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Human nature, the means-ends relationship, and alienation: Themes for potential East–West collaboration

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A B S T R A C T

This essay identifies two basic themes, human nature and the means-ends relationship, that can both advance philosophical reflection on technology and potentially serve as a basis for East–West collaboration in philosophy. What is central to the philosophy of technology and engineering are questions of how technical activity is related to human nature, both as founded in human nature and contributing to its realization. In the history of human thought, there have been a number of theses about human nature — the human being is a rational animal, a tool making and using animal, and a symbol making and using animal — that can have different implications for such questions. There are nevertheless possibilities for synthesis of different theories that point toward the importance of thinking about technology in terms of the means-ends relationship and the experience of a disharmony in the relationship that has been called alienation. From the perspective of the means-ends relationship, some suggestions are considered for dealing with different forms of alienation. A final suggestion is that some traditions of Chinese philosophy may contribute to advancing efforts to understand human nature and to deal with disharmonies in the means-ends relationship.

1. Introduction

In 1995 the American Philosophical Association hosted at its annual Eastern Division meeting in New York a Society for Philosophy and Technology shadow symposium on “Philosophy of Technology after Twenty Years.” Surprisingly to some, when commenting on the situation of the philosophy of technology at that time, three leading philosophers of technology — Don Ihde, Joseph C. Pitt, and Friedrich Rapp — all described the field as marginal [1].

There is little doubt that since then philosophy of technology has moved to a less marginal if still not central position on the map of philosophy. For instance, in 1998 a workshop on “The Empirical Turn in the Philosophy of Technology” was organized at Delft University of Technology in the Netherlands, with participants came from both the philosophy and engineering professions. Workshop organizers Peter Kroes and Anthonie Meijers argued that, to advance philosophical engagement with technology, “The philosophy of technology should be based on empirically adequate descriptions of technology and the engineering practices” [2, p. xxxiii].

The “empirical turn in the philosophy of technology” can to a considerable extent be interpreted as a turn to engineering. This is because concretely and empirically speaking technological acting is engineering practice. As for the topic of engineering, Carl Mitcham's *Thinking through Technology: The Path between Engineering and Philosophy* (1994) had pointed out that philosophers must think about technology in a way that does not exclude engineering discourse in order to advance their philosophical work [3, p. 267]. However, it was not until the early 2000s that a significant number of philosophers of technology gave engineering any sustained attention.

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At the beginning of the 21st century, as a younger sibling of the philosophy of technology, there emerged the philosophy of engineering [4]. It is obvious that philosophy of technology and philosophy of engineering are two overlapping subjects, distinctive but interdependent and interactive. However, this essay will not differentiate the two and focus only on their common points.

From my perspective, technology and engineering differ from science, which focuses on the pursuit of truth, by being deeply involved with theories of human nature. Such an involvement will in the future help move the philosophy of technology to an ever more central position in philosophical reflection. Insofar as the philosophy of technology and engineering deal with questions of human nature they also deal with essential problems in philosophy as a whole. This essay will consider briefly two such topics — human nature and the means-ends relationship — that can also provide opportunities for collaboration between western and Chinese philosophical work.

2. Human nature

There are many theories of human nature. Debates about what it means to be human have occupied philosophy from its beginnings, with pre-philosophical reflection taking place in myths. One early attempt in the West to bring mythological thinking about human nature into philosophy occurs in Plato's *Protagoras*, in a passage that deserves to be quoted at length. The old Protagoras, in order to persuade a younger Socrates that virtue is teachable, tells the following fable (as adapted from Jowett):

> Once there were only gods and no animals. When the time came for the creation of mortal animals, the gods molded them in the earth as mixtures of fire and earth and other elements. When they were about to enter the light of day, the gods ordered Prometheus and Epimetheus to distribute appropriate capabilities to each.
>
> Epimetheus proposed to Prometheus: "Let me distribute and you inspect." This agreed, Epimetheus went about his task. To some he gave strength without swiftness, while weaker animals were given swiftness; some he armed, and others he left unarmed but devised other means of preservation: making some large, with size as a protection, and others small, who could fly in the air or burrow in the ground. Thus did he give to each species some means for self-preservation … .
>
> But not being as wise as he might have been, Epimetheus distributed among the non-human animals all the qualities he had to give, so that when he came to humans, who had yet to be provided for, he did not know what to do. Now while he was thus perplexed, Prometheus came to inspect the distribution, and he found that although all other animals were suitably equipped, humans alone were naked and unshod, uncovered, and unarmed — and already time had come when humans and the other animals were to go forth into the light of day.
>
> Then Prometheus, not knowing what to do, stole from Hephaestus and Athene wisdom in their arts along with fire — since these arts could not have been acquired or used without fire — and quickly gave them to humans. Thus human beings acquired the wisdom necessary to support life, but not political wisdom, since this was in the possession of Zeus …. But Prometheus entered unobserved into the workshop shared by Athena and Hephaestus, in which they pursued their arts, and carried off Hephaestus' art of working by fire, and also the arts of Athena, and gave them to humans. And in this way humans acquired the means of livelihood. But Prometheus is said afterward to have been prosecuted for theft, owing to the blunder of Epimetheus. (*Protagoras*, 320c-322a)

Obviously and interestingly, we can interpret the Greek myth philosophically as follows. According to the story, the nature of an animal species is associated with its ability to survive. While all animals obtained from Epimetheus their own such natural abilities, only humans did not obtain something, which means that humans did not from the beginning have a nature of their own. But Prometheus stole the arts — the Greek word is "technai", the root of the English "technology" — from Hephaestus and Athena and along with them fire, giving them to humans so as to enable human beings to survive.

The word "to steal" is another key to interpreting human nature. As another element in the story, "stealing" further suggests that humans do not have their own nature but instead have a "stolen" nature by way of Prometheus. So while the nature of all other animals rests in their own bodies — for example, the nature of tigers or the nature of moles is to be found in their anatomies and physiologies — the nature of humans exists outside their bodies. Human nature is outside the body in an ability to use the arts and fire. Considering that Hephaestus was the god of blacksmiths and artisans, with his symbols being the tools of axe and tongs, and that Athena was the goddess of the city, handicrafts, and agriculture, modern philosophers have gone a step further and interpreted the human as a tool-making and tool-using animal.

In ancient Greece, because tool-making and tool-using activity was mainly carried out by slaves, slave owners disdained tool-making and tool-using. Slave owners such as Plato and Aristotle would resist defining humans as a tool-making species. Instead, according to Plato, Aristotle, and their followers, the human being is not a tool-making and tool-using animal but a rational animal. This can be called the Plato-Aristotle thesis. The majority of philosophers for two thousand years in the West accepted this view. Something similar was the case in China, although servitude was not quite the same as in the West. In China, for instance, peasant agricultural life was ranked above that of traders.

In the 18th century, Benjamin Franklin proposed a counter thesis, that the human being is a tool-making animal. Strangely, this thesis was not stated by Franklin himself but was attributed to him by Samuel Johnson. A later commentator summarized Franklin's view as follows:

> Inventiveness was the indispensable condition for the survival of the human species. Without fur or feather, carapace or scale, ancestral man naked to the elements;

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