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BOOK REVIEW

The Filter Bubble: What the Internet is Hiding From You

Eli Pariser
(The Penguin Press, 294 pp., $25.95)

By Julie Allen

In *The Filter Bubble*, Eli Pariser looks behind the veil of modern search technologies and communications to reveal the algorithms responsible for shaping our perception of the world. These masterful filters have a profound impact on the way people learn, explore, and discover the environment around them. In his book, Pariser structures his arguments in seven sections wherein he explains the current technology landscape, identifies the major players, and suggests ways for consumers, companies, and governments to become informed, active, and protected participants in the new technology age.

Pariser begins with describing what he calls the "Race for Relevance" (Pariser 2011, 21) in which companies are clamoring to develop the newest and best-personalized filters that go far beyond sponsored search results that filter to the top. He explains that each click of the mouse sends "click signals" that signal to companies what is of interest to an individual. Pariser provides an example of searching the term "sox" could return "Sarbanes Oxley" for a Wall Street type and baseball results for another (Pariser 2011, 35). Companies are able to track individual preferences, even knowing how long someone waits to continue browsing after the initial click. Right now, these highly specialized homepages are expensive to implement but as with all technology innovations, will drop in price once there is sufficient demand.

Pariser explains the ability to collect a vast amount and variety of information at the individual level has led to an entirely new field called the "Data Market" (Pariser 2011, 42). He profiles companies like Acxiom and TARGUSinfo, whose business is to sell people's personal data to help companies create targeted advertising and drive-up profits. Acxiom knows about 96 percent of American households and collects over 1,500 different data points like the names of family members, addresses, prescriptions, and even whether an individual is right or left-handed. Yet, a company this knowledgeable about personal information is far from widely known.

In the second chapter, Pariser explores the changing media landscape and cites the rise of "disintermediation – the elimination of middlemen" (Pariser 2011, 59).He presents the argument that with the salience of the Internet, people no longer have to rely on the Washington Post to interpret a press briefing, but rather, people can read the transcript and decide for themselves. He explains that because news homepages are driven by audience responsiveness from click sig-

nals, which he argues can be a good thing, it can also lead to important headlines being drowned out by entertaining ones.

Pariser's discussion of the loss of serendipity in the technology age in the third chapter is perhaps the most eloquent and timely argument presented. Nicknamed "The Adderall Society," Pariser explains that people have condensed the news to a point where their perception of reality is effectually distorted and it leads to the book's namesake: A Filter Bubble. He argues that the existence of personalized filters is at odds with people's natural cognitive processes because it limits the extent to which people are exposed to contrary ideas and "removes from our environment some of the key prompts that make us want to learn "(Pariser 2011, 84).

Pariser warns of the dangers of a world that is too highly adapted to personal interests, and laments the loss of serendipity in society's narrow experiences. He explains that in "the evolutionary view of innovation, this element of random chance isn't fortuitous, it's necessary. Innovation requires serendipity"(Pariser 2011, 96). For those in the policy world, this goes beyond the problem of making a 'replicable literature review' virtually impossible. Researchers are no longer confronted with ideas that go against their existing opinions. For true innovation and learning to occur, the global community needs to be confronted with contrary and new information that challenges existing ideas.

The idea of cognitive dissonance is one that people gravitate toward ideas that confirm their beliefs, rather than contradict them (Festinger 1957). Once a person clicks on a link, they are more likely to see a similar link later, thus reinforcing their own interests. In the fourth chapter, Pariser writes, "Your identity shapes your media, and your media then shapes what you believe and what you care about. You click on a link, which signals an interest in something, which means you're more likely to see articles about that topic in the future, which in turn prime the topic for you. You become trapped in a you loop, and if your identity is misrepresented, strange patterns begin to emerge, like reverb from an amplifier" (Pariser 2011, 125).

In a world where cognitive dissonance is discouraged, if not altogether avoided, there is not much room for change, influence, or discovery. Filters cannot distinguish someone's compulsion from general interest. Suddenly, a person's world of status updates, tweets, and personalized news becomes the reality and there is no disclaimer at the top of the screen warning that there is a vast world outside of the "you loop."

The chapters five and six are the most technical in the book, but are presented to the reader in a fairly accessible way. To most people, technology is something they use, not something they have a hand in controlling, let alone influencing. The average person is not fluent in sophisticated programming languages. Pariser explains that people rely on programmers to design technology that will help them in their everyday lives, and hope to be informed of the potential dangers or risks associated with it (Pariser 2011). Additionally, he personifies Facebook anecdotally through a profile of Mark Zuckerberg and his mentor, Peter Theil, thus making the giants of the industry relatable and the description of how they fell into the "$50 Billion Sand Castle" (Pariser 2011, 180) more accessible.

Pariser's discussion of the future of technology in chapter seven, describes the rise of avatars, robots, and smart dust. This chapter is perhaps the most unnerving of the book. The chapter prophesizes a future with the lines between artificial and real intelligence are so blurred that the code may learn to ask the questions people cannot think to ask themselves. The level of privacy loss will be astounding and escapes most current comprehension. The examples range from the benign, a clothing store knows a person's favorite color and uses it to their advantage, to the less savory, a baby monitor used

as a hacking device. While many aspects of personalized technology are designed to make people's lives easier, this kind of information overload leads to bounded rationality and ultimately, the economic problem of limited information (True et al. 1999). Pariser argues that people have to remember that they live in "an equilibrium between your own desires and what the market will bear"(Pariser 2011, 215).

Just when the reader thinks all hope for future privacy, free will, and creativity is lost, Pariser's eighth and final chapter identifies the keys to adapting to the new technology and communications environment will be to accept and acknowledge the presence of opinion-shaping algorithms and targeted messages. Pariser acknowledges in the final chapter that the largest question left to our "you loop" generation will be one of privacy. Moreover, society is going to have to become informed consumers of information before they can deftly interpret it.

Pariser concludes with suggestions for companies, governments, and individuals on steps to mitigate and/or eliminate the effects of these filters and algorithms. He also suggests that engineers can design filter systems that expose people to topics outside of their bubble. He explains that the responsibility cannot entirely rest on the shoulders of the corporations, however. No one ever said it is the job of the Internet to present the world with contradictory ideas. The marketplace of ideas is complex and cannot be and should not be reduced into something as contrite as a search engine. If society leaves the job of learning and discovery to a computer program, they are giving up our own ability and responsibility to reason and discover new things.

Pariser is a poignant, intelligent writer, whose theories and arguments are clearly and fairly expressed. A simple position to take in a book like this would be to attack the data-hungry corporation as trying to prey on the naïve consumer. Pariser does a thorough job of discussing the risks and benefits both sides of the argument, and ultimately settles on the need for shared responsibility. He draws attention to an extremely important subject and makes the reader feel empowered to make their own choices and to protect their personal information. His writing style makes the technocratic subject matter accessible; it does not require advanced or detailed knowledge in computer science to understand the contents.

The Filter Bubble is, at times, scary. It is eye opening and occasionally disturbing to see in plainly written, non-technical jargon exactly what is happening behind the screen. An apt, computer-savvy consumer may still be disturbed by how little they know of the extent to which companies go to mine personal information and to present only highly-personalized content. This book is recommended for any person who uses technology to make, guide, or influence one or more decisions in a given day. Armed with the information presented in this book, readers may feel compelled to change their online behavior. At the very least, the reader will come away with a thorough understanding of the technology that pervades daily interactions and an awareness of its influence.

References

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