

**Values and pragmatic action:
The challenges of engagement with technical design communities**

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In *Technopoly*, Neil Postman remarked how “we are surrounded by the wondrous effects of machines and are encouraged to ignore the ideas embedded in them. Which means we become blind to the ideological meaning of our technologies” (1992, p. 94). It has been the goal of many humanists, social and philosophical scholars of technology to remove these blinders and critically explore the ideologies embedded technical systems and artifacts (see, for example, Berg, 1998; Latour, 1992; 1985; Mumford, 1964; Winner, 1980). Such scholars argue that technologies have social and political biases; they tend to promote certain ideologies, while obscuring others. The concern that technologies have ideologies has been extended into questions of how information technologies specifically have ethical and value biases (see, for example, Friedman, 1997; 1995; 2005; Johnson & Nissenbaum, 1995; Moor, 1985; Nissenbaum, 2001; 1997; Tavani, 2004). Such scholarship sees information technologies as crucial sites for asserting not only social or political ideologies, but also human values of moral and ethical import, such as freedom from bias, trust, autonomy, privacy, and justice. Such research seeks to identify, understand and address the ethical and value-laden concerns that arise from the rapid design and deployment of information technologies into society.

Arising from these concerns, various technical design communities have attempted to incorporate values into the design stages of technological systems. For example, the Human-Computer Interaction community has maintained a strong commitment to user-centered design toward the goal of increased usability of technical artifacts (see, for example, Norman, 1990; Raskin, 2000; Nielsen, 1993). Similar scholarship has emerged from Participatory Design communities (Sclove, 1995), where democratic design processes are used to create not only efficient and effective technologies, but also ones that maintain the safety and well being of the users themselves. While commendable for their longstanding commitment to incorporating values into the design of technologies, these frameworks tend to focus their efforts on functional and instrumental values, such as user-friendliness and worker-safety, falling short of directly addressing values of moral and ethical import, such as privacy or autonomy.¹ To fill this void, new pragmatic

¹ This is not to say that attention to functional values cannot have a moral or ethical impact. For example, building a user-friendly technology might increase a user’s sense of autonomy. The distinction we

frameworks have recently emerged to ensure that particular attention to moral and ethical values becomes an integral part of the conception, design, and development of technological artifacts and systems. These include Design for Values (Camp, n.d.), Values at Play (Flanagan, Howe, & Nissenbaum, 2005; Flanagan, Howe, & Nissenbaum, in press), and Value Sensitive Design (Friedman, 1999; Friedman, Kahn, & Borning, 2002). Each of these frameworks – which we will refer to collectively as Value Conscious Design – seek to broaden the criteria for judging the quality of technological systems to include the advancement of ethical and human values, and to proactively influence the design of technologies to account for such values during the conception and design process.

Recent advances in the power and ubiquity of information and communication technologies have led to ethical concerns over the flow of personal information across our increasingly data-intensive, networked world. Two examples include the development of networked vehicle systems, which rely on the identification and tracking of individual cars as they travel the highways (Zimmer, 2005), and the construction of identity management infrastructures to share personal profiles across various systems and platforms. Recognizing that the design of technologies bear “directly and systematically on the realization, or suppression, of particular configurations of social, ethical, and political values” (Flanagan, Howe, & Nissenbaum, in press), we, the authors, have been involved in attempts to engage with the technical design communities of these two technologies to influence their design in ethical- and value-conscious ways. Unfortunately, the results were discouraging.

Zimmer, seeking to ensure that the value of privacy became a constitutive part of the technological design of networked vehicle technologies, was confronted with designers focused primarily on the “security paradigm” of privacy protection, general delays in establishing working groups to comprehensively address privacy-related issues, and, after achieving some initial collaboration, experienced barriers of confidentiality and restricted access. While Manders-Huits had more success engaging directly with the designers of an identity management infrastructure as part of a concerted effort to design such systems in an ethically sensitive manner, the end result of her collaboration was equally discouraging as the perceived complexities of allowing for the ethical dimensions of such a system caused such considerations to eventually be left on the shop room floor.

Learning from our imperfect interventions with technical design communities, this paper will identify four key challenges of pragmatic engagement with technical design communities: (1) confronting competing values; (2) creating the role of the values advocate; (3) the justification of its moral framework; and (4) doing justice to ethical theory. Addressing these challenges must become a priority if we are to be successful in pragmatically engaging with real-world design contexts to support the value-conscious design of emerging information technologies.

are making here is a matter of focus, whether attention to moral and ethical values is the primary goal of the design process, or simply a by-product.

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