Afterword

ETHICS, ENGINEERING, AND PUBLIC IMAGINATION

While many people start realizing how much technology impacts their lives, few think of technology, infrastructure, and engineering as having anything to do with ethics. Let alone that, members of the general public are aware of the existence of the academic areas so familiar to the author of this book—engineering ethics, ethics of technology, science and technology studies. It is easy to forget this, especially because scholarship in these areas has been growing and flourishing during the past decades. But if we want to improve the situation, it is important to reflect on why this gap persists.

While thinking of ethics most people assume a distinction between “human” areas and “things” areas (“non-human”). Technology and engineering are seen as belonging to the “things” part, whereas ethics is perceived as having to do with humans and their actions. In spite of all the hard work done by philosophers of technology and other thinkers about technology, this is still the picture assumed by most people, and it is difficult to change that. The result is that it is relatively easy to convince people that ethical evaluation is necessary in areas such as medicine and health care or even business, which are perceived as “human,” but that it is really hard to have people fully realize that technology, infrastructure, and engineering are suffused with specific and difficult ethical questions and that ethical evaluation and studies in these areas is as much needed as in others.

Indeed, it is astonishing how accepted for instance medical ethics is as compared to ethics of technology. It is not only much more developed as an academic discipline, ethical evaluation in this field is by now also well established. It is also integrated in medical practices. There are ethical committees that review research proposals and oversee medical decisions. Students in medicine, nursing, and so on are educated in ethics. There is a relatively large number of academics who make their living with this kind of ethics.

Ethics of technology, by contrast, is still a rare bird, especially when not immediately relevant to medicine or anything “bio.” Of course, there is an increasing number of scholars, journals, organizations, conferences, and other academic activities now, there are some graduate programs in the area, and there are some exceptions where ethical evaluation is applied before the technology is developed. Consider for instance the new research funding scheme of the European Commission and (other) national programs of “responsible research and innovation” in Europe. But the numbers and the extent to which technological practices are actually influenced by, say, an ethical committee or by ethical reviewers who look specifically at the ethics of technology and engineering are somewhat disappointing. Despite applaudable, significant, and continuing efforts by many people in the field to increase and deepen scholarship, education, and practice in this area, there is still a long way to go.
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Can we speed up this positive and encouraging, but all too slow development? Sadly, the one thing that is rather successful in increasing more general awareness about ethics of technology and related issues is often a disaster, a case where things have gone terribly wrong, or, in the best case, a story about a disaster or a worst-case scenario. We often only realize how dependent we are on technology and on those who design and maintain it once things go awfully wrong. This is also the case in the (related) area of environmental ethics: catastrophes and doom scenarios are often wake up calls. Should we wait for the next technological disaster to happen before technology is seen as an ethical matter that needs far more resources than it gets now? I hope not, of course, but I am afraid this is the situation we are in now with regard to ethical questions raised by new and emerging technologies, and we better at least try to imagine what could go wrong if current technological developments continue in the direction they are going now (or can be foreseen to go).

Consider our dependence on Information and Communication Technology (ICT). Luckily, we have not (yet?) experienced the equivalent of a nuclear disaster. Cases where things went wrong are limited. But, this also means that there is generally a lack of sufficient public debate about the ethics of technology and engineering. We live like people who live in a vulnerable area but think they do not need protection against floods. In the area of ICT we might well need the equivalent of the Dutch storm surge barriers to prevent worst to happen. If we want to deal with the current and future technological vulnerabilities, we need ethical-technological “flood control.” We need to re-direct the design and use of technology in ways that mitigate ethical risks and contribute to our vision of a better world. Of course, it is difficult to foresee all possible consequences of a technology, and we can never fully “design” the technological future, if we should even attempt to do so at all. But unless ethical reflection and evaluation are more integrated in technological design, use, and policy, society will keep a dangerous blind spot.

It seems that academic efforts to make this happen in practice, for example in the form of “technology assessment” and “research and responsible innovation,” are insufficient. Maybe this is partly so because academics are given, and assume, the role of scientific “experts” who have to produce thoughtful articles, balanced reports, careful evaluations, and reasonable advice. And of course all of this is necessary. But what is missing in most of these articles, reports, evaluations, and advice is sufficient engagement with, and stimulation of, the public imagination. There is too little interaction between key academics in the field and those in the media, in politics, in business, and elsewhere who are (far more) successful in shaping the public imagination concerning technology and who play a role in public discussions about technology, but usually lack a deeper understanding of the ethical issues raised by it.

If we want more rapid change when it comes to ethics of technology, therefore, we need not only the reflection and the understanding, but also the imagination, the emotions, the pictures. We need the doom scenarios, perhaps, especially in order to increase awareness. Yet what we need most is a positive, common vision of where we want to go. Unless we are able to collaboratively and collectively imagine a better society and better technologies, we risk to sleepwalk into a future no one wants. We will keep fine-tuning things that are about to disappear. And most of us will be in the hands of those who design our future without asking us where we want to go. Both directions are possible. They are possible because, after all, technology has much, if not everything to do with humans and human values. Ethics of technology and engineering ethics are, in the end and in a deeper sense, a kind of bioethics: they have to do with life, with human lives and other lives, especially with how we live our lives and what this means for other lives. Since ancient times this is what ethics is all about.
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