

HABILITATION THESIS REVIEWER'S REPORT

Masaryk University

Applicant

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Habilitation thesis

We, Other Utopians Recombinant DNA, Genome Editing, and Artificial Life

Reviewer

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The book *We Other Utopians* offers an impressive and detailed diagnosis of our world in which biotechnological utopias take the place of the modern emancipation project, including a vision of solidarity built-in political communities. The book, based on the Eva Šlesingerová's ethnographic research at a biochemical laboratory and her comprehensive theoretical exploration of the theme of genome editing, is a valuable contribution to the contemporary debate about the role of imagination in technology development. The book leads us to reconsider the interconnection between historical and technological imagination in the sphere of science. Hence, let me start this review with a historical anthropological sketch that would provide an exemplifying frame to get the depth and significance of the author's interpretive perspective.

While the control of fire has been a fundamental ingredient of human existence for several thousands of years, the biotechnological production of life can become similarly intrinsic for the existence of our successors. The control of fire requires foresight and renunciation of affective impulses at the level of individuals, as the author reveals that biotechnological production of life is no less demanding of self-conduct. Both foresight and the renunciation of affective impulses required by fire control, scientific research, and many other modes of practice are learned by children for generations. The book *We Other Utopians* achieves its critical standpoint with a modest but ingenious move of reminding the reader that the gradual acquisition of a certain measure of self-control, a mode of conducting one's impressions and impulses, has to be located at the core of the historical processes which transmit those social and cultural conditions that make possible science, research and the future of biotechnological production of life, too. What is more, historical processes in which modes of self-conduct are transmitted from one generation to the next and in the course of which these forms change does not leave entirely behind traditions of self-understanding and motivation formed at earlier stages.

One of the essential features of this book is that it leads us to think about the future of biotechnological production of life in terms of historical processes of learning, sharing, and transmitting specific modes of self-conduct and self-understanding which make technological power over life possible. Accordingly, to grasp the dynamism of technological change, the book also provides a route to leave the analytical level of individual agency. To understand the rhythms and speed of current technological acceleration, one can be reminded that human societies perform culturally shaped capacity to control fire for thousands of generations. The domestication of genome editing seems to be incomparable to this process; nevertheless, we can be sure that it will be a part of cultural and social processes that extend beyond the timescale of individual existence. The history of the domestication of fire

extended from cooking and clearing land to experiments with nuclear power and thermonuclear weapons.

Currently, along with the success story of the increased human control of fire, we can recognize that the unintended historical consequence of this general increase in control was increased dependency, too. Besides, recently our well-elaborated dependency on fuel and material infrastructure, which make various forms of fire available, we have to acknowledge that our current "regime of fire control" also makes us dependent on historically particular social institutions and cultures of highly specialized knowledge and professionalized self-conduct. There is no guarantee that the domestication of genome editing will not lead to new forms of dependencies. Nevertheless, as the book reveals, those directly involved in biotechnological domestication are not predisposed to envision the times to come from the point of view of its social consequences, modes of institutional organization, and dependencies.

We live in the age of the third or fourth great ecological transformation. However, the sociological relevance of the book *We Other Utopians* is not conditional on accepting the assumption that genetic engineering in particular and biotechnology, in general, possesses a revolutionary capacity comparable to human domestication of fire, adoption of agriculture, and industrialization. Given the extent of changes in our daily life induced by technological changes, we may well accept that it is appropriate and vital to explore the lifeworld of those scientists who work on speeding up human evolution just because of scientific research's role in our current times.

The significance of this book can be situated on two planes. First, the urgency of its subject matter is given by the radical promises and hazards of genome editing and recombining DNA technologies. Alongside the *what* the book focuses on, its remarkableness consists in the *how* it deals with this demanding theme. The author's interpretive ability to decode the meanings of the social drama that frames the public understanding and the scientists' self-understanding of their efforts to reveal, discover and control life processes is remarkable. It draws on the combination of critical anthropological perspectives with the epistemological radicalism of recent actor-network theory and science and technology studies. However, besides being theoretically and methodologically up to date, the book also develops a unique amalgamation of these recently well-established approaches with sensitivity to post-communist memories and to the historical interconnectedness of the recent atmosphere of victorious innovation with earlier efforts to bring about "scientific-technological revolution".

Her historical sensitivity makes it possible for the author to take the scientists' passion for experimentation and utopia seriously and, at the same time to acknowledge the cultural contradictions inherent in the relationship between aesthetic modernity and modern science. I want to focus on this relationship and draw up an issue, possibly a few questions, that could contribute to the refinement of the author's inquiry into the historical embeddedness of the passion for experimentation and utopia.

In conditions of modernity, science and art as institutional domains were often legitimized as complementary opposites. The core of the aesthetic sphere was categorized in terms of expression. Hence, the works of art were supposed to be comprehended as original manifestations of the creative subjectivities of individual artists. However, it was not only the artistic practice that was subjectivized in this mode but also the reception of artworks. As Bourdieu, his fellows, and critics demonstrated, behind this subjectivization of reception, we can find an increasing divergence between the artistic practice and its public. Historically there has been a deepening incongruence between the culturally established expectations of the recipients and the normative demand for aesthetic originality of artworks. However, the available modes of understanding for non-specialized publics given by their dispositions could not go along with the rhythm of the highly professionalized aesthetic sphere.

For the institutional sphere of science, on the contrary, its legitimization required the depersonalization of the authorial voice. The search for the truth in debate required the interchangeability of the positions of reader and author. The events in the laboratory were supposed to be translated into documented experiments by textual objectivization in which the referential, factual content was privileged over the rhetorical form.

After reading the book *We Other Utopians*, can we claim that the legitimization of these two great institutional domains, art, and science, is no longer constituted in dramatically divergent modes? Can we understand scientists' current erosion of depersonalization and rising aesthetic subjectivization as their answer to accelerating professionalization and specialization?

In her unique book, Eva Šlesingerová demonstrated how is the everyday practice of scientists who are oriented to the radical transformation of life implicitly embedded in the cultural structures of current technological and historical imagination. She also revealed that both these imaginaries provide strong motivation to work, nevertheless are spread through with unsolvable paradoxes because of their strongly utopian character. The book contains a severe warning: a ruling mode of self-understanding in science does not lead us to consider the impact of our research work as socially and politically relevant. Maybe in the future, non-utopian forms of historical imagination, like remembering and appropriating our social history, will find their proper place beside the techno-utopian fantasies and the sphere of science.

Reviewer's questions for the habilitation thesis defence (number of questions up to the reviewer)

(i) After reading the book *We Other Utopians*, can we claim that the legitimization of these two great institutional domains, art, and science, is no longer constituted in dramatically divergent modes?

(ii) Can we understand scientists' current erosion of depersonalization and rising aesthetic subjectivization as their answer to accelerating professionalization and specialization?

Conclusion

The habilitation thesis entitled *We, Other Utopians Recombinant DNA, Genome Editing, and Artificial Life* by Mgr. Eva Šlesingerová, Ph.D. **fulfils** requirements expected of a habilitation thesis in the field of sociology.

Date: 15.08.2022

Signature:

