Thinking About Design

Critical Theory of Technology and the Design Process

Patrick Feng and Andrew Feenberg

1 Introduction

In this chapter we offer a framework for thinking about the design of technology. Our approach draws on critical perspectives from both social theory and science and technology studies (STS). We understand design to be the process of consciously shaping an artifact to adapt it to specific goals and environments. Our framework conceptualizes design as a process whereby technical and social considerations converge to produce concrete devices that fit specific contexts. How this happens – and the possibility that it might happen differently – is a crucial point for philosophers and other students of technology to consider.

To date, design studies have been focused predominantly on the work of what we might call proximate designers, while work in the field of STS has focused on the role of non-designers such as clients, stakeholders, and other socially relevant groups.[1] However, little attention has been paid to ways in which historical choices and cultural assumptions about technology shape the design process. Our goal is to address this oversight. We begin by posing a seemingly simple question: is design intentional? A review of the literature draws our attention to at least three possible levels of analysis: that of proximate designers, the immediate design environment, and broader society. We then present a critical theory of technology that provides a non-deterministic, non-essentialist approach to the study of technology. We argue that critical theory, with its emphasis on examining taken-for-granted assumptions, offers a theoretical space for thinking differently about design. Finally, we discuss the possibilities opened up by critical theory and some of the obstacles that stand in the way of realizing a richer world of design.

P. Feng, University of Calgary

A. Feenberg, Simon Fraser University

[1] Woodhouse and Patton (2004) define *proximate designers* as those professionals closest to the design process: engineers, architects, draftsmen, graphical artists, and so on.

P. E. Vermaas et al. (eds.), *Philosophy and Design*.

2 Design and Intentionality

Design is typically conceived of as a purposeful activity, and so intentionality seems to be built into the very definition of the term. But is design really intentional? Put another way: to what extent do designers' intentions shape the artifacts they produce? A review of the literature reveals three general perspectives: first, there are those who see designers as having a great deal of control over the design process; second, there are those who see designers as being highly constrained and therefore unable to translate their goals and intentions into products; finally, there are those who see design as a function of the broader culture. This last perspective throws into question the very notion of intentionality by problematizing the distinction between designers and society-at-large.

2.1 Strong Intentionality: Designers are Powerful

The idea of achieving something "by design" suggests that designers have a great deal of power. It suggests – contrary to technological determinism – that people *can* steer technological development. Furthermore, it rests on the assumption that intentionality plays a significant role in design: that by consciously deciding on a course of action one can design better. The work of Norman (1988) provides a good exemplar of this perspective.

Norman sees a strong link between better designers and better design. For example, he places much of the blame for "bad design" on the fact that design work is "not done by professional designers, it is done by engineers, programmers, and managers" (1988, 156). Similarly, he places much of the responsibility for "good design" on professional designers: "[i]f an error is possible, someone will make it. The designer must assume that all possible errors will occur and design so as to minimize the chance of the error in the first place, or its effects once it gets made" (1988, 36). In this view, designers are powerful – it is, after all, *their* knowledge and *their* values that determine the shape of our technologies.

Like others in the strong intentionality camp, Norman assumes that a sharp division of labor between designers and the public is essential to good design. While he acknowledges that manufacturers, store owners, consumers, and others may have competing demands, he believes that "[n]onetheless, the designer may be able to satisfy everyone" (1988, 28). He thus sidesteps issues of conflict and power, and, while Norman sometimes calls for participation from non-designers – "[d]esign teams really need vocal advocates for the people who will ultimately use the interface" (1988, 156) – he does so in a way that makes clear it is the designers who are in charge. Users, when they are mentioned at all, are assumed to be largely passive recipients of technology.

The result is that Norman and authors like him assume that designers' intentions are expressed through design. His prescription for improving design is to have better, more enlightened designers. While this viewpoint has merit in