Social Computing 101 Syllabus

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This is an example syllabus for a plenary course in social computing for interdisciplinary graduate students. The references suggest example readings.

Week 1 & 2: Introduction

Social computing is the study of large-scale socially-aware information systems. Current technologies span social networking sites (e.g., Facebook), media sharing sites (e.g., YouTube, Flickr), collaborative knowledge production (e.g., Wikipedia) and mapping sites (e.g., mashups). Developing a disciplined understanding of social computing, however, is an inherently *interdisciplinary* task requiring research and training across a spectrum of fields – including engineering, sociology, education, the humanities, communication, design, the arts, and media studies (Liu et al., 2008). Have these technologies changed our social attitudes and behaviors? How has social computing altered problems of collective action and information credibility? What research methods are effective in studying these phenomena?

We start by defining *social computing* (Wang et al., 2007) and discussing *Web 2.0* visions (O'Reilly, 2005; Rheingold, 2000; Brown and Duguid, 2002). We discuss how open-source software and collaborative knowledge production might be described as a new mode of economic production – described as *non-market social production* by Benkler (2006) or more generally as *digital commons* (Greco and Floridi, 2004).

What are the theoretical ideas behind technology diffusion into society? We discuss utopian and dystopian visions, and technological determinism and social shaping of technology (Bimber, 1994; Mackay and Gillespie, 1992; Kling, 1996).

Week 3 & 4: Technology

We start by discussing the nature of the Web and its behavioral and structural complexities (Adamic and Huberman, 2001; Albert et al., 1999; Fielding and Taylor, 2002). We review several key technologies and discuss their architecture and design:

- Blogging (Kumar et al., 2004);
- Collaborative filtering (Kautz et al., 1997) and tagging (Sen et al., 2006; Golder and Huberman, 2006; Halpin et al., 2007);
- Internet search (Barroso et al., 2003);
- Social media and networking sites (Boyd and Ellison, 2007); and
- Wikipedia and wikis (Priedhorsky et al., 2007; Almeida et al., 2007).

Week 5 & 6: Behavior

- Free-riding problems (Adar and Huberman, 2000; Beenen et al., 2004).
- Motivations and social psychology (Nardi et al., 2004).
- Online credibility (Metzger et al., 2003; Metzger, 2007; Rieh and Danielson, 2007).
- Social impacts (Katz and Rice, 2002; Kavanaugh et al., 2005).
- Social roles in online environments (Golder and Donath, 2004; Suler, 2004).

Week 7 & 8: Culture

- Authoring (Pfeil et al., 2006; Emigh and Herring, 2005).
- Globalization (Axford, 2004).
- Historical perspectives.
- Social presence (Schroeder, 2002).
- Virtual communities (Bakardjieva, 2003).

Week 9 & 10: Policy

- Intellectual property (Mitchell, 2005).
- Privacy (Gross et al., 2005).

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