

TRUST AS A PARTICIPANT IN THE ADAPTATION OF TECHNOLOGICAL CHANGES

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Purpose: Trust is an important relational element in everyday social life and influences the efficiency of the communication process of the whole society. In the literature on the subject, there are different definitions of this concept. Most often, trust is described as an element of the personality formed at the beginning of life. This thesis examines the concepts of trust and trust in technology. It discusses the differences, connections, and dependencies between them, which determine the process of adaptation of technology recipients to its advanced development.

Design/methodology/approach: In the content of the paper, the authors focused on a review of the literature on the selected issue. The content attempts to refer to the aspects of trust that emerge during the implementation and adaptation of new technologies.

Findings: The analysis of the research carried out by individual authors allows us to conclude that the concepts of interpersonal and technological trust are not identical, but complementary. Due to technological progress and the fact that it plays an increasingly important role in society, trust in technology is gaining in importance. There is also a growing need on the part of manufacturers to provide trustworthy IT solutions, as audience trust is crucial in the sense of user acceptance of technological solutions and thus their turnover in the market.

Social implications: The development of new technologies changes the shape and perception of reality. Technology determines the progress of development as well as the dynamics of functioning in this technological reality of society. New technologies throw many challenges at the social level, one of them is the issue of trust in what technology can change as a causal effect.

Originality/value: In its content, the article tries to cross the horizon of current events in the dimension of technological changes. Many futurologists like Y.N. Harrari is trying to see possible scenarios that will be a consequence of implementing the technology. It is important to emphasize that technology itself is not deterministic, it is programs of use, common sense, trust and human morality that determine the ultimate agency and use of technology.

Keywords: technology, trust, adaptation.

1. Introduction

Trust is an important relational element related to interpersonal interactions occurring in everyday social life and influencing the efficiency of the communication process of the whole society. In the literature on this subject, one can find various definitions of this concept. Most often, trust is described as an element of the personality of a given individual, formed in the initial period of life, concerning his tendency to certain actions. This article examines the concepts of trust in technology and trust as a whole. It discusses the differences, connections, and dependencies between them, which determine the process of adaptation of technology recipients to its advanced development.

2. Trust

The key factor in the process of any social interaction of significant importance, which undoubtedly influences the behavior of every human being, is trust. This phenomenon is responsible for the pace and dynamics of created mutual behavior and determines the speed of information exchange in any social environment (Smith, Barclay, 1997). Trust is reinforced by the circumstances which, as a result of the occurrence, characterize cooperating individuals as dependent on each other by being oriented towards achieving a previously defined, common goal.

Due to the meaning of the term in various disciplines (e.g. social psychology, sociology, and economics), trust is defined in many different ways. Some researchers view trust as an aspect of a person's personality - similar to a tendency to trust or dispositional trust - that develops early in life and remains relatively stable (Rotter, 1967; Webb, Worchel, 1986).

Trust usually involves the ability of another person to do something in a certain scenario. As a result, it is widely accepted in the literature on this topic that trust is essentially a three-place predicate (Castelfranchi, Falcone, 2010; Hawley, 2014; Simpson, 2011). Usually, this will mean a trust attitude analysis in which entity A trusts entity B with respect to some action of X. Trust seen in such a model is a matter of performing some action in a specific situation or domain of interaction.

Interpersonal trust is an inherently relational concept and is often cited as the underlying principle for optimal performance in society as a whole. It is commonly defined as the willingness to rely on someone else's actions when at risk (Mayer et al., 1995; Williams, 2001). But trust also underlies other key aspects of relationships, such as someone's perception of their ability to be helpful (Gambetta, 1988) and the willingness to reveal confidential information (Krackhardt, Hanson, 1993). As trust reduces the need to monitor another person's behavior

and thus the need for formalized procedures or contracts, it provides the necessary link that organizations need to become more efficient and effective (Powell, 1990). A different perception of trust appears as a set of beliefs and expectations about the characteristics, intentions, and behaviors of the other party (Cook, Wall, 1980; McAllister, 1995). There are researchers in the scientific community who treat trust as a psychological state or willingness to be vulnerable based on beliefs and expectations of the other party (Mayer et al., 1995; Rousseau et al., 1998).

It is also worth remembering that the scientific community also distinguishes the approach to trust, where trust is seen as a synonym of cooperative behavior or risk taking (Gambetta, 1998). Such complexity in the interpretation of the term can lead to misunderstandings about how to correctly define trust.

The literature on the subject consists of extensive collections of scientific works that lead to wide-ranging discussions about the role of trust (Dirks, Ferrin, 2001; Schoorman et al., 2007). However, it does not raise any doubts and it is not a controversial statement that trust is the glue, which in its success, defines human-human interaction and is necessary on the way to the success of interpersonal relationships.

Among many studies on trust between human beings, research on the role of human trust in new technologies is gaining importance. The initiating motivation to carry out research in this area is undoubtedly the new information technologies which, with their development, have crossed the horizon of events in the field of human-to-human communication. Current experience is enough to show the multitude of benefits of this way of communicating with other people through technology. However, this difference in the way we communicate through the broadly understood lower quality way of communication may be what, in its effect, will inhibit the development of trust between people. Taking the above as an argument, it becomes justified to carry out research into the relationship between trust and interpersonal trust in technology. The conducted research allowed to establish that interpersonal trust influences trust in technology, which in turn influences the behavior related to cooperation. Both types of trust influence intentions to continue interpersonal interactions and intentions to use technology in the future, but interpersonal trust has a stronger impact on both intentions. The results of the study help us understand how trust functions in a technology-mediated environment. Future research should focus on examining how interpersonal trust and trust in technology develop over time (Miller, 2015).

Trust plays an integral role in the communication process. Recent research has begun to analyze the nature of the construct of trust in human-machine interactions and human trust in technology. In many disciplines, trust in technology has attracted a lot of attention from both the research and applied communities, providing support for its theoretical and practical relevance (McKnight et al., 2011).

Research on trust in the literature has been the interest of many scientists. Among the many different studies, there are studies that linked trust with the communication process (Boss, 1980; De Dreu et al., 1998; Dirks, 1999; Kimmel et al., 1980; Mellinger, 1959; Smith, Barclay, 1985; Zand, 1972), trust with the behavior of an individual in an organization (Konovsky, Pugh, 1994; McAllister, 1995), trust and the negotiation process (Kimmel et al., 1980; Schurr, Ozanne, 1985), trust and conflict (De Reu et al., 1998; Porter, Lilly, 1996; Zaheer et al., 1998), trust and other behaviors (Dirks, 1999; Spreitzer, Mishra, 1999), trust and individual efficiency (Earley, 1986; Oldham, 1975), trust and satisfaction (Boss, 1978; Brockner et al., 1997; Driscoll, 1978) and other research on trust (Benton et al., 1969).

3. Trust in Technology

In the field of research, trust in technology has become a meaningful subject. The multitude of definitions that try to develop this issue treats trust in technology in a way where the interpretation is translated as the belief that a specific technology has the attributes necessary to operate as expected in a given situation where negative consequences are possible (McKnight et al., 2011). When talking about trust in technology, we can distinguish identical levels that develop this trust. Among other things, there is a relationship between trust and whether a given technology will be adopted by its user (Gefen et al., 2003; Davis, 1985; Ajzen, 1975). There is also an aspect of trust in automation (Lee and See, 2004) and services provided by technology (such as e-administration, e-banking, or e-commerce).

Often, when trust is discussed in the context of human-technology interaction, it refers to human dependence and the use of a particular technology. After all, technology is often developed to reduce human error in the system.

In the literature, there are many models that deal with technology acceptance models, noting a lot of constructs that are a catalyst or an inhibitor of technology implementation. Scientists are looking in many different directions, but the aspect of trust is not popular in the context of dealing with technology. However, trust is what binds any social relationship, it is the beginning of every business, the whole functioning world is based on it. The technology-driven world invites machines to cooperate with humans, with which humans enter into relationships through multiple communication opportunities. Technology allows for new ways and methods of human-to-human communication.

This allows for the conclusion that the role of trust in technology is an element of the context of using information and communication technologies (Kuriyan et al., 2010). Today's mechanisms, which powering a functioning economy, are nothing more than technology. This technology, taking the form of various tools, provides man with a way to carry out complex tasks more efficiently than ever before, in other words, technology provides services that form

the pillar of the multi-level functioning of the economy, politics, economy - life. Therefore, trust in technology is related to technology adaptation, and response of target users making trust in technology a matter of broad interest.

The profile of trust research can have different backgrounds. For clarification, the example of trust research is of interest to scientists who are focused on a field of science that looks towards information systems. In this environment, the conducted research and conclusions suggest that trust in technology depends on how the user perceives a given technology and on institutional mechanisms ensuring the security of human-technology interactions (Rajalekshmi, 2008). This issue is of interest to an organization that wants to develop because of the fact that the reliability of technology is a key aspect of the reliability of a modern organization (Tworek et al., 2020).

4. Research on Trust and Technology

In the context of understanding the nature of trust in technology, a study was conducted by L. Xin, R. Guang, B. Jason (2012). The researchers believe that there is a lack of basic understanding of how technology trust relates to traditional trust and its role. Their work suggests that technology trust differs from an interpersonal trust (i.e., trust in people) due to different basic characteristics of trustees. To explore these differences, the authors first develop and validate a measure of technology trust consisting of technology-specific belief sources. They then develop a research model that compares and contrasts technological trust and interpersonal trust. This study provides evidence that trust in technology is related to, but distinct from, interpersonal trust. The authors found that trust in technology plays a dual role, exerting direct and indirect effects on trust outcomes. Rather than suggesting that trust in technology replaces interpersonal trust, the findings suggest that trust in technology complements interpersonal trust by influencing intention to use technology.

Research on trust in technology is rooted in theories of social reactions to computers (Reeves, Nass, 1996; Nass, Moon, 2000), which assume that people treat computers and computer technologies as social actors and apply social rules to them. As a result, many studies simply extend theories of interpersonal trust and transfer definitions and models from the interpersonal context to the technological context. For example, consistent with interpersonal trust research, IS research often defines trust in technology as people's multidimensional beliefs about the trustworthiness of a particular technological artifact, including benevolence, competence, and fairness, when performing important tasks (Wang, Benbasat, 2005; Vance, Straub, 2008). However, the characteristics of social actors and information technologies differ. For example, even when personified as agents of human actors, technologies generally lack the volitional control and moral capacities of human beings.

Given the existing differences between trust in people and trust in technology, researchers point to the need to identify an appropriate set of attributes that are unique to trust in technology.

In the era of development, the profile of scientists and the profile of business practitioners should treat the subject of development carefully. Scientists and managers in a responsible way should look for solutions that will take into account the good and fate of man. Undoubtedly, technology is the direction in which all units for which development and growth matter are oriented. For this reason, the aspects of ethics that stimulate the development of trust in technology should be studied by scientists to determine the moral responsibilities of those responsible for implementing the technology. Nowadays, the thesis that technology shapes our world is not controversial, so it is also necessary to recognize the fate of man, who may ultimately be replaced by this technology.

Table 1.
selected definitions of trust

Concept	Definition	Reference
Trust	The willingness of a party to be vulnerable to the actions of another party based on the expectation that the other party will perform a specific action important to the trustee, regardless of the other party's ability to monitor or control the other party	Mayer et al., 1995
Trustor	A party in a fiduciary relationship that trusts	
Trustee	A party in a trust relationship that receives trust	
Trustworthiness	The features and actions of the trustee that make the person more or less trusted	Gefen, 2002
Trusting beliefs	The trustees' insights into the trustworthiness characteristics of the trustee to form a trust	Gefen et al., 2003; Kim, Benbasat, 2009
Interpersonal trust	People's beliefs about the credibility of another human actor in a relationship	
Interpersonal Trust Belief - Competence	The ability of the trustee to do what the trustee needs	Mayer et al., 1995; McKnight et al., 2002; Gefen et al., 2003
Interpersonal Trust Belief - Benevolence	The care and motivation of the Trustee to act in the interest of the Trustee	
Interpersonal Trust Belief - Integrity	Trustee's honesty and promise keeping	
Technology Trust	People's beliefs about the reliability of an IT department in carrying out a task	Ratnasingam et al., 2005; McKnight, 2005
Institution-Based Trust	Belief that structural conditions are needed to increase the likelihood of a successful outcome to the trust venture	McKnight et al., 2002; Pavlou, Gefen, 2004

Source: Xin, L., Guang, R., Jason, B. (2012). Does Technology Trust Substitute Interpersonal Trust?: Examining Technology Trust's Influence on Individual Decision-Making, *Journal of Organizational and End User Computing*; Hershey Tom 24, Nr/edition 2, (2012): 18. DOI:10.4018/joeuc.2012040102.

In a study conducted by Alesina and Ferrara, the researchers note that the determinants of trust are rooted in individual and community characteristics. The researchers indicate that both individual and community characteristics contribute to the selection of trust by factors that reduce trust: recent traumatic experiences, membership in a racially discriminated group, low income or education, and high racial or income inequality in communities. They also found that religious beliefs and ethnicity do not significantly affect trust (Alesin, Ferrara, 2000).

5. Conclusion

The analysis of the research carried out by individual authors allows us to conclude that the concepts of interpersonal and technological trust are not identical, but complementary. Due to technological progress and the fact that it plays an increasingly important role in society, trust in technology is gaining in importance. There is also a growing need on the part of manufacturers to provide trustworthy IT solutions, as audience trust is crucial in the sense of user acceptance of technological solutions and thus their turnover in the market. It is also important that many currently available solutions, by reducing the risk of error, contribute to the efficiency of teams and thus consumer trust in the company itself.

Undoubtedly, in future years, scientists should pay attention to the agency of technology in terms of ethics that affects society. More and more technologies powered by artificial intelligence make the fate of man in the world of business questionable. Already today, the world of science and the world of business cannot predict what professions will be dominant on the labor market and what will actually be expected from the employee in terms of his skills and knowledge.

Technology powered by artificial intelligence puts humans in a position that is impossible to compete with. Algorithms are immeasurably ahead of the effect of human work. Situations like this should guide scientists and world governments to make wise decisions and build programs for proper technology implementation so that confidence in technology can grow.

Using the latest reports on tools and technologies that function thanks to artificial intelligence, such as generating images after entered words (Dalle-2) or creating ready-made essays on any given topic (chatGPT) is what starts asking important questions in which direction this is coming, as well as what it may lead to as a result.

If today there are algorithms that are able to create graphics much more efficiently, replacing the graphic designer's working hours - will it not be possible in the future to establish the entire production process based on algorithm calculations that will determine the entire process-flow, noting bottlenecks and potential quality defects? In this case, the work of countless people is directly at risk. Such technology without the right framework based on morality, ethics and trust can lead to negative scenarios.

And as scientists and business practitioners realize, technology is gaining momentum, making economically developed countries even larger economies of the world. However, there is a huge risk that countries with much lower economic development in this race may, according to Y.N. Harrari, become a 'useless class'.

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