

Integrating Technical with Other Investigations: Mechanisms and Metrics

**INSC 543/CSE 599P
Value Sensitive Design**

Note: No class November 11 – Veteran’s Day

**Email Discussion Question: 5 PM Tuesday, November 17
For Class: Wednesday, November 18**

For next Wednesday’s class, we’ll look at ways in which technology can be informed by value analyses. To do so, we’ll examine in some detail three projects that have come out of the Value Sensitive Design Research Lab and a related one on design tensions.

The first involves cookies and web browser security (Millet et al., 2001). This work uses a model for informed consent online (a conceptual investigation) to analyze how at the time cutting edge web browsers presented cookies to the user (a technical investigation). In a later paper (recommended, not required reading; Friedman et al., 2002), based on gaps identified in this work, the Mozilla browser was redesigned to provide informed consent for cookies (a second technical investigation).

The second project involves the design of a groupware system to support software engineering in a large software corporation (Miller et al., 2007). This project introduces the “value dams and flow” method for translating data on users’ views and values (an empirical investigation) into design decisions about what technical features to implement (a technical investigation). It also provides a value sensitive evaluation of the system deployment (an empirical investigation), co-evolves managerial policy for the system (an empirical investigation) along with the technical features, and demonstrates that value sensitive design methods can be used successfully in an industry setting.

The third project describes the development of an open source privacy license (Friedman, et al., 2006). Here the informed consent online model from the cookies web browser work is repurposed (a conceptual investigation) and combined with a threat analysis (frankly, I’m not sure how to categorize this in terms of conceptual, empirical and conceptual investigations) to identify the privacy protections that might go into an open source privacy license. Then, these protections are translated into legal text. We can view the license as within the form of law, regulation and policy (as such, it is an empirical investigation). In turn, the license provides requirements for system functions (a technical investigation).

The fourth project presents a framework for working with design tensions (Tatar, 2007) – many of which may be understood as value tensions in the design. The framework is illustrated with the design of educational software in support of mathematics learning. Thus, power relations between students and teachers, collaborative vs. individual learning, participation, and voice are all aspects considered in this work as they are supported and constrained by the education software system (a technical investigation).

For Wednesday, please read the following papers about these projects.

Millett, L., Friedman, B., & Felten, E. (2001). Cookies and Web browser design: Toward realizing informed consent online. *Proceedings of CHI 2001* (pp. 46-52). New York: ACM Press.

Miller, J., Friedman, B., Jancke, G., & Gill, B. (2007). Value tensions in design: The value sensitive design, development, and appropriation of a corporation's groupware system. *Proceedings of GROUP 2007* (pp. 281-290). New York: ACM Press.

Friedman, B., Smith, I. E., Kahn, P. H., Jr., Consolvo, S., & Selawski, J. (2006). Development of a privacy addendum for open source licenses: Value Sensitive Design in industry. *Proceedings of Ubicomp 2006* (pp. 194-211). Berlin, Heidelberg, New York: Springer-Verlag.

Tatar, D. (2007). The design tensions framework. *Human-Computer Interaction*, 22(4), 413-451.

Recommended Readings:

Shneiderman, B. (2003). Promoting universal usability with multi-layer interface design. *Proceedings of the Conference on Universal Usability 2003* (pp. 1-8). New York: ACM Press.

Friedman, B., Howe, D. C., & Felten, E. (2002). Informed Consent in the Mozilla Browser: Implementing Value-Sensitive Design. *Proceedings of the Thirty-Fifth Annual Hawai'i International Conference on System Sciences (HICSS-35)*. Abstract, p. 247; CD-ROM of full-paper, OSPE101. IEEE Computer Society: Los Alamitos, CA.

As you read, please reflect on how the analyses of human values are used to support the development and evaluation of technical features. In what ways do you see the systems strengthened by these value analyses? In what ways do the methods and systems described here come up short?

WRITE a question that you would be interested in discussing that in some ways addresses the issue of method. Again, if you would like to situate your question about method in the context of your own work, please feel free to do so. Then provide an initial discussion of your own question. As before, your writing should be concise, grammatically correct, and, as appropriate, draw on (and at times quote from) the reading.

Please EMAIL your question to Alan at borning@cs.washington.edu and Batya at batya@u.washington.edu in the BODY OF AN EMAIL MESSAGE no later than 5 PM Tuesday afternoon, November 17. We will use your questions to structure some of the discussion on Wednesday.

No late questions will be accepted.