

## CHAPTER 4

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# How to Understand Mundane Technology: New Ways of Thinking about Human–Technology Relations

*Mike Michael*

### Introduction

In this chapter, I attempt to trace out some of the ways in which recent developments in the study of mundane technology might inform “technological literacy.” As a subject taught in schools, “technology” (often twinned with design) makes certain assumptions about the nature of technology and the humans that engage with it. The design and production of technology is often conceptualized in terms of “fitness for function.” However, the sociology of technology would problematize the very idea of “function” by showing how this is subject to all manner of negotiation. As we shall see, the malleability of “function” is something that is addressed in curricula, usually under a heading that addresses “context” (e.g., environmental or social effects). In contrast, latter-day sociology of science would seek to show how the functions of technologies emerge in the sociotechnical ensembles of which they are a part. In a sense, one can contrast the “assembling” of technology (by which is meant the assembling of skills, resources, and contexts to understand or make a technology) with the “ensembling” of technology, by which I mean the idea that technology emerges out of ensembles of heterogeneous entities in which there are various complex dynamics of ordering, disordering, and reordering. In this model of “ensembling,” technologies are held to have an “influence” on people, often shaping them through their impacts upon their bodies. As such, humans are emergent too.

We also turn to more radical accounts of the relation between humans and technologies where it is not simply technologies and humans that are emergent, but the combination of these. Here, there is a shift of focus to the co-emergence of these—or rather, the production and reproduction of arrangements of humans-and-technologies, that is, of hybrids, or what I call co(a)gents. Here, the concern is with the role of such heterogeneous entities in the flow of everyday life.

In what follows, then, I begin by drawing a parallel between technological and scientific literacy in order to open up a discussion about some of the recent trends in the study of mundane technologies. I then return to the idea of technological literacy as it informs current educational practice and aspiration. I conclude by rereading “technological literacy” through the terms “ensembling,” the “emergence of the human,” and “co(a)gent” with a view to drawing out some implications for the teaching of technology, not least as this relates to citizenship.

### **Humans and Mundane Technologies: From Understanding to Co(a)gency**

What might be meant by “technological literacy?” In the multidisciplinary field of “public understanding of science” we find the cognate term “scientific literacy.” This is a term that is commonly subjected to criticism because it assumes what has been called the “deficit model” of publics: publics are taken to be deficient in appropriate knowledge of science, and various attempts are made to measure and correct this deficit. Thus the Royal Society’s (1985) report titled, “The Public Understanding of Science” laments the common failings in lay people’s understanding of scientific knowledge and processes. If improved, scientific literacy, it is claimed, would lead, seemingly unproblematically, to greater practical competence in everyday life; increased capacity to make informed decisions; enhanced employability; enhanced ability to get involved in Western civilization and culture; a better-developed capacity to contribute to the democratic decision-making process with its increasingly prominent scientific content. However, against this model of the deficient public is counterposed a version of the lay local person who possesses local “folk” knowledges that are a crucial adjunct to expert knowledge. A classic example is Brian Wynne’s (1996) case study of the contamination of the fells of Cumbria, a district in North-West England. As Wynne traces, in the immediate aftermath of the Chernobyl fallout, sheep farmers’ local knowledge could have crucially supplemented the technical process whereby scientific measures of radiation