

ShinJoung Yeo, **Behind the Search Box: Google and the Global Internet Industry**, Champaign: University of Illinois Press, 2023, 299 pp., \$28.00 (paperback).

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In *Behind the Search Box: Google and the Global Internet Industry*, ShinJoung Yeo discusses how large corporations have commodified and subordinated information-seeking activity, an essential aspect of our lives. In this book, Yeo masterfully maps out the geopolitical market of search engines to educate readers about the social and economic structures of capitalism that power the simple search bar. The book does not just focus on Google; it places the search industry giant among the four other players in the global Internet industry: Facebook (now under Meta), Microsoft, Apple, and Amazon.

ShinJoung Yeo, an assistant professor of political economy of information and communications at the City University of New York, focuses on the history of the Internet, media, capitalism, geopolitics, and social movements networked through infrastructures and cultural and information provision. In this book, the author draws from the critical tradition of the political economy of communication to address the unequal structures of global capitalism, including exploitation, injustice, inequality, and the role of states, technology, labor, and culture in reproducing capitalist social relations.

Information cannot be separated from other geopolitical-economic conflicts on natural resources either. This book comes at an important time, as U.S. legislation could restrict products being mined in Congo (“US Measure,” 2023) due to precarious human rights violations (Calvão, McDonald, & Bolay, 2021). However, even the courts side with the technology giants (Stempel, 2024). Congo is currently an important location, as many important minerals (conflict minerals) are crucial in developing digital technology products. The political economy of natural resources is just as connected to the rise of big tech and even the green economy and needs to be considered in the big picture (Veltmeyer, 2013). The political economy of cobalt mining has been covered by Sovacool (2019) elsewhere. The book failed to touch on the role of conflict materials in the growth of digital technology (Diemer, Perkins, & Gros, 2022; Kang, Milko, & Hinnant, 2022).

However, the book did effectively accomplish its main objectives by unveiling how Google became the dominant search engine. Capitalist expansion drives the commodification of the Internet sector, transforming values and needs. Products are no longer valued based on their ability to meet individual and social needs but on their ability to bring profit in the marketplace. In this environment, everything is subject to commodification.

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This is where the public-private partnership promoted by the state and lobby efforts by the Internet giants played an important role, leading to wealth accumulation for the rich. Google also started in the public sector, funded by public tax dollars from the National Science Foundation in public institutions. However, federal granting authorities and academic institutions handed it over to the private sector. This drove the commercialization and privatization of scientific research and the Internet, which became deeply embedded in the first dot-com boom.

Yeo explores how the search engine was monetized through advertising and infrastructure investments. Initially, Google did not consider adopting an ad-based model; however, when the dot-com bubble burst and funds became scarce, they began considering this option. Over time, they implemented banner and text-based ads, relevant ad placements, and user-tracking mechanisms, with profitability becoming a key focus.

Google is expanding its search business by controlling Internet gateways, data accumulation, cloud computing, and investing in submarine and optic cables and data centers. Submarine cable maps can be viewed at <https://www.submarinecablemap.com/>. But they are not alone, as these cables require large-scale investments. The book details how large corporations such as Google, Apple, Facebook, Microsoft, and Amazon compete for capital by expanding into each other's territories through mobile advertising, building global data centers, controlling and interconnecting them with submarine cables and dark fiber.

Additionally, these corporations are competing for government cloud contracts. This competition is not just coming from within the United States. Yeo also places search in the global geopolitical economy by highlighting China's strategic development of a domestic Internet market and the European Union's antitrust cases against U.S. tech companies, challenging the United States' dominance in constructing global information systems. Baidu's (a Chinese search engine) emergence further disrupts the balance of power for Google. As China's Internet industry relies on foreign investment, the government maintains a cautious approach regarding its role in the global capitalist economy. Microsoft Bing continues to operate in China, while Google, Twitter, and Facebook are blocked.

Another important but often forgotten aspect is the labor behind the search engines. The contribution of human labor has not disappeared in digital technology. Instead, it has intensified and transformed. The industry relies on precarious working conditions and unpaid labor to generate profits to maintain a viable pool of Reserve Army of Labor from which they draw. In addition, lobbying for immigration bills allows them to access cheap foreign labor from other countries, such as India.

Yeo illustrates how the workforce is divided in the tech industry, with the top of the pyramid consisting of skilled IT workers from elite academic institutions and the bottom of the pyramid consisting of temporary workers, vendors, contract workers, paid users, and consumers. Big companies like Google hire more temporary workers and vendors to save labor costs, which is where most employment growth occurred. Unpaid labor is also used through deskilling and automation, which enables and expands capital profits for companies.

Her analysis extends to Google's participatory labor management, which is rooted in traditional labor control tactics such as data-driven policies for surveilling their employees, welfare capitalism, and union busting. In recent events, Google laid off workers who had been attempting to unionize under the Alphabet Workers Union ("Google Lays Off," 2024; Wiessner, 2024).

As investment in artificial intelligence (AI) technology grows, there is competition among companies to be the first to achieve significant advancements. Recently, Elon Musk, the owner of Tesla and SpaceX, filed a lawsuit against OpenAI for allegedly abandoning its original mission to benefit humanity in pursuit of profit (Chan, Beaty, & O'Brian, 2024; Nidumolu, Soni, & Dang, 2024). However, it has been speculated that the real reason behind the conflict between Musk and OpenAI CEO Sam Altman may have been the latter's decision to sell the company to Microsoft instead of Musk. Tech giants hide behind goodwill public relations gimmicks such as Google's mission "to organize the world's information and make it universally accessible and useful." After this book was published, a Google employee who protested the use of Project Nimbus, "that powers genocide," was fired, and it was not the first time Google employees protested the use of Google in military contracts (Elias, 2024). However, Big Tech's primary objective is to make a profit, and this goal often conflicts with their proclaimed values.

This book analyzes how Google became dominant in the information-seeking industry through commodification and dispossession. The author suggests learning from this history and working toward decommodifying and reorganizing it as a public good. Yeo encourages that the way forward is collective action by working-class people to resist capitalism in local, national, and international arenas.

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