Social Computing: A Research Topic in Search of Disciplinarity

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Social Computing is facing a distinct challenge, one that faces many research topics as researchers become interested and begin to explore the topic in-depth. The challenge is whether a topic is really just some kind of conceptual space or whether there are distinct principles, theories or methods that bring the topic to the level of a new discipline. There is a repeatable, reliable progression when new disciplines emerge and Social Computing has begun that progression.

This paper is a brief (and biased) review of selected disciplines that might provide a home to Social Computing. In the progression from topic to discipline, understanding what established disciplines have to offer in terms of theory and methods that we can adopt and what parts of a discipline we should avoid, is critical to reflecting on what will define Social Computing as unique and possibly worthy of being promoted to the realm of discipline. I close with three principles that I believe should differentiate Social Computing.

Communications Studies for the Internet

One possible way to think of Social Computing is that it is largely a sub-discipline of Communications as applied to Internet based communications technologies. The burgeoning programs of "new media" attest to the attraction of many Communications departments to an area similar to that of Social Computing. In this view, the Internet blurs the lines between traditional mass communications and interpersonal communications because networked technologies often support characteristics of both, somehow enabling something new.

Communications has effective theory and methods for addressing large scale participation. However, the theories that exist in Communications have rarely been turned into methods for the design and implementation of new technologies. The basic problem with subsuming Social Computing into Communications is that the tradition of Communications is not design oriented. For Social Computing to have impact it needs to have theoretical as well as technical design implications. The intellectual traditions of communications do not facilitate this for Social Computing.

Social Psychology on the Internet

A second possible way to conceptualize Social Computing is as a sub-discipline of Social Psychology. This view of Social Computing would be useful because Social Psychology and Psychology in general has well developed methodology and a history of systematic exploration that builds theory. Subsuming Social Computing into Psychology gives an immediate academic credibility to the methods and the results, but with an associated shift in potential focus.

While there is much to commend Social Psychology this discipline has largely focused on how individuals act within a frame of social relations and interactions. From this perspective the problem is understanding how individuals interpret and react to their social setting. This perspective can fail to account for the way individuals purposely manipulate their social setting to change aspects of their social relations. As well, this perspective can overlook how social knowledge is embedded in the environment – in the social frame of relations and interactions. Social Computing needs to diverge from this focus. The perspective that individuals manipulate their surroundings – often through the capabilities of the technologies they use – is a critical perspective for Social Computing to adopt.

Social Informatics by another Name

Social Informatics is in a position similar to that of Social Computing – not quite a discipline, but something more than just a topic of study. Research in Social Informatics has considered social relations and social change as facilitated by ICT (Information and Communication Technology). Methods and theories from a wide range of the social sciences have been adopted into Social Informatics. Indeed the similarities between Social Informatics and Social Computing seem phenomenal on the surface.

However, in going beyond the surface there seems to be something distinct about the two perspectives that might preclude one from subsuming the other. The research in Social Computing has had a more proactive design perspective. That is, Social Computing has been more likely to design and develop new technologies that facilitate different forms of interaction. This difference might be a function of the disciplinary origins of the researchers or something more to do with the specific venues in which these two topics are currently published.

Mass Participation for CSCW

Computer Supported Cooperative Work (CSCW) could be a potential home for Social Computing. Researchers in CSCW have been studying the socio-technical issues in collaboration for over 20 years. The perspective that computing enables new forms of work and new social relations was central to the way CSCW was initially defined. The way that theory and methods have been adopted into CSCW from remote disciplines and a general ethos that multiple methods add value are examples of the way that Social Computing should develop.

Making CSCW a home or even a template for Social Computing has specific risks. In particular, CSCW has been oft criticized for focusing on small groups. Many prominent issues for Social Computing cannot be effectively studied in the small – they happen on a much larger scale – perhaps Internet scale. And while, in principle, CSCW is accepting of new methods and new perspectives, there has been a trend toward an ever more focused ethnographic style of research that nearly precludes studies of mass participation. This trend may make CSCW a poor fit for Social Computing.

Three Defining Elements of Social Computing

An important challenge in moving forward is to acknowledge what is central to Social Computing – to settle on what makes it unique. I propose three key principles that help define what Social Computing should be:

Computing as Enabler – Computing technologies should be a clear enabler of the social phenomena that we study. Making computing central to what enables 'the social' serves to differentiate Social Computing from the myriad other social sciences that have allowed computing to invade their focus of study. We should acknowledge that computing technology allows individuals to observe, manipulate and reflect on their social relations – as well as participate in those relations. We should study how computing technology matters as a part of complex social spaces.

Mixed Methods – Social computing should affirm that mixed methods are essential to studying the technical and the social phenomena that will comprise the domain. This principle should go beyond simply being accepting of different methods; we should specifically apply mixed methods in our studies. We need to understand behavior at a large scale, but specific details really matter, and subtle differences at the individual level can have dramatic impacts when reproduced en masse. The potential scale of social relations enabled by network technology creates a challenge for single methodological perspectives. We need to apply mixed methods and integrate results from those methods.

Design Outcomes – Social Computing cannot be just about studying the social impacts of a technology that already exists. Social Computing researchers understand "the social" and sociability in ways that allow us to directly influence the design of computing for the better. Designing for individuals and their use of technology has lurched forward over the past 20+ years, but designing for the social and relational has hardly made progress. Establishing effective methods for translating social understanding into design is important for making Social Computing findings actionable for a wider audience. Social Computing research should take pride in communicating design issues in ways that they can be readily employed by system builders.