Chapter 18
Issues on Anshin and its Factors

Yuko Murayama
Iwate Prefectural University, Japan

Yasuhiro Fujihara
Iwate Prefectural University, Japan

ABSTRACT

Traditional research on security and safety has been based on the assumption that a user feels secure and safe when using objectively secure and safe systems and services. The authors investigate factors influencing users’ subjective sense of security, which they call Anshin in Japanese. In this chapter, the authors introduce the concept of Anshin as an emotional trust and its research issues. They also show how to use statistical analysis methods to derive the factors of Anshin and present some results. Results using exploratory factor analysis and structural equation modeling bring us with three factors contributing to Anshin.

INTRODUCTION

In this chapter, we introduce the concept of Anshin and its research issues. We also present how to use statistical analysis methods to derive the factors of Anshin in our research presenting some results. Anshin is a Japanese term indicating an emotional state of one’s mind in peace. “An” is to ease and “shin” is to mind; Anshin literally means to ease one’s mind. We have introduced Anshin, and identified it as a key component of emotional trust (Murayama, Hauser, Hikage and Chakraborty, 2008).

DOI: 10.4018/978-1-61520-682-7.ch018
RELATED WORK ON ANSHIN AND TRUST

In this section, we introduce some related work. Most of them are introduced more thoroughly in our previous publication (Murayama, Hauser, Hikage and Chakraborty, 2008).

The sense of security is the emotional aspect of security. Since research on information security has been focused on its cognitive aspect, it is hard to find specific related work concerning the emotional aspect. On the other hand, some researchers have been looked at emotional aspects of trust. The relationship of user interfaces and trust has also been looked at by some researchers. Anshin has been studied in risk communication which is communication about the risks of nuclear power plants for a long time.

The concept of trust has been researched as a multi-disciplinary concept. From psychological viewpoint, Deutsch defined trust in an interpersonal context (Deutsch, 1960). Gambetta defined trust as a particular level of one’s subjective probability that another’s action would be favorable to oneself (Gambetta, 1988). Later Abdul-Rahman and Hailes used Gambetta’s definition of trust and proposed a distributed model of trust based on recommendation (Abdul-Rahman & Hailes, 2000). Marsh proposed the first computational trust model with quantized trust values in the rage of -1 to +1 (Marsh, 1994).

Lewis and Weigert (Lewis & Weigert, 1985) identified that trust had two aspects, viz. cognitive trust and emotional trust. Xiao and Benbasat defined the emotional aspect of trust in terms of commerce calling the trust concepts researched so far cognitive trust (Xiao & Benbasat, 2003; Xiao Komiak & Benbasat, 2004).

Popularly, cognitive trust is defined as a trustor’s rational expectation that a trustee will have the necessary competence, benevolence, and integrity to be relied upon. On the other hand, the emotional aspect of trust is defined as an emotional security, or feeling secure, or comfortable (Kuan & Bock, 2005; Xiao & Benbasat, 2003). According to Xiao and Benbasat (Xiao Komiak & Benbasat, 2004), emotional trust is feeling, while cognitive trust is cognition.

Yamagishi gives the distinct definitions of Anshin and trust from a sociological viewpoint; Anshin is the belief that we have no social uncertainty, whereas trust is needed when we have high social uncertainty. Trust is expectations of others’ intentions based on trustor’s judgment of others’ personalities and feelings (Yamagishi, 1998).

From a human interface viewpoint, Whitten and Tygar point out that user interfaces in security systems need special interfaces (Whitten & Tygar, 1999). Stephens gives design elements, such as page layout, navigation, and graphics which affect the development of trust between buyers and sellers in e-commerce (Stephens, 2004). Pu and Chen also report that how information was presented affected trust building in user interfaces (Pu & Chen, 2006). According to Riegelsberger, Sasse and McCarthy, affective reactions influence consumer decision-making (Riegelsberger, Sasse, & McCarthy, 2003).

From the viewpoint of communication about the risks of nuclear power plants, Kikkawa et al. introduced two Anshin states, viz. one with knowledge and the other without knowledge (Kikkawa et al., 2003, pp.1-8). They suggested that it would be necessary for users to study and obtain information in an active way to get more Anshin. To create Anshin the experts on technology would need to provide information to users as well as reducing technological risks. Yamazaki and Kikkawa suggested that there is a structure in Anshin through their study on Anshin in epidemic disease ‘Yamazaki & Kikkawa, 2006).

Recently Camp identified that trust included security, safety and reliability (Camp, 2003). Later Hoffman et al. presented such a structure as well with security, safety, reliability, privacy and availability (Hoffman, Lawson-Jenkins, & Blum,
Related Content

Analyzing the Ethical Dilemma between Protecting Consumer Privacy and Marketing Customer Data
[www.igi-global.com/article/analyzing-ethical-dilemma-between-protecting/78292?camid=4v1a](www.igi-global.com/article/analyzing-ethical-dilemma-between-protecting/78292?camid=4v1a)

Trusting Technological Actors: A Foundation in Structure and Cultural Sentiments
Daniel B. Shank (2010). *Trust and Technology in a Ubiquitous Modern Environment: Theoretical and Methodological Perspectives* (pp. 35-54).
[www.igi-global.com/chapter/trusting-technological-actors/42899?camid=4v1a](www.igi-global.com/chapter/trusting-technological-actors/42899?camid=4v1a)

Research Design
[www.igi-global.com/chapter/research-design/60584?camid=4v1a](www.igi-global.com/chapter/research-design/60584?camid=4v1a)

Mobile Trusted Computing Based on MTM
[www.igi-global.com/article/mobile-trusted-computing-based-mtm/51603?camid=4v1a](www.igi-global.com/article/mobile-trusted-computing-based-mtm/51603?camid=4v1a)