



The Theatre of Engineers

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Abstract

The Theatre of Engineers

-Materialism on an uncanny stage

Yuk Hui

We are not analyzing a world, we are building it. We are not experimental philosophers, we are philosophical engineers. We declare “this is the protocol”. When people break the protocol, we lament, sue, and so on. But they tend to stick to it because we show that the system has very interesting and useful properties.

–Tim Berners-Lee

The philosophers have only interpreted the world, in various ways; the point is to change it

–Karl Marx, Eleven Theses on Feuerbach

This paper is a reflection on what Tim Berners-Lee calls ‘philosophical engineers’ and propose that one should place this term in a broader philosophical discourse, proposed here as a *theatre (theatron)*. This paper wants to show that within the theatre of engineers, the material transformation of the stage demands new way of acting today, which goes beyond what Berners-Lee’s *philosophical engineering* (Berners-Lee takes a limited understanding of philosophy here, as physics was considered to be practical *philosophy*). Craftsmen, the first generation engineers, have been philosophical in the beginning, described by Aristotle in the four causes. Making is poetic (*poesis*), the forms come out of matter through touch and vision. The age of Enlightenment depicted by Denis Diderot in *Encyclopaedia* serves as a transition to the age of mechanical reproduction, which foreground the emergence of modern engineers, who makes special crafts: machines which produce crafts. In such a transition, we see the shift in the roles of the engineers in its ancient form to the present model through the mediation of machines, in which we see the drift from the poetic bringing-forth of matter through forms to a rational engineering principle, form over matter, ontologies over things.

The rapid and aggressive technological transformation brought melancholia of a past that was left behind in acceleration, but the stage remains and extends to very realm of everyday life. In this sense, the sociologist Scott Lash can follow Wittgenstein calls it a ‘technological form of life’. The stage is never the workshop or the factory, but extended what Jacques Ellul calls a technological system/sub-systems. According to Ellul, it is fruitless to discuss a particular technology, one must grasp the system as a whole. The system is formed through the materialization process and dissemination of knowledge, that also implies equally a process of desymbolization. What were once symbols that signify our thoughts and actions are losing their roles as transitional objects, but rather are constituted as manipulative data. Materialism is renewed in such a process, what

was termed as the immaterial becomes visible and materializable through technological advancement. This new form of materiality, which is data, pushes the technological system to a new height. Through data/metadata and the telecommunication networks, we see the convergences of different scientific disciplines. Within such a system, it also opens to a new political and ethical domain, that engineers and craftsman from the past never envisage.

The role of the actors are renewed on the stage, they are not someone who attempts to produce the perfect works in the workshop or factory, as Diderot described as the enlightenment craftsman, or Bertrand Gille depicted as the renaissance engineers. They move their stage to the world. They are, as Berners-Lee says not 'analysing the world' but 'building the world'. Here one finds the resonance of Karl Marx's thesis on Feuerbach. One can easily find a gesture in common in Berners-Lee and Marx, though with different targets. Such a concept of philosophical engineering goes far beyond the philosophical discussion concerning logic, for example Frege's *Sinn und Bedeutung* and the web. Instead it treats the world as a complex of protocols, or rather forms. Engineers are the rule keepers, who create and maintain the concreteness of the frameworks. The audience are simply spectators, especially when knowledge are finely divided and technical knowledge are far beyond the understanding of untrained people. This is a paradoxical movement, when the stage stretches further; the actors also refrain from their audience. Then how can one act on such a stage? Without turning to the question of ethics, the paper suggests a return to the stage and the audience, to open up a play instead of following a predefined script, which is also its poetic origin. This is exemplified in the debate concerning folksonomy and taxonomy.