

Dangerous Liaisons: Trust, Distrust, and Information Technology in American Work Organizations

Marietta L. Baba

This paper employs an inductive, natural-systems approach to explore the complex social and economic factors whose interaction generate trust and distrust between individuals, subunits, and firms in American corporations. The objective of this investigation is to gain a better understanding of the role of interpersonal trust and distrust on the implementation and use of new information technologies in organizational settings. The focus of the investigation is work-group control of information flow across organizational boundaries under conditions of trust and distrust, and the consequences of advanced information technology for such information-control practices. A central finding is that more powerful parties often try to force a shift in the medium of information exchange to gain greater control in specific hierarchical relationships. When these changes threaten the quality or security of information required by less powerful parties, resistance is the result. The discussion suggests that deployment of advanced information technology without the application of local knowledge of social interrelationships increases the risk of implementation failure.

Key words: trust, distrust, risk, information, information technology, electronic communication

Introduction

Relations of interpersonal trust in formal organizations are an emerging area of interest in the social and organizational sciences. Since economic transactions are embedded within networks of social relationships, the characteristics of those relationships—such as trust and its opposite, distrust—have a direct bearing on the effectiveness and efficiency of instrumental exchanges in organizational settings (Granovetter 1985). Trust between various organizational actors (including trust between individuals within a work group, in separate units within a firm, or in different firms) appears to confer a competitive advantage by enabling more effective cooperation and coordination among parties to an economic transaction (Fukuyama 1995). Where there

is trust, different parties can enter into collaborative relationships more quickly, sustain coordinated action by making mutual adjustments, and learn from each other, rather than being bogged down for days, weeks, or months in formulating cumbersome contracts or building elaborate hierarchies that enforce a limited form of cooperation that ultimately may interfere with learning (Thompson 1967; Alter and Hage 1993). Organizational scholars and practicing managers alike have discovered that many economic objectives—from achieving success in mergers, acquisitions, and partnerships (Johnson and Lawrence 1988; Dodgson 1993; Kanter 1994) to creating new types of “virtual” organizations (Handy 1995) to sustaining the long-term economic growth and development of nations (Fukuyama 1995)—are furthered by high levels of trust in social and organizational relationships.

Prompted by competition from firms based in Japan and elsewhere in the East—where reciprocal bonds of obligation facilitate trust and cooperation between individuals and groups (e.g., Brunner et al. 1989)—American corporations have belatedly recognized the value of a trust-based “collaborative advantage” (Kanter 1994). In response, U.S. firms have adopted a number of new structures and management practices that attempt to build trust as a means to improve coordination and cooperation among parties representing different interests (e.g., employees and managers, managers of different subunits, firms and their customers, buyers and suppliers). These structures and practices include self-directed

Marietta L. Baba is professor of anthropology at Wayne State University. The author is indebted to the research team at the Laboratory for Socio-Technical Systems Integration for gathering data that suggested the critical role of trust and distrust in electronic connectivity. Special thanks go to Allen Batteau and Wizdom Systems, Inc. for enabling access and field experiences that sharpened my awareness of the significance of trust in business relationships. I am also most grateful to employees in the automotive and aerospace industries whose personal stories of work and technology use vividly illustrated the issues discussed in this paper. Funding for the research reported here was provided by private-sector firms and government agencies that will remain anonymous. Any errors or omissions in this article are strictly the author's responsibility.

and/or cross-functional work teams, total quality management, employee involvement, and category management (i.e., manufacturer-retailer partnerships), among others (Aoki 1990).

At the same time, American corporations also have pursued other pathways to a "collaborative advantage" that do not necessarily rely upon trust. Probably the most prominent of these are new information technologies such as electronic data interchange (EDI); computer-aided design (CAD), computer-aided manufacturing (CAM), and computer-aided engineering (CAE); shared databases; and computer supported cooperative work (CSCW) tools. Such technologies potentially offer many of the same advantages as trust; that is, they enable people based in different places and/or doing different jobs to coordinate their actions with greater speed and effectiveness. These benefits are believed to derive from the basic features of modern information technologies, which reduce the elapsed time for transactions, decrease error rates¹ and permit ease of collaboration with remote colleagues (via single-entry data points, automated electronic transmission, common access to shared databases, asynchronous and one-to-many communication networks (Davenport 1993; Sproull and Keisler 1993). Often, it is assumed that the deployment of new information technology will allow the corporation to circumvent or transcend geographical, temporal, cultural, or organizational barriers to cooperation, supposedly without the need for more intangible and difficult-to-manage changes in interpersonal relationships. Toward such objectives, American firms spent more than \$400 billion on new computer hardware, software, and services in 1997 alone (David H. Hill, personal communication, July 11, 1999).

In American society, offering technological solutions to address economic, political, and social problems is not only commonplace, it is a distinguishing feature of our national culture (Segal 1985). The history of this society, a "civilized people on an uncivilized continent" (de Tocqueville 1862), coupled with conditions of severe labor shortage and serious labor-management conflict and violence over a number of centuries, established conditions that elevated the "technological fix" to the status of a managerial "silver bullet" (Baba et al. 1996). In American industry, new technology is viewed not only as a perfect substitute for labor (this idea is a cornerstone of economic theory), it can also take care of "people problems" by doing things people cannot or will not do, all with less hassle (see, for example, Hammer and Champy's 1993 arguments for technology-enabled "re-engineering").

While the success of information technology typically is not predicated upon bonds of trust, its failure often is the result of another phenomenon that has received less attention in the literature—distrust. Distrust is more than the absence of trust, it is the presence of particular cognitive and affective factors in the stream of social interaction that actively inhibit cooperation and coordination between different parties (McAllister 1995). The presence of distrust between firms, functions, and hierarchical levels in a corporation results from an expectation of harm that is based, in part,

on the memory of past negative exchanges (actual or perceived) between particular groups (Luhmann 1988). Such expectations, warranted or not, may inhibit the sharing of information across group boundaries, which is a prerequisite for effective use of information technology (Sproull and Keisler 1993). Ironically, the absence of trust thus may indicate a potential blockage in one pathway to cooperation (i.e., information technology) that was not supposed to rely upon trust in the first place.

This paper employs an inductive, natural-systems approach to explore the complex social and economic factors whose interaction generate conditions of trust and distrust between individuals, subunits, and firms in American corporations. The objective of this investigation is to better understand the role of interpersonal trust and distrust on the implementation and use of new information technologies in organizational settings. A key focus of the investigation is work-group control of information flow across organizational boundaries under conditions of trust and distrust, and the consequences of new information technology for such information-control practices. The discussion will suggest that deployment of new information technology without the application of local knowledge of social interrelationships increases the risk of implementation failure.

Theoretical Background

The Concepts of Trust and Distrust

Until recently, trust and distrust were seldom subjects of systematic empirical investigation or theorizing by social scientists (Barber 1983). Management writers in particular often do not even define the words, or spend much time providing an anatomy of these concepts, presumably assuming that readers know what they mean. If one stops for a moment to consider the phenomena, however, it becomes apparent that the concepts of trust and distrust are not so simple. Complexity resides not only in the fact that different scholars have assumed different meanings for the terms (Hosmer 1995), but also that these concepts exist at multiple levels of analysis (individual, dyad, group, corporate entity), and have multiple dimensions. For example, in American studies of supervisor/worker and coworker dyads, trust has been found to have as many as five different dimensions, including (in order of importance) *integrity* (defined as honesty and truthfulness), *competence* (technical and interpersonal skill), *loyalty* (benevolent motives toward another), *consistency* (reliability, predictability, good judgment), and *openness* (willingness to share information and mental accessibility) (Butler and Cantrell 1984; Schindler and Thomas 1993). The relative importance of these factors in the United States, however, may differ according to the specific dyad one is examining. Openness, for instance, may be more important in horizontal or peer-to-peer dyads (e.g., between coworkers in a work group) than in vertical dyads, where other dimensions such as competence may be more critical.

Further, although trust and distrust are panhuman (i.e., they are an aspect of social relations in virtually all societies), they are defined and enacted differently in different cultural contexts. What constitutes trust, including its behavioral requirements and pre-conditions, is not the same in Japan or China as it is in the United States or Mexico. Fukuyama (1995) compares the sociocultural contexts of trust and distrust in several societies, including China, France, Germany, Italy, Japan, Korea, and the United States, showing that the willingness to trust various classes of persons in the economic sphere is related directly to differences in social structure and kin relations. An understanding of structural differences between the Japanese *ie* (household) and the Chinese *jia* (family), for example, is necessary to comprehend the reasons why trust relations in Japan may be extended to all of the members of a large corporate enterprise, while in China they are more typically limited to the kinship network. As cultures change over time, the meanings of trust and distrust also change. As an illustration, the requirements of trust rested more heavily on personal loyalty and obligations in the feudal societies of Western Europe than in their modern descendants, where technical competence is more critical (Barber 1983). Several writers have noted that, regardless of context, trust requires a shared system of values (see Hart et al. 1987). Thus, trust relations would be expected to be more likely between parties within a particular sociocultural group than between such groups.

A Definition of Trust

An emerging consensus among scholars suggests that trust may be defined as the subjective expression of one actor's *expectations* regarding the behavior of another actor (or actors). Trust exists when one actor expects that another will behave in such a way that the safety and security of the first actor will be preserved, under conditions in which the first actor is both *dependent* upon and *vulnerable* to the actions of the second, that is the first actor does not have control of the second, and there is the risk of harm (see Hosmer 1995).² Trust may be both a characteristic of a relationship between individuals or groups (e.g., a high level of trust in labor-management negotiations), as well as a characteristic of an individual (e.g., a child known to have a trusting character).

Two basic kinds of trust have been identified, each related to a different set of expectations about others (Barber 1983). The first kind of trust involves *general expectations* regarding the persistence and fulfillment of the natural and moral social orders. This is the form of trust we rely upon every day as we go about our routines—we trust the sun will rise in the morning and our family members will not harm us while we sleep. The second type of trust involves expectations that are *specific* to particular contexts and vary greatly from place to place. Specific trust is of two kinds, which are independent of one another: a) trust related to the technical *competence* of role performance; and b) trust related to *fidu-*

ciary responsibility.³ If we trust in the competence of another, we expect that he or she has the requisite knowledge, skill, and personal characteristics (e.g., dependability) needed to perform an action in a way that results in a positive outcome for us (e.g., we trust our surgeon to perform the operation in a competent manner). In the fiduciary form of trust, we expect that another will behave in a way that preserves and advances our interests while abstaining from opportunism (e.g., we trust our babysitter to make decisions about our children's welfare in a manner that, hopefully, benefits the children more than the sitter). This latter type of trust also has been called *goodwill*⁴ (Dodgson 1993), based on the notion that fiduciary responsibility can extend beyond the call of duty, to inspire an actor to exploit opportunities that further another party's interests, while at the same time refraining from taking unfair advantage of the other.

Competence and fiduciary responsibility, respectively, may be related to two distinctive human foundations for trust: the cognitive and the affective (Lewis and Wiegert 1985). Trust is grounded in part on cognition-based criteria; we consciously choose those in whom we trust based on our perceptions of evidence for their trustworthiness (e.g., credentials, reputation, and demographics). Cognition-based trust thus may be related to competence. Affect-based trust reflects emotional investments in a relationship. When individuals demonstrate their genuine caring and concern for one another over time, there emerges a feeling in one that the other will do no harm. This aspect of trust appears to be connected to the notion of fiduciary responsibility. The two forms of trust, competence/cognitive and fiduciary/affective, function in distinctive ways, but may be causally related—the former may provide a foundation for the latter (McAllister 1995).

The Social Functions of Trust: Uncertainty and Risk

Trust has important functions in all societies, including the promotion of long-term stability (Cook and Wall 1980), reduction in the costs of exchange and other transactions (Schmidt and Posner 1982), and enhancement of the quality of life (Schindler and Thomas 1993). Trust is one way all societies deal with a central problem of the human condition—how to span the boundary between the self and the other, between us and them. Trust facilitates transactions needed for survival by reducing the *uncertainty and risk* (or complexity) of cooperation. Luhmann (1988) has emphasized the relationship between trust and risk. The existence of trust between two parties suggests that it is possible for one party to act in a way that could damage the other party, and that it is possible for the party at risk to therefore choose *not* to participate. The reason actors choose to enter into the risky situation is because of the bond of trust; without trust, the risk would be too great. Trust is a matter of probability, however, not certainty. There is always the possibility that expectations will be disappointed, even in the closest relationships.