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*Buddhism and Intelligent Technology: Toward a More  
Humane Future*

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# A Review of *Buddhism and Intelligent Technology: Toward a More Humane Future*

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*Buddhism and Intelligent Technology: Toward a More Humane Future*. By Peter D. Hershock. London: Bloomsbury Academic, 2021, 280 pages. ISBN 978-1-350-18227-1 (paperback), \$26.95/978-1-350-18226-4 (hardback), \$90.00/978-1-350-18228-8 (e-book), \$24.25.

Since Google's DeepMind in 2016 defeated Lee Sedol, the world champion of the ancient game Go, interests, research, developments, and investments in artificial intelligence (AI) have skyrocketed. The world has come to realize the power of AI to accomplish tasks hitherto thought to be impossible for a machine to accomplish. AI has entered our collective consciousness, and we are hearing about it every day in the media. Nation states, realizing the awesome potential and power of the technology, are rushing to compete with one another to develop it further, pouring vast amounts of resources into the task. The competition is aptly called by Peter Hershock "the New Great Game," referring to the old rivalry between world powers such as Great Britain and the Russian Empire for every aspect of global dominance in the nineteenth century. The difference is that now the two competing powers are the U.S. and China.

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Together with the rapid rise of research and development in AI is the increased awareness of the need to rein in its power and provide effective regulation. This has resulted in an explosion of guidelines designed for just these purposes. Over the last three years the popular website AI Ethics Guidelines Global Inventory (<https://inventory.algorithm-watch.org>) has collected a total of 173 guidelines according to the most recently updated version of the website. These guidelines come from all the regions of the world. Furthermore, ethical deliberation on AI has become an academic industry, with more and more scholars entering the field and producing a very large number of works on the topic in only a few years.

These guidelines and research on the ethics of AI, however, are based on the cultural presuppositions of the West. The ethics in these guidelines are informed by familiar Western ethical theories such as deontology and utilitarianism. Moreover, most academic works in AI ethics, broadly construed, are also oriented toward these Western theories. Thus, Peter Hershock's book is a welcome addition to the field. The book adds to a small number of works discussing the ethical implications of AI from a non-Western perspective, namely Buddhism, and thus is a significant contribution to the intercultural ethics of technology. More specifically, to my knowledge there are now only two book-length studies of the ethics of AI from the Buddhist perspective (broadly construed, as Hershock might disagree that his work should be classified as such). As AI is spreading its influence throughout the globe, it is only fitting that there are academic studies focusing on its social and ethical aspects from a variety of non-Western perspectives. Western readers will benefit from a look at AI and its ramifications from a new angle, an angle which could provide them with a critical look at how their horizons of ethical thought and deliberation could be expanded. Furthermore, readers in non-Western cultures will also benefit because these works show that ethics and philosophy are not restricted to the West, but other traditions, such as Buddhism, can contribute to the global task of thinking together on how to regulate the

power of AI and the global corporations that profit hugely from the use of the technology.

I have said earlier that one would be reluctant to classify Hershock's book as a study in AI ethics from the Buddhist perspective, which is squarely the topic of my own book. This is because the focus of his book is not to provide a set of guidelines for the designer and manufacturer of the technology but is more oriented toward suggesting a way for consumers or users of AI technology to become more resistant. Hershock's book is a call for us to be fully aware, or "mindful" in the Buddhist sense, or in his words to be able to envision "who we need to be *present as*" (7), in order that we are not lured into the trap laid by the social media platforms and thereby lose our bearing. It is our being lured into this trap that constitutes the predicament engendered by the AI revolution, a condition that for Hershock cannot be solved but only slowed or stopped. Buddhist teaching and practice is the key to slowing and stopping the predicament. As we find AI and social media platforms pervading our environment, what we need to do, according to Hershock, is to follow the Buddhist teaching of being mindfully aware so that our attention and our engagement with these media are adequately informed by the relevant sense of autonomy that would enable us not to become mere products of these platforms.

According to Hershock, what he calls the "Intelligence Revolution" has created a predicament in the same way that climate change has created, or is itself, a predicament. He argues that climate change is not a technical problem solvable by technical means but is a complex of various factors—economic, sociological, scientific, technological, and so on—that together constitute a difficult situation where particular technical solutions are not effective. Hershock compares this difficult situation to the Buddhist notion of *dukkha* (*duḥkha*), which he invariably translates as "conflict, trouble, and suffering." As climate change is a predicament constituted by a complex web of various factors, the way to encounter it, according to Hershock, is not to find a direct fix—a kind of medicine that

purports to cure the condition directly—but a complete turnaround, a re-orientation of one’s total way of living in such a way that the predicament is undercut from the ground up. In the case of climate change, this means that there must be relational and systematic efforts performed together by all or most of the nodes within the complex web, a turnaround from what is familiar, such as one’s reliance on fossil fuels in one’s day-to-day living. Hershock knows that this complete turnaround is not practically feasible, and he suggests in the later chapters of the book that the predicament of climate change must be countered either by slowing it down or by stopping it altogether. Since slowing down is obviously easier, what he suggests is a kind of concerted effort to start a new way of life as well as various measures so that our gradual turning away from the familiar way of living contributes to the desired change.

Basically, this is the gist of Hershock’s argument in the book. His main concern is not how to combat climate change, of course, but the difficult situation, the predicament, caused by the Intelligence Revolution (variously called the AI revolution, or perhaps the Fourth Industrial Revolution, by other scholars). The situation in which almost everyone is hooked on their smart phones, checking the most recent posts every minute or so, is for Hershock a serious predicament in need of a complete turnaround. The lifeblood of the Intelligence Revolution is the personal data that users emit to the global network every second. The fact that social media platforms such as Facebook, Twitter, and Google are free to use this data means that these sites are effectively turning users into the products that they sell to their real customers, which are the businesses that pay Google and Facebook huge amounts of money for advertising purposes. Many scholars, such as Shoshana Zuboff and Jathan Sadowski, have shown the dangers of surveillance or data capitalism in which the users are turned into products to be advertised and sold by one business to another, thereby reducing ordinary users to mere numbers or commodities. This is a serious predicament caused by the Intelligence Revolution. As with climate change, the way to combat this situation is not by finding a

set of technical fixes but by performing a complete turnaround, a radical change in how we conduct our lives.

In a nutshell, Hershock's prescription for the turnaround is to look at Buddhist teachings for content and inspiration. This call for a turnaround is thus different from what has been proposed by mainstream ethicists of technology, whom he criticizes as offering only technical solutions. Here Hershock's proposal is not unlike that of the earlier philosophers of technology who were strongly critical of the technological situation overall. Martin Heidegger, for example, is well known for his stance in *The Question Concerning Technology*, where the main problem is the mindset that accompanies modern technological systems. A hydroelectric dam is a product of the modern technological system, but for Heidegger the dam is a concrete manifestation of the mindset that views the river not as a living organism to be respected as did the ancients, but as *Bestand*, or a standing reserve, something always there to be exploited whenever one wishes. Thus, in Hershock's term, the hydroelectric dam represents an aspect of a predicament caused by the older technologies of dam construction and hydroelectric power generation. Albert Borgmann, another philosopher of technology, thinks in the same way. Here the dam represents a device paradigm—to use Borgmann's terminology (*Technology and the Character of Contemporary Life* 33-77)—that takes us away from the river as a focal point of our earlier practice such as performing rituals or having a relation with the river in an intimate way (*Holding on to Reality* 223-224). In both Heidegger and Borgmann, we see a bifurcation between the technical or technological on the one hand, and the natural or the focal point on the other. The idea is that the former is taking us away from our true condition, our authenticity, and that there should be a way for us to return to the latter. For Hershock, this is accomplished through Buddhist practice.

Hershock argues that there are two kinds of ethics of technology: the familiar one that focuses on the agents, rules of conduct, and the justification of rules; and his preferred one, which looks at the broader systematic relations constituting an undesirable situation alluded to above.

According to the second kind, there is no direct resolution of the undesirable situation, only either a stopping or a slowing down of the whole process as we have seen. This is the solution suggested by those philosophers who regard technology as a whole system that threatens human dignity and autonomy. Apart from Heidegger and Borgmann, we can also count philosophers such as Jacques Ellul and Herbert Marcuse in this group. What they share is that they look at technology itself as one big threat; their analyses of the situation usually come in the form of exposing the thoughts and theories behind the technology in such a way that the technology emerges as a manifestation of a particular kind of logic designed for domination. According to Ellul, for example, modern technology is a manifestation of what he calls “technique,” an all-encompassing force driven by capitalism and the scientific-technological complex against which humanity has no or very little power to resist (Ellul 3-13). Hershock’s analysis of the Intelligence Revolution is of the same kind. Instead of looking at particular actions perpetrated by various agents within the Revolution, he looks at the situation as a whole. His kind of ethics, which he calls the “ethics of diversity,” is a call for humanity to resist the situation. His stance is distinctly political. As consumers can get together to initiate boycotts or other forms of protest and thereby gain more leverage against the giant corporations, Hershock in the later chapters of the book issues a similar call for users of the popular social media platforms to get together and slow the rate of sending out personal data that feeds the money-making engines of these corporations. Buddhist teachings contribute to this process through providing a vocabulary and theoretical foundation; the whole situation is a predicament, a *dukkha*, that needs to be resolved. One can resolve it by seeing things as they are, finding the root cause of the undesirable situation, and setting out a regime of practices found in the teachings designed to eliminate the cause.

Thus, Hershock’s “ethical diversity” as he calls it (137) is a kind of ethics only in the sense that Heidegger’s or Borgmann’s analyses of the technological condition could be called an ethics. The difference between these two kinds is that according to the first, more familiar kind, there is



the focus on particular actions, such as the fact that the dam is causing such-and-such damage to the ecosystem of the river, then an analysis as to why that action is wrong, followed by a recommendation for a solution. Applied ethics usually is done in this format. However, Hershock is not particularly interested in finding solutions to specific problems. Instead, since his overall goal is more a political one, the aim is to engage in a political act designed to change the overall conduct of the AI corporations altogether. Commenting on the predicament, Hershock writes:

A Buddhist ethics of intelligence invites asking whether such a system is able or likely to help us realize virtuosic relational dynamics and superlative social institutions. The economics of the Intelligence Revolution are premised on an intelligence-gathering infrastructure that enables AIs to identify, predict, and respond to individual human needs and desires. Increasing “personalization” is a crucial dimension of the seductiveness of smart services and the ultimate key to their commercial success. And given their tireless learning capabilities, if we assess these services ethically in terms of their benefits to us as individual agents and patients, we can expect to find them earning increasingly favorable evaluations. (143)

For Hershock the usual form of ethics seems to be rather ineffective in combatting the predicament. As AI becomes increasingly smarter, it can guess what it needs to do in order to please the user; thus, assessments of individual action could result in more positive results for AI. But this rests on the presumption that AI is inherently bad. When the proposal to alleviate the predicament is either to slow it down or to stop it completely, there does not seem to be any room left for compromise, such as to design AI in such a way that one does not always have to stop it or slow it down. Nonetheless, this proposal appears to close the door to the possibility that AI could be beneficial to us. Now there has been more research in the area broadly known as “AI for Social Good” (e.g., Tomašev et al.;

Association of Pacific Rim Universities and Keio University). The idea is that AI could bring forth not only material products, but also the kind of social arrangements that promote fairness, equity, and justice. This is obviously a very difficult challenge, but Hershock's proposal in the book appears to close out this possibility entirely.

For example, there is now a growing amount of research on how AI could contribute to a more equal society in terms of gender. Natural language processing software can be designed to detect gender biases that are inherent in the way language is used and flag out inappropriate uses; moreover, AI algorithms can be trained so that they not only detect and stamp out existing gender biases in language but cease generating their own biases in the future. Whether this task is technically feasible in the long run is up to the technicians to decide, but at least we should not just close out this possibility that AI could bring us genuinely beneficial results. Thus, Hershock's assumption that the whole situation is already a predicament may need to be viewed again from a rather critical stance. In philosophy of technology itself, the younger generations of philosophers also tend to stay away from the broad critique of technology one finds in Heidegger and Borgmann, and they have started to focus on the specific problems engendered by contemporary technologies. Instead of critiquing Technology with a capital T, they are instead looking at technologies in the plural. For example, one of the most well-known philosophers of technology of the last twenty or thirty years, Don Ihde, has recently shifted his stance. Instead of conducting a phenomenological investigation of the overarching condition produced by technology, Ihde advocates in *Heidegger's Technologies* the view that philosophers should instead focus on specific problems caused by specific technologies.

Chapter one of *Buddhism and Intelligent Technology* focuses on the basic tenets of Buddhism. What is distinctive is that Hershock tries to use his own terminologies in place of the more traditional ones that one finds in standard books on Buddhism. For example, instead of talking about "suffering" or "dissatisfaction," Hershock translates *dukkha* as "conflict,

trouble, and suffering”; in fact, these three terms appear together throughout the book. Conflicts may indeed be a part of *dukkha*, but in Hershock’s use the conflicts seem to be rather those between the individual and her social environment. That is why *dukkha* is essential to the predicament that Hershock aims at eradicating. In the usual Buddhist sense, however, *dukkha* is more a matter of an individual herself; the point of Buddhist practice is of course to cultivate one’s mind in order that *dukkha* is eventually eliminated. This does not mean that the traditional sense of *dukkha* cannot include the sense proposed by Hershock, but the reader should be reminded that Hershock is talking about the *dukkha* suffered by society as a whole.<sup>2</sup>

Hershock helpfully summarizes the history of the development of AI in chapter two. Instead of starting the narrative from the actual development of AI in the decade following World War II as many narratives do, he takes us all the way back to ancient Greece, where the epic *Iliad* provides stories about “self-propelled chairs” and “golden attendants” (44). The dream of having machines to do our work is almost as old as civilization itself. Then Hershock takes the reader on an overview of the history of AI proper, starting with Alan Turing’s seminal paper “Computing Machinery and Intelligence” from 1950 up until the Fourth Industrial Revolution.

Chapters three and four are also useful as an introduction to the AI predicament for those who are new to the subject. Hershock provides a clear history of the development of the technology and an introduction

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<sup>2</sup> One is here reminded of the familiar difference between the Theravāda and Mahāyāna traditions, where the former stresses individual liberation and the latter the aspiration to bring all sentient beings across the sea of *samsāra* to the other side. However, this difference between the two main traditions is not relevant to my discussion here. In saying that Hershock pays more attention to *dukkha* in the social sense, this does not mean that he should instead focus on the more individualistic sense. After all, his call is for us to be virtuosic and mindful of how we are *present as*. This is clearly an individualistic sense. Certainly, he also calls for certain social arrangements to change, but the individualist sense of being present as here is a necessary condition.

to the problems caused by surveillance capitalism. Chapter three focuses on the current uses of information technology in business, politics, and the military. Here Hershock discusses the distinction between technologies and tools. The former consists of more than gadgets and devices; technologies encompass the system of social relations and balances of power, while tools are much smaller in scope, comprising the use of technical means already embedded within the system of social and power relations that comprise technologies. For example, a gun is a dangerous device; as a result, in many guns there are built-in safety devices. For Hershock, however, this is a far cry from the conclusion that guns are now safe because the deeper underlying cause remains neglected—the system of social relations that allow many people to own guns easily in the first place. This type of argumentation is used by Hershock throughout the book.

Hershock discusses the all-important problem of attention capture in chapter four, and his description of this predicament paves the way to his central argument in the following chapter. What happens when we use social media is that we leave what is known as “digital trails” or “digital crumbs” in the wake of our usage. In the past, these trails were neglected until someone discovered that they could point toward the pattern of media use by each individual user, a veritable gold mine for advertisers. The social media companies realized this immediately and started to install more sophisticated algorithms to keep these digital trails and at the same time to keep the user focusing on the content of the media for as long as possible. This is the key predicament that Hershock’s whole book is designed to analyze and criticize. His Buddhist critique of the attention capture algorithm starts by realizing the unwholesome nature of the whole thing—we are not being skillful in allowing ourselves to be hooked up to these media all day long. We need to be present as someone more skillful in order to avoid this predicament.

Chapter five is the most important chapter in the book. Here Hershock talks about his own theory and its difference from the usual form of

ethics that I discussed earlier. Here he mentions some of the well-known computer ethicists such as Terry Bynum and Luciano Floridi. These philosophers advocate the view that computer ethics should aim at maximizing the absolute good, which for Bynum is human flourishing and for Floridi the amount and variety of information in the environment. Hershock criticizes these positions, saying that they do not provide enough force in solving the predicament he mentioned earlier. He then proposes in this chapter his own view, which he calls “ethical diversity.” Diversity is here given an extra meaning in that it refers to the dynamics of interrelationality and interdependence of all things, whereas “variety” is used for the other forms of ethics that emphasize only mere differences and number.

Chapter six compares Buddhist ethics to the philosophies of Socrates and Confucius. It aims at answering the question of who we need to be present as to “engage in diversity-enhancing ethical improvisation,” in Hershock’s words (15). The chapter looks at the other two major ancient ethical traditions, Confucianism and Socrates’ philosophy, and proposes that the ideas of relationality in the former and rational integrity in the latter do complement the Buddhist view, which Hershock calls “attentive virtuosity.” Together these three concepts comprise the answer of who we need to be present as, which was alluded to earlier. Chapter seven is also important in that Hershock lays out the path of practice so that one become virtuosic, capable of resisting and stopping the predicament of the Intelligence Revolution. The content of the practice is predicated upon the six *pāramitās*, viz., in Hershock’s translation, generosity (*dāna*), moral clarity (*śīla*), patient willingness (*kṣānti*), variant effort (*vīrya*), pointed attentiveness (*dhyāna*), and wisdom (*prajñā*). I don’t quite agree with Hershock’s translation of *śīla* as “moral clarity,” because *śīla* has a sense of disciplining and restraining oneself so that one does not fall prey to the sensual desires. However, Hershock appears to add another meaning to the term on his own, so that the term means that one should redirect the currents of the contemporary karmic landscape (to use Her-

shock's own terms). That is, *śīla* becomes more social and political in Hershock's usage rather than inward looking and individual as in the traditional sense.

Chapters eight and nine present Hershock's practical suggestions on how to fight against the AI predicament. In chapter eight, Hershock advocates a kind of consumer boycott as a means for the fight. Since data is the lifeblood of data or surveillance capitalism, Hershock argues that consumers or users of the technology get together and at least slow down their use. This means simply being on Facebook or Google less and putting away the phones more. As a result, there will be more time for face-to-face communication and real connection to one's natural surroundings. Furthermore, just as there are carbon taxes on businesses to compensate for their emission of carbon into the atmosphere, Hershock suggests "data taxes" to be levied on the businesses that reap huge amounts of profit from selling users' data to advertisers as a means of slowing down the process, so that we collectively have more time to think about the impact of AI on our lives. The more data they collect, the more taxes. This is a very good suggestion. Imposing taxes would also have a more positive impact in the quality of the data being transmitted, too. In the current situation in which any kind of data can be produced and shared through media, the filters put in place by Facebook and others are utterly inadequate to combat the hate and misinformation pervading every corner of cyberspace. There would certainly be practical problems, such as who would have the power to collect the taxes since the scope of these giant corporations span all over the globe. Another potential problem is how to spend the tax money received, supposing that this is actually possible. The money could be spent on further research for designing AI algorithms that are able to filter out hate speech and prevent deceptions. This certainly requires strong political will and political power.

The last chapter focuses on education. Here, Hershock argues for increased support of the humanities, which everywhere are becoming more marginalized in favor of the STEM disciplines. Here I can only agree.

However, the education advocated in this chapter appears to focus only on those who will graduate to become users of the technology. What is important and is missing in this chapter is how the computer scientists and engineers of the future should be educated.

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Hershock looks at the problems caused by AI from the perspective of the ordinary user. There is little or no suggestion for the designers and manufacturers of AI software as to what they should do. But if one talks about an ethics of AI, especially an ethics of diversity regarding AI, surely one should also factor in the designers and manufacturers too. The suggestion to collect data taxes is of course directed to the political authorities, but not to the likes of Facebook themselves. It would be more complete if Hershock said something directly to these groups about how AI should be designed and what is expected of the technology from the side of ordinary users. One need not unnecessarily create a line between the user and the designer of the technology and focus only on the former. That would be perhaps less than ideally skillful.

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