

Commentary

A Primer on How Artificial Intelligence Algorithms Control You

Russell Fulmer¹

Artificial intelligence (AI) algorithms can control you by exerting heavy influence on your worldview. Your worldview is akin to your personal philosophy, which affects how you perceive and label social systems and structures, groups of people, and politics. Algorithms impact your decision-making, beliefs, mood, relationships, and more. My rhetoric is intentionally strong when discussing algorithms, and I invite you to assess its merit by reviewing related literature and thinking critically.

Through this commentary, I will explain the nature of algorithms and illustrate a main method by which they influence, if not control, significant aspects of your life. Algorithms use *restriction* as a tactic, delivering content based on your preferences and thereby confining and molding your worldview, either inadvertently or deliberately. To the extent that the “worldview shaping” is done deliberately, big tech companies, as the creators of algorithms, are subtly manipulating your life. The catch is that many individuals remain oblivious to the substantial influence of AI and big tech-driven algorithms on their lives.

Counselor educators are known for discussing power dynamics. In a previous commentary, I recommended that counselor educators also learn about and teach AI (Fulmer, 2023). If we couple the two, power dynamics and AI, we get a discussion of algorithms. I suggest that this topic is underrated and under addressed in classrooms.

The Nature of Algorithms

An algorithm is “a sequence of instructions telling a computer what to do” (Domingos, 2015, p. 1). AI often uses algorithms. Algorithms recommend content to you online and sort through myriad information to make computer processes more efficient. Examined independently as a construct, an algorithm is like potential energy, neither inherently good or bad, just waiting to act. Examined in practice – the kinetic energy side of the analogy – algorithms are part of a large and complex informational system, where those in power can use them to persuade, promote specific viewpoints, spread misinformation, and manipulate. Algorithms can be useful, especially from an efficiency perspective, and promote good (beneficence). This commentary is not anti-AI. Personally, I am an AI optimist. Yet, balancing optimism with an acknowledgment of potential pitfalls is important because AI’s imperfections mean that hazards exist. At its best, AI is an unprecedented problem-solver. At its worst, AI is an existential threat. Somewhere in between, yet over on the negative side, are the AI algorithms that can harm you.

The Cognitive Anaconda

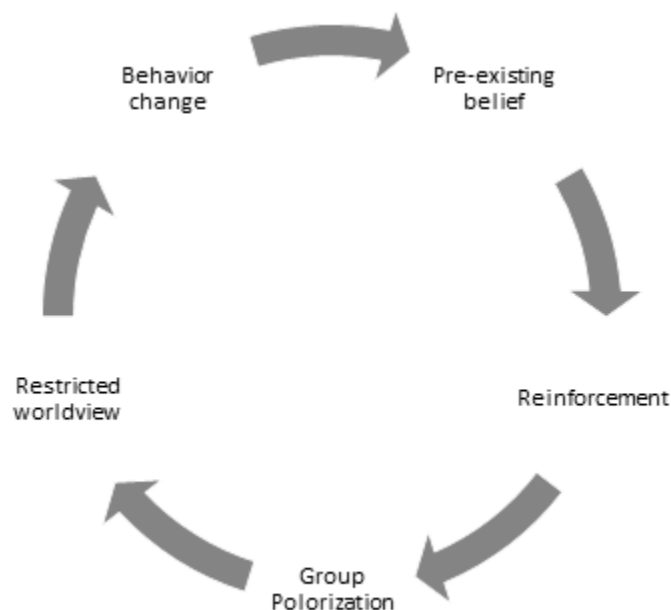
Algorithms provide you with increasing amounts of information that reinforce your existing beliefs (Pariser, 2011). Pariser calls this a filter bubble. Informally, we can say that you are in an echo chamber. Supplying you with a never-ending stream of information, the algorithm reinforces and “confirms” what you already

¹ Husson University

believe. Algorithms nudge you further into more rigid and extreme forms of those beliefs, thereby contributing to confirmation bias. As illustrated by Figure 1, *worldview restriction* ultimately leads to behavior change. A person starts with an interest, curiosity, or maintains a pre-existing belief. Material suggested by algorithms serve to reinforce that belief, or give it a partisan nudge, as previously mentioned. Discussing the belief with like-minded people often leads to group polarization, where members gravitate towards more extreme versions of their shared beliefs. In time, the person is insulated and caught in a feedback loop. The algorithm is now akin to a cognitive anaconda, squeezing out diverse viewpoints from the belief system.

Figure 1

How Algorithms Restrict Worldviews



Remedies

Resisting the pull of algorithmic currents is difficult. Here are five suggestions and steps that counselor educators can take to help reduce bias and unwanted influence from AI algorithms.

1. *Awareness.* Understand the nature, commonality, and power of algorithms. Maintain a waking consciousness when online rather than operating robotically. Awareness ties in neatly to critical thinking.
2. *Critical thinking.* Consider how newsfeeds influence beliefs. Whatever you believe, it is likely that you did not formulate the belief independently. Rather, you drew from others. In other words, the beliefs of other people contributed to the formation of your own beliefs. A critical thinker asks the questions: Who contributed to my beliefs? What is their agenda? Is the belief valid and if so, for whom, and in what circumstances, and how? Would I have formed this conclusion on my

own without their influence? A critical thinker also actively seeks out information contrary to their own notions, thereby adapting a scientific mindset.

3. *Critical ignoring*. Critical ignoring has been suggested as a competency of digital citizenship (Kozyreva, 2023). Critical ignoring is choosing where to direct your attention and where not to direct your attention. Kozyreva and team (2023) suggest that critical ignoring requires a paradigm shift in education, from an emphasis on focus and concentration to abstaining from engagement altogether. In an information age that assails people with data, critical ignoring is a crucial component of dealing with powerful algorithms.
4. *Associate with people with diverse perspectives*. Social learning and operant conditioning suggest that we are primed to learn from our “ingroup” and that their rhetoric reinforces our desire for further affiliation with them. In less technical terms, while there are advantages to finding your “peeps” or “my people,” there are potential drawbacks from associating exclusively with them. Why? Because, respectively, your people likely think similarly. They probably share a similar worldview. A good test to see if you are in this trap, presently, is if you support Joe Biden for president, then identify the number of people in your circle who support Donald Trump, Robert F. Kennedy, Jr., or anyone on the right side of the political spectrum. Trump supporters can ask themselves how many people they frequently associate with that support Biden. Additionally, whatever your politics, ask yourself how often you seek out news from sources that do not align with your viewpoint.
5. *Read books*. Real ones. Made out of paper. They remain available for free in public libraries. The author of the book may indeed have an agenda, but no algorithms lurk behind the scenes in books made of paper. Reading books is a good way to limit your screen time.

References

Dezfouli, A., Nock, R., & Dayan, P. (2020). Adversarial vulnerabilities of human decision-making. *Proceedings of the National Academy of Sciences*, *117*(46), 29221-29228.

Domingos, P. (2015). *The master algorithm: How the quest for the ultimate learning machine will remake our world*. New York, NY: Basic Books.

Fulmer, R. (2023). Counseling and Artificial Intelligence: Forging a Path Forward (Commentary). *Journal of Technology in Counselor Education and Supervision*, *4*(1), 2.

Kozyreva, A., Wineburg, S., Lewandowsky, S., & Hertwig, R. (2023). Critical Ignoring as a Core Competence for Digital Citizens. *Current directions in psychological science*, *32*(1), 81–88. <https://doi.org/10.1177/09637214221121570>

Pariser, E. (2011). *The filter bubble: What the Internet is hiding from you*. Penguin UK.