

Post-Truth and the Production of Ignorance¹

Joanna Kempner²

This essay is written in response to Fujimura and Holmes's piece "Staying the Course," published in the December 2019 special issue of Sociological Forum—Resistance in the Twenty-First Century.

KEYWORDS: ignorance; knowledge; post-truth; power; science; technology.

These days, even postmodernists might be forgiven a little nostalgia for a time when truth felt easier to grasp. Every day, we are introduced to a new disorienting fissure with what previously seemed to be obvious fact. News anchors in the United States continue to host debates about the existence of climate change, despite historic hurricanes that have nearly wiped out entire island nations. The public appears willing to question whether holding young children in detention for months on end meets the definition of a "concentration camp." And many of us now wonder whether Donald Trump could, in fact, shoot a man on Fifth Avenue and then successfully deny what we have all witnessed. Given this political hellscape, it is not surprising that so many scholars have begun to question and debate the general utility of critique, particularly when it comes to critiques of science (Fassin 2017; Latour 2004; Sismondo 2017). Even Bruno Latour (2004)—the scholar who is perhaps most closely associated (rightly or wrongly) with the idea that facts are socially constructed—has argued that science studies scholars must now begin defending science.

Fujimura and Holmes's (2019) essay on the value of science and technology studies (STS) scholarship in relationship to the "post-truth" movement wades into this debate. I was pleased that their article defended critical analyses of science, arguing that STS often complements and strengthens the mission of scientific research. As Sismondo (2017:3) points out, studies that detail how knowledge is constructed demonstrate that constructing knowledge is not *easy*; it requires "infrastructure, effort, ingenuity and validation structures."³ Nevertheless, I was not entirely satisfied by Fujimura and Holmes's conclusion that STS ought to "stay the course"—a position that implies far too much political neutrality for my taste. Instead, I argue that STS scholars should go further and (as many already do)

¹ *Editor's Note:* The three articles that constitute this issue's "The Forum" are written in response to Fujimura and Holmes (2019).

² Department of Sociology, Rutgers University, New Brunswick, New Jersey 08901; e-mail: jkempner@rutgers.edu

³ How I wish the social construction of knowledge were easy. We could all tweet our findings!

contribute to the resistance by analyzing the relationship between knowledge, ignorance, and power.

Science and technology studies does more than simply investigate the social, economic, and political contexts in which science is produced. STS also investigates how power influences and shapes the production of knowledge by asking: Whose reality is privileged and whose needs are served? Who is written out of our research or systematically harmed by technological developments? And, importantly, how can we resist the power relations that wield control over academic institutions? Asking these questions is not to deny that an objective world exists; rather, these questions require that we continue to acknowledge that knowledge is produced by humans within a social world, and therefore ought to be analyzed like any other set of social facts.

Importantly, scholars have begun to study how ignorance is a social fact, rather than simply the flip side of epistemology. Although most ignorance is normal and not the product of politically, economically, or socially powerful organizations conspiring to maintain power (Smithson, 1989), some ignorance *is* produced and mongered by powerful actors for nefarious reasons (Proctor and Schiebinger 2008). The “post-truth movement,” which has scholars enraged with its efforts to undermine so much important knowledge, is simply the latest of these efforts. In this commentary, I describe how STS scholars are not only uniquely equipped to understand the historical, social, economic, and political forces that *produce and sustain* the post-truth movement, but also how we can contribute to the resistance by studying and explaining how social movements can effectively resist efforts to spread dangerous forms of ignorance.

POWER AND THE PRODUCTION OF IGNORANCE

Fujimura and Holmes (2019) write that STS scholars must “(re)consider the place of science and our analyses of science in our society” because we now live in a “post-truth” era. Although I am sympathetic to the anxiety invoked in their call for reflection, I disagree that our current “post-truth era” constitutes an unprecedented epistemological crisis. First, we need to acknowledge that while certain kinds of scientific research have experienced funding cuts under the Trump administration, research that aligns with contemporary political goals is flourishing—for example, research on nonaddictive painkillers (NIH 2019). Second, if we are facing a new kind of ignorance, when did it begin? The political suppression of research didn’t start with Trump. I still seethe when thinking about how President George W. Bush’s administration systematically suppressed scientific findings that undermined their political ideological positions. I am certain ACT-UP activists feel the same about the 1980s, when they marched with placards reading “Silence = Death” in protest of President Reagan’s refusal to utter the word *AIDS*. Meanwhile, our country is still suffering the consequences of President Nixon’s Drug Enforcement Agency’s 1971 decision to categorize drugs such as marijuana, LSD, and psilocybin as Schedule I, which produced a de facto prohibition on clinical research into potential medicinal uses of these drugs (Nutt, King, and Nichols, 2013). For those who

might argue that this particular crisis *is* different because this time, we are facing the existential threat of climate change, I will gently point out that the War on Drugs, AIDS, and the war in Iraq are responsible for millions of deaths around the world.

Powerful elites have always sustained their hierarchical positions through the control of knowledge. Genesis's story about the Tree of Knowledge is a morality tale about power and access to knowledge. The church's denial of Galileo's heliocentric model of the solar system scared Descartes so much that *The World* and *Treatise of Man* were only published posthumously. But even today, power struggles ensue between scientists and the church. Darwin's theory that we evolved from apes not only shocked clergy in the mid-nineteenth century, but it continues to face fierce resistance in some parts of the U.S. public education system (Binder 2002). Therefore, the question at hand is not "How is today's crisis different than previous eras?" but instead, "How can we apply what we already know about power and knowledge to contemporary politics?"

IGNORANCE AND OPPRESSION

As Fujimura and Holmes (2019) point out, feminist STS scholars have long taken the position that all knowledge encodes value systems. Feminist science studies scholars have also made some of the earliest and most important contributions to the study of ignorance by arguing that white supremacy is sustained by knowledge systems that systematically obscure, ignore, and marginalize women and people of color. Over the last 10 years, several feminist STS scholars—most notably Nancy Tuana and Shannon Sullivan (2006:vii)—have argued that feminists must attend to ignorance as a practice fundamentally "intertwined with practices of oppression and exclusion."

Feminist STS has also given rise to critical race and postcolonial theories of ignorance. Charles Mills's (2007) writing on "white ignorance" exemplifies how theorizing on ignorance can elucidate contemporary racist beliefs and practices. White people, according to Mills, are not simply uneducated about the social, political, economic, and historical conditions of being black in the United States. Rather, white people employ a strategic, willful ignorance as part of a deliberate tactic that enables white privilege to exist and proliferate. Meanwhile, marginalized populations will not survive if they remain ignorant of dominant culture; survival requires that nonwhite populations must become "lay anthropologists" (Mills 2007:17) in order to understand the social group that wields power over them. Continued research in this tradition will further elucidate how the "post-truth" movement uses ignorance to perpetuate patriarchy and white supremacy.

AGNOTOLOGY AND THE PRODUCTION OF IGNORANCE

A number of STS scholars now work on "agnotology," the academic study of the deliberate production of ignorance (Proctor and Schiebinger 2008). Scholars working within this tradition have identified how political institutions or large

corporations—for example, tobacco, pharmaceuticals, oil, agriculture, food, or banking—sometimes suppress knowledge to suit their own economic or ideological goals. These scholars typically understand scientific controversy not as the inevitable product of ignorance but as something manufactured and maintained by powerful interests in order to produce doubt (Proctor 1995). Historians Naomi Oreskes and Erik Conway (2010) provide an exemplary model for how research in this area can serve as a resource for citizens and policymakers seeking to better understand how to interpret the information that corporations provide about their products. Their best-selling scholarly monograph, *Merchants of Doubt*, described exactly how oil companies have engaged in specific public relations campaigns to enlist a small group of scientists in efforts to undermine public belief in climate change. They followed the publication of their book with well-placed editorials, including a piece in *Nature*, which argued that scientists must stop using scientific language inflected with uncertainty if they wanted to convince the public that climate change is, indeed, now a “fact.” In just a few short years, their work inspired a highly regarded documentary, bringing their findings to an even broader audience.

Policymakers and the public are hungry for this kind of research. Indeed, when it comes to the potential dangers (and especially when it comes to the so-called corruption) of science, the consuming public understands more about the messiness of science than we currently give them credit. They understand how industry and governments can collude to produce bad pharmaceutical drugs; they understand how environmental toxins in everyday cleaning products may be carcinogenic; they understand that artificial intelligence may perpetuate inequality; and they understand how corporations seek to use technologies to replace human labor. This, after all, is the stuff of science fiction movies and books: the deep fear that powerful interests may produce knowledge and technologies designed to serve the elite, rather than the public.

CIVIL SOCIETY AND THE RISE OF IGNORANCE

Science and technology studies scholars can also contribute to the resistance by studying so-called post-truth movements that reject scientific evidence. As Fujimura and Holmes (2019) point out, the post-truth movement is fueled by the rise of populism, which promotes a general distrust of expertise and encourages individuals to rely on their own experiences. Although Fujimura and Holmes suggest that those inspired by populist movements are put off by scientists’ “opaque and arcane evidence,” STS scholars who study these populist movements suggest that, at least in some cases, populism may be the public’s logical reaction to the realization that corporations have an oversized influence on the oversight and production of scientific knowledge.

Jennifer Reich’s (2016) research on the rise of the antivaccination movement in the United States provides one such example. Reich’s research carefully unpacks the logic that parents (mostly mothers) use to reject or delay recommended vaccination schedules. Much of this logic *does*, as Fujimura and Holmes suggest, rely on parents’ belief that they know better than any physician what’s best for their

children. However, Reich also finds that parents' distrust of vaccines is fueled by a broader distrust of "Big Pharma." Much like any sociologist might ask, these parents want to know: who stands to benefit financially from the wide distribution of vaccinations? Parents also wonder whether federal agencies such as the Centers for Disease Control and Prevention and the Food and Drug Administration may be unduly influenced by pharmaceutical corporations.

Reich's refusal to dismiss the concerns of those she studies as irrational produces an important and actionable finding: corporate influence in federal government, in medicine, and in the oversight mechanisms designed to protect public health undermines public trust, ultimately fueling the antivaccination movement. The federal government can fix this if they choose. What else might we learn if we study "post-truth" movements without condescension?

CIVIL SOCIETY AND THE RESISTANCE TO THE PRODUCTION OF IGNORANCE

For all our worries about the spread of scientific skepticism, a number of social movements contest "undone science"—an oppressive form of ignorance created when the (typically) privileged groups who produce knowledge reproduce their cultural assumptions and material interests (Frickel et al. 2010; Hess 2009). Case studies have investigated a wide range of social movements that identify and mobilize against undone science, including movements focused on, for example, uncovering the health effects of environmental racism (Brown et al. 2004), identifying geographic gaps in water quality monitoring (Kinchy, Parks, and Jalbert 2016), and cataloging consumers' concerns about the safety of drugs (Barker 2019; Langlitz 2009).

Some of these movements are even powerful enough to resist explicit forms of suppression. Determined patient movements appear to be especially willing to push back against legislative rules that they believe obstruct their ability to find effective treatments. Take, for example, those with HIV who organized illegal exchanges for the trade of pharmaceuticals in their bid to survive (Barbot 2006; Epstein 1996) or, more recently, parents of children with treatment-resistant epilepsy who developed techniques for dosing their children with cannabinoid oil (Sobo 2017). My own research follows people who have cluster headache, an excruciating neurological disease, as they develop protocols for growing and using psilocybin-containing "magic" mushrooms as medicine (Kempner and Bailey 2019). The next iteration of this research may uncover how these underground movements have contributed to the current wave of drug liberalization laws sweeping the nation. In doing so, STS scholars can push forward our collective understanding of how social movements can continue to resist ignorance in the twenty-first century.

CONCLUSION

Fujimura and Holmes (2019) argue that STS scholarship is useful despite concerns that STS scholars might contribute to the current epistemological crisis in the

United States. I hope to see the end of this sort of defensive posturing. STS scholars are not responsible for the political problems in this country. However, we can conduct research that identifies how political and economic elites produce, manufacture, and sustain ignorance. Moreover, we can contribute directly to the resistance by treating the study of ignorance as a liberatory epistemology.

REFERENCES

- Barbot, Janine. 2006. "How to Build an 'Active' Patient? The Work of AIDS Associations in France." *Social Science & Medicine* 62: 3: 538–551. <https://doi.org/10.1016/j.socscimed.2005.06.025>.
- Barker, Kristin. 2019. "Lay Pharmacovigilance and the Dramatization of Risk: Fluoroquinolone Harm on YouTube." *Journal of Health & Social Behavior*, forthcoming.
- Binder, Amy. 2002. *Contentious Curricula: Afrocentrism and Creationism in American Public Schools*. Princeton, NJ: Princeton University Press.
- Brown, Phil, Stephen Zavestoski, Sabrina McCormick, Brian Mayer, Rachel Morello-Frosch, and Rebecca Gasior Altman. 2004. "Embodied Health Movements: New Approaches to Social Movements in Health." *Sociology of Health & Illness* 26: 1: 50–80. <https://doi.org/10.1111/j.1467-9566.2004.00378.x>.
- Epstein, Steven. 1996. *Impure Science: AIDS, Activism, and the Politics of Knowledge*. Berkeley: University of California Press.
- Fassin, Didier. 2017. "The Endurance of Critique." *Anthropological Theory* 17: 1: 4–29. <https://doi.org/10.1177/1463499616688157>.
- Frickel, Scott, Sahra Gibbon, Jeff Howard, Joanna Kempner, Gwen Ottinger, and David J. Hess. 2010. "Undone Science: Charting Social Movement and Civil Society Challenges to Research Agenda Setting." *Science, Technology & Human Values* 35: 4: 444–473. <https://doi.org/10.1177/0162243909345836>.
- Fujimura, Joan H. and Christopher J. Holmes. 2019. "Staying the Course: On the Value of Social Studies of Science in Resistance to the 'Post-Truth' Movement." *Sociological Forum* 34: SI: 1251–1263. <https://doi.org/10.1111/soef.12545>.
- Hess, David J. 2009. "The Potentials and Limitations of Civil Society Research: Getting Undone Science Done." *Sociological Inquiry* 79: 3: 306–327. <https://doi.org/10.1111/j.1475-682X.2009.00292.x>.
- Kempner, Joanna and John Bailey. 2019. "Collective Self-Experimentation in Patient-Led Research: How Online Health Communities Foster Innovation." *Social Science & Medicine* 238: 112366. <https://doi.org/10.1016/j.socscimed.2019.112366>.
- Kinchy, Abby, Sarah Parks, and Kirk Jalbert. 2016. "Fractured Knowledge: Mapping the Gaps in Public and Private Water Monitoring Efforts in Areas Affected by Shale Gas Development." *Environment and Planning C: Government and Policy* 34: 5: 879–899. <https://doi.org/10.1177/0263774X15614684>.
- Langlitz, Nicolas. 2009. "Pharmacovigilance and Post-Black Market Surveillance." *Social Studies of Science* 39: 3: 395–420. <https://doi.org/10.1177/0306312708101977>.
- Latour, Bruno. 2004. "Why Has Critique Run Out of Steam? From Matters of Fact to Matters of Concern." *Critical Inquiry* 30: 2: 225–248. <https://doi.org/10.1086/421123>.
- Mills, Charles. 2007. "White Ignorance." In Shannon Sullivan and Nancy Tuana (eds.), *Race and Epistemologies of Ignorance*: 11–38. Albany: State University of New York Press.
- National Institutes of Health (NIH). 2019. "NIH Funds \$945 Million in Research to Tackle the National Opioid Crisis Through NIH HEAL Initiative." National Institutes of Health, September 26, 2019 (<https://www.nih.gov/news-events/news-releases/nih-funds-945-million-research-tackle-national-opioid-crisis-through-nih-heal-initiative>).
- Nutt, David J., Leslie A. King, and David E. Nichols. 2013. "Effects of Schedule I Drug Laws on Neuroscience Research and Treatment Innovation." *Nature Reviews Neuroscience* 14: 8: 577–585. <https://doi.org/10.1038/nrn3530>.
- Oreskes, Naomi and Erik Conway. 2010. *Merchants of Doubt: How a Handful of Scientists Obscured the Truth on Issues From Tobacco Smoke to Global Warming*. New York: Bloomsbury.
- Proctor, Robert N. 1995. *The Cancer Wars: How Politics Shapes What We Know and Don't Know About Cancer*. New York: Basic Books.
- Proctor, Robert N. and Londa L. Schiebinger. 2008. *Agnology: The Making and Unmaking of Ignorance*. Palo Alto, CA: Stanford University Press.

- Reich, Jennifer A. 2016. *Calling the Shots: Why Parents Reject Vaccines*. New York: New York University Press.
- Sismondo, Sergio. 2017. "Post-Truth?" *Social Studies of Science* 47: 1: 3–6. <https://doi.org/10.1177/0306312717692076>.
- Smithson, Michael. 1989. *Ignorance and Uncertainty: Emerging Paradigms*. New York: Springer.
- Sobo, Elisa J. 2017. "Parent Use of Cannabis for Intractable Pediatric Epilepsy: Everyday Empiricism and the Boundaries of Scientific Medicine." *Social Science & Medicine* 190: 190–198. <https://doi.org/10.1016/j.socscimed.2017.08.003>.
- Tuana, Nancy and Shannon Sullivan. 2006. "Introduction: Feminist Epistemologies of Ignorance." *Hypatia* 21: 3: vii–ix. <https://doi.org/10.1111/j.1527-2001.2006.tb01110.x>.