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ABSTRACTS

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Innovation beyond technology: Alternative approaches and alternative responses

Pieter VERMAAS
Delft University of Technology, The Netherlands
p.e.vermaas@tudelft.nl

Marianne BOENINK
Twente University, The Netherlands
m.boenink@utwente.nl

Deborah JOHNSON
University of Virginia, USA
dgj7p@virginia.edu

Alfred NORDMANN
Technische Universität Darmstadt, Germany
nordmann@phil.tu---darmstadt.de

Ibo VAN DE POEL
Delft University of Technology, The Netherlands
i.r.vandepoel@tudelft.nl

The classical framing of the development of technology as due to new technical findings that find their application in new products and processes has by now lost its dominance in philosophy of technology. Technological development, and specifically innovation, is shaped by additional factors and by processes more complex than mere application of new findings. New technical findings can create enabling technologies, as does NBIC convergence, and then define a platform for innovation, rather than be that innovation itself. Design has evolved beyond solving set problems in terms of technical products and has become directed towards shaping and reshaping the value of these products, adding a new dimension to the development of technology.

Including these alternative approaches to technological development in our thinking challenges existing responses to it. Platforms and design methods for innovation are sometimes recommended for their potential to create developments that cannot be predicted nor anticipated, which means that the notion of technology assessment, seen as charting, discussing and intervening with developments in technology, needs revisiting. Yet this emergence also opens possibility for philosophy of technology to define new responses to innovation and its unpredictable consequences.

In this panel we look at innovation to explore its alternative approaches and for surveying new ways of responding to it. We open by five pitch presentations to set the stage and then broaden the discussion to a plenary one.

Pitches

Marianne BOENINK

In recent years, values have acquired an increasingly prominent role in innovation and innovation policies. On the one hand, technology developers and designers increasingly frame their goal in terms of value creation (in a broad sense), sometimes leading to explicit 'value sensitive' design approaches. On the other hand, recent strategies for anticipatory governance and TA increasingly tend to include at least some attention for values. However, in both cases values are usually seen as stable phenomena, which can be used as unequivocal criteria for assessing the desirability of innovation. This ignores the fact that morality is dynamic, partly as a result of technological change. The challenge for philosophy of technology, I will argue, is twofold: (1) to bring in the notion of techno---moral change in innovation and innovation policies, (2) without falling prey to naïve notions of steering such change.

Deborah JOHNSON

Technological development and innovation are vitally important because the technologies produced and adopted structure the world in which human lives take place. Technology Assessment (TA) of some kind is, therefore, important though traditional forms of TA don't seem to take into account that the processes of technological development and innovation are multi---directional, contingent and involve many different actors and factors. TA doesn't seem to take into account the contingency and uncertainty of technological development, especially the fluidity of social arrangements and social practices that constitute new technologies. Attempts to control or structure the development process – to make it more efficient, faster, more value---generating – are understandable though also problematic for a variety of reasons.

Alfred NORDMANN

Different concepts of design can be contrasted and relate to different approaches to Technology Assessment (TA). There is first the notion that design seeks productive anticipations of the future which corresponds to TA in the social shaping idiom and which confronts the Collingridge dilemma. This form of TA takes the future as an object of design. There is second the notion that in an iterative process design attunes system performance to user expectations. It corresponds to TA in the idiom of collective learning from social experimentation. The two approaches are critically evaluated in terms of technical hubris of TA.

Ibo van de Poel

Introduction of technology into society should not be conceived of as implementation but rather as a form of experimentation and on---going development. Advantages and disadvantages of new technology can only partly be anticipated and will usually become gradually known in a process of social experimentation. This perspective raises new questions about how we should organize learning processes and how to experiment with technology in a socially and morally responsible way.

Pieter VERMAAS

In current design methods it is explicitly argued that designers spur innovation by taking deliberate distance from the three other key---actors involved in design. Customers may initiate a design process but it is the designer who formulates what actual goals these customers have. Managers of design processes are set aside as killing serendipitous innovation by their pre---set targets. And user---centred design is seen as leading to mere incremental improvements. Design has become a separate source of innovation that creates innovative propositions to people rather than solves the problems people formulate.