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## TECHNOLOGY AND THE ENVIRONMENT: INTRODUCTORY REMARKS FOR THIS SESSION

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**ABSTRACT:** This paper explores the relationship between technology and the environment. Although technological intervention can help humanity to address some of the most pressing environmental challenges, technological advances alone cannot solve all environmental ills. In some cases, the attempt to manipulate the environment through technology can lead to different types of environmental destruction. This paper thus suggests that the introduction and use of technology requires a critical assessment of its ethical and environmental benefits.

**T**ECHNOLOGY can help and harm human beings and the natural environment. Different types of technology (including medical, manufacturing, educational, bio, business, military, information and communication, transformation technology and so much more) can assist human beings to abolish human misery and lead a comfortable life, to inform, educate, and assist in promoting the value of the natural world. Some studies show that “advances in genetic knowledge and technology will increase our ability to prevent or reduce the prevalence of disease caused in significant part by deleterious genes” (Brock 2003, p. 357). According to Dan W. Brock, the same advances in genetic knowledge and technology can help us to understand and control human nature. “Thus, we face the prospect of being able to take control over and to design human nature and the nature of our progeny. What was once in the hands of God or the natural lottery will come to be increasingly within deliberate human choice and control” (Brock 2003, p. 357). Reproductive technology helps parents to have choices and control the characteristics of their offspring.

On the other hand, technology can lead to massive environmental disaster like the catastrophes at Bhopal (1984), and Chernobyl (1986), and the Fukushima

Daiichi nuclear *disaster* (2011), and the destruction of politically and psychologically sustainable ways of life. The use of various technologies can have social and political consequences. Even technologies that are meant to enhance well-being can permanently alter traditional, sustainable ways of life. For instance, the Green Revolution created monocrops, new pests, new diseases, water shortages, economic debt, and dependence and increased rather than decreased social instability in Punjab, India. Biotechnology has the potential to physically change human and non-human beings. “Genetically engineered organisms are being created in laboratories and released into the environment, creating a whole category of pollution—‘biological pollution’” (Gruen 2003, p. 441). Biological pollution can overrun indigenous crops, as it cannot be controlled, contained and cleaned up. So, as Denis Goulet notes:

The modern technology system simultaneously creates and destroys values. Yet no society can do without technology, which is indispensable to abolish misery, eliminate onerous work, and create new resources. The road to modernity necessarily passes through technology. But can modern technologies be harnessed to human needs? (1995, p. 109)

So we need to think more critically about the use and development of various technologies. We need to examine the foreseeable consequences of their use for human beings, for animals and for the natural world. We should study the ethical implications of new technologies including the potential long-term adverse impact on inequality and fairness, and make sure that their risks are justified by their potential benefits before applying them. Cooperative action between experts and the policymaking community may help humanity to reduce the risks of new technologies.

Today, the four speakers will address some aspects of technology, and the relationship between technology and the environment.

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