

## Summary

### **Carl Mitcham's Project for a Philosophy of Technology**

The subject-matter of the dissertation are views of Carl Mitcham, one of the leading thinkers in the field, on the philosophy of technology and technology itself. The dissertation aims at presenting, reconstructing, and evaluating Mitcham's key ideas: research on the identity of the philosophy of technology, its relationship to the philosophy of science, history of technology, and philosophy of engineering as well as on the forms of technology and its relation to human beings. The analysis shows Mitcham as an important researcher for the field of philosophy of technology because of both his scholarly achievements and his institutional contribution to the shaping of this field.

The dissertation consists of four chapters, with a table of content, introduction, and conclusions, and is supplemented with the table of content and summary in English and the name index. Chapter I presents some issues useful for understanding Mitcham's thought. The chapter first sketches Mitcham's profile as a researcher, lecturer, and editor of numerous works on technology and the philosophy of technology. Secondly, it presents his understanding of the aims of the philosophy of technology. And then – thirdly – the problem of the term and concept of technology and that of technique. Chapter II consists of four points. The first two points are devoted to the relationships – as seen by Mitcham and other researchers – between the philosophy of technology and related disciplines: the philosophy of science and the history of technology. The third point develops an analysis of one of the main Mitcham's theses on the existence of two traditions in the philosophy of technology: engineering philosophy of technology and humanistic philosophy of technology. The two traditions are shown as different with respect to their origins, main objectives, and research methods, as well as key representatives that Mitcham points to; they might even be seen as antagonistic. Mitcham's thesis about the need for synthesizing both traditions into a new "complete" philosophy of technology is then discussed. The last point of this chapter presents the origin and characteristics of the philosophy of engineering as a new form of reflection on technology. Chapter III discusses Mitcham's theses on technology. The first point presents Mitcham's division of the forms of technology: artifacts, knowledge, activity, will. The second subsection presents Mitcham's account of the possible relations of "being-with-technology" and the problem of technical determinism and indeterminism. Mitcham replaces the classical

division of the human-technology relationship into technooptimism and technopesimism with three types of relations: ancient skepticism, “Enlightenment optimism”, and “romantic uneasiness”; a possibility of distinguishing the fourth type is also considered. Chapter IV is devoted to the reception and criticism of Mitcham's conceptions and it consists of four points. The first one shows the influence of Mitcham's ideas on other thinkers, especially the common acceptance of the thesis on the existence of two traditions in the philosophy of technology, and debates over forms of technology and of “being-with-technology”. The second point presents criticism of Mitcham's view from the point of view of the humanistic philosophy of technology and engineering philosophy of technology. Thus, for presenting criticism Mitcham's own idea of two traditions is employed. The last point develops the author's own criticism aiming at showing some limitations and possibilities of development of Mitcham's view.

The analyses developed in the dissertation allow us to draw some conclusions and pose further research questions. It is noticed that Mitcham considers so many different topics from many points of view and with many methods that it is impossible to include him into any of the currents in the philosophy of technology. His research projects are connected only by the subject matter – be it technology or the philosophy of technology, so sometimes there is an impression of chaos or disorder. Thus, Mitcham did not build any consistent system of the philosophy of technology. In spite of that Mitcham's ideas prove to be fruitful and inspiring for other thinkers in this field. Moreover, Mitcham's research indicates that the philosophy of technology – because of the complexity and changeability of technology itself – should be interdisciplinary. This gives rise to a dilemma: on one hand Mitcham wants the philosophy of technology to develop its cognitive identity, and on other hand, he encourages researchers to draw on results of other domains. Thus, there is a need for a “golden means” in the development of that domain. Mitcham also shows that it is necessary to consider technology both from a theoretical as well as practical point of view and in a sense this is reflected in his idea of the existence of the two traditions mentioned above. He postulates a synthesis of the two traditions as a “complete” philosophy adequate to its research subject – technology. The question arises whether such a synthesis is possible taking into account the differences between them which Mitcham himself pointed out. Mitcham's distinction between the forms of technology also leads to some questions. Technology develops so quickly and unpredictably that it is an issue to be considered whether the listed forms are sufficient to grasp for example strong AI or the Internet or maybe we should expand Mitcham's list. It is especially interesting, as Mitcham himself admits that technologies might take hybrid forms. It should also be stressed that Mitcham

developed ideas concerning the necessity of philosophy for engineering activity and postulated education to that effect.

The conclusion is that although Mitcham did not create a system of the philosophy of technology, he remains an important thinker who went beyond “classical” philosophy of technology, indicated new directions of research and inspired other scholars. Since technology rapidly develops we may expect that philosophy of technology will gain importance. This is the reason why it is worthwhile to investigate Mitcham's views.