ness of his creation, and eschatology. (In fact, the author notes the affinity between the transhumanist aversion to the physical body and the ancient heresy of Gnosticism.) However, many of transhumanism's underlying ideas are part of the mental undercurrents of our time, such as the way we speak of ourselves in information-processing terms (for example, "I can't compute this"). Transhumanists take this perception of humanity to its limit. At the end of the book, the author sums up his experience this way: "I am not now, nor have I ever been, a transhumanist. I am certain I would not want to live in their future. But I am not always certain I don't live in their present" (p. 234).

Moreover, as the author notes throughout the book, the concerns that drive transhumanism (e.g., the reality of death) are similar to those addressed by religion and have a broad influence in society. For example, he notes that "Life extension (is) a long-term preoccupation for Google's founders Larry Page and Sergey Brin (and has) gradually become a part of the company's 'moonshot' culture" (p. 186). Additionally, Google's Vice President for Engineering, Ray Kurzweil, is the leading proponent of an upcoming technological Singularity. It is easy for Christians to forget the existential relevance of the fact that Christ has delivered "all those who through fear of death were subject to lifelong slavery" (Heb. 2:15 ESV).

This book was well written and enjoyable to read. It can serve as a helpful introduction to the subject for those desiring to know more about it.

Reviewed by Russell C. Bjork, Professor of Computer Science, Gordon College, Wenham, MA 01984.

ALGORITHMS OF OPPRESSION: How Search Engines Reinforce Racism by Safiya Umoja Noble. New York: New York University Press, 2018. 256 pages. Paperback; $28.00. ISBN: 9781479837243.

Algorithms of Oppression is author Safiya Umoja Noble's polemic against the international search company, Google. Subtitled "How Search Engines Reinforce Racism," her book seeks to enlighten the reader on the impact that search results have upon the world, and how these search results commonly skew toward negative racial and social stereotypes. Her contention is that Google could change its algorithm to balance the results but refuses to do so, a contention which this reviewer questions.

The book of 186 pages, plus introduction and thirty-one pages of references, is divided into six chapters: (1) A Society, Searching; (2) Search for Black Girls; (3) Search for People and Communities; (4) Search

for Protections from Search Engines; (5) The Future of Knowledge in the Public; and (5) The Future of Information Culture. It ends with a concluding chapter: (6) Algorithms of Oppression.

The author's points are as follows: First, the world relies on Google search results to gather, collate, filter, and deliver information, and the top 10 or 20 results are of utmost importance. Second, in the search space, Google is essentially a monopoly. Third, Google is not a public resource, but a company whose goal is to make money for its stockholders, not to deliver unbiased results. Fourth, Google's results are biased, although how their search algorithm works is private intellectual property. Fifth, the effects of biased results are far-reaching and destructive. Finally, Google could remove this bias from its algorithm but refuses, claiming that it is unable to do so.

Points 1, 2, and 3 are incontrovertible, and well supported by the author's references, anecdotes, and arguments. Points 4, 5, and 6 are not as well supported, yet they are the crux of the author's argument. The author certainly demonstrates that at the time of her writing, certain searches, for example, "black girls," provided top results that were primarily links to websites that were pornographic or hypersexualized advertising. Similar results are seen for "latina girls," "asian girls," and "hispanic girls." However, a search for "white girls," while producing some top-10 results that refer to pornographic sites, provided a much more balanced result.

The author produces a few examples of how Google seems to have "fixed" search results when some searches produced clearly racist results. One example is how Google responded to French and German laws stating that it is illegal to advertise or sell materials that deny the existence of the holocaust. When these governments informed Google that its search results provided links to such sites, Google responded by filtering the results to comply with the laws.

The author's contention from this example is that Google can alter its algorithm to produce unbiased results for *any* kind of search that may produce racist results. Google claims that its results are based on the well-known and well-published PageRank algorithm, and simply reflect what the public is searching for, what websites exist, and how they link to each other.

The book includes little proof that Google deliberately biases its results or can manipulate the results of any and all search queries that might produce socially and/or racially biased results. The author infers from news articles, interviews, research, and

Book Reviews

anecdotes that the results could be manipulated to prevent the biases, but she has no proof, yet this is the raison d'être for the book.

Algorithms of Oppression is a difficult read. The book is full of long, convoluted sentences, and often reads like a PhD dissertation (and a cursory inspection online of the author's PhD dissertation seems to indicate that most of the thoughts, if not the actual text, are borrowed from her dissertation). For example, one part of a paragraph reads as follows:

> In this effort to try and make sense of how to think through the complexities of race and gender in the US, I resist the notion of essentializing the racial and gender binaries; however, I do acknowledge that the discursive existence of these categories, "Black" and "women/girls," is shaped in part by power relations in the United States that tend to essentialize and reify such categories. (p. 70)

Finally, the book, being essentially a polemic against Google, offers little in the way of solutions to the problem. We could protest against Google, and this might have an impact. Or we could take our business elsewhere. But, there are few alternative search engines to use that have the scope and depth of Google search. The author does highlight a few search engines designed to collect and curate references to more balanced and positive websites regarding African-American culture and racial issues. Yet, these search engines have little impact on the greater general public.

This book does offer important lessons: be cognizant of the issues, skeptical of search results, and thoughtful about the impact of search results. These are important lessons for users, including Christians, to remember. Google search is value-laden and Google is essentially a monopoly. Google generates revenue by promoting some companies' websites over others. Google's algorithm naturally promotes websites cross-referenced by other websites, and not all races, cultures, and subcultures are equally represented online.

As Christians, we should be informed about the factors that influence search results. Question what you find. Practice going deep into the results. Do not simply accept what you find in the first or second page. Scan lower-ordered results for alternative opinions and voices. Thoughtfully consider the impact the results may have on your decision making. Simply following the top results may lead you to have an incomplete understanding of important issues.

Reviewed by Victor T. Norman, Associate Professor of Computer Science, Calvin College, Grand Rapids, MI 49546.

✝ THEOLOGY

EVOLUTION AND THE FALL by William T. Cavanaugh and James K. A. Smith, eds. Grand Rapids, MI: Eerdmans, 2017. xxix + 231 pages. Paperback; $26.00. ISBN: 9780802873798.

Books on the historical Adam and the Fall (into original sin) are multiplying in the current decade, particularly when considered against the backdrop of the ongoing dialogue of theology with the natural sciences. This book was sponsored by the Colossian Forum, an organization devoted to developing resources for churches to navigate cultural conflicts, funded by a grant from the John Templeton Foundation and mediated through the BioLogos Foundation's Evolution and Christian Faith project. As such, the ten chapters gathered together in this volume developed from a three-year initiative that took up the following question:

> If humanity emerged from nonhuman primates (as genetic, biological, and archaeological evidence seems to suggest), then what are the implications for Christian theology's traditional account of origins, including both the origin of humanity and the origin of sin? (p. viii)

The cumulative results are distinctive along the following lines when compared to the extant literature at this interdisciplinary intersection.

First, the conversation is ecumenically broad. The lead editors are a Roman Catholic systematician (Cavanaugh) and a Reformed charismatic and continental philosopher cum public intellectual (Smith), and contributors derive from confessions across the spectrum of Catholic-Anglican on the episcopal side to Wesleyan-Methodist on the more free church side, with others staked out all along the way in between. Although the various confessional identities are not conspicuous in every chapter, they are surely not absent, and, in a few cases, these are overtly factored into the analysis. The point is that the ecclesial dimensions of the discussion are neither muted nor marginalized, and when they are foregrounded, they provide windows into how to navigate the challenging questions at this interface in ways that involve, invite, and engage the richness and thickness of the church and its affirmations and even practices (see below) with the conversation.

Second, given the commitments of the BioLogos Foundation to foster Christian discussion about and openness to evolutionary understandings of the world and humanity's place in it, readers ought not to be surprised if the general scientific consensus struc-