



Technology and the good society: A polemical essay on social ontology, political principles, and responsibility for technology[☆]



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ARTICLE INFO

Article history:

Received 12 August 2016

Accepted 9 December 2016

Available online 12 December 2016

Keywords:

The good life

Technology

Information technology

Philosophy of technology

Society

Political philosophy

ABSTRACT

How can we best theorize technology and the good society? This essay responds to this issue by showing how our assumptions about the meaning of the social and the political influence our evaluations of the impact of new technologies on society, and how, conversely, new technologies also shape the concepts we use to evaluate them. In the course of the analysis, the essay offers a polemic that questions individualist approaches to the good society and individualist assumptions about the social, especially in the analytic-individualist traditions and in postphenomenology, and recommends that more philosophers of technology use the resources of political philosophy to tackle the challenge of understanding and evaluating technology and society.

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1. Introduction

Researchers in philosophy of technology agree that evaluating technology includes evaluating its ethical and social consequences, which may take the form of reflecting on the good society. However, there are divergent views on how to do this. How can we best theorize “the good society”, and more specifically, “the good society with technology”?

Thinking about technology and the good life tends to focus on the individual, psychological point of view, for instance on well-being or individual eudaimonia or happiness [1–3]. More generally, philosophy of technology and applied ethics in the English-speaking world tends to focus on the individual as the level of analysis. “The good life” is understood to refer to the life of the individual, and hence the relation between technology and the good life is studied and evaluated at that level. This does not mean that society is not considered, but a particular conception of society and the social is involved. For instance, the societal consequences of technology are assumed to consist of the aggregation of its individual effects. Hence a lot of work in for example ethics of technology within the analytic-individualist tradition focuses on evaluating how technologies shape the life of the individual. Even work in Anglophone philosophy of technology that draws on the

virtue ethics tradition such as the recent book of Vallor [29], while not neglecting practices¹ and cultures, still focuses on *individual* character, skills, and flourishing.

More generally, in spite of the continuing influence of Science and Technology Studies (STS), for example the work of Latour [e.g. 14], and of approaches in critical theory that focus on the social (for example the work of Feenberg e.g. [27] or Winner e.g. [28]), often technologies are nevertheless studied and evaluated at the level of “individual” artefacts and their relation to (individual) humans, leaving out their relations to other artefacts and the wider social-technological context: the practice, the society, and the culture. This is not only the case in so-called ‘analytic’ philosophy of technology; it also happens in approaches that originate in so-called ‘continental’ philosophy. Postphenomenology’s² typical attention to how technology mediates human-technology relations, for

¹ In this essay I use the term “practices” in a loosely MacIntyrean sense as referring to activities that are inherently social, depend on the use and development of skill, are embedded within a community, and provide a way to learn and exercise virtue. For example, playing music is a practice, but also coding and the design or hacking of a technology can be regarded as a practice if it meets these criteria.

² While there is discussion about what postphenomenology is and how exactly it differs from phenomenology, for the purposes of this essay I assume the following definition inspired by the writings of Ihde and Verbeek. Postphenomenology is based on the work of Don Ihde and is a revision of traditional phenomenology which studies in an empirical way how technologies mediate relations between humans and their world.

[☆] **Focus:** Theorizing Technology and the Good Society.

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example in the work of Ihde [25] and Verbeek [26], tends to focus on individual humans and individual subjects. Social relations are not centrally part of their phenomenology and hermeneutics.

A similar lacuna exists for *politics*, in particular for political philosophy. Again Feenberg and Winner are exceptions, but they cover only a limited range of political-philosophical and sociological approaches. Well-known political theory from the English-speaking world, such as work by Rawls, Sandel, Walzer, MacIntyre, or Nussbaum is often not even mentioned, let alone used, within contemporary philosophy of technology. The danger here is that philosophers of technology try to reinvent the political-philosophical wheel, neglecting entire discourses and traditions.

In my work on philosophy of technology I have tried to remedy this one-sided understanding of the problem by paying attention to less individualist, more relational ontologies [4,5] and by connecting evaluations of technology to thinking about modernity [6,7], religion [8,9], and ecology [10]. I have also connected the issue of human enhancement to political-philosophical discussions [17].

With regard to the good life, there are many ways to shift the focus away from an individualist interpretation of the good life. For instance, inspired by ancient Greek thinking about the good life, one may choose to interpret *eudaimonia* in a more communitarian way (inspired by Aristotle and perhaps MacIntyre [11]), as being about the good life of the community and related to practices, and then apply this conception of the good life to technology. Then evaluating a particular technology means not only to study how it shapes individual lives and meanings, but also how the community and the practices change. Or one may interpret the capabilities approach in a more “social” way, not only by emphasizing the more social capabilities such as the capability of affiliation, one of Nussbaum’s central capabilities [12], but also by showing that each of the capabilities depends on the social or on the community for its further development. Technology can then be evaluated according to its contribution to capabilities, understood as intrinsically connected to the social and the community. Such routes can lead to an understanding of the good life with technology that is more intrinsically social than current, more individualist understandings.

In this essay, I will further unpack the claims made in this introduction. However, I will not construct a direct normative argument or theory about technology and the good life, but instead make explicit and question some social-ontological and political assumptions in some kinds of current influential thinking about technology. In the course of my essay I reveal and question individualist assumptions and refer to concrete technologies (e.g. robotics) and problems in this field (e.g. privacy), but the emphasis is on questioning some approaches, in particular individualism. Then I argue that philosophers of technology should benefit more from the resources of political philosophy, for instance by using political principles to evaluate technology’s contribution to the good life – although I will also argue that political principles should not be seen as stable and independent from technological development (a point that is typically missed by political philosophers, who usually do not read philosophy of technology).

2. Make your assumptions explicit: individualist assumptions and beyond

On the one hand, evaluations of the impact of technology on society could benefit from more fundamental and critical reflection on their, often salient, (descriptive) social-ontological and (normative) political-ideological assumptions. If we want a more critical and philosophical evaluation of technology, these assumptions need to be made explicit and discussed. For this purpose philosophers of technology can learn from (sub)disciplines such as social philosophy, sociology, cultural anthropology, and STS, and

political philosophy, which offer theoretical resources that support more awareness and understanding of the social and political nature, and societal embeddedness, of our thinking about technology, the good life, and society.

Yet whereas for instance STS and Latour’s work is already widely used in philosophy of technology, (sub)disciplines such as social philosophy, classical sociology, and (social) ontology are much less used but can be helpful for reflecting on the fundamental assumptions about the social that underlie the study and evaluation of technology. Moreover, an influential “school” in philosophy of technology, postphenomenology, has surely benefited from reading STS and Latour when it comes to recognizing the hermeneutic role and the agency of artefacts (see for example the work of Verbeek [26]), but has not really taken on board its more *social* approach and, more generally, attention for the social question as such. Mediation theory à la Verbeek asks about technological mediations between individual subjects and (individual) artefacts; social relations are not part of the human-technology-world scheme. The result is not only that the social and the cultural are largely neglected, but also that so far postphenomenology and mediation theory have not yet made explicit, or reflected on, their assumptions concerning the social in the first place. Yet for a mature philosophy of technology it is important to do this, in postphenomenology and elsewhere.

This is not only important for thinking about technology and the social, but also has implications for thinking about ethics and technology, and related concepts such as responsibility. For example, whether we start from the assumption that society is the sum of individuals, or instead from a more relational, communal, or even organic view of the social, will influence our view of responsibility for technology and will lead to different views of responsible research and innovation. For instance, individualist understandings will emphasize individual consent, whereas more communal versions might focus on participatory and communal innovation. If the individual level is seen as ontologically primary, responsibility for technology will be seen as an individual matter: it is the responsibility of the designers and users of technology to develop and use technology in a responsible way. For example, from an individualist perspective, the good life with robots is a matter of making sure individual designers and users create and use technology in a way that contribute to the good life of individuals, and responsible innovation will focus on individual consent. The use of robots in health care is then a matter of individual ethics: the ethics and consent of the individual users, care givers, etc. and the ethical implications for individual care receivers and their psychology. One may ask, for instance, if a cuddly care robot deceives vulnerable users such as the elderly or children. If, on the other hand, a more relational or communal view is taken, different questions may be asked, for instance what kind of practices and communities would be created by having robots play a larger role in health care and care for the elderly, and how social relations and social practices are re-configured by the technology. In the context of health care, users and patients are then seen as part of a web of social relations and as participants in social practices, rather than individuals. Questions concerning the good life are then expanded to a range of participants and stakeholders, with a focus on their relations and on the practice.

Furthermore, when we think about technology we also tend to make assumptions concerning the relation between the social and technology, or between the social and nature. For instance, our evaluation of technology’s impact on society differs if we define the social in strictly human terms or if we include technology and materiality in the social, as influential approaches in STS and anthropology do (consider again Latour’s work). The choice we make here has, again, implications for our thinking about for example

technology and responsibility. Should ethics of technology target primarily the responsibility and ethics of individual humans or rather evaluate the entire socio-technical system? Should thinking about technology crucially include thinking about the social, or are technology and the social not intrinsically connected? For instance, using robots in health care might be analysed in terms of what individuals might do to other individuals and their lives, or as a question of what kind social-technological systems and societies are created when care is automatized. And one may focus on good and bad uses of the artefacts, or instead evaluate the entire human-technological and social-technological practice. Moreover, if one endorses an ethics of technology that acknowledges differences, one could focus on individual differences (and their consequences for technology use), or rather on cultural differences; in the latter case not only philosophy but also for instance cultural anthropology may help to provide perspectives from which to understand the relationship between technology and culture.

Interestingly, the choices one makes here are not only important for descriptive and hermeneutic purposes but also have a normative significance. Which assumptions about the social one makes, is not *merely* a question of “method” or “approach”; the method and approach also influence the normativity of the analysis. In particular, the method may also influence the very values that form the basis of one’s evaluation. While for instance there is no straightforward and clear relation between on the one hand, social-philosophical individualism, and on the other hand normative individualism or, say, neoliberalism or libertarianism (indeed an analytic distinction can and should be made between these³), it is neither the case that the former kinds of theories have no normative influence whatsoever. For instance, if one defines society as the sum of individuals and analyses individual ethics, then the range of normative concerns that guides the evaluation of technologies will typically be limited to the focus these theories provide: the focus at the individual level. Other normative concerns, such as ethical concern for the natural environment, might be left out. I say “might” since I do not claim that these theories could not take into account communal or environmental concerns. For instance, a virtue ethics perspective or a utilitarian theory could be interpreted in such a way as to include these concerns. The point is that a methodological focus on the individual makes it *easier* to lose sight of, say, the ecological and environmental effects of technology, since it is based on a conception of the social that thinks of the social as what happens between individuals or at the level of individual character. This in turn is more conducive to for instance neoliberal ideologies. Similarly, an organicist view of the social needs not lead to fascism or Nazism. But perhaps more care has to be taken to avoid such routes, also in the seemingly politically neutral choice of method. The metaphors and approach are not entirely neutral, neither ethically nor politically. This means that theory about technology and the good life should question its own assumptions about the social and, if necessary, change direction.

For postphenomenology, for instance, this implies that when it comes to the hermeneutics and normativity of technology it should ask about the social dimension of this normativity and should not limit the inquiry to the morality of artefacts and their mediating role, but also ask about the social and political implications of technological mediation. More generally, postphenomenology and

media theory are invited to reflect on their assumptions about the social, and to study how the social and the political can be integrated in the human-technology-world framework as developed by Idhe and elaborated by Verbeek.

For theories of the good life in the analytic tradition that are currently mainly focused on individual *eudaimonia*, virtue, and well-being, this questioning means that they should make explicit that focus, and either expand their approach to include social and political aspects, or argue why they think that the focus on the individual is justified. Otherwise their individualism plays the role of an unconscious “ideology” which guides their theoretical work but remains implicit. As long as it remains implicit, it is not possible to gain and take a critical relation to it.

This mentioning of politics and political ideologies brings us to the next point I wish to make in this brief essay: the need for engaging with political philosophy in evaluations of technology.

3. Use political philosophy

Given that technologies raise political issues (something which all philosophers of technology will acknowledge), it would be very helpful for dealing with the problem of technology and the good society if philosophers of technology used more resources from *political philosophy*.

Some philosophers of technology already do this, since politics or power is their specific theoretical focus. For instance there are researchers influenced by Marxism and other critical theory, or by Foucault, who study power issues with regard to technology. For example, influenced by Marcuse but also by Heidegger and STS, Feenberg has developed a critical theory of technology which enables us to study how technologies shape society by their design, urging us to re-design our technologies in a way that contributes to achieve social ends such as more equality [30]. And in the (related) field of media studies Christian Fuchs has analysed social media and other uses of the internet by means of Marxian theory, drawing attention to ‘digital labour’ [13]. Feminist theory can also bring in the political, and if we consider also STS, then in Latour [14,15] we can also find (a very specific kind of) attention to both the social and the political. Conceptualizing a social world and political collective of humans and nonhumans, Latour’s work can be read as an explicit attempt to bring things into the social and the political. But in many influential and mainstream areas of philosophy of technology, including individualist theories of the good life with technology and postphenomenology and mediation theory, direct engagement with political theory is largely avoided. Maybe this is understandable in the context of the postmodern aversion against the grand narratives. It is also to be expected, perhaps, in work that is situated in the wake of the so-called empirical turn, which focused on artefacts and turned away from what Mitcham [16] called a “humanities” philosophy of technology: apparently this turn also included turning away from political philosophy. One may also point to analytic philosophy’s focus on “technical” problems in a way that also left out, and leaves out, attention to the political (and the cultural, the “religious”, etc.). This happens in much applied ethics, for instance, which touches upon issues concerning technology (for instance in bioethics, ethics of human enhancement, and robot ethics) but when it comes to its approach tends to remain at the individual level. But understanding what happened does not justify it.

Political philosophy offers excellent resources for thinking about justice, equality, freedom, democracy, and other political principles which, unfortunately, are not often used by philosophers of technology to discuss the societal impact of technology. Consider for instance discourse about the ethics of human enhancement: while some authors have written about the political aspects of human

³ Social-philosophical individualism is a descriptive and methodological claim about how to approach the social, saying that the social should be studied, explained, and understood at the level of the individual. This is different from normative positions which claim that our moral and political normative focus should be on the individual, for instance the view that individual freedom is the highest moral and political value.

enhancement (see for example my discussion of the politics of human enhancement [17], Savulescu about fairness [31], and Cabrera's arguments for social enhancement [32]), the discourse on human enhancement, especially in transhumanism, is often limited to ethical theory and psychology. What matters, according to much literature on this topic, is how human enhancement might change the lives of individuals, say in terms of their psychology and well-being. Is it right to use "moral enhancement" [18], for instance? – with "moral enhancement" being understood as referring to enhancing moral-cognitive capacities and therefore the related ethics is the ethics and psychology of the individual. But approached in this way, political-philosophical questions regarding enhancement and (social) justice tend to remain out of sight. The focus is on the mind and life of the individual. For instance, it is imagined that we will create a new kind of individual human; there is little reflection on the future of societies and cultures – except then as the sum of individuals and the sum of technological risks that occur at the individual level. Consider for instance Bostrom's discussions of human enhancement and transhumanism, which tend to be focused on either individual capacities (e.g. Ref. [33], but see Ref. [35]) or work on existential risks for the whole of humanity [34], which mentions policy issues but mainly discusses the problem in ways that abstract from concrete social and political problems – let alone *addresses* these problems with the help of political theory.

Why this neglect of the political? Here too it is important to reflect on fundamental assumptions made, including the very concept of the political that is assumed. Many assumptions have a long history and are rather pervasive and persistent. For instance, since Aristotle the political has been defined in human terms, even, as Arendt's interpretation [19] shows, in explicit opposition to materiality and necessity. Whether or not Arendt's particular view as expressed in *The Human Condition* is still influential today, her view of politics and the distinctions she makes between on the one hand politics and on the other hand making and labour, are representative of an Aristotelian way of thinking in the history of the West which has separated the political from the technological-material. Technology and the good life are then seen as belonging to different domains, hence questions concerning these topics are also separated. For instance, questions regarding human enhancement or artificial intelligence are seen as a "technological" issue that have little to do with politics or religion, which are seen as being concerned with "human" discourse and culture. But other conceptualizations of the political are possible. Think for instance about Latour's non-modern conceptualizations of politics, which crosses the subject-object boundary and attempts to give a voice to artefacts [15]. The precise conceptualization of politics we choose has implications for how we deal with technology in society.

For example, whether we see technology as politically neutral or as intrinsically political will influence how we deal with technological risk: in the former case dealing technological risk may be seen as a mere "technical" problem and perhaps a "private" matter (a matter of individual use and a matter of how private companies deal with it); in the latter case technological risks is seen as always already social and political, and therefore a matter that is properly the domain of politics, a "public" matter that should not be left to technical people and private corporations alone. Another example is climate change: if we define the political as being about people rather than about things, then climate change is not seen as a properly political issue but can only appear in terms of its effects on humans and societies. If, on the other hand, politics is seen in a Latourian way which brings nonhumans such as "the climate" into politics [14] [15], then climate change is a very political issue indeed: one which includes humans and non-humans, and one which requires solutions that cross the subject/object and human/

nature barriers.

To avoid this neglect of the political in thinking about technology and the good society, then, it is important to reflect on one's assumptions about the social and the political, and to make upfront choices about one's approach to politics. But to what extent is this a matter of choice?

4. Technology also influences the way we think about the social and the political

One may conclude from the previous sections that it is important to be aware of one's social and political assumptions, and make choices with regard to these. It is also important to make an explicit choice concerning use of approaches and theories from political philosophy. However, which approach to the social (and hence to technology) we employ and assume in our understandings and evaluations of technology, is not *entirely* a matter of choice. The theories we use and the choices we make concerning our approach are not entirely independent of the object of investigation. In contrast to what most political philosophers assume, our (conceptualizations of) political-philosophical principles and thinking about the social are themselves not entirely technology-independent and up to choice, but are themselves influenced by human-technological experience and practices. For instance, our experience with the internet may give rise to specific conceptualizations of the social and the political (e.g. visions about society in terms of networks or global citizenship, and related visions of the good life), which in turn shape particular uses of the technology. And "technical" practices in social robotics may suggest particular conceptualizations of the social and of society (e.g. behaviourist view of the social, a sexist view of human relations, and a consumerist view of care and society), which in turn may shape particular practices, e.g. in health care (for example when the practice and thinking about health care technology suggest a vision in which patients are mere consumers and users of technology, who benefit from services provided by for instance "female" robots). These assumptions concerning the social and related assumptions (e.g. about gender roles) often remain invisible; but we can reveal them and use that as a way of contributing to the critical function of philosophy of technology. We can do robot ethics, for instance, in a way that reveals how both thinking about robots and the design of robots is problematic when influenced by salient assumptions about slaves (see for instance [20]) and women (see for instance discussions about sex robots, e.g. the Campaign Against Sex Robots⁴ and critical responses such as [36]).

Furthermore, the very meaning of ethical and political principles such as privacy and security may be redefined by (our use of) electronic information and communication technologies. It is not only the case that new technological developments raise concerns about privacy [21]; the new technologies also influence the very way we *define and think about* privacy. For instance, today privacy is often defined in terms of control over your "data". This assumes that we are producers of data, some kind of moving targets that radiate or leak data (which then can be stolen, misused, and so on) – a very specific conceptualization of both privacy and human activity. And since we are continuously connected to the internet, not only at work and on the street but also at *home*, via social media and smart technologies through which we share (part of) our private life, the "home" can no longer be defined as a private sphere, unless we re-define privacy. One could say that because of the technology, at the very least it is no longer clear what privacy is; it is not even clear what we mean when we say that we value privacy. The value

⁴ <https://campaignagainstsexrobots.org/>.

and principle itself is, to some extent, shaped by the technological developments.

Hence when we make assumptions about society and politics when we evaluate technologies, we need to be aware that the object of our reflection also influences our thinking about it; in this epistemology the object shapes the subject (and vice versa). We are not living in isolation from our contemporary society and culture, from our contemporary environment, and this is a technological environment with specific features – including normatively relevant or normatively “active” features. As social and environmental beings, our existence and our *thinking* and our *values* are shaped by our environment, and hence also by technological artefacts and systems.

Another way of saying this is that technology does not only have an instrumental but also a non-instrumental aspect. At least since Heidegger [22], philosophers of technology have emphasized that technologies are not only instruments, tools, but also shape our thinking. Technologies are not only means but also frame our ends. Ethical values, therefore, are not immune for technological change; they are also touched by it. Not only how we live our lives as individuals but also what we *value* changes.

Political philosophy and (applied) ethics can learn from this insight about the non-instrumentality of technology. It is not only the case that philosophers of technology can and should learn from normative and practical philosophy; the latter can also learn from philosophy of technology. Moreover, recognizing the non-instrumentality of technology, which is very common in contemporary philosophy of technology, has implications for our evaluations of what technology does to society. It means, in particular, that such evaluations should not be reduced to “applied ethics” or applied political philosophy, if that means that we have a fixed and permanent set of principles which are applied to the fluid, impermanent world of technology and society. For the purpose of evaluation we can use principles, but it is important to be clear about their status: they are conceptual tools, and tools – as we know – can change and have changed. They have a historical aspect.

For example, what we mean by privacy may be different in an age when we are continuously connected via social media. Perhaps in the future privacy will come to mean not so much isolation from others, as it was seen in the past, or no interference from others, as it was seen in modern times, but rather something like moving about in specific, self-chosen “onlife” [23] environments and touching certain issues rather than others (no “political” and “public” issues?). Or perhaps such a definition will prove untenable, and the concept of privacy will change once again, or become obsolete or even meaningless. Whatever happens to the concept of privacy, the point is that it is unstable in the light of technological-cultural developments. Hence an evaluation of technology in terms of privacy needs to be aware of the instability of this concept and reflect on it.

Similarly, the way we define and interpret capabilities may be influenced by our use of technologies. For instance, I have suggested in previous work [24] that the meaning of the capability “social affiliation” may change as a result of new technologies such as social media and social robots. As today a lot of human communication takes place without physical face-to-face contact, for instance, we may come to see social affiliation as having little to do with such physical encounters, whereas it is likely that in the past these meetings were seen as the “default”, “normal” form social affiliation takes, until for instance phone calls became less exceptional and became the new “default”. Again, the development of technologies and media always influenced our conceptions – in this case human communication and its “default” form, which is always changing but is at the time regarded as being somehow less

distant and less mediated.

Thus, whatever happens and will happen to these particular concepts (privacy, capability of social affiliation), it is clear that our thinking and values depend on the relevant technological development. Moreover, with “our thinking” I mean not only “our” thinking as in “the thinking of all individuals together” (aggregation of individuals) but also “our” thinking in the sense of the thinking that is present and changes/evolves in (technological) society and culture as a whole, where individual thinking is always already related to the whole. To conclude: technology changes not only individual thinking, but also always at the same time our society and our culture, including its values and indeed political principles. If we take this more holistic approach to values and their relation to technology, evaluation of new technologies is never only about “technology”, presumed to be an independent object of investigation; it is also at the same time an evaluation of our practices, society, culture, *and* the evaluative frameworks that are operative in these social wholes and that are not stable but also dependent on technological development.

Note that the claim that technology and culture are deeply related does not need to be interpreted in a deterministic or fatalistic way. On the contrary, once we become aware of this relation we can try to actively shape it and contribute to it, thus taking responsibility for technology – keeping in mind, however, that as *individuals* we have limited influence on the whole.

5. Conclusion

In this essay I have drawn attention to the assumptions about the social and society that influence our understanding and evaluation of technologies, and argued for more explicit attention to these assumptions (e.g. methodological individualism) and use of social philosophy, classical sociology, and other thinking about the social. In particular, I have been critical of individualist assumptions and I have taken the position that it would be helpful to make more use of the resources of political philosophy for evaluating new technologies. This criticism had a political character; it has especially targeted analytic-individualist approaches in Anglophone (applied) ethics and postphenomenology and mediation theory, and challenged them to clarify their assumptions and learn from political philosophy, sociology, and related disciplines. I also acknowledged that some philosophers of technology are already doing this, but suggested that there is still a lot of scope for developing reflection on the social and political aspects of technologies. In addition, I have suggested that in this respect philosophy of technology should not only become more critical-philosophical (indeed less dogmatic) by reflecting more on its assumptions about the social and by taking into account thinking about the social in other (sub-)disciplines, but that given its specific expertise and core insight about the non-instrumental role of technology, it can also contribute to political philosophy and other normative theory (and to sociology that does not recognize this non-instrumental role of technology). Philosophy of technology, understood appropriately and critically, can show how the very principles and values we use to evaluate technologies, are themselves dependent on technological development. Furthermore, I have argued that the approach we choose, while not providing direct normative guidance, has normative implications. The present essay and polemic, then, is not only concerned with approach or level of analysis as such; it also raises questions about what kind of “good society” and good politics, with technology, we want, and urges us to reflect further about *how* we want to take responsibility for it.

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