Redeeming AI: A Response to "After the Fall: Scriptural Implications for Artificial Intelligence Innovation"

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Cora Barnhart and Leslie Turner's article, "After the Fall: Scriptural Implications for Artificial Intelligence Innovation," is a timely and insightful piece on the Christian response to the growing penetration of artificial intelligence systems across industries. The article opens by defining relevant terms and reviewing some of the literature raising alarms about the implications of the future of AI. It identifies the four AI-related concerns upon which the authors focus: developing the skills and knowledge needed to apply AI ethically, utilizing AI in a way that does not involve deception, avoiding the bias inherent in some AI systems, and providing a positive influence on the regulation of AI use in professional disciplines (Barnhart & Turner, 2024, p. 7). The article then applies lessons from the Genesis 3 narrative of the Fall of mankind for Christian professionals seeking to navigate the challenges posed by AI as it transforms markets and the workplace. It concludes with some wellfocused admonitions to Christian professionals, advising that they should stay educated about AI developments and applications, adopt AI systems judiciously in their own areas of control, and participate actively in the creation of regulatory schemes designed to mitigate the risks of AI (Barnhart & Turner, 2024, pp. 14-15).

The cautionary approach of the article is timely because the rapid growth of artificial intelligence systems across the economy is concerning. In November 2022, OpenAI launched its ChatGPT version 3.5 for research preview (Hines, 2023). On February 1, 2023, Reuters reported that the system had already gained 100 million users (Hu, 2023). In June 2023, Bloomberg Intelligence issued a report forecasting that generative AI would experience a compound annual growth rate of 42% over the next ten years, becoming a \$1.3-trillion market by 2032 (Bloomberg, 2023). Global accounting giant, KPMG, conducted a study that found 83% of firms it surveyed already use AI for financial planning and modeling (KPMG, 2024).

This kind of market acceptance is fueled by perceived economic value. AI systems have the potential to leverage human effort, dramatically saving both time and money for its users. Some of the systems also have the capacity to perform more accurately than the people currently doing those tasks because of the amount of data they can consider and process in a single decision. AI systems have already proven superior to human beings in diagnosing certain kinds of cancer (Powell, 2020), performing financial analysis (Chussler, 2024), and forecasting the weather (and doing it in seconds rather than the hours required by conventional means) (Heikkila, 2023).

The economic value of these systems can discourage professionals from identifying and controlling the risks they might throw off. Barnhart and Turner (2024) chose to focus on some important risks, like bias and deception, but they could have applied their biblical analysis to several others. Generative AI, in particular, relies on large data sets to train its responses, but those data sets sometimes include large numbers of written and graphic works that constitute intellectual property. In December 2023, the New York Times sued OpenAI and Microsoft for copyright infringement based on ChatGPT's use of the newspaper's archives in its training sets (Allyn, 2024). Those training sets may also include personal information about individuals protected by various privacy laws, such as employment or medical data (Grossenbacher, 2023). Generative AI may have the effect of revealing that protected information in its output. When used improvidently to create or process confidential information, it can also breach confidentiality by turning its own work product into data sets used by that same AI system or by others for training purposes. The opportunities for unintended negative effects from AI systems has grown right alongside the systems themselves. It would be impossible for Barnhart and Turner (2024) to address all the potential pitfalls of AI, but the existence of these pitfalls should serve as a call for further research in this area.

Barnhart and Turner's theological approach to addressing AI concerns is orthodox, but it is not the only approach available across the spectrum of Christian traditions. Some well- respected Anabaptist traditions reject technological advances in part because of their potential negative consequences. The approximately one million Mennonites living around the world are highly selective about adopting new technologies, often rejecting electricity and automobiles in favor of gas lights and horse-drawn buggies (Cruz, 2018). The potential for harm stemming from AI systems might suggest they are on to something. Some Amish groups are more progressive than others when it comes to adopting new tech, but all of them tend to be very cautious and will wait until they think they understand the impact that new technology will have on their spiritual walk and the life of their larger community (Kraybill et al., 2013).

While those contrary approaches exist, the larger portion of the Christian world would agree with Barnhart and Turner (2024) that innovation tends to be amoral, in and of itself. That position, however, puts the burden on Christians to adopt technologies (whether AI or others) in a manner that allows them to join God in the activity of His creation (Dabrock, 2009) rather than joining the Enemy in his efforts to steal, kill, and destroy (John 10:10). If we are to create with God, we must do so with the wisdom, love, and compassion of God (Locke, 2020).

History provides some hope in this new challenge. This is not the first time Christian businesspeople have had to adjust to a technologically dynamic world. The 18th century development of the steam engine launched the industrial revolution (Whipps, 2008). Innovative applications of that technology could replace a dozen men in a sawmill turning logs into lumber. Its rapid adoption across Europe and North America displaced skilled laborers but also increased productivity while simultaneously reducing prices for many necessities. The term "computer" used to refer to a skilled mathematician who solved complex problems with a pencil and paper (Word Origins, 2019). The development of the microchip in the 20th century and the adoption of computers across the industrial landscape produced significant benefits for society but also brought its share of evils to be managed (Mitchell, 2023). Even setting aside the harm these

technologies can do, the disruption in the labor force alone requires significant management. One of the points we can learn from these past experiences of disruptive technology is the importance of neighborly compassion and generosity for those whose skills are made redundant by innovative tech. As our Lord taught us in the Parable of the Good Samaritan, we cannot say we love our neighbors if we are unwilling to help those in need (Luke 10:25-37).

Barnhart and Turner (2024) identified the key to managing the deployment of these innovative technologies in a Christian manner. They note that professionals are responsible for their work product, even when they deploy advanced technologies to generate that work product. "AI users are responsible for resulting actions and decisions, even when they do not recognize incorrect or deceitful outcomes because they do not understand the underlying process" (Barnhart & Turner, 2024, p. 11). Their application of the Fall narrative richly demonstrates this risk. When God confronts Adam and Eve with their sin of eating the fruit of the forbidden tree, both people blame others to avoid responsibility (Genesis 3:12-13).

Mercifully, this is not the only example of how to deal with moral failing in Scripture. In Psalm 51, David confesses his adultery with Bathsheba, the wife of Uriah. He acknowledges his wrongdoing and pleads for redemption and restoration. In the corresponding narrative of David's life, captured in 2 Samuel 12, the prophet Nathan assures David of God's forgiveness of his sin and describes the punishment David will endure (the death of his illegitimate child). David's taking responsibility for his moral failure opens the door to his redemption, and it is his humility that opens the door to taking responsibility for his actions. Confronted by the temptations and confusion of applying a new technology like generative AI, Christian business people would be well served to follow David's example in Psalm 51 rather than that of Adam and Even in Genesis 3. If we humbly recognize that we do not fully understand all the future implications of this new technology and proceed with wisdom and humility, we can trust in God to guide and correct us as we seek to capture the value of AI while minimizing its potential harms.

There is an urgency about Barnhart and Turner's message. The rapid growth of AI technology and the emerging data about its potential harms has generated many calls for its regulation. The six-month moratorium called for by technology leaders that Barnhart and Turner (2024) refer to (p. 8]) ended in September, 2023 (Future of Life Institute, 2023). The cycle of development,

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demonstrated harms, and regulation is well underway. The Brennan Center for Justice at New York University Law School has identified 50 bills introduced into the U.S. Congress related to AI between January 1 and August 1, 2024 (Brennan Center, 2024). In October, 2023, President Biden issued an executive order regulating the development and usage of artificial intelligence systems (Whitehouse, 2023). If Christian business professionals are going to take Barnhart and Turner's (2024) advice to "participate," the best time to get involved would the present. The regulatory regimes directing AI systems will be fleshed out over the coming months, whether Christian professionals bring their input to bear or not. How much better might those regimes be if we are able to bring biblical notions of responsibility, humility, and wisdom to bear on them?

There is an additional opportunity for involvement in the management of AI systems that Christian businesspeople, most notably managers, may be able to pursue. As we follow Barnhart & Turner's (2024) advice to adopt these technologies judiciously, we can also impact organizational policy and procedures for their adoption. Those with management responsibilities can train their employees in the appropriate use and evaluation of AI systems so as to avoid, or at least mitigate, some of the harms they have the ability to cause. Christian managers can thereby leverage their positions to increase their impact on the evolution of AI systems and their application.

I'm grateful to Dr.'s Barnhart and Turner for allowing me to respond to their article but much more grateful that they have brought these issues to the attention of the Christian Business Faculty Association and other readers of the Journal of Biblical Integration in Business. Who knows whether we have not been placed in our various positions of authority and stewardship for such as a time as this (Esther 4:14)? AI, like other disruptive technologies that preceded it, has the ability to contribute dramatically to human flourishing and to promote the welfare of all mankind. It can also produce dramatic harm and even lead to dystopian futures that only our reliance on Scripture can refute (Barnhart & Turner, 2024). Let us be like the sons of Issachar who "understood the times" (1 Chronicles 12:32) and set our efforts to dedicating these new tools to the redemptive work of Christ.

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