Technology and the Virtues: A philosophical guide to a future worth wanting
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A Book Review by
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Shannon Vallor is the Regis and Dianne McKenna Philosophy Professor at Santa Clara University in Silicon Valley and an AI ethicist and visiting researcher at Google. Vallor’s research focuses on the impact of emerging science and technology on our character – the moral and intellectual virtues of human beings. In 2016, she published Technology and the Virtues: A philosophical guide to a future worth wanting from Oxford press. Vallor’s book is a comprehensive text that provides a substantial introduction to virtue ethics and current technological challenges to general readers and scholars alike. Her work is part of a contemporary renewal of virtue ethics among Western philosophers including Martha Nussbaum and Alasdair MacIntyre. Vallor asks us to consider the following inquiry: how can human beings hope to flourish in a world of increasing complexity and unpredictability due to emerging technologies? Her solution is to cultivate a kind of moral character that expresses technomoral virtues so that we can live the good life as human beings. The good life in the 21st century requires envisioning our technosocial future - a future in which technological powers become “embedded in co-evolving social practices, values, and institutions” (2016, p. 5). However, Vallor characterizes our current condition as one of “acute technosocial opacity” (2016, p. 6), in which we find it difficult to identify, seek, and secure a vision of a life lived well. Thus, the challenge we face is to figure out what we will do with new technologies and what they will do to us.

Virtue Ethics as a Global Strategy

Vallor’s book outlines a global ethical framework drawing from the Aristotelian, Confucian, and Buddhist virtue traditions. She contends that these classical virtue traditions offer us an ethical strategy “for cultivating the right type of moral character that can aid us in coping, and even flourishing, under such challenging conditions” (2016, 10). The solution to our technosocial ills is not newer technologies, but the adoption of technological practices that reinforce our moral self-cultivation and help us acquire the moral discernment to live well. For Vallor, the good life for human beings is attainable by care and cooperation, thereby making it incompatible with antihumanistic and neoliberal philosophies.

Vallor uses Alasdair MacIntyre’s understanding of the conceptual structure that unifies virtue traditions to establish a common framework between Aristotelianism, Confucianism, and Buddhism. For MacIntyre, a virtue is only meaningful if it is within the context of a recognized practice: a cooperative human activity in which the internal goods that the practice aims to produce are pursued and realized in the effort to excel at that activity. MacIntyre explains that a practice must be embedded in a coherent narrative concerning the whole of human life which itself must participate in a shared moral tradition. The intentions and beliefs behind individual actions that are part of a practice are given context and
coherence within one’s personal narrative. MacIntyre argues that personal narratives make sense as part of a broader historical tradition that implicates us and others in the pursuit of the good life. Thus, MacIntyre’s moral practice is irredicably a social enterprise that holds us accountable as persons in community rather than isolated individuals.

Vallor contends that the global reach of new technologies (e.g. online marketplaces, surveillance technologies, online communities, etc.) has enabled unprecedented “cooperative technosocial activity as a means of seeking the good life, individually and collectively” (2016, p. 46). She understands this global technosocial activity as a moral practice with four identifiable internal goods. The first is the notion of a global community – not in terms of a world government or any particular institution, but rather a global moral community of reciprocal concern and respect for humanity. Second, intercultural understanding and global justice are required goods for communities to function. Third, human security is needed to protect the present and future flourishing of the human species. Finally, Vallor insists that the internal good of collective human wisdom is required because the wise direction of massive scale human coordination is “morally necessary for the good life in the 21st century” (2016, p. 53). These technomoral goods are essential for Vallor because they address our global technosocial challenges and the increasingly interdependent conditions of the 21st century.

**Moral Self-Cultivation & the Virtues**

To secure these technomoral goods, Vallor points to the pursuit of moral character by self-directed and habitual effort as encouraged by Aristotelian, Confucian, and Buddhist virtue ethics. Vallor identifies seven core elements of the practice of moral self-cultivation that bind these three virtue traditions into a single family of ethical thought. These traditions share the practice of moral habituation, which involves the gradual transformation from an uncultivated state to a morally habituated one through repeated good conduct. The foundations of virtuous character are cultivated by developing a relational understanding of moral obligations, reflective self-examination of moral progress, and intentional self-direction of moral development. One’s moral wisdom is completed through habitual moral attention to the salient features of particular situations, prudential judgement to deliberate and choose well among different actions, and the appropriate extension of moral concern to “the right beings, at the right time, to the right degree, and in the right manner” (2016, p. 117).

Vallor defines twelve technomoral virtues that the morally cultivated self will exhibit for flourishing in the 21st century: honesty, self-control, humility, justice, courage, empathy, care, civility, flexibility, perspective, magnanimity, and wisdom. She maintains that these virtues will need to evolve with our changing technosocial context and does not consider her taxonomy of virtues exhaustive. **Technomoral honesty** is exemplary respect for the truth aided by practical expertise to express the truth in appropriate ways (e.g. appropriately exposing potentially sensitive information to the public). **Technomoral self-control** is the ability to reliably align one’s desires with the good and choose the goods that contribute most to our present and future flourishing. **Technomoral humility** recognizes the real limits of our technosocial knowledge and retains a sense of wonder at the universe’s power to confound us while avoiding both extreme optimism and pessimism towards new technological proposals. Vallor’s concept of technomoral justice is the disposition to seek fair and equitable distribution of technological benefits and risks, along with the concern for how new technologies can impact the well-being of others. For example, this kind of justice considers how the consumption of technological products in one country could damage the well-being of others in a different country.
Additionally, technomoral courage involves intelligent fear and hope regarding the dangers and opportunities presented by new technologies, technomoral empathy is a concern with the goal of increasing another’s welfare, and technomoral care is the skillful and emotionally responsive disposition to meet others’ needs. A person with technomoral civility has a sincere disposition to create and share the good life with fellow citizens who hold different conceptions of the good life and to collectively deliberate about matters requiring political action. Vallor’s virtue of technomoral flexibility is defined as the skillful disposition to modify action, belief, or emotion according to novel or unstable technosocial situations (e.g. modulating one’s attitudes towards AI upon discovering new empirical studies). Moral perspective is the disposition to discern and attend to separate moral phenomena as part of a meaningful moral whole, and magnanimity encourages moral ambition and leadership through exemplifying moral excellence. Lastly, the greatest of Vallor’s virtues is technomoral wisdom, the general condition of well-cultivated, integrated, and unified moral expertise that intelligently and authentically expresses the other virtues.

Virtue Ethics & Surveillance Technologies

In the final part of her book, Vallor applies the global virtue ethics analysis to emerging technologies in social media, surveillance, robotics, and human enhancement to understand how these technologies can impact our character. Regarding surveillance technologies, Vallor points out that the ethical ideal encouraged by surveillance data storage and algorithmic analysis can undermine our ability to lead an examined life.

In virtue traditions, the examined life seeks reflective knowledge as a means to moral cultivation. The habit of bringing one’s examined thoughts, feelings, and actions closer to some normative ideal helps us to gradually reorient these aspects of our character so that we can live a good life. Vallor also challenges the ‘cult of transparency’ – which has fostered a culture of widespread surveillance and data storage known as “dataveillance” (2016, p. 189) as a replacement for self-examination of one’s character. The cult of transparency has reduced truth to information by isolating and recording ‘raw facts’ devoid of real-world complexities. Large quantities of information are no replacement for wisdom - a virtue required to intelligently perceive and process information. Vallor highlights the replacement of the classical pursuit of self-knowledge with the quest for the “quantified self;” a quantifiable picture of existence as produced by perpetual surveillance and mobile sensors (2016, p. 196).

Whereas philosophical techniques (e.g. dialectics and meditation) foster reflective self-examination, Vallor argues that self-surveillance in pursuit of the quantified self does not examine one’s virtues and lacks an end towards which self-examination should aim. Rather than falsely assuming that a dataset is a life lived well, virtue ethics traditions teach us to consider the examined life as an ongoing project in which the practice of taking responsibility for one’s own moral being is itself transformational. For flourishing amid emerging surveillance technologies, technomoral honesty and technomoral wisdom will be required for people to “be discerning in the treatment of information” (2016, p. 205) and know how and when to record, reveal, and conceal different kinds of data.

Vallor provides several examples of how we could treat information in ways that are potentially more honest and wiser. We might insist upon encrypting high-level government meetings unless courts decide that there is a “compelling public interest in the information” (2016, p. 206). We could “expand the rights of citizens to safely record their interactions with law enforcement” (Ibid) using technologies that are less intrusive than multiple cell phone cameras. Additionally, we might require wearable recording devices “to audibly announce when a photo or video is being captured” (Ibid) and could
“discourage or ban their use in public recreation or wilderness areas” (*Ibid*). Regardless of the specific proposals, Vallor contends that without the technomoral virtues, we will lack the ability to determine which goals are worth pursuing with surveillance technology for our flourishing.

*Technology and the Virtues* is a rich resource for understanding the wisdom of virtue traditions in navigating the moral complexities of new technologies. Nevertheless, it seems that more could be said on the importance of prioritizing local cultural contexts of moral cultivation to foster global flourishing. Vallor acknowledges that it is “unreasonable to think that we can live well globally without also flourishing in our own families, states, and cultures” (2016, p 120). Although inevitable tensions will exist between local and global goods, she concludes that both global and local visions of flourishing must be integrated into our lives. However, if we consider how human beings develop their relational understanding or cultivate the virtue of care, it is often first through local institutions.

As Edmund Burke argued in his *Reflections on the Revolution in France,* to be “attached to the subdivision, to love the little platoon we belong to in society, is the first principle of public affections” (2009, p. 47). Burke contends that our devotion and affection to the local is the “first link in the series by which we proceed towards a love to our country and to mankind” (*Ibid*). MacIntyre would also likely support this prioritization of the local. At the end of *After Virtue,* MacIntyre calls for the “construction of local forms of community within which civility and the intellectual and moral life can be sustained” (2015, p. 263). That said, there might be local communities and cultures which pursue globally devastating projects (e.g. massive environmental destruction or nuclear war). Such endeavors are not warranted, and the determination of exactly what projects are disqualified in particular contexts will require Vallor’s *technomoral wisdom* embodied in people of virtuous character. For further research, a question that Vallor directs us to ask is: exactly what kinds of practices best cultivate the technomoral virtues required for human flourishing in the 21st century?

**Bibliography**


**About the Reviewer**

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