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**From the Editor in Chief**

# THE AXES OF THE MODERN AGE

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This issue of *Human Technology* is essentially about adapting to new technologies. The adaptation phenomenon presents an ever-intriguing, constant process of human history. Innovations increase efficiency and evoke enthusiasm but also cause frictions, tensions, and even dramatic ruptures when the prestige of the old technology is challenged by the lure of novelty.

Recently, an interesting tweet appeared on *Human Technology*'s feed. The tweet addressed an old, prestigious, and society-transforming technology: the book. A Finnish journalist posted a humorous question concerning her reading hobby: "Has my reading gotten out of hand if I take a book even to sauna?"[1] At this point, readers not familiar with the Finnish society would benefit in knowing that Finns are members of a sauna-loving nation (most apartments have a private sauna). Equally, they are avid readers, measured by the daily time spent reading (Brown, 2018).

The ensuing discussion on the Twitter thread was jolly and humorous, but it reflected nonetheless the adoration for, powerful position of, and staying power of this particular form of technology. Even though the initial tweet was meant to amuse the audience, I do not doubt the journalist actually had contemplated the idea or even actualized it, and had indeed read a book in the hot and steamy sauna room. It seems she even took some pride in the act. So did her followers, and one of them wondered whether it was even possible to read so much that it got "out of hand." Indeed, book reading is respected to the extent that one can hardly "go too far," and the sense one could derive from the responding collective is that it does not matter what kind of a book the person is reading, just as long as they are reading one. In this sense, the medium *is* the message, as Marshall McLuhan claimed (McLuhan, 1964)**.**

If this feels a bit like overanalyzing, imagine a tweet similar to the one above but where *reading* was replaced with *social media use* and *book* with *mobile phone*. The question then would have been, "Has my social media use gotten out of hand if I take my phone even to sauna?" I suspect that the tone of the thread to this latter question would have been different. Reassuring comments would have been rare, regardless of the type of content the user was enjoying on social media.

Yet, both the book and the smartphone are simply communication technologies, and using either one usually involves some measure of reading; however, the former is more prestigious as a medium than the latter. The book holds a long tradition during which it has been established as a symbol of sophistication, knowledge—and even power. The smartphone and social media are more recent, easier, multifunctional, and less established, and thus they often are exposed to moral concern. Although one can learn and develop one's thought and skills, including literacy, by using a smartphone (e.g., West, 2014), its position within the societal hierarchy is lower than that of the book, and thus one of the reasons why people worry more about screen time than about book time. Indeed some parents—in their goal of parenting well—seek to replace their children's screen time explicitly with book time, and there is plenty of research to support their concerns.

However, it is only rarely discussed how even book time can sometimes be harmful intellectually, socially, psychologically, and even physiologically (see, e.g., Dali, 2014; Gerdes, 2015; Short, 2019). For a classic example, one can peruse the century-old diary of the famous anthropologist Bronislaw Malinowski and discover how his excessive reading habit was constantly in the way of conducting ethnographic research among the people he was supposed to study (Malinowski, 1967/1989). If worrying about excessive book time sounds strange or funny, it might be partly because of its traditional position in one's society.

At this point, I, as an anthropologist, am reminded of a classical study of technology, titled "Steel Axes for Stone-Age Australians," by J. Lauriston Sharp (1952), who vividly described how stone axes were the prestigious symbol of the older male elite among an Australian aboriginal group. The Yir Yoront were a Paleolithic hunter-gatherer society who inhabited the west coast of the Cape York Peninsula in modern-day Queensland. For a long time, the stone ax played an important role in the Yir Yoront economy and culture, because not only was it a central, essential tool in use, but also for the interrelated reasons that it was the center of elaborate rituals and a medium of partnerships among communities. Even clan names were derived from the stone ax, and the stories of mythical ancestors revolved around axes. However, only the older men owned an ax, held it in ceremonies, or pantomimed its use in ritual performances. Although women and younger men could use the ax in everyday contexts, and often did so even more than the older men, they always had to borrow it from the older men who were the only ones who could declare ownership of the ax. It was thus an important symbol of hegemonic masculinity.

With the influx of European settlers to Australia, steel axes became available to the aboriginal communities. The settlers were eager to sell the axes to the aboriginals, give them in lieu of salary, or even distribute them freely for charitable purposes, hoping that the tool would allow the aboriginals to improve their lives. However, most older males of Yir Yoront rejected the steel ax as a vulgar and unfit foreign object even though it was clearly a superior tool—more durable, efficient, and comfortable to use as compared to the old stone ax. The widely available steel ax was a threat to the symbolic power of the stone ax, and hence older male power.

However, the women and young men of the community, finding immense benefits in the steel ax, were quick to adopt it. Slowly, the adopted steel ax began to undermine the traditional power of the older males. In time, the stone axes started to vanish from the center stage of male-lead ceremonies; indeed, the existence of steel axes chipped away the significance of the ceremonies themselves. The older men were not happy about their diminishing control over

the resource gathering of the young men and the women. They also were ashamed of having to borrow a steel ax from their inferiors. As a result, with the introduction of the steel ax, the old conceptions about gender and age began to change. The charitable settlers where not happy either because they had hoped that the steel ax would help the aboriginals to complete building the settlers' choirs faster so that the workers could spend more time on other tasks. Instead, the aboriginals spent the newfound time resting.

One could say that social media—and any other significant technological innovation about to supersede an older one—propose the same kind of sociocultural challenge to modern society as the steel ax did to the Yir Yoront. Although social media are not challenging the hegemony of older males, at least not as on the same scale as the steel ax did in Australia, they are changing social dynamics in practice. Information, worldviews, opinions, and ideologies spread via social media faster and more effectively than the same information in a printed book. People who previously did not have a voice and the accompanying social influence now can experience what they might deem as equality, and sometimes they are not the kind of people who identify with the learned society–or vice versa. Thus, the literati may have many reasons to worry about the fate of the book, and some of them seem to revolve around the "ownership" of the technology. Throughout history, the book that is "owned" by the educated classes is impossible to overuse, whereas the smartphone–even though it also is used for reading–is viewed as easily overused and abused, especially by the young and the uneducated. Certainly well-documented research can be found easily on the dangers of excessive screen time in general and social media in particular (e.g., Hutton, Dudley, & Horowitz-Kraus, 2019; Nelson, 2018; Soumya & Revathy, 2018). But it is possible as well that the narratives about the dangers of the social media and the superiority of the book are bolstered by worries about the diminishing hegemony of the literati. The proponents of the old technology want to safeguard their old textual realm and the related ideas of "proper" reading and writing.

Thus, social media (like the steel ax of the Yir Yoront) is changing power structures, and it is either welcomed or frowned upon. It has good or bad consequences, depending on one's sociopolitical outlook, but also reflects the differing symbolic value given to it. The book and the smartphone can surely coexist peacefully, but perhaps it could happen more easily if the technologies were not seen as having different intrinsic values. They are both media, and the use and value of them is determined by humans who use (or refuse) them, and both can be used for good and bad.

The technological change, and the negotiations it brings about, do not seem quite as dramatic in the articles of this issue as they were among the Yir Yoront or even in the recurring discussions about the role of social media. Nevertheless, interesting frictions, signs of cultural change, and fluctuating power positions are evident in them. In the article titled "Measuring Expectation for An Affordance Gap on a Smartphone User Interface and Its Usage Among Older Adults" by **Chui Yin Wong, Rahimah Ibrahim, Tengku Aizan Hamid,** and **Evi Indriasari Mansor**, the authors present evidence in how age matters when looking at the affordances of mobile phones. Perhaps a bit like the Yir Yoront older males, the older adults in Wong et al.'s study are confronted with a superior means of communicating—a smartphone—but struggle with the implications of using a smartphone interface that does not easily fit with their mental models of interaction. This new technology also impacts the dynamics of social relations because the older users must rely on their younger relatives in managing the unfamiliar tool. Further, in the

article titled "Utilizing Digital Tools to Support Face-to-Face Care: Examining Uptake Within the Practices of Australian Psychologists," based on a pilot study, authors **Jeremy Kerr** and **Ashley Van Houten** explored therapists' current adoption of digital tools within and beyond the traditional therapy sessions. Their study discusses how technologies could extend face-to-face care but also the implications of technologies—including social media—to the how, when, and where of psychological care. The study's findings seem to suggest that the therapeutic culture is "organic" enough to be relatively slow in adapting digital technologies, even when some therapists are generally tech savvy. **Andreja Istenič Starčič and Maja Lebeničnik**, in their article "Investigation of University Students' Perceptions of their Educators as Role Models and Designers of Digitalized Curricula," investigated the younger generation's view on technology integration in higher education, that is, the students are evaluating their teachers as adopters of educational technology and as role models for technology integration for professional development. According to this pilot study, teachers in some academic disciplines currently are not seen as leaders in new technology use, and this is especially true for students in the education field, who will be teaching future generations raised as digital natives. Finally, in returning to the value of reading, the final article of this issue presents a study of GraphoLearn/GraphoGame,[2] a game to develop reading skills. **Elisabeth Borleffs, Frans Zwarts, Ade R. Siregar**, and **Ben A. M. Maassen** exhibited the results of their study on Indonesian first-graders playing GraphoLearn in their article titled "GraphoLearn SI: Digital Learning Support for Reading Difficulties in a Transparent Orthography." The article serves as a reminder of the value of games in learning important skills and how new technology can be used to support mastery of an old "technology" that is far from becoming extinct.

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## ENDNOTES

1. The tweets cited here appeared originally in Finnish and have been translated by the author.
2. GraphoLearn is the research/not-for-profit version of the commercial product GraphoGame.

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