Book Review

Susskind, R., & Susskind, D. (2022). *The future of the professions: How technology will transform the work of human experts* (2nd ed.). Oxford University Press.

Given the technological developments among the professions since the 2015 release of the first edition, Susskind and Susskind produced an updated second edition of their well-received *The Future of the Professions*. However, aside from type-setting changes (such as changing the footnotes to endnotes), the body of the volume remains unchanged. Rather, the updates and developments they share with readers come in the form of a 48-page "New Preface." In this new preface, the authors provide updates on developments among the professions over the seven years between editions, reflect on the impact of the COVID-19 pandemic, respond to common questions they receive, and provide their "framework for thinking about innovation" (pp. lxi–lxxii). For this review, therefore, I briefly survey the core of Susskind and Susskind's argument in the volume, which has remained unchanged since the first edition, before focusing on the updates provided in this new preface.

Throughout this book, Susskind and Susskind track the rapidly developing use of technology within the professions of healthcare, education, clergy, law, journalism, management consulting, auditing, and architecture. They argue that these "increasingly capable machines" will assume many of the traditional tasks of human professionals in the 21st century. For Susskind and Susskind, "professionals" and their corresponding professions emerged from the need to transfer expert knowledge in a "print-based industrial society" (p. 190–194) to address common problems. For Susskind and Susskind, this system of expert knowledge transference creates a monopoly on professional expertise. They argue, however, that the world is now changing from a "print-based industrial society" to a "technology-based internet society," in which "increasingly capable machines" (pp. 187–243) are transforming how expert knowledge is stored, accessed, and applied to meet daily needs. These machines can potentially transfer expert knowledge with more speed, accuracy, and efficiency than human professionals. Through extensive research about technological developments in these eight professions, they argue that these "increasingly capable machines" will gradually change access to this expert knowledge in society, thus bringing about a fundamental transformation in how the professions (and their use of human labor) operate. The authors provide six

models for how these machines could transform human labor within the professions before discussing the implications for the future. Though they predict gradual, yet substantive changes to the workforce, they present a relatively positive view of the potential benefits these technological changes will have for clients and consumers.

In the new preface, Susskind and Susskind reaffirm their initial projections, suggesting that observations on the increasing use of rapidly developing technology among the professions over the seven years between editions confirm their model. Following the pattern in the body of the book, they survey these changes in each profession before discussing larger trans-industry trends. Many of the most substantive changes they note in the preface concern the increasing role of artificial intelligence (AI) in the professions. They note that different professions have responded in various ways to AI's potential benefits. For example, healthcare providers display more skepticism concerning the potential increase of AI's role in their professions. Alternatively, accountants and architects appear more open to the possible benefits AI could offer. For example, AI algorithms now generate floor plans and space designs in architecture and engineering, encroaching on the traditional expertise that architects offer. Susskind and Susskind note that the pandemic hit architects hard as the sudden move to working from home substantively reduced the need for built space. The pandemic forced many professions to rapidly embrace new technologies to enable people to work from home, revealing the challenges of widespread, fast-paced technology adoption. While this process forced a substantive expansion in the use of technology among the professions, Susskind and Susskind suggest that the pandemic does not substantively alter their model. Rather, they recognize that the pandemic reduced resistance to technology changes.

The authors reach four conclusions in light of their assessment of these developments in the professions. First, they observe the difference between the increasing pace of technological development and the much slower pace of technological adoption in the professions. Second, the technologies presently adopted among the professions have "systematized past practices" rather than transformed the nature of the profession. Third, Susskind and Susskind note that many "experts" identify the 2020s as a key decade for the "technological transformation in the professions" (p. xlv). Finally, they note that their thinking about the technological developments among the professions has evolved as they have worked independently on other books, though they do not provide further detail about this change.

They conclude the new preface by discussing innovation among the professions and their "framework for thinking about innovation" (p. lxi-lxxiii). They present their framework as a practical tool they use for its functionality. They argue that the key innovation of industry leaders, those they call "second generation innovators," is that they use technology to automate, routinize, and

standardize tasks in uncontested markets that expert professionals previously performed by "hand".

All of the merits of the first edition still apply to the second edition. Regardless of one's level of (dis)comfort with predictions about technology's use and function in the future, Susskind and Susskind build a well-researched argument upon which to construct their model. Their inter-industry and interdisciplinary perspective allows them to identify trends across industries and to parse out unique nuances of how different fields experience technological change. Depending upon one's philosophical assumptions about the relationship between technological development and societal change, some readers may not fully resonate with their generally positive view of technology's future impact on society. However, such assessments do not change the fact that the technological change they chronicle is taking place, and the professions will have to adapt to operate in a world with these new technologies.

One question that the volume raised for me, however, was the relationship between these technological changes and the realities of globalization. Susskind and Susskind recognize the realities of the professions operating in an increasingly globalized world and technology's role in supporting the information and communication infrastructures upon which globalization depends. This knowledge and communication infrastructure opens many possibilities for increased collaboration, competition, and innovation in the global market. However, as they acknowledge, their data predominantly comes from Anglo-American industries and companies, limiting their study (see p. 6). They recognize the value of extending their research beyond Anglo-American companies and industries and that such a study would require the production of several more books (see p. 61; this volume is already 592 pages). Given the important work that Susskind and Susskind have done in this volume, I would eagerly welcome a future volume (by them or another) extending their insights in light of the knowledge of industries and companies beyond this Anglo-American focus.

Beyond these merits and considerations, their volume raises another issue of interest for the *Journal of Technology Education* readers concerning the increasingly difficult task of training educators who are equipped to prepare students for this rapidly changing technological landscape. Susskind and Susskind recognize the challenge posed by the increasing pace of technological development. This fast pace of development poses challenges not only to those who write books on the topic (p. xlii) but also to those tasked with preparing the future workforce. This challenge appears when preparing students to enter fields related to technology and engineering, which Susskind and Susskind identify as fairly open to the prospects of technological change. Educators' technological experience and expertise, shaped by earlier generations of technology, often mediate students' engagement with innovative technology. It takes time and resources to acquire new technology for classroom use and to train teachers for

full integration into students' educational experiences. With technology developing so quickly (see particularly the current advances in AI), this lag between the emergence of new technology in an industry and the integration of that technology into educational institutions is problematic. Consequently, students can find themselves trained with one generation of technology before entering a workforce already employing the next generation of technology. In some respects, this lag time fits into Susskind and Susskind's critiques of the reliance on human-centered expertise for knowledge transference.

However, such fast-paced change makes it difficult to fully reach the potential utilization of technology once adopted across industries and the unintended impacts of technology, particularly since technology does not always serve the intended purposes. Each of these uncertainties raises questions about the degree to which scholars can anticipate the future labor market. Whereas Susskind and Susskind frame the pandemic lockdown as not substantively altering their model, the unpredicted onset of the COVID-19 pandemic illustrated that even experts cannot always anticipate the future problems technology must address in the environment in which it will operate.

Regardless of one's enthusiasm for technological change, Susskind and Susskind's book remains a thought-provoking and insightful volume that will inspire readers to rethink current assumptions about professional expertise in light of the rapidly changing technological world. It will be of particular interest to those tasked with preparing the future generations of working professionals who will find themselves engaging, developing, and implementing new forms of technology that hold the potential to transform their respective industries substantively.

About the Author

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