



a way to bolster the evidentiary paragraphs, but regardless of the final formatting the book provides an excellent resource for anyone with an interest in political systems.

It is most appropriate for an undergraduate student audience, as it does more to introduce and explain election

rigging methods to readers that are currently unfamiliar with them than it does to enlighten experts in the field. It would be most at home in academic libraries, particularly undergraduate institutions, though it would also be of use in law libraries for students with an interest in election law.

## The Internet Trap: How the Digital Economy Builds Monopolies and Undermines Democracy

Author \_ Matthew Hindman

Publisher \_ Princeton University Press, 2018. 256p. Cloth (also available as an e-book). \$29.95.

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Reviewer \_ Clem Guthro, independent librarian

Hindman, an assistant professor of media and public affairs at George Washington University, has written a fascinating book that attempts to upend the common understanding of the internet as a force that provides a level playing field and economic opportunity that is only a click away. In eight chapters, using data-driven research, he shows how very large companies have captured the attention economy, and the danger this poses to news organizations, a key component of our democratic life and values. His book joins several other recent volumes that attempt to show the ways that the attention economy is shaping our lives and work. These include C. C. Bueno, *The Attention Economy: Labour, Time and Power in Cognitive Capitalism*, 2016; J. G. Webster, *The Marketplace of Attention: How Audiences Take Shape in a Digital Age*, 2016; J. Williams, *Stand out of our Light: Freedom and Resistance in the Attention Economy Paperback*, 2018, and T. Wu, *The Attention Merchants: The Epic Scramble to Get Inside Our Heads*, 2016.

Google was one of the first companies to systematically conduct research on user behavior, discovering that small changes resulted in compound instead of incremental changes.

Compound attention on any site is referred to as “stickiness” and Google’s research discovered ways to increase stickiness, including increased load speed and offering ancillary services such as email, video, maps, mobile, and office software. Site stickiness created by Google, Facebook, Microsoft, and Yahoo allowed them to capture one-third of all web traffic, and Google and Facebook to capture almost 75 percent of digital advertising revenue in the United States.

Hindman argues that “the digital attention economy increasingly shapes public life, including what content is produced, where audiences go, and ultimately which news and democratic information citizens see” (p. 5). He

attempts to define a new model of audience attention: one that explains the reality of what is happening and dispels the myth that the internet disperses attention and allows small and local sites to flourish.

The playing field is not level in today’s network economy. Hindman correctly argues that mega companies’ investments in technical infrastructure translate into sites and services with increased efficiency, stickiness, revenue, and dominance in the marketplace. Google, with its blazingly fast architecture, uses load speed as a factor in ranking search results, which favors large organizations that can invest heavily in technology. The unevenness of the playing field further advantages large firms because of their ability to conduct experiments on site usage and layout and leverage what they learn to make their sites stickier. Big brand recognition (e.g., *New York Times*) as well as easy to use sites, usually designed and improved through large scale testing, also favors large sites. Brand loyalty and proficiency of use capture users’ attention and makes it hard to switch users to new sites. Hindman argues that this unevenness counters the popular mythology of an internet that is frictionless commerce and a level playing field.

Personalization and recommender systems dominate the internet. Using the Netflix prize, a competition to improve its recommender system, as an example, Hindman shows that, at scale, recommender algorithms often outperform humans. Recommender systems and learning algorithms built and employed by large sites (Google, Facebook, Amazon) are beginning to replace editorial judgment and journalistic and information norms. Hindman rightly worries about the profound effect this has on what content we see and even which sites are presented first in a search. Recommender systems are one of the powerful tools that help grow audiences and give large



firms a competitive advantage. Recommender systems, based on large scale data collected from users, also allows these same large firms to target advertising in sophisticated ways in which smaller firms or startups cannot. Large firms use these recommender systems to dramatically increase their audience and promote lock-in to keep their audience coming back.

Hindman explores online content production, showing that content bundling and aggregation dominate large companies and sites. Bundling is a key strategy of content producers to help concentrate audience attention and build increased revenue. Hindman's model provides insights that are contrary to popular views, namely that digital media concentrate influence as well as jobs geographically rather than dispersing them, and small niche sites, especially local news sites, have an uphill battle compared to Google news. Because search engines are so large and powerful, they can push traffic to small niche producers but also can circumvent the small producers by hosting the content themselves and concentrating more power and influence.

Hindman sets out a power model for the dynamics of web traffic that overturns the common understanding that the internet promotes a natural tendency to dispersion and decentralization. He makes one of the first large scale studies of audience churn, using Hitwise data for the top three hundred sites for every day between July 1, 2005, and June 30, 2008. Hindman bases the model on stochastic dynamical systems (SDS), a statistical model which Hindman explains in great detail, and while helpful for the expert, it is easy for others to get lost in the statistical detail. He also does not indicate his reasons for the choice of very old data that does not include data on mobile or app use of news sites. His study showed traffic for large sites is more stable than for small sites, noting that traffic for the top ten sites is very stable, and sites below the top twenty-five are subject to greater audience churn and are constantly changing their position in rank. Hindman notes that this strong stability of larger sites speaks against the conventional notion that real competition and massive growth is only a click away for any new site.

Hindman switches his focus to online news, especially web-based local news, without specific comment as to why he chose online news as an example. He conducts a study using ComScore data from February, March, and April 2010 and covered the one hundred largest US broadcast market areas. It is unclear why he used such dated data—especially when it did not include mobile data. It would be helpful to see results from current data,

including app-based access to news sites. Based on his work on web traffic, it is not surprising that this data shows how small the monthly audience is for local news. Hindman notes that the FCC rollback of net neutrality further complicates online news because the rollback supports cross-media ownership, which further limits the number of independent local news outlets. The overall argument that the internet has expanded the number and amount of local news coverage does not find support in the data.

Hindman believes most news leaders misunderstand the nature of web-based audiences. He thinks it is clear from the data that the large audience for local news that news leaders talk about is a fantasy. If digital news is going to survive and thrive, news leaders need a basic understanding of how digital audience is compounded and what strategies make sites sticky. Because news sites get only three percent of web traffic and most of that goes to national news sites, he believes that local news needs to abandon false strategies like paywalls or the shift to video journalism. Hindman insists they focus on strategies that will actually build their audience and that increase stickiness: load speed, effective site design and layout, personal content recommendation, and creating more compelling digital content that is constantly updated.

Other strategies include a stream of short news pieces, headline testing, optimizing for social media, and more multimedia content. Hindman correctly notes that news organizations need new and different types of employees and outsourced services, and this takes strategic spending and not seeing digital media as an afterthought.

Hindman concludes with a chapter that is a mix of caution and optimism. He rightly recognizes the mythology that imagines the internet is a leveling force which invites even the smallest business to succeed and grow with no apparent barriers. He shows that the real internet favors the large and disadvantages the small. This is particularly telling and problematic for news organizations because of the reality of the small size of the news audience. Because the internet functions as an “attention economy” and there is such strong gravitational pull towards giants such as Google and Facebook, it will be necessary for small publishers to build an audience with the help of big digital firms.

Hindman's book is a significant addition to our understanding of the contemporary internet and how digital audiences are built and grown. He successfully casts doubt on the naïve view of the internet of the past, a leveling



force that democratizes access for all, and shows the large players like Google, Facebook, Amazon, and Yahoo for what they are—attention engines that dominate the internet. He rightly raises the issue regarding the scope of data collected by large firms. He sees privacy and security issues and the potential for government abuse or for non-state actors to steal and use the data to influence public discourse and spread fake news.

Despite these challenges Hindman still holds out some hope for local news sites, provided they pay attention to building and keeping a digital audience and making their sites sticky.

This book is appropriate for the general public, technologists, news professionals, political scientists, librarians, and others concerned with the nature of the internet and the effect it has on audience generation, distribution, and the news.

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