the age of information

is going to be the difference between whether we survive or whether we become some kind of fucked-up dystopia."⁴³ In this case, the language used and the content of the video were perhaps the biggest tip-offs that the video was a fake. The video was created by a BuzzFeed video producer and marks a new era of propaganda and fake news. These so-called "deepfakes" use algorithmic machine learning technology to create realistic videos where anyone can be made to say or do anything. The future implications of this technology for political polarization and the foundations of democracy are terrifying. Imagine a deepfake video of a political candidate is released days before an election. It looks and sounds real. A deepfake can still be debunked and identified as a fake, but probably well after it has gone viral and has inflicted major damage.

This example represents how tech-savvy fake-news peddlers have become. The only real counter in the ongoing battle with fake news is for the average information consumer to develop a new and robust post-truth skepticism. Doubt alone will no longer cut it. Traditional skepticism is clouded and undermined by human nature—we are not critical enough of new information that matches our worldview, while we exhibit hostility toward new conflicting information. Information literacy programs need to move beyond just evaluating the quality and authority of information and start to make individuals more aware of the inherent cognitive and emotional biases that shape information behaviors.

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