

The Role of Individual Trust in E-Collaboration

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INTRODUCTION

The subject of individual and interpersonal trust within communities has captured the attention of sociologists and psychologists for many decades, having intensified with the advent of virtual or online communities and their potential for increasing social inclusion. E-collaboration, particularly for business purposes, often requires the communication of “rich” information (Daft & Lengel, 1986), of high utility value to its recipients, such that it facilitates “rational action” (Ulrich, 2001).

Communities are identifiable by the levels of trust, reciprocity, dependence, and formality exhibited by their members. The development of e-communities has presented IS developers with a long standing and on-going problem articulated by Kollock and Smith (1996, p. 109) as follows:

At the root of the problem of cooperation is the fact that there is often a tension between individual and collective rationality.

This “tension” has led to confusion amongst researchers and developers, with the result that individual and collective rationalities have often been conflated.

In response to this problem, this article deals explicitly with individual rationality, *distinct from* but *related to* the collective. We adopt for this purpose, Simon’s (1957) notion of “bounded rationality” to explain how individuals recognize the cost of gathering and processing information and how its utility contains multiple values. Among the multiple values under consideration, the presence of trust is of primary concern for would-be, online collaborators. Trust is a complex entity, affecting individual and group attitudes and behaviours. Its presence in both techno-scientific and social science literatures on e-collaboration is

recognition of its importance. It is considered to be an essential feature of economy and commerce in reducing complexity by providing “internal security” before taking action (Abdul-Rahman & Hailes, 2000). By deconstructing the elements of individual trust, this article reveals clues to how individuals rationalize participation in e-collaboration.

BACKGROUND

The problem of engendering online trust is conceptualized differently according to two schools of practice: either as an engineering problem or as a social problem. Engineering developments have demonstrated the effectiveness of online community tools for connecting people to one another and helping them to share information. Developments and discussions amongst the technocrats naturally look towards possibilities for making these tools even more powerful. Jordan, Hauser, and Foster (2003), for instance, seek to enhance trust by this method and thereby to “further public discourse” in online communities.

In relation to the broad literature covering trust, developments in engineering at the user interface relate only to one form of online trust relationship: the interpersonal institutional phenomenon variously known as “structural” or “system” trust. According to McKnight and Chervany (1996), system trust is not founded on any property or state of the trustee, but rather on the perceived properties of, or reliance on, the system or institution within which that trust exists. The engineers’ supposition regarding the relationship between connectivity and trust appears rather tenuous when, according to Kollock (1997), the problems of social interaction and order are often ignored in the software and online industry in their discourse on “social computing.” He considers this to be a “thin term” applying more to the

user interface design than to actual social interaction between two or more people.

Social science literature focuses on interpersonal relationships. The notion of interpersonal trust can be thought of as one person trusting another specific person(s) in order for meaningful outcomes to occur. For partners in business or retail transactions, it is often defined in terms of trusting beliefs about the other party's predictability, benevolence, honesty, and competence plus a weighting given to events that provide information about the person's motives for being in the relationship (McKnight & Chervany). Identity-based trust, as a subset of interpersonal trust (Lewicki & Bunker, 1996), pervades when individuals comprehend and appreciate the needs of each other: where shared meanings and culture are manifested and there is a commitment to common values, objectives, and a collective identity. If not developed, the lack of identity based trust can be extremely detrimental to group processes and performance.

Castelfranchi and Falcone (1998), with their five-element strategy, addressed a wider agenda, encompassing both the engineering and social paradigms comprising human-computer (or systems) trust, interpersonal trust relationships, dispositional trust, risk, attitude and potential gain. They and others point out the necessity for understanding that virtual communities and their supporting ICTs are embedded in human interpersonal, social, and legal relationships (see also Hartman, 1995; Leiwo & Heikkuri, 1998).

Kollock deals comprehensively with individual perception of risk within a range of community-based contexts, where risk and trust are dynamically related (see also Abdul-Rahman & Hailes, *Ibid*; Marsh, 1994; Tan & Thoen, 1999). Coetzee and Eloff (*Ibid*, 2005) identify three "important" elements of trust: its dependency on the context (Coetzee & Eloff, *Ibid* 2005); the measurable belief that reflects its strength (Grandison, 2003); its subjective entity that evolves through new experiences and observations (Dimitrakos, 2003). This third property provides the focus for the remainder of this article.

E-collaboration often involves the transfer of rich information when, for example, design blueprints are transmitted or when the complexities of a new piece of legislation are discussed. The community of practice (CoP) (Wenger, 1998) is the most commonly cited medium for the transfer of rich, tacit knowledge. The *process* of e-collaboration is explained partly through

the notion of legitimate peripheral participation (LPP) (Lave & Wenger, 1991). LPP is a complex and composite notion, in which the three constituent aspects of legitimation, peripherality, and participation, are indispensable in defining each other and cannot be considered in isolation (Kimble, Hildreth, & Wright, 2001). Whilst LPP explains contributions in terms of social situatedness, social identity and social orientation theories also resonate strongly with this inquiry. Mullins and Hogg (1999) propose that social identification affects both self-conception and intergroup orientation focussing on how the self is defined by group membership.

Of particular relevance is the notion of "social loafing" (Karau & Williams, 1993). They propose that LPP is influenced by a set of individual and group factors that explain why individuals will withhold contributions to a group or community. Social loafing is common where groups undertake "additive tasks," where the group output is greater than the individuals' contributions. This phenomenon can be reduced by ensuring that individual contribution is noted and valued by others and the individuals themselves; enhancing the importance of tasks and information; providing some form of reinforcement (reward or punishment). Small groups are better at providing social cohesiveness, whilst time pressure (a key factor within business communities) is important and can lead to members withholding essential information.

RESEARCH APPROACH

This article is informed by a three-year action research inquiry into the development of an online community comprising over fifty small and medium-sized enterprises (SMEs), information providers, and business experts. The inquiry set out to improve communication quality and information sharing between these actors for the benefit of the SMEs.

By adopting the approach recommended by Kemmis and McTaggart (1990), the enquiry was conducted via a series of research cycles each containing four steps: plan, act, observe, and reflect. To ensure rigor and relevance in the AR process, Davison Martinsons, and Kock (2004), propose the use of "canonical" AR (CAR). Incorporating 31 criteria, embedded within five principles, this inquiry adhered closely to the CAR standard. Qualitative feedback was continually sought

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