

# Technostress-induced distorted pre-adoption beliefs

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Imagine that an individual has to accomplish a task with a new information system (IS). Even if first research results indicate that strain reduces an individual's intention to use an IS continuously (Maier et al. 2014), reasons have not been investigated how such behavioral responses, which are mainly influenced by perceptual beliefs (Davis 1989), arise from being strained. In this paper, we theorize that a highly strained individual develops distorted perceptual beliefs which are in turn a starting point for developing intentions not to adopt an IS. Hence, the research question of this article is: *How does strain while using an IS for the first time influence perceptual beliefs about and the intention to adopt this IS?*

The person-environment (P-E) fit model is a widely accepted and used theoretical paradigm in stress research (Cooper et al. 2001). The model characterizes strain as a result of the misfit between characteristics of an individual and its environment. This misfit arises when an individual's abilities do not match the demands of the environment. One application of this model in IS research is the confrontation of an individual with a new IS. According to the P-E fit model, an individual is strained when the subjective evaluation of the demands to use the IS does not fit with the individual's skills to use it. Based on this subjective evaluation an individual might be strained (Ayyagari et al. 2011).

An individual aims to keep the degree of being strained at a minimum level. This means that strain has no effect on an individual while one is not strained, whereby a strained individual intends to reduce it when it is present. As a consequence, being strained is accompanied by the desire to change something about this situation. Whenever strain is grounded in the usage of a new IS, an individual is evaluating its characteristics and develops perceptual beliefs within a negative emotional state. As an individual aims to change the negative perception of being strained, the development of one's perceptual beliefs is distorted negatively by the IS-induced strain (Taylor 1991). This means that the perceptual belief being developed in this negative emotional state is worse than it would be without this state. Such perceptual beliefs which are influenced by an individual's emotional state are named distorted beliefs (Turel et al. 2011). In this context, it is important that individuals tend to pay more attention to negative experiences than to positive ones (Ito et al. 1998). As a consequence we assume that the evaluation of the IS by a strained individual is distorted and these distorted perceptual beliefs are the base for developing an intention to adopt the IS. Due to an individual's reason-based decisions, the intentions to adopt an IS of strained individuals are lower than the intentions to adopt a new IS of an individual who does not feel strained. Figure 1 summarizes our theoretical nomological network of the influence of strain on distorted perceptual

beliefs and consequently the initial adoption as well as the continuous usage decision

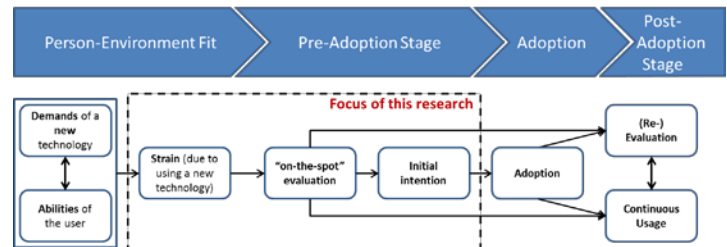


FIGURE 1: DISTORTED BELIEFS IN PRE-ADOPTION STAGES

To validate the proposed distorting influence of strain on beliefs we intend to set up an experiment by using NeuroIS measurements. Individuals, who have not used a specific enterprise content management system (Laumer et al. 2013) before, have to accomplish tasks with this system. During the experiment the participants' level of electrodermal activity (EDA) as one NeuroIS indicator of strain is measured. After the experiment beliefs and intentions related to the IS are captured using a survey.

Based on the expected results we intend to contribute to IS research by theorizing strain as an inhibiting variable that distorts IS-related beliefs at the pre-adoption stage. This increases the understanding of how and why individuals use IT. Using NeuroIS in IS adoption research might also open the black box (Benbasat and Barki 2007) in this branch of research by explaining how physiological responses influence the development of beliefs when using a new IS for the first time.

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