

THE IMPERSONAL NATURE OF TRUST

Kosenen Miia, Blomqvist Kirsimarja, Ellonen Riikka

This is a Final draft

version of a publication

published by IGI Global

in Encyclopedia of Networked and Virtual Organizations

DOI: 10.4018/978-1-59904-885-7

Copyright of the original publication: © IGI Global

Please cite the publication as follows:

Kosonen, M., Blomqvist, K. & Ellonen, R. (2008). Trust and its impersonal nature. Post-print version of a book chapter published in G. Putnik & M. Cunha (Editors). Encyclopedia of Networked and Virtual Organizations (p. 1683-1690). Hershey, New York: Idea Group. DOI: 10.4018/978-1-59904-885-7.ch222

This is a parallel published version of an original publication. This version can differ from the original published article.

Miia Kosonen, Kirsimarja Blomqvist & Riikka Ellonen

Lappeenranta University of Technology Department of Business Administration and Technology Business Research Center

Kosonen, M., Blomqvist, K. & Ellonen, R. (2008). Trust and its impersonal nature. Post-print version of a book chapter published in G. Putnik & M. Cunha (Editors). Encyclopedia of Networked and Virtual Organizations (s. 1683-90). Hershey, New York: Idea Group.

THE IMPERSONAL NATURE OF TRUST

INTRODUCTION

In the knowledge-based network economy, trust is becoming an increasingly important issue. Both economists (Arrow, 1974) and sociologists (Luhmann, 1979) have pointed at the role of trust as a lubricant in managing uncertainty, complexity, and related risks. Trust reduces transaction costs, and increases spontaneous sociability (see Kramer, 1999, Creed & Miles, 1996). Trust can also have a critical role in enhancing knowledge creation and transfer within the organizational context (Grant, 1996, Kogut & Zander, 1992). Trust is an intriguing and paradoxical issue: in the modern society we need trust more than ever, yet we have less natural opportunities for trust to evolve (e.g. Lahno, 2002, Blomqvist, 2005).

We believe that due to organizational and management challenges, future organizations cannot rely on interpersonal trust only, but demand complementary forms of trust to enhance knowledge creation and transfer, as well as exchange under risk. However, few studies of impersonal trust are relevant for emerging social structures, such as virtual organizations. In general, virtual organizations are formed by business partners and teams who work across geographical or organizational boundaries with the help of information and communication technologies (Rachman & Bhattachryya, 2002).

In this paper we focus on the impersonal nature of trust. Our research objective is to analyze the impersonal nature of trust in organizational and virtual contexts, and to explore its antecedents or building blocks. Our research questions are: How can impersonal trust be understood in organizational and virtual interactions? What are the sources of impersonal trust? The study has been conducted as a critical literature review. We contribute theoretically by analyzing the scattered research on impersonal trust. We will first discuss the nature and role of impersonal trust, and secondly outline the sources for impersonal trust from the relevant, but dispersed literature. Finally, we will conclude by emphasizing the need of a more encompassing theory of trust.

BACKGROUND

So far, much of the trust research in both the organizational and virtual contexts has focused on interpersonal trust (e.g. on virtual teams, see Järvenpää et al., 1998). Barber (1983, ref. in Kramer, 1999) has defined trust quite broadly as "socially learned and socially confirmed expectations that people have of each other, of the organizations and institutions in which they live, and of the natural and moral social orders that set the fundamental understandings of their lives". Rotter (1967) has developed an interpersonal trust scale measuring also aggregated levels of trust, i.e. generalized expectation towards other actors, media and institutions. Zucker (1986) shows in her historical analysis of 19th and 20th century American socio-economic system how characteristic- and process-based trust has been supplemented by "institutional-based trust".

By definition, impersonal trust refers to *trust relationships that are not based on direct personal contact*; it has been considered as a type of an *indirect* social relationship, where e.g. markets, administrative organizations or information technology serve as *mediators* (Calhoun, 1992, ref. in Pixley, 1999, see also Shapiro, 1987). Thus, as distinct from dispositional trust and more abstract, system-level forms of trust (see Luhmann, 1979), *identifiable objects* of trust are involved. When information about an agent's trustworthiness is mediated by an

impersonal system or structure, also such systems themselves have to be trusted (Sztompka, 1999). Impersonal forms of trust may be gained more easily than interpersonal trust, but they also carry certain risks; e.g. institutionalized trust may reach a degree of stability which nourishes unjustified trust (Lahno, 2002, Shapiro, 1987).

Much of the research of trust in mediated relationships in the virtual context focuses on trust in online merchants and their websites (Olson & Olson, 2000). Prior research has equalized issues of impersonal trust with trust in e-commerce systems, or applied the view of dyadic interpersonal trust even in conditions where no such dyads exist (Ridings et al., 2002; see Mayer et al., 1995). Therefore we argue that it is useful to broaden the concept of impersonal trust to the field of networked and virtual organizations to better understand their dynamics, and especially the early phases of relationship development. In comparison with traditional face-to-face interaction, the role of impersonal trust may become emphasized online in both inter-organizational and intraorganizational contexts, as direct relationships between two parties are challenged by issues of distance, time, security, anonymity, lack of physically individuating cues, and lack of personal experience about the situation.

IMPERSONAL TRUST IN THE VIRTUAL CONTEXT

Three important forms of impersonal trust can be identified in interaction in the virtual context: 1) *institutional third-party trust,* such as a reputation system or a trusted third party (Pavlou et al., 2003, Abdul-Rahman & Hailes, 2000, Ba, 2001, Resnick, 2005), 2) *institutional bilateral trust,* such as secure communication, dyadic standards and contracts (Pavlou et al. 2003), and 3) trust that is at a *collective* level (Järvenpää et al., 1998, Spears & Lea, 1992, Kramer et al., 1996, Boyd, 2002). While the former refer to *interorganizational* relationships, the latter represents *intraorganizational* processes of identification and trust.

Pavlou et al. (2003) discuss two types of institutional trust in online interorganizational context, namely, third-party institution-based trust (intermediaries, such as in online marketplaces) and bilateral institutional trust (interorganizational processes, standards and norms). On the other hand, inside virtual organizations the notion of collective trust may better enhance our understanding about the nature of interaction. Next, we will discuss the instances of virtual impersonal trust in more detail.

Institutional third-party trust.

In conditions of reduced personal cues, and especially in large systems, it is beyond each individual's resources to evaluate all aspects of a given situation. Thus trust information must be provided by external sources (Abdul-Rahman & Hailes, 2000). Indeed, Resnick (2005) names reputation systems as a form of impersonal social capital among collective action in environments mediated by information and communication technologies. When direct contact is lacking, reputation systems help individuals to decide who to trust by gathering information about others' past behaviour and making such information available to the community (ibid.). So called *trusted third parties* (TTPs), in turn, authenticate agents and disseminate information about their behavior. The digital certificate issued by a TTP indicates both authenticity and reputation: thus anyone who holds a valid certificate should be regarded as a reputable agent (Ba, 2001).

Institutional third-party trust is typical for large virtual systems, such as in B2C and B2B e-commerce. These systems cultivate trust through third-party certification (institutional mechanisms such as trust seals) and reputation (Chang & Cheung, 2005, Castelfranchi & Tan 2002). For a comprehensive review on trust in e-commerce, see Shankar et al., 2002.

Bilateral institutional trust.

According to Pavlou et al. (2003), institutional trust mainly deals with third parties. However, *institutional processes, standards* and *norms* also help to manage exchange between and within organizations. Bilateral institutional trust is "the subjective belief or confidence that there are fair, stable, and predictable shared routines, processes, and norms to enable successful transactions" (Dyer, 2000; ref. in Pavlou et al., 2003).

Thus, bilateral institutional trust differs from interorganizational trust in the sense that it is based on processes and routines, not the organization or its members. Pavlou et al. posit three dimensions of institutional trust: in addition to *structural assurances* and *situational normality* (McKnight et al., 1998), there are *facilitating conditions* that are less formal than structural assurances (e.g. contracts and guarantees) but more tangible than situational normality (e.g. beliefs about confidentiality and integrity). Facilitating conditions include socio-technical issues such as standards, values and common beliefs about goals and behavior. Typical examples in the virtual context are communication standards and the use of interoperable technical platforms. Furthermore, the authors propose that the importance of facilitating conditions increases as the relationship matures, while the role of structural assurances / situational normality diminishes over time. (Pavlou et al., 2003)

Collective trust.

On collective level, people can trust e.g. a group, community, or organizational unit. Boyd (2002, p. 4) names *trust in a community* as "an ongoing system of risk-taking enabled by good will and positive expectation in other members of the system rather than by controls and guarantees that reduce user choice". Collective trust still remains an unsettled concept that seems to carry both interpersonal and impersonal traits. According to Lahno (2002), trust in the social group presupposes that the trustor directly perceives connectedness to the members who are perceived as persons, and the members share aims, values or

norms. When these conditions are not met, Lahno calls it mere reliance rather than trust (ibid.). A distinct view on trust in a group has been presented by Kramer et al. (1996). From the impersonal perspective, the *processes of social categorization* may create a cognitive social structure that mediates trust similarly as institutional structures, when there is no direct relationship between the trustor and the trustee (see Kramer et al., 1996, Turner, 1987, Tajfel, 1982, Brewer, 1981). In other words, collective trust becomes institutionalized and internalized (Kramer et al., 1996). Assumptions of similarity and consensus also reduce the perceived risk, as people expect more positive behavior from those with whom they share membership in a given category. Similarity with others reinforces members' identities and positively affects the willingness to cooperate. On the other hand, strong collective trust may result in unjustified confidence, or passive over-reliance on someone else in the organization to react to the situation. (Kramer et al., 1996)

According to the *social identification/de-individuation* theory (SIDE), people self-categorize themselves as being either part of the in-group or out-group. Furthermore, the SIDE theory argues that group salience and social identities are emphasized in online interactions due to the absence of individuating cues about others (Spears & Lea, 1992, Spears et al., 2002). Social categorization and group membership represent "a cognitive shortcut that allows people to rely on previously held beliefs rather than incoming information about specific group members" (Williams, 2001, p. 380). Judgments and impressions are driven by initial categorizations; as maintained by Fiske & Taylor (1991, ref. in Williams, 2001), category-driven processing is highly likely to occur when an individual is under time pressure, cognitively busy with other tasks, or not particularly motivated to make accurate impressions. This implies the importance of category-based trust for computer-mediated interactions, as suggested by the SIDE theory. However, the effect of self-categorization on actual trust in virtual groups has remained an understudied field.

The interplay between impersonal and interpersonal trust.

Lahno (2002) emphasizes the complementary nature of interpersonal and impersonal trust, as the institutional forms of trust are grounded in interpersonal trust. There is no essential difference between them, as "in both cases a person relies on what she knows about the expected behavior of others" (p. 3). Also Handy (1995, p. 46) claims that the role of interpersonal trust always remains, noting that "Trust is and never can be an impersonal commodity". Handy emphasizes the role of shared goals, values and beliefs, as does Lahno (2002), when he refers to the important role of a participant's attitude, connectedness in interests and/or normative convictions. They are all emotional by nature, not only rational or cognitive aspects of trust.

SOURCES OF IMPERSONAL TRUST

According to Shapiro (1987), impersonal trust is generally derived from mechanisms such as procedural norms, structural constraints, entry restrictions, policing mechanisms, social-control specialists and insurance-like arrangements. It arises when social-control measures derived from social ties and direct contact between the principal and the agent are unavailable, and when faceless and readily interchangeable individual or organizational agents exercise considerable delegated power and privilege. Similarly, Pixley (1999) mentions relatively symmetrical relations where behavior is meant to be controlled by principals, to guard against future risk and vulnerability.

In the organizational context, impersonal trust has been mainly discussed in the form of institutional trust. This stream of research maintains that trust reflects the security one feels about a situation because of guarantees, safety nets and other structures (structural assurance dimension of institutional trust by McKnight et al., 1998). It also means belief that things are normal, customary and that everything seems to be in proper order (situational normality dimension of institutional trust by McKnight et al., 1998). Impersonal trust can derive from the roles, systems

and reputations from which inferences are drawn about the trustworthiness of an individual (Atkinson & Butcher, 2003, on role-based trust, see Kramer, 1999).

In addition, impersonal trust may be based on shared membership in a given category (category-based trust). Both salient information about membership in a given category and information on organizational roles serve as a basis for presumptive, depersonalized form of trust, bypassing the need for personalized knowledge or history of interaction with the other members (Kramer, 1999, Brewer, 1981). On the other hand, Kotkavirta (2000) notes that individuals can act as representatives of the category through their organizational roles. Also Nooteboom (2002) emphasizes the mutual effect of personal and system/institutional trust. He recognizes how the system effects trust in people, and behaviour and experience in specific relations have effects on the trust that one has in the system.

According to Bicchieri et al. (2004), impersonal trust generally arises from the behavioral pattern of trusting and reciprocating. However, norms of trust and reciprocity only tend to emerge in the long run, when there is high enough probability for the parties to meet again. This carries some important implications. In virtual groups, reciprocal interactions can be sustained efficiently, as a simple act of helping is relatively easy to produce and can be viewed by a large group of individuals (Wellman & Gulia, 1999). On the other hand, the anticipation of future association (Powell, 1990, ref. in. Järvenpää & Leidner, 1998) may be more difficult to sustain online than in co-located organizations.

Fair procedures communicate information about authorities' motivation and the ability to carry their intentions through (Kramer, 1999). Procedural fairness can be operationalized as fair information practices (e.g. privacy and consent), which act as a fiduciary norm to build impersonal trust (Culnan & Armstrong, 1999). Pavlou et al. (2003) consider third-party intermediaries, dyadic processes, standards, and norms as the sources of impersonal trust in the online inter-

organizational context. Bailey et al. (2002) generally identify four categories of virtual trust sources: surface inspection (examination of the external appearance of the other, "first impression"), experience (repeated successful exchanges with an exchange partner), presumptions (beliefs derived e.g. from cultural stereotypes) and institutions/third parties. Of these, presumptions and institutions present indirect and impersonal forms of trust development.

Table 1. Sources of impersonal trust

| Author | Context | Antecedents/sources of |
|----------------------|----------------------------|-----------------------------|
| | | impersonal trust |
| Shapiro (1987) | Networks of social | Procedural norms |
| | interaction | Structural constraints |
| | | Entry restrictions |
| | | Policing mechanisms |
| | | Social-control specialists |
| | | Insurance-like arrangements |
| Pixley (1999) | Networks of social | Global mediating |
| | interaction | organizations |
| Lahno (2002) | Networks of social | Interaction with the |
| | interaction | representatives of the |
| | | institution |
| Bicchieri et al. | Exchange between | Norms of trusting and |
| (2004) | rational agents | reciprocating |
| McKnight et al. | Organizations | Guarantees |
| (1998) | | Safety nets and other |
| | | structures |
| Kramer (1999) and | Organizations | Fair procedures |
| Kramer et al. | | Third parties |
| (1996) | | Roles |
| | | Social categories |
| Atkinson & | Managerial relationships | Roles |
| Butcher (2003) | | Systems |
| | | Reputations |
| Culnan & | Customer relationships | Fair information procedures |
| Armstrong (1999) | | |
| Pavlou et al. | Online interorganizational | Intermediaries |
| (2003) | relationships | Processes |
| | | Standards and |
| | | norms |
| Bailey et al. (2001) | Computer-mediated | Presumptions |
| | exchange | Institutions/third parties |

DISCUSSION

We answer our first research question by analyzing the impersonal trust in both virtual and organizational contexts. In virtual organizations, communication and trust are challenging, as people cannot socialize only through interpersonal interaction and rely on direct experience about the exchange partner. Thus institutional norms, processes and structures are needed. Impersonal trust is critical especially in the early phases of involvement, as institutional structures may catalyze interactions between different parties and be the initial step toward new trust-based relationships (see Pavlou et al., 2003).

Our second research question concerned the sources of impersonal trust. In sum, four categories of impersonal trust sources have been identified in the literature:

- Norms, standards and fair practices
- Roles, categories and presumptions
- Structural constraints, policies and control
- Intermediaries and third parties

While in some instances impersonal trust is enough for successful exchange, in other instances it may further encourage one's trust in interpersonal interactions. Also interpersonal relationships may enhance the evolution of institutional trust, as individuals act through their specific roles and memberships of institutions.

FUTURE TRENDS

The nature of trust may be changing from a traditional and incrementally evolving type of trust towards a more analytical, reflective and tentative type of trust (Adler, 2001). In many cases there is not enough time for repeated interpersonal interaction on which the traditional, slowly evolving trust is based. It is therefore proposed that different forms of trust, such as fast and individual-based trust (Blomqvist, 2005), as well as institutional trust are increasingly important for knowledge-based organizations.

In the literature, impersonal trust is traditionally discussed in the form of indirect relationships and mediating organizations. However, there is a "gray area" between informal interpersonal dyads and formal structures that alone have represented impersonal trust. Reaching out towards a more comprehensive theory on trust is a critical issue for researchers of both traditional and virtual organizations.

CONCLUSIONS

Social trust based on interpersonal knowledge is too scarce in the global network society and inadequate for technology-mediated communication where people do not share a physical space. Past research on trust both in organizations and in virtual social collectives has mainly focused on the interpersonal level. Crosslevel studies and a more comprehensive theory on trust are called for (Möllering et al., 2004).

We have contributed by analyzing prior studies on impersonal trust in both organizational and virtual contexts. We have also stressed the antecedents of impersonal trust. It is further proposed that a more encompassing theory on trust is needed which incorporates the impersonal nature of trust and the emerging social structures in the virtual context. Our advice for managers is to increase awareness of the kind of trust that is not based on interpersonal relationships.

REFERENCES

Abdul-Rahman, A. & Hailes, S. (2000). Supporting trust in virtual communities. *Proceedings of the 33th Hawaii International Conference on System Sciences (HICSS'00)*. Retrieved March 10, 2004, from http://www.cs.ucl.ac.uk/staff/F.AbdulRahman/docs/hicss33.pdf

Adler, P. (2001). Market, hierarchy, and trust: The knowledge economy and the future of capitalism. Organization Science, 12(2), 215-234.

Arrow, K. (1974). Limits of Economic Organization. New York: Norton.

Atkinson, S. & Butcher, D. (2003). Trust in managerial relationships. *Journal of Managerial Psychology*, 18(4), 282-304.

Ba, S. (2001). Establishing online trust through a community responsibility system. *Decision Support Systems*, 31, 323-336.

Bailey, B., Gurak, L. & Konstan, J. (2002). Trust in Cyberspace. In J. Ratner (Ed.), *Human Factors and Web Development* (pp. 311-321). New Jersey: Lawrence Erlbaum Associates.

Barber, B. (1983). The Logic and Limits of Trust. New Jersey: New Brunswick.

Bicchieri, C., Duffy, J. & Tolle, G. (2004). Trust among Strangers. *Philosophy of Science*, 71, 286-319.

Blomqvist, K. (2005). Trust in a Dynamic Environment - Fast Trust as a Threshold Condition for Asymmetric Technology Partnership Formation in the ICT Sector. In R. KleinWoolthuis and K. Bijlsma-Frankema (Eds.), *Trust Under Pressure, Empirical Investigations of Trust and Trust Building in Uncertain Circumstances* (pp. 127-147). Cheltenham: Edward Elgar Publishing.

Boyd, J. (2002). In community we trust: online security communication at eBay. *Journal of Computer-Mediated Communication*, 7(3). Retrieved January 10, 2005, from

http://jcmc.indiana.edu/vol7/issue3/boyd.html

Brewer, M. (1981). Ethnocentrism and its role in interpersonal trust. In M. Brewer and B. Collings (Eds.), *Scientific inquiry in the social sciences* (pp. 214-231). San Francisco: Jossey-Bass.

Calhoun, C. (1992). The Infrastructure of Modernity: Indirect Social Relationships, Information Technology, and Social Integration. In H. Haferkamp and N. Smelser (Eds.), *Social Change and Modernity* (pp. 205-236). Berkeley: University of California Press.

- Castelfranchi, C. & Tan, Y. (2002). The role of trust and deception in virtual societies. *International Journal of Electronic Commerce*, *6*(3), 55-70.
- Chang, M. & Cheung, W. (2005). Online Trust Production: Interactions among Trust Building Mechanisms. *Proceedings of the 38th Hawaii International Conference on System Sciences (HICSS'05)*.Retrieved January 18, 2006, from http://ieeexplore.ieee.org/iel5/9518/30166/01385603.pdf?arnumber=1385603
- Creed, D. & Miles, E. (1996). Trust in Organizations. A Conceptual Framework Linking Organizational Forms, Managerial Philosophies, and the Opportunity Costs of Control. In R. Kramer and T. Tyler (Eds.), *Trust in organizations. Frontiers of Theory and Research* (pp. 16-38). Thousand Oaks: Sage Publications.
- Culnan, M. & Armstrong, P. (1999). Information Privacy Concerns, Procedural Fairness, and Impersonal Trust: An Empirical Investigation. *Organization Science*, *10*(1), 104-115.
- Dyer, J. (2000). *Collaborative Advantage: Winning Through Extended Enterprise Supplier Networks*. Oxford: Oxford University Press.
- Fiske, S. & Taylor, E. (1991). Social cognition. New York: McGraw-Hill.
- Grant, R. (1996). Toward a knowledge-based theory of the firm. *Strategic Management Journal*, *17*, 109-122.
- Handy, C. (1995). Trust and the Virtual Organization. How do you manage people whom you do not see? *Harvard Business Review*, May-June 1995, 40-50.
- Hofstede, G. (1980). Motivation, leadership, and organization: Do American theories apply abroad? *Organizational Dynamics*, *9*(1), 42-63.
- Järvenpää, S., Knoll, K. & Leidner, D. (1998). Is Anybody Out There? Antecedents for Trust in Global Virtual Teams. *Journal of Management Information Systems*, 14(4), 29-64.
- Järvenpää, S. & Leidner, D. (1998). Communication and Trust in Global Virtual Teams. *Journal of Computed-Mediated Communication, 3*(4), June 1998. Retrieved October 5, 2004, from http://jcmc.indiana.edu/vol3/issue4/jarvenpaa.html
- Kogut, B. & Zander, U. (1992). Knowledge of the firm, combinative capabilities, and the replication of technology. *Organization Science*, *3*(3), 383-397.

Kollock, P. (1999). The production of trust in online markets. *Advances in Group Processes*, *16*. Retrieved October 7, 2004, from http://www.sscnet.ucla.edu/soc/faculty/kollock/papers/online_trust.htm

Kotkavirta, J. (2000). Luottamus instituutioihin ja yksilöllinen hyvinvointi. [*Trust in institutions and personal well-being*]. In K. Ilmonen (Ed.), Sosiaalinen pääoma ja luottamus [*Social capital and trust*] (pp. 55-68). Jyväskylä: University of Jyväskylä.

Kramer, R., Brewer, M. & Hanna, B. (1996). Collective Trust and Collective Action: The Decision to Trust as a Social Decision. In R. Kramer and T. Tyler (Eds.) *Trust in Organizations: Frontiers of Theory and Research* (pp. 357-389). Thousand Oaks: Sage Publications.

Kramer, R. (1999). Trust and Distrust in Organizations: Emerging Perspectives, Enduring Questions. *Annual Review of Psychology*, *50*, 569-598.

Lahno, B. (2002). Institutional trust: a less demanding form of trust? Originally in *Revista Latinoamericana de Estudios Avanzados* (RELEA), Caracas, *16*.

Luhmann, N. (1979). Trust and Power. Chichester: John Wiley.

Mayer, R., Davis, J. & Schoorman, D. (1995). An integrative model of organizational trust. *Academy of Management Review*, 20(3), 709-734.

McKnight, D., Cummings, L. & Chervany, N. (1998). Initial trust formation in new organizational relationships. *Academy of Management Review*, 23(3), 473-490.

Möllering, G., Bachmann, R. & Lee, S. (2004). Understanding organizational trust – foundations, constellations and issues of operationalisation. *Journal of Managerial Psychology*, 19(6), 556-570.

Nooteboom, B. (2002). *Trust: Forms, Foundations, Functions, Failures and Figures*. Cheltenham: Edward Elgar Publishing.

Olson, J. & Olson, G. (2000). Trust in E-commerce. *Communications of the ACM,* 43(12), 41-44.

Pavlou, P., Tan, Y. & Gefen, D. (2003). The Transitional Role of Institutional Trust in Online Interorganizational Relationships. *Proceedings of the 36th Hawaii International Conference on Systems Sciences (HICSS'03).*

Pixley, J. (1999). Impersonal trust in global mediating organizations. *Sociological Perspectives*, *42*(4), 647-671.

Powell, W. (1990). Neither market nor hierarchy: Network forms of organization. *Research in Organizational Behavior, 12*, 295-336.

Rachman, Z. & Bhattachryya, S. (2002). Virtual organization: A stratagem. Singapore Management Review, 24(2), 29-45.

Resnick, P. (2005). Impersonal sociotechnical capital, ICTs, and collective action among strangers. In W. Dutton, B. Kahin, R. O'Callaghan and A. Wyckoff (Eds.), *Transforming Enterprise* (pp. 399-412). London: MIT Press.

Ridings, C., Gefen, D. & Arinze, B. (2002). Some antecedents and effects of trust in virtual communities. *Journal of Strategic Information Systems*, 11, 271-295.

Rotter, J. (1967). A new scale for the measurement of interpersonal trust. *Journal of Personality*, *35*, 651-665.

Shankar, V., Urban, G. & Sultan, F. (2002). Online trust: a stakeholder perspective, concepts, implications, and future directions. *Journal of Strategic Information Systems*, 11, 325-344.

Shapiro, S. (1987). The Social Control of Impersonal Trust. *American Journal of Sociology*, *93*(3), 623-58.

Spears, R. & Lea, M. (1992). Social influence and the influence of the 'social' in computer-mediated communication. In M. Lea (Ed.), *Contexts of Computer-Mediated Communication* (pp. 30-65). Hemel Hempstead: Harvester Wheatsheaf.

Spears, R., Lea, M., Corneliussen, R., Postmes, T. & Ter Haar, W. (2002). Computer-mediated communication as a channel for social resistance: the strategic side of SIDE. *Small Group Research*, *33*(5), 555-574.

Sztompka, P. (1999) *Trust: a sociological theory*. Cambridge: Cambridge University Press.

Tajfel, H. (1982). Social identity and intergroup relations. Cambridge: Cambridge University Press.

Turner, J. (1987). *Rediscovering the social group: A self-categorization theory*. Oxford: Basil Blackwell.

Wellman, B. & Gulia, M. (1999). Virtual communities as communities. In M. Smith and P. Kollock (Eds.), *Communities in Cyberspace* (pp. 167-194). New York: Routledge.

Williams, M. (2001). In whom we trust: Group membership as an affective context for trust development. *The Academy of Management Review, 26*(3), 377-396.

Zucker, L. (1986). Production of Trust: Institutional Sources of Economic Structure, 1840-1920. In B. Staw and L. Cummings (Eds.), *Research in Organizational Behavior*, 8, 53-111.

Key terms

Virtual organization is formed by business partners and teams who work across geographical or organizational boundaries with the help of information and communication technologies. (Rachman & Bhattachryya, 2002)

Impersonal trust refers to indirect relationships where trust is not based on direct personal contact but mediated by a social organization or structure. (Shapiro, 1987, Pixley, 1999)

Institutional trust reflects the security one feels about a situation because of guarantees, safety nets and other structures (structural assurance), and the belief that things are normal and customary and that everything seems to be in proper order (situational normality). (McKnight et al., 1998)

Trusted third party (TTP) represents a type of trust-guarding institution. It refers to a situation where two exchanging parties use a third (trusted) party to secure their own interactions.

Collective trust is an ongoing system of risk-taking enabled by good will and positive expectations of other members of the social system.

Social category represents a "cognitive shortcut" that allows people to rely on previously held or stereotypical beliefs rather than specific knowledge about the other party. (Williams, 2001)

Category-based trust refers to trust based on salient information regarding a trustee's membership in a social category, influencing judgments about his trustworthiness. (Kramer, 1999)