METALITERATE LEARNING FOR THE POST-TRUTH WORLD

EDITED BY
THOMAS P. MACKEY
and
TRUDI E. JACOBSON

FOREWORD BY
TROY A. SWANSON

ALA Neal-Schuman
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TROY A. SWANSON

Foreword

Nearly twenty years ago I started my career as a librarian focusing on information literacy and instruction. At that time the *Information Literacy Competency Standards for Higher Education* (Association of College & Research Libraries [ACRL] 2000) was fairly new and I had a feeling of exuberance around the potential that information literacy presented as an avenue for entering the curriculum and offering valuable skills to students.

But as a new librarian, some of my excitement fell away as I read James Marcum's 2002 article "Rethinking Information Literacy" in *Library Quarterly*. This article laid bare the problem that I had refused to recognize up to that point but could not ignore once Marcum defined it. Essentially, many instruction librarians made grand claims about the impact and value of information literacy to transform higher education but, in practice, many of us were mostly teaching students to search for books in the library catalog. As Marcum (2002) states:

> What conclusions can be drawn from this discussion? One implicit message is that information literacy reaches too far. As developed to date, IL sets too broad a target and must clarify realistic objectives. . . . On the other hand, information literacy as practiced is too limited, too grounded in text, and overly concerned with conveying basic skills to fully encompass the visual, the interactive, and the cultural domains required by the current situation. . . . (20)

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As I read this in 2002, I knew that Marcum was right. Information literacy had the potential to be much more than it was, and as a profession, we needed a broader vision that went beyond simply searching with keywords.

Over the past two decades, librarians have stepped up to answer Marcum's challenge. We have created learning outcomes, lesson plans, and assessments focused on information literacy (Radcliff 2007). We have explored critical information literacy, considering power relationships and social justice issues within the information landscape (Accardi, Drabinski, and Kumbier 2010). We have identified core ideas connected to information literacy, as in the work of Townsend and colleagues (2016) who outlined information literacy threshold concepts through their Delphi study, providing fresh energy focused on helping learners make progress in learning.

Metaliteracy has been an important part of this conversation since Mackey and Jacobson's 2011 *College and Research Libraries* article "Reframing Information Literacy as a Metaliteracy" and both of their books, *Metaliteracy: Reinventing Information Literacy to Empower Learners* (Mackey and Jacobson 2014) and *Metaliteracy in Practice* (Jacobson and Mackey 2016). Metaliteracy, as a model, outlined a direction for revising the *Information Literacy Competency Standards for Higher Education* (ACRL 2000) and influenced the subsequent development of the *Framework for Information Literacy for Higher Education* (ACRL 2016), which transformed the conversation into a broader conceptualization of what information literacy could be. Specifically, metaliteracy helped move the conversation away from the skills and objectives orientation of the *Standards* and toward the more adaptable and reflective stance of the *Framework*.

This book that you hold in your hands or that you are reading online represents another meaningful step in this conversation about information literacy in general and metaliteracy in particular. This dialogue is crucial in our "post-truth" world where 9/11 Truthers, Andrew Wakefield anti-vaccers, and Trump's birthers have held sway. The 2016 US election and the firestorm of debates that followed emphasized the impact misinformation, disinformation, and accusations of "fake news" can have in undermining the credibility of institutions. The calls to address misinformation, disinformation, and political polarization have gone out through librarianship along with many other disciplines.

The chapters in this book are timely, as educators and librarians consider how to address our tumultuous information world. I am most excited by the metacognitive aspects of metaliteracy and how reflection can open up the affective domain. It is the affective domain that sets the traps that make misinformation and fake news effective. In our post-truth information environment, understanding the role of affect and the ways that information sources interact with emotion, identity, and worldview seems more urgent than ever. Metaliteracy presents a model whereby we can understand the complexities of affect in learning.

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It is my belief that much of our work around information literacy in higher education is built upon a misunderstanding of how we interact with information sources. The mental faculty of *reason* is mostly treated as a capability to help the individual process information better. But the work of Mercier and Sperber (2018), among others, argues that this is an inaccurate view of the purpose of reason. Most of the time, reason is put into practice in order to produce ideas that are used in arguments. These are arguments against others, with oneself, or in building new ideas with others. As educators, we think of reason as part of logic or at least as some kind of rules-based approach for decision making. *Reason should be used to discover capital-T Truth.* But Mercier and Sperber argue that reason did not evolve to find the *right* answer. Reason evolved as a cooperative mechanism to coordinate groups, and it does this fairly well. It makes *existing* arguments stronger. This is the source of the challenge.

Recent research from Kahan (2017) has noted that an individual's perception of his or her own identity is directly connected to ways that individuals interact with information. Our reasoning enables us to connect to groups that are important to some facet of our identity, such as political, religious, ethnic, class, or countless other aspects. Some are strong and well-defined. Others are not. We work to use reason to protect these identities. This *identity-protective cognition* is activated when information contradicts preexisting beliefs that align with group affiliations. The protection of identity is more central to how we interact with information than is seeking objective truth. This is why there are not heated debates about the theory of gravity but there are debates about the theory of evolution. As Kahan (2017) states:

> 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. (6)

Identity-protective cognition explains a great deal of the debates that surround highly charged topics such as climate change, the social safety net, privacy rights, and immigration.

When we argue with others or interact with information that conflicts with our views, it is reasonable that we would give weight to our own arguments, especially when time and emotion have been given to creating them. Our tendency is to avoid falling prey to arguments presented by those who disagree with us. We are naturally skeptical. We don't want to be suckers, which makes sense. But in the current, highly polarized information environment where trust has been undermined and sources can be found to support almost any stance on any topic, our innate skepticism and our identity-protective motivations threaten to bring about an epistemological nihilism that allows no possibility of changing beliefs. Psychologists Taber and Lodge (2006) note:

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> Skepticism is valuable and attitudes should have inertia. But skepticism becomes bias when it becomes unreasonably resistant to change and especially when it leads one to avoid information as with the confirmation bias. (768)

This brings us back to the value of metacognition in understanding affect. If our students are to actually learn—which means being open to utilizing new information to develop new beliefs—then they have to be open to reflecting on their own biases. They need to become aware of their affective and identity-driven connections to information. Most important, they have to recognize that their ideas may *feel* as if they are well-reasoned and built upon logic but that many other identity-driven factors may be hidden behind their ideas. How do we teach this? We need the applications presented in this book to help us develop approaches emphasizing the metacognitive.

As I read the chapters in this text, I celebrate. I celebrate the work of Mackey and Jacobson whose initial idea has taken root and borne fruit. This collection includes theoretical as well as on-the-ground applications of metaliteracy that connect to diverse disciplines and speak to one another in valuable ways. The contributors have answered Marcum's call to make information literacy something more than dressed-up bibliographic instruction, and as a profession, we should be proud about how many of the authors here are not librarians at all. Metaliteracy has its roots in information literacy, but the conversations have spread throughout higher education. In our post-truth world, this dialogue must expand and evolve if we are to meet the ever-changing needs of the students and communities that we serve.

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Preface

This book examines metaliteracy as a pedagogical framework to develop metaliterate learners for the post-truth world. Although the term *post-truth* has been around for some time, it has become the definitive nomenclature for our connected yet partisan world, especially as a result of the 2016 presidential election. It is a descriptor for a set of interrelated issues about how we identify, define, and understand truth in the fractured era of divisive politics and disruptive social technologies. The idea of a post-truth world challenges us to consider how we are to believe or not the information that circulates in our online lives and real-world communities. This book argues that metaliteracy is an empowering pedagogical framework that prepares learners to be active and engaged participants in an oftentimes technology-mediated social information environment. Our goal is to positively contribute to the conversation about envisioning educational solutions to the post-truth world while supporting the fine work that continues to emerge in response to these profound challenges.

As a postmodern term with a now precise dictionary definition provided by Oxford Dictionaries (2018), post-truth effectively names and defines "circumstances in which objective facts are less influential in shaping public opinion than appeals to emotion and personal belief." The post-truth world is evident in the damaging nationalist rhetoric and divisive politics that wash across our television screens and mobile devices with unnerving frequency.

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This situation challenges us to expand pedagogical theories and practices that teach learners to understand the issues while pursuing truth and reason through ongoing inquiry and discovery. The term *post-truth* also has limitations since it is difficult to fully describe how we consume, produce, and share information in a world seemingly *after* truth has been exhausted. Naming is a crucial step in defining and ultimately resolving, but these issues have been unfolding for decades and will not be easily fixed. One of the problems with post-truth terminology is that the continuous fading of truth may simply be accepted as the way things are now, and not persistently challenged or rebuked. Consequently, we have to be careful that simply identifying the issues does not normalize rhetoric and circumstances that would be considered unimaginable otherwise. We need to do much more than acknowledge the post-truth condition. This book addresses the challenges directly through learner-centered pedagogical strategies while thinking beyond a post-truth era to reinvent a connected world of knowledge, collaboration, and participation.

The specific application of metaliteracy to prepare metaliterate learners for the post-truth world is a logical extension of research that started with the first article in 2011, "Reframing Information Literacy as a Metaliteracy" (Mackey and Jacobson 2011). The introduction of a metaliteracy offered a unified approach to literacy while foregrounding the impact of social media and online communities on the consumption, production, and distribution of information in participatory environments. As the idea evolved in the book *Metaliteracy: Reinventing Information Literacy to Empower Learners* in 2014 (Mackey and Jacobson 2014), the metacognitive dimension of metaliteracy developed within four domains of metaliterate learning that also included the affective, behavioral, and cognitive areas. This expanded conceptualization of the model advanced in partnership with the Metaliteracy Learning Collaborative and led to specific metaliteracy goals and learning objectives (Jacobson et al. 2018). This work informed several grant-funded MOOC (massive open online course) projects and the design of a competency-based digital badging system. The edited volume *Metaliteracy in Practice* in 2016 featured educators who discussed the application of this model in a range of disciplinary settings and different pedagogical situations (Jacobson and Mackey 2016). Metaliteracy research and practice has strived toward better understanding the collaborative and constructive aspects of a connected world. This perspective is grounded in the idea that education is transformative and necessitates critical thinking, the active production of new knowledge, and thoughtful cooperation in the design and facilitation of communities of trust.

Applying metaliteracy to an emerging set of concerns related to the post-truth world moved quickly with the circumstances. Just one month after the 2016 presidential election, the *Conversation* published the article "How Can We Learn to Reject Fake News in the Digital World?" in which we applied metaliteracy to the destructive emergence of fake news during that deeply

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divisive time (Mackey and Jacobson 2016). This essay made the argument that we need to read online information with a critical eye, apply metacognitive thinking to the consumption of all information, and make purposeful and responsible contributions to the social media ecology as active participants. Unfortunately, fake news is still a pressing issue, especially since the term has been appropriated and redefined to discredit reputable news organizations that ask critical questions and report information that counters misleading or false narratives. In addition, an expansive and troubling set of issues about the post-truth era extends beyond fake news to include confirmation bias, personal privacy, online security, online trolling, and an overall lack of trust in the information we consume through the technologies we have become so dependent upon.

There is a particular urgency in publishing this book now, when truth itself has been questioned by partisan leaders for political purposes, professional journalism is under attack, science and climate change are doubted as factual, online hacking is prevalent, and personal privacy has been violated by commercial and political interests. During this post-truth era, education and health care have become more politicized than ever before, and the proliferation of false information through commercial social media networks has developed as a serious concern. It is profoundly clear that the competencies, knowledge, and attributes specific to metaliterate learning are critical to effectively traverse these challenges. Metaliteracy is an evolving concept that offers an empowering way to develop and support the metaliterate learner in a wide range of educational contexts, across multiple learning spaces, and through continuous lifelong learning experiences.

BOOK CHAPTERS AND ORGANIZATION

In this book, an exceptional team of authors examines several critical themes related to metaliterate learning in the post-truth world through multiple perspectives. The chapter authors build on and expand theoretical and applied approaches to metaliteracy through persuasive insights and strategies that are adaptable to multiple disciplinary settings. The first half of the book opens up primarily from a theoretical perspective and then we shift to mostly applied viewpoints, although theory and practice intersect throughout the volume.

In the first chapter, "Empowering Metaliterate Learners for the Post-Truth World," Thomas P. Mackey, PhD, Professor in the Department of Arts and Media at SUNY Empire State College and one of the editors of this book, examines metaliteracy as a pedagogical model for the post-truth world and beyond. This framing chapter includes a detailed analysis of the metaliterate learner characteristics and the revised metaliteracy goals and learning objectives developed with co-editor Trudi E. Jacobson and the Metaliteracy

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Learning Collaborative. In this chapter, metaliteracy is envisioned as an empowering pedagogical model that supports reflective and self-regulated learning to advance the purposeful creation and distribution of new knowledge in participatory communities of trust.

The second chapter, "The Materiality of Metaliteracy: A Documentary Approach and Perspective for Information and Literacy Practices in the Post-Truth Era," is authored by Marc Kosciejew, MLIS, PhD, Faculty of Media and Knowledge Sciences in the Department of Library, Information, and Archive Sciences, University of Malta. According to Kosciejew, while there is implicit acknowledgment of documentation in the original metaliteracy framework, this key dimension must be developed further to support metaliterate learning. Kosciejew asserts an essential role for documentation in the metaliteracy model and argues that a stronger awareness and deeper understanding of the documents we consume, create, and share leads to ethical and responsible practices.

The next chapter, "Inoculation Theory and the Metaliterate Learner," is written by Josh Compton, PhD, from the Institute for Writing and Rhetoric at Dartmouth College. In this theoretical piece, Compton argues that inoculation theory is a valuable perspective for understanding metaliteracy in the post-truth world because of the focus on building resistance to influence. As Compton suggests, inoculation and metaliteracy are complementary theories that offer considerable promise for future research synergies in support of developing proactive learning strategies. Compton provides a detailed analysis of metaliteracy's four domains of learning and the metaliteracy goals and learning objectives through the lens of inoculation theory.

Allison B. Brungard, MLIS, from Slippery Rock University and Kristin M. Klucevsek, PhD, from Duquesne University co-authored "Constructing Scientific Literacy through Metaliteracy: Implications for Learning in a Post-Truth World." Brungard and Klucevsek argue that such factors as politics and emotion are now challenging evidence-based learning practices and scientific reasoning. The authors call for a holistic approach to scientific literacy that is enhanced through metaliteracy, including the four domains of metaliterate learning, and the associated emphasis on digital learning strategies. They offer a comprehensive methodology that reimagines scientific literacy for a wide range of disciplines within the STEM (science, technology, engineering, and mathematics) disciplines.

In the next chapter, "When Stories and Pictures Lie Together—and You Don't Even Know It," Thomas Palmer, MS, Digital Media Lecturer from the University at Albany, SUNY, and Editorial Design Director/News Editor at the *Times Union* newspaper, writes about the deceptive qualities of visual images. According to Palmer, the relationship between text and image is dynamic and complementary, while also leading to misrepresentations as well. Palmer analyzes the synergistic association of several visual-textual examples from

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photojournalism to illustrate how images are easily manipulated or misunderstood. He argues for an empowering pedagogical response to these concerns that develops detection and prevention strategies through the lens of metaliteracy.

The second half of the book shifts primarily to applied methodologies for advancing metaliterate learning. The collaborative chapter "Teaching and Learning with Metaliterate LIS Professionals" was co-written by Nicole A. Cooke, PhD, MEd, MLS, and Rachel Magee, PhD, MA, from the University of Illinois. The authors argue that information professionals in the field of library and information science (LIS) must be metaliterate as well to support and promote metaliteracy among learners. Cooke and Magee incorporate both metaliteracy and the ACRL (2016) *Framework for Information Literacy for Higher Education* into their work with communities, including peers and learners, to best serve students while transforming the curriculum.

Allison Hosier, MSIS, Information Literacy Librarian at the University at Albany, SUNY, wrote the next chapter, "First, Help Students Learn to Be Wrong," based on a freshman seminar she redesigned and taught at the University at Albany, SUNY. Hosier reimagined the course Empowering Yourself as a User and Creator of Information by applying concepts from both metaliteracy and the ACRL *Framework for Information Literacy for Higher Education*. The revised learning experience addressed such topical issues as fake news and misinformation in the post-truth world. Hosier argues that the development of a lesson on being wrong was a critical part of the course to empower learners about the responsibilities of creating information.

In the chapter "Fictional Affect and Metaliterate Learning through Genre," Jaclyn Partyka, PhD, in the English Department at Temple University, argues for developing metaliteracy through genre analysis and fictionality. The author focuses specifically on first-year writing instruction to develop students as analytical readers and writers capable of differentiating among the wide range of rhetorical strategies from a multitude of information sources. Partyka examines the application of the metaliteracy goals and learning objectives as well as the ACRL *Framework for Information Literacy for Higher Education* in her course Inventing Facts: Digital, Historical, Fictional for Temple University's First-Year Writing Program.

The book's closing chapter, "Poetic Ethnography and Metaliteracy: Empowering Voices in a Hybrid Theater Arts Course," was written by Kimmika L. H. Williams-Witherspoon, PhD, Associate Professor in the Department of Theater at Temple University. According to the author, Temple University's Department of Theater features a Theater Arts curriculum that demonstrates the application of the metacognitive domain of metaliteracy. Williams-Witherspoon examines THTR 2008 Poetic Ethnography from a metaliteracy perspective that inspires learners to create digital storytelling projects based on poetic narratives from neighborhoods in Philadelphia. The author argues that

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the development of metaliteracy and metacognitive learning strategies in the context of collaborative communities provides learners with a voice to challenge fake news and related concerns as critical consumers and creative producers of information.

BEYOND THE POST-TRUTH WORLD

As the authors of this book demonstrate, moving beyond the post-truth world requires pedagogical strategies that challenge learners to carefully analyze and reflect on all forms of information, as both consumers and producers. The chapter authors discuss theories and practices that encourage learners to critically adapt to new technologies, while investigating the social and political issues that influence perception, communication, and decision making in participatory environments. Each author explores metaliteracy as a pedagogical framework to advance metaliterate learning in the post-truth world. The authors innovate through metaliteracy while applying the metaliteracy goals and learning objectives and in some cases the ACRL *Framework for Information Literacy for Higher Education*. Collectively, they contribute to the continued development of metaliteracy as a comprehensive and unifying model in support of literacy and learning.

As the narratives unfold, it is important to remember that the believability of words and images will always be changeable through an evolving media ecosystem built on the virtual representation of ideas. The post-truth world has created a unique host of concerns, however, that exacerbate the virtualization of information and the inherent flaws of systems that were intended primarily to connect participants. As the current situation has demonstrated, uncertainty about truth itself reveals how people gravitate to their own communities and like-minded ways of thinking. The post-truth world has emerged as an unintended consequence of the first wave of social technologies that were idealistically developed to unite people in online communities. In designing the next wave of innovative social systems, developers, educators, and learners need to be wary of the proprietary and political interests that manipulate the openness of the social media ecology. Doing so will challenge the creation and distribution of false and unreliable information in these environments. In moving beyond a post-truth world, imagine a fully realized sense of community in which participants and producers take full responsibility for the systems to advance transparency, connectedness, and trust.

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THOMAS P. MACKEY

1
Empowering Metaliterate Learners for the Post-Truth World

The emergence of the post-truth world reinforces the need to advance metaliteracy in higher education and as a practice of lifelong learning. This book explores the metaliterate learner as an active and empowered participant in information environments that are both connected and divided. This framing chapter examines the advent of a post-truth world in which metaliteracy must play a vital role by supporting reflective learning and the informed production of new knowledge. The metaliterate learner is a critical consumer of information, continuously developing effective questions, verifying sources of information including authorship, and always challenging his or her own biases through metacognitive thinking. Metaliterate learners understand the social, political, and economic dimensions of information that often move instantly through mobile and social systems. Becoming metaliterate is an ongoing practice that requires learners to understand changing technologies and challenge assumptions about authority in these spaces, including the power we often give to the technology itself. This process is especially crucial during a time when truth is seen as mutable, requiring an unwavering commitment to the responsible and ethical participation in social networks and the critical reflection on how information is produced, shared, and consumed.

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Metaliteracy prepares individuals to be thoughtful and collaborative producers of information in all forms including text, image, sound, and multimedia. It also supports learners in navigating and contributing to the networked environments of social media and online communities. Through this integrated consumer-producer dynamic, with a particular emphasis on metacognitive thinking, the metaliterate learner is a reflective and responsible digital citizen who understands that how we participate in social spaces has an ethical dimension that is reliant on effective contributions. Striving toward learner empowerment through metaliteracy is especially vital in a post-truth world when the distinction between truth and deception has been intentionally blurred and distorted.

The optimism that once surrounded social media as a participatory technology that connected us all in online communities has shifted to a more critical stance that exposes the fissures in the network that mislead and divide us. While these complex issues present many obstacles for educators and lifelong learners, the ability to overcome this post-truth reality is accomplished through meditative teaching and learning, in which teaching is a shared activity among the empowered, connected learners themselves.

THE POST-TRUTH WORLD

The term *post-truth* designates a significant cultural shift in the definition of truth as a result of the 2016 US presidential election and the Brexit movement in the United Kingdom. Oxford Dictionaries (2018c) identified both events as contributing factors when it named post-truth the 2016 word of the year. According to Oxford Dictionaries (2018b), post-truth, an adjective, is defined as follows:

> Relating to or denoting circumstances in which objective facts are less influential in shaping public opinion than appeals to emotion and personal belief.
>
> *'in this era of post-truth politics, it's easy to cherry-pick data and come to whatever conclusion you desire'*
> *'some commentators have observed that we are living in a post-truth age'*

As part of this description, a clear distinction is made between "objective facts" and "personal belief" and the related term "post-truth politics," which allows individuals to simply create their own reality based on their own belief system and not on objective and verified factual information. It is within this post-truth milieu that facts are contested as relevant and truth is determined by individual political or personal beliefs and feelings.

In his essay "Post-Truth and Its Consequences: What a 25-Year-Old Essay Tells Us about the Current Moment," Richard Kreitner (2016) traces the term

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back to Steve Tesich's article from 1992 and argues, "As Oxford Dictionaries has confirmed, that was a pioneering observation for its time. But now tens of millions of American voters have affirmed it." Kreitner emphasizes the emergence of this post-truth circumstance as a shared responsibility within a society that allowed a post-truth leadership to ascend.

Steve Tesich's 1992 essay for the *Nation*, "The Watergate Syndrome: A Government of Lies," argues, "In a very fundamental way we, as a free people, have freely decided that we want to live in some post-truth world" (13). According to Tesich, this new reality was the result of the Vietnam War, the Watergate scandal, and the pardon of Richard M. Nixon because at the time "we looked to our government to protect us from the truth" (12). Rather than acknowledge or celebrate that truths were ultimately revealed through each of these traumatic historical events, and that we emerged stronger than before, Tesich argues that "we came to equate truth with bad news and we didn't want bad news anymore, no matter how true or vital to our health as a nation" (12). Tesich's essay also examines the Iran/Contra scandal and the War in the Persian Gulf as two additional examples that led to a post-truth world, through our acceptance of a compromised understanding of truth itself. According to Tesich:

> We are rapidly becoming prototypes of a people that totalitarian monsters could only drool about in their dreams. All the dictators up to now have had to work hard at suppressing the truth. We, by our actions, are saying that this is no longer necessary, that we have acquired a spiritual mechanism that can denude truth of any significance. (13)

Tesich's essay is a sharp commentary directed at the leaders responsible for each of these circumstances, but he also focuses on the collective societal accountability for the post-truth world. As part of his argument, Tesich challenges the notion that the education system has failed and says that we need to "educate by example" (13). This is especially relevant today when education, as another pillar of society, has too been challenged in a post-truth context. In an opinion piece for *Time* magazine titled "AFT President: Betsy DeVos and Donald Trump Are Dismantling Public Education," Randi Weingarten (2017) argues, "It's dangerous in education when the facts don't matter to people." Tesich could not have envisioned the future, but he did suggest that we all must learn from the lessons of history, including the social, racial, and economic inequalities, and ultimately challenge the false assertions and assumptions of a post-truth world.

In 2004, Ralph Keyes, acknowledging the work of Steve Tesich, addressed the changing social and cultural understanding of truth in his book the *Post-Truth Era: Dishonesty and Deception in Contemporary Life*. According to Keyes, "We live in a post-truth era" in which "post-truthfulness exists in an ethical twilight zone" (13). Similar to Tesich's earlier argument that emphasized the

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flawed leadership that led to social and political upheavals from the 1970s to the 1990s, Keyes situates the post-truth era in the aftermath of the political scandals and controversies that followed, including those of the "Reagan-Clinton-Bush era" (12). Keyes writes, "Dishonesty has come to feel less like the exception and more like the norm. Along with our acceptance of lying as commonplace we've developed ingenious ways to let ourselves off ethical hooks" (12). He notes, for example, several terms that have become commonplace as substitutes for the word *lie*—as, he suggests, a softer way of making the same assertion—including *misspeak*, *exaggerate*, *exercise poor judgment*, and *spin* (13). According to Keyes, "When our behavior conflicts with our values, what we're most likely to do is reconceive our values" (13). He discusses the importance of language in defining what is true and what is not while describing the social and political factors that influence interpretations of truth.

In many ways, Keyes foreshadowed today's post-truth era by recognizing the important role public figures play in modeling and upholding the truth. Over decades, political leaders and individuals in the public eye have diminished the meaning of truth in society by lying and through political and personal scandals that demonstrate bad decision making. Today, the spread of false and misleading information accelerates through social media, cable television, and talk radio, while websites such as FactCheck.org publish research to counter the falsehoods. Glenn Kessler, Salvador Rizzo, and Meg Kelly (2018) from the *Washington Post*, for instance, have been tracking the precise number of false or misleading claims since President Trump has been in office. Similarly, David Leonhardt and Stuart A. Thompson (2017) from the *New York Times* have been cataloging all of the false or misleading statements to date and express concern that the public may simply get used to or even acquire a numbness to untruthful information. The ongoing tracking of falsehoods, and even the blatant use of the term *lie* in this context, illustrates the seriousness of the concerns. At the same time, the ongoing reporting about false and misleading information by elected officials also requires the public to take responsibility and to carefully reflect on and determine if this is an acceptable state of affairs. Ultimately, we are all responsible for accepting the deterioration of truth by leaders and institutions and through technologies such as social media. We are also accountable for the language and terms we use, as well as the normalization of behaviors and communications once considered inconceivable.

POST-TRUTH AND POSTMODERNISM

Keyes (2004) suggests that postmodernism explains how our definition of truth has changed. He writes, "To devout postmodernists, there is no such thing as literal truth, only what society labels *truth*. That is why they call

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concepts of truth *social constructs*, ones that vary from society to society, group to group, and individual to individual" (Keyes 2004, 139). According to this definition of postmodernism, there is no longer an objective truth because any individual or group is capable of defining its own reality based on particular social circumstances and explanations. Andrew Kirkpatrick (2017) looks at post-truth through a postmodern lens as well and states:

> We are "post-truth" not because truth is passé and we have moved beyond it as a concept. We are post-truth because we already have and possess our truths. This has only been amplified by the postmodern condition, whose little narratives serve as impenetrable bastions of certainty. (331)

In this context, then, postmodernism describes disparate communities with defined opinions and beliefs. Everyone is confident in the truths they consider as their own. Kirkpatrick suggests that what we are really lacking is the ability to try to understand others, and as he states, "Most alarming in post-truth discourse is the lack of empathy for and movement between these little narratives" (331). While the postmodern world opened up the opportunity for multiple perspectives by challenging linear historical narratives and traditional hierarchies, disparate groups are now talking past one another without the compassion needed for mutual understanding. At the same time, this fragmentation of communities and groups has been taken advantage of by those interested in fostering division and intensifying mistrust through false narratives.

In an opinion piece for the *New York Times*, Thomas B. Edsall (2018) explores postmodern theory in relation to the post-truth era and notes, "Scholars of contemporary philosophy argue that postmodernism does not dispute the existence of truth, per se, but rather seeks to interrogate the sources and interests of those making assertions of truth." This reading of postmodernism in a post-truth world supports the need for critical thinking that informs the ongoing questioning of statements presented as truth. Rather than assume that any assertion is inherently true, we must continuously investigate, challenge, and support assertions with evidence, no matter what the source of information may be, whether the individual is an anonymous blogger or a famous world leader.

In his essay "America's First Postmodern President," Jeet Heer (2017) writes, "Postmodernism brings with it the erasure of older distinctions not just between reality and fiction, but between elite and popular culture." Heer suggests a significant blurring of traditional boundaries between what is real and virtual as well as between truth and untruth. He argues that there is more to the ascension of Trump than "a fluke election or a racist and sexist backlash, but the culmination of late capitalism," and that postmodernism is key to understanding the connection to these "cultural changes with deeper economic transformations." Postmodernism provides a way to recognize the

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social, political, and economic factors at play that have led to such a contested and partisan post-truth environment. Heer asserts:

> In a world where commerce and media (including social media) reward performance above truth telling, it's not surprising that a figure like Trump rises to the top. Any moralistic condemnation of Trump is incomplete without acknowledging the institutions (notably the media) that both created him and allowed him to thrive.

As Heer suggests, we need to examine the role social media has played in the emergence of the post-truth condition. Social media was once seen as a way to level the playing field, as a democratic technology that provided wide access to transformative communications, interactivity, connectivity, and participation. In the post-truth world, however, the same technology is also understood as an immense social network that has created an editorial vacuum with confusing notions of expertise. This connected system functions through algorithms that simply present us with the kind of subjective information we want, while continuously selling products in the virtual marketplace. The vast amounts of information in these spaces can be truth or lies, and how this information is presented and shared, without editorial filters or collective agreements about what is reality or expertise, will impact how it is received and interpreted.

CONFIRMATION BIAS

As just described, the post-truth world has been advancing for some time and may be better understood through the lens of postmodern theory. Research into how we think and respond to data and information sources provides another explanation. In her book *The Influential Mind: What the Brain Reveals about Our Power to Change Others*, Tali Sharot (2017) argues that confirmation bias and prior beliefs play a significant role in how we interpret and understand information, whether factual or not. She defines confirmation bias as "seeking out and interpreting data in a way that strengthens our preestablished opinions" (22). In other words, we find and analyze information that supports what we already believe to be true. According to Sharot, "data has only a limited capacity to alter the strong opinions of others" (15), which means that the presentation of verified and objective facts will not necessarily convince anyone of anything. She notes, "Established beliefs can be extremely resistant to change, even when scientific evidence is provided to undermine those beliefs" (15). This suggests that a fact-based argument is not sufficient to impact opinions that people hold dear and the presentation of scientific proof is not enough to sway them. According to Sharot, "When you provide someone with new data, they quickly accept evidence that confirms their

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preconceived notions (what are known as *prior* beliefs)" (17). She argues that this response leads to only further "polarization" among people with differing perspectives and that every new argument will generate even stronger counterarguments (18). As a result, presenting individuals with information that contradicts their existing beliefs to persuade them or change their opinion is not entirely effective, even though it is grounded in the idea of a reasonable argument (Sharot 2017, 18).

Sharot's (2017) research presents educators with a considerable challenge since our intellectual frame is based on the development of rational, logical, and scientific arguments. Her assertion that "there is no single truth we all agree on" describes the current state of the post-truth world very well (18). In this environment, the meaning of truth itself is contested, as is the idea of one commonly understood truth. If everyone pursues and supports what each already believes to be true, the presentation of new ideas and counterarguments will not result in a shared understanding of truth. Sharot examines these issues through her research to identify the *motivations* that lead to change (34). Sharot's research provides awareness about how we think, and the biases we all have and continuously support through how we receive data and information. This is a valuable perspective in developing pedagogical strategies that address the post-truth world while moving beyond some of our own preconceived notions about how to do so.

PERSONAL PRIVACY

Concerns about personal privacy have been prevalent since the emergence of networked environments, and in a post-truth world, these issues relate to how individuals trust the platforms they engage with online. Personal data is not secure through social networks, as was evident in the vast security breach of over 87 million Facebook users before the 2016 presidential election. This issue raises serious concerns about personal privacy in a post-truth era since individuals freely post and share information about themselves with a false sense of security about the social systems. Both the *New York Times* and the *Observer* of London investigated Cambridge Analytica, a data analytics firm that "harvested private information from the Facebook profiles of more than 50 million users without their permission" (Rosenberg, Confessore, and Cadwalladr 2018). Facebook later increased the number of users impacted by this breach of trust to more than 87 million (Schroepfer 2018). This significant violation of consumer data revealed the failure of Facebook, the most popular social media platform in the world (Statistica 2018), to protect the personal privacy of millions of unsuspecting users.

According to Rosenberg, Confessore, and Cadwalladr (2018), Cambridge Analytica was able "to exploit the private social media activity of a huge swath of the American electorate, developing techniques that underpinned its work

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on President Trump's campaign in 2016." In addition, Cadwalladr and Graham-Harrison (2018) reported that Cambridge Analytica worked with both the Trump campaign and the Brexit campaign. They also stated that Facebook knew about this as early as 2015 but "failed to alert users and took only limited steps to recover and secure the private information of more than 50 million individuals." As evident in this massive security breach, personal data was simply a commodity that was appropriated and manipulated for a specific political purpose without the awareness of the users. This situation in particular demonstrates the need for continuous proactive strategies for protecting one's personal data, as well as knowledge about the security policies and practices of social media platforms. The revelations about Cambridge Analytica are a significant enough turning point to demonstrate the necessity for participant empowerment online to guard against current and future incidents.

FAKE NEWS

The term *fake news* is one of the most contested phrases in a post-truth world, but it exemplifies and magnifies the interrelated concerns of this era. Initially, fake news described the false and misleading information that circulated through social media, but then it was appropriated and its definition was intentionally altered to describe any news story or news organization that countered the prevailing narrative of the Trump administration. This tension was obvious when the Sinclair Broadcast Group required nearly 100 local news anchors throughout the United States to recite a script that claimed to argue against "the sharing of biased and false news" (Burke 2018) but did so in an orchestrated and nonnegotiable way that supported President Trump's position. This unprecedented attack on objective and professional journalism through a scripted performance that was delivered by local news anchors was edited together in a video that went viral through social media (Deadspin on Twitter, 2018). The video showed all of the anchors reading from the same exact script, as mandated by the Sinclair Broadcast Group. The visual mash-up of the incident reinforced the critique that followed by illustrating the concerns about objectivity in news reporting when the message is politicized by a media conglomerate that owns local television stations.

Claire Wardle and Hossein Derakhshan (2017) argue that the term *fake news* fails to adequately describe what they define as the proliferation of "information pollution" through global social technologies. They also avoid the fake news language because "it's becoming a mechanism by which the powerful can clamp down upon, restrict, undermine and circumvent the free press" (5). An essay in *Science* titled "The Science of Fake News," however, argues that while the terminology for fake news is being appropriated for political purposes, it is important to keep the original phrase and intent

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