

## Chapter 3

# Technological Consciousness and Moral Agency

### INTRODUCTION

*As in manufacture so in science—retooling is an extravagance to be reserved for the occasion that demands it. The significance of crises is the indication they provide that an occasion for retooling has arrived. —Kuhn, 1962, p.76.*

Is it possible to explain social and ethical aspects of technology in society without considering the human minds and actions intertwined within technological advances? Can legal and ethical questions concerning agency in autonomous machines be addressed without meditating on the conditions of consciousness required for agency? The answer to both these questions is no. A persistent problem

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in the study of technology today is the lack of attention to the nature of the human mind and how it fits into the real world of technology. Scholars have tended to draw on philosophical-sociological theory and group themselves into camps (e.g., technological determinism, social constructivism, actor-network theory, etc.). Most of these theories, however, fail to address the human side of technology that lies within ‘individual’ minds and bodies that affect and are affected by technology at a deeply personal level. In other words, the mental life of human subjects is not a core consideration in the study of technology in society. What remains is a persisting problem within a continually advancing technological society to understand the relationship between technology, consciousness, and society.

Technology is not only important in contemporary society, it is also at the root of what it means to be human. As stated by David Nye (2007), “Technology matters because it is inseparable from being human. Devices and machines are not things “out there” that invade life. We are intimate with them from birth, as were our ancestors for hundreds for generations” (ix). Technology is core to human development and a key focus for understanding human life, society, and human consciousness. The longstanding importance (and challenge) of technology to human life is attested by its pervasive entrenchment in human consciousness, life and society throughout history.

Now, more than ever before, there is a crucial need to consider how the human mind connects with technology and society in order to shed light on the complex relation between humans, technology, and society. There is also a need to better ground technological theories within technological processes wherever they occur within the mind, body, and world. This can be achieved by framing the study of technology within a relational stance to more tightly ground the study of technology and society in human life and visa versa. This chapter delves into the characteristics of technological consciousness rooted within a knowledge-based society fuelled by advancing science and technology and the need for a technoethical framework for leveraging understanding and guiding societal practices. It highlights how technology is a core source of meaning in human life and a driving force at the root of autonomous agency in humans and autonomous machines.

## **BACKGROUND**

### **Technology Conceptualized**

As with many concepts so deeply connected with human values and interests, “technology” is a term that has been defined in many ways and worn smooth by a thousand tongues from different historical periods and social contexts. What is

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