

# Chapter I

## The Emerging Field of Technoethics

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### ABSTRACT

*Over the last 30 years, an amassing body of work has focused on ethical dimensions of technology in a variety of contexts impacting society. This purpose of this paper is to trace the emergence of this new interdisciplinary field by exploring its conceptual development, important issues, and key areas of current technoethics' scholarship. The first part of this paper introduces key concepts and provides a skeletal description of its historical background and rationale. The second part of this paper identifies key areas and issues in technoethics in an effort to help inform scholarship in technoethics. This paper is based on the premise that it is of vital importance to encourage dialogue aimed at determining the ethical use of technology, guarding against the misuse of technology, and formulating common principles to help guide new advances in technological development and application to benefit society.*

### INTRODUCTION

The ethical use of new technologies is important in society today, particularly in areas where technological advances have a transforming effect on society. Moor (2005) referred to this transforming effect of technology as a technological revolution, which he argued was connected to growing ethical problems. Moor developed Moor's Law, which holds that, as the social impact of technological revolutions grows, ethical problems increase

(Moor, 2005, pg. 117). This phenomenon is believed to occur not simply because an increasing number of people are affected by technology, but because revolutionary technology provides novel opportunities for action about which well thought out ethical policies have not yet been developed. What is important to note is the juxtaposition of technological growth with the growth of ethical needs. This phenomenon happens not simply because an increasing number of people are affected by technology but because revolutionary

technology provides numerous novel opportunities for action for which well thought out ethical policies will not have been developed. From this perspective, technology is recognized not as a solution to existing ethical problems, but as an intricate part of societal development which fosters change and new ethical considerations to address. This highlights the importance of ethics within the context of technological growth.

The relationship between ethics and technology is of seminal importance to society and raises questions that continue to challenge learned scholars from a variety of fields and academic backgrounds. For instance, new life-preserving technologies, stem cell research, and cloning technologies are redefining current work in bioethics. Similarly, the development of new forms of surveillance and anonymity are redefining privacy laws and the right of privacy. Increased scholarly attention to ethical issues arising from technological transformations of work and life have created a need for a new framework dedicated to ethical considerations of all aspects of technology. Under this framework that would become known as technoethics, old ethical questions of privacy and free speech are given new shape and urgency within a technologically advanced society.

Beginning in the 1970s, technoethics first emerged as an interdisciplinary field. Although research in technoethics had been done earlier than this, official work under this heading began with Mario Bunge, the first scholar to coin the term “technoethics” (Bunge, 1977). Bunge viewed technologists and engineers as professionals closely connected to technology with increased moral and social responsibility for technological innovations and applications. In order to meet these increased responsibilities, Bunge advocated the creation of a new type of ethical and moral theories which highlight the special problems posed by science and technology (Bunge, 1977). For Bunge, technology was a broad term encompassing general technologies, techniques, applications, as well as social, conceptual considerations.

For this reason, Bunge believed technologists and other professional working with technology had a unique moral responsibility for the outcomes of technological progress. As stated by Bunge (1977) “the technologist must be held not only technically but also morally responsible for whatever he designs or executes: not only should his artifacts be optimally efficient but, far from being harmful, they should be beneficial, and not only in the short run but also in the long term.” In addition, to coining the name of this field, Bunge brought to the forefront the core idea that technology should be moderated by moral and social controls and that the pursuit of such technology related issues requires special consideration and expertise, what eventually would become the field of technoethics

### **Rationale: Why Technoethics and Why Now?**

The rationale for technoethics derives from efforts to provide a solid grounding framework for technology focused sub-areas of Applied Ethics distinguished from other areas of scholarship. It is also to guard against potential limitations that may threaten the sustainability of technology focused ethical inquiry. First, the advent of technology in many areas of human activity has given rise to a plethora of technology focused programs of ethical inquiry scattered across multiple disciplines and fields. Efforts to reach an understanding of ethical aspects of the various types of technology are challenged by the tendencies within academia to create silos of information in separate fields and disciplines. Technoethics helps connect separate knowledge bases around a common theme (technology). To this end, technoethics is holistic in orientation and provides an umbrella for grounding all sub-areas of applied ethics focused on technology related areas of human activity including, business, politics, globalization, health and medicine, and research and development.

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