3-1-2007

Emotional Attachment to IT Brands and Technology Acceptance

Ben Liu
benliu@uga.edu

Elena Karahanna

Follow this and additional works at: http://aisel.aisnet.org/sais2007

EMOTIONAL ATTACHMENT TO IT BRANDS AND TECHNOLOGY ACCEPTANCE

Ben Liu
University of Georgia
benliu@uga.edu

Elena Karahanna
University of Georgia
ekarah@terry.uga.edu

Abstract

Technology acceptance model (TAM) is a well-established theory to explain technology adoption. However, traditional TAM research generally neglects the impact of emotion in the adoption decisions. In this research, we propose to investigate the effects of consumers' emotional attachment to IT brands on their adoption decisions and the precursors of emotional attachment. This research synthesizes the existing psychological and marketing theories on emotional attachment and TAM research.

Keywords: Technology acceptance, emotional attachment, brand trust, self-concept congruity

Introduction

In the late 1980s, the technology acceptance model (TAM) was developed for the IS discipline (Davis, 1989; Davis, Bagozzi, & Warshaw, 1989). It was based on the theory of reasoned action (Fishbein & Ajzen, 1975), an intention theory that has been widely accepted for several decades. Past stream of research supports the robustness of the model across time, setting, populations, and technologies (Venkatesh & Davis, 2000). It established the dominant paradigm in the field of technology acceptance. Following the paradigm, we just need to investigate the constructs of beliefs and attitudes to predict technology adoption behavior. However, the influence of user's affect or emotion towards technologies is traditionally neglected.

Nowadays the information technologies (IT) consumers enjoy an unprecedented variety of IT products. Since most personal IT products demonstrate satisfactory functionalities and usability, what makes an IT product distinguish itself from others is its ability to engender favorable user emotions (Tractinsky, 2004). Although the competition among the IT companies becomes more and more rigorous, companies such as Apple and Google have large groups of fans to secure their market share even identical substitutes of their products exist in the marketplace. The IT consumers' emotion attached to certain IT brands is very likely to predict their adoption of the IT products in those brands. However, most existing models or theories focus on the cognitive and behavioral aspects of human decision-making processes. The precursors and outcomes of consumers' strong affective attachment towards certain IT brands remain unexplored. To address the theoretical gap, I proposed the construct of emotional attachment in the context of technology acceptance research. This research intends to answer the following question:

(1) What are the precursors of users' emotional attachment towards a certain company's IT product?
(2) How does the users' emotional attachment influence their adoption behavior?

Theoretical development

The theoretical model is illustrated in Figure 1. Borrowed from psychological and marketing theories, the concept of emotional attachment is central to this model. Brand trust and self-concept congruity are posited to be two antecedents of emotional attachment. This model incorporates the existing psychological and marketing research on emotional attachment into TAM. In the following part of this section, I will clarify the constructs and their relationships in the model.
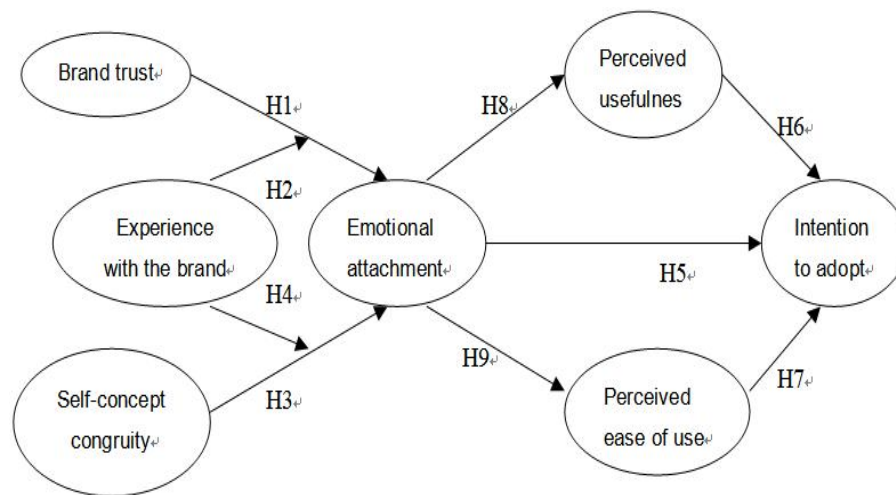
Figure 1: Theoretical model

Attachment theory and emotional attachment

Attachment theory is viewed as a valid framework for explaining variations in emotion regulation, interpersonal relations, and mental health (Mikulincer, Hirschberger, Nachmias, & Gillath, 2001). Attachment researches find that the sense of having a secure base is an essential factor for emotions and behaviors in interpersonal relationship (Feeney, 1999). When people experience stress from the external environment, they often seek physical or psychological protection from the attachment others. The expectations that significant others will be available and supportive in times of stress provide a sense of secure base. When an individual is separated from his or her attachment others, distress can result. according to Bowlby (1979), emotional attachment is evidenced by psychological and behavioral outcomes such as proximity-seeking behaviors, separation distress, a sense that the attachment object offers a safe haven, and mourning of its loss (Bowlby, 1979).

As discussed above, attachment theory is mainly used to describe and explain interpersonal relationship. However, since emotional attachment is viewed as a relationship-based construct that reflects the emotional bond connecting an individual with an object (either another human being or a material object), it can also be used to explain the relationship between human beings and material object. A material object may have either utilitarian or hedonic values. People can also have expectations that their material possessions will function as assumed in times of need. When an individual experiences stress from external environment, a material object can also provide physical or psychological protections. Extending Bowlby's concept of attachment, Thomson, MacInnis et al.(2005) define it as an emotion-laden target-specific bond between a person and a specific object. Emotional attachment to a material object reflects a vital and ubiquitous way people valuate it. Consumers' emotion towards particular possessions or activities has been widely noted in marketing research literature. A consumer's emotional attachment to a consumption entity induces a state of emotion-laden mental readiness that influences his or her allocation of emotional, cognitive, and behavioral resources toward a particular target (Park & Macinnis, 2006). In the context of technology acceptance research, consumers' emotional attachment towards a certain IT brand may also play a determinant role in technology adoption.

In marketing literature, there are quite a few concepts such as preference and attitude which should be distinguished from emotion attachment. These distinctions delineate the boundaries of emotion attachment and give us better understanding of these constructs. Preferences are themselves primarily affectively based behavioral phenomena. A preference for X over Y is a tendency of an individual to approach X more often and more vigorously than Y (Zajonc & Markus, 1982). Preference is defined from a behavioral tendency. Although emotion attachment induces attainment or proximity maintenance behavior, the construct itself doesn't contain a behavioral component. Attitude refers to the degree to which a person has a favorable or unfavorable evaluation or appraisal of the attitudinal object (Ajzen, 1991). Emotional attachment typically develops over time and is often based on the history of interactions between a person and his attachment object (Baldwin, Keelan, Fehr, Enns, & Koh-Rangarajoo, 1996). Emotional attachment generally has a temporal stability. In contrast, favorable attitude towards an object doesn't necessarily develop over a direct experience with the attitudinal object. An individual's favorable attitude may change over a short period of time. Moreover, emotional attachment has strong motivational and behavioral implications such as attainment, proximity maintenance, and willingness to defend and invest in the attachment object. The favorable

attitude towards a brand doesn't necessarily lead to consumption or adoption behavior. Moreover, emotional attachment is inherently tied to a person's self-concept (Mikulincer et al., 2001). However, favorable attitude is not necessarily based on self-concept. Empirical validation of the conceptual distinctions is out of the scope of this article. Although these differences discussed above are quite speculative, the conceptual distinction made above is quite relevant to the boundaries of the emotional attachment construct.

Brand trust

The concept of secure base is central to the logic and coherence of the attachment theory. According to Bowlby, to be attached is to use someone preferentially as a secure base from which to explore. The term secure attachment implies confidence in a caregiver's availability and responsiveness (Waters & Cummings, 2000). Analogously, confidence in a brand's ability to perform its stated function is also likely to provide a secure base. Chaudhuri and Holbrook (2001) define brand trust as the willingness of the average consumer to rely on the ability of the brand to perform its stated function. This definition reveals that brand trust plays an important role in formation of the emotional attachment to a brand. Trust is originally a crucial concept in interpersonal relationship research. Recently the concept of trust has been frequently applied to consumer-brand relationship in marketing research. In the context of consumer-brand relationship, the trustee is a material object. The brand trust involves an inference regarding the benevolence of the firm to act in the best interests of the customer. Beliefs about reliability, safety, and honesty are all important facets of brand trust.

Delgado-Ballester, Munuera-Aleman et al. conceptualize brand trust (2003, p37) as "the confident expectations of the brand's reliability and intentions in situations entailing risk to the consumer". Accordingly, brand trust implicitly means that there is a good probability that the brand will perform functions which will result in positive outcomes for his or her relational partner. This conceptualization of brand trust humanizes the brand as an active relational partner. This definition of brand trust has two distince components: brand reliability and brand intentions (Delgado-Ballester et al., 2003). Brand reliability can be analogized to the ability-based trust. It is based on the consumer's belief that the brand will accomplish its value as expected. This component of brand trust implies a sense of predictability that the brand will consistently satisfy the consumer's needs (Delgado-Ballester et al., 2003). Brand intentions are based on belief that the brand will act in the interest of the consumer when unexpected problems arise. This component of brand trust captures a consumer's belief that the performance of a brand is guided by favorable and positive intentions towards the consumer's welfare in any problematic situation (Delgado-Ballester et al., 2003). This dimension can be analogized to the benevolence and integrity-based trust.

According to Delgado-Ballester and Munuera-Aleman's conceptualization, brand trust implies an expectation that the trusted brand will perform its promised functions, will be responsive and supportive in times of need. Therefore, a trusted brand provides a secure base which compels the consumer to develop an emotional attachment to the brand. A complete understanding of trust comes from consideration of its evolution within a relationship. The level of trust will evolve as the parties interact. Mayer, Davis et al. proposed that (1995) outcomes of trusting behaviors will lead to updating of prior perceptions of the ability, benevolence, and integrity of the trustee. Trust formation is viewed as an individual's experiential process of learning over time. Correspondingly, brand trust evolves from the result of past experience with the brand. The longer the experience with the brand, the more likely the consumer has a better understanding of the brand. If a consumer builds brand trust over a very longer period of interaction, he will have more confidence that the brand will provide a secure base. Moreover, past experience with the brand need to be internalized to the working models of attachment security to facilitate the emotional attachment development (Mikulincer et al., 2001). Following this logic, we hypothesize the following:

H1: brand trust is positively related to emotional attachment to the brand.

H2: experience with the brand mediates the relationship between brand trust and emotional attachment.

Self-concept congruity

The construct of self-concept is inherently tied to attachment (Kleine, Kleine, & Kernan, 1993). The secure base schema underlying emotional attachment links the attachment object to the self (Holmes, 2000). Baldwin (1992) theorized that a relational schema generally has three components: a self schema that represents how the self is experienced in interaction with another, a partner schema that represents attributes of the partner, and an interpersonal schema that represents expectations generalized from past interactions, in the form of "if-then" contingencies. Analogously, the secure base schema underlying emotional attachment to a brand should have perceptions of the self, the brand, and the relationship of the two.

The significance of self-concept lies in the fact that consumers use brands to demonstrate their self-concepts to themselves (Sirgy, 1982). Through the purchase and consumption of brands, consumers define, maintain and enhance their self-concept (Zinkhan & Hong, 1991). This results in what is often described as self-concept brand image congruity- or in short "self-concept congruity" (Sirgy et al., 1997). The construct of self-concept congruity delineates an individual's perceptions of the self, the brand, and person-brand relationship. Since the secure base schema underlying emotional attachment is conceptualized as a representation of the self, the other, and the relationship interaction pattern (Mikulincer et al., 2001), self-concept congruity is part of that schema. Self-concept congruity is also generalized from the experience with the brand. Escalas (1990) maintains that people form the perception of self-concept congruity by processing their experiences with brands, in a narrative mode of thought, that is, by creating stories or imposing a story-like structure on events. The longer the experience with the brand, the more likely the consumer has an adequate base to form the brand-self perception. Moreover, longer period of interactions strengthens the internalization of the self-concept congruity into the working model of attachment security. Therefore, we hypothesize the following:

H3: self-concept congruity is positively related to emotional attachment.

H4: experience with the brands mediates the relationship between brand trust and emotional attachment.

Emotional attachment and TAM

As noted previously, emotional attachment is conceptually related with specific behaviors such as proximity maintenance (e.g., keep close with partner) and willing to defend and invest (e.g., cognitive, monetary resources) in the attachment object (Hazan & Shaver, 1994a). Proximity to the attachment object confers security and facilitates successful functioning in the environment. Stress from external environment triggers a search for attachment object as a safe haven. If real or threatened separation from the attachment object occurs, behaviors reflecting psychological distress are observed. The intensity of an attachment can be inferred from the levels of these behaviors (Hazan & Shaver, 1994b). Therefore, an individual's emotional attachment to a brand will predict his commitment to the relationship with the brand. In the marketing research, a relevant indicator of commitment is the extent to which the individual remains loyal to the brand (Garbarino & Johnson, 1999). In the context of technology acceptance research, emotional attachment will predict a strong intention to adopt. Thus, the following is hypothesized:

H5: emotion attachment is positively related to intention to adopt.

Intention to adopt a technology should be explained in part by the technology acceptance model or TAM (Davis, 1989; Davis et al., 1989). According to TAM, the intention to adopt a technology is jointly determined by two beliefs: (1) the perceived usefulness of using the technology and (2) the perceived ease of use of the technology. Perceived usefulness is a measure of the individual's subjective assessment of the utility offered by the technology in a specific task-related context. Perceived ease of use is an indicator of the cognitive effort needed to learn and to utilize the technology. As shown in the previous research, the following hypotheses are also proposed in our research:

H6: perceived usefulness is positively related to intention to adopt.

H7: perceived ease of use is positively related to intention to adopt.

The construct of emotional attachment captures the strong feelings an individual has towards a brand. While the two beliefs in TAM obviously tap the realm of cognition, emotional attachment is clearly relevant to the realm of affect. Recent psychological models view affect as an input into an information-processing and retrieval system. Two major theories, which focus on the informational role of affect in the judgment construction, have been offered. The first theory is the affect-priming model (Bower, 1981; Forgas, 1995; Forgas & Bower, 1988). This view suggests that affect can indirectly inform judgments by facilitating access to related cognitive categories (Bower, 1981; Forgas, 1995). In other words, affect can prime the encoding, retrieval, and selective use of information in the constructive processing of judgments. The second theory is the affect-as-information model (Clore & Parrott, 1991; Forgas, 1995; Schwarz & Clore, 1988). This view suggests that an individual forms a judgment simply by asking himself or herself "how do I feel about it" rather than recalling the features of the target (Forgas, 1995). In this model, affect may directly inform the outcome of judgment. According to the two psychological theories, individuals' emotional attachment to a brand may directly or indirectly influence their evaluation of the brand. On one hand, strong positive feeling towards a brand is very likely to inform the individual that "the brand is useful and is ease to use" as suggested in the affect-as-information model. On the other hand, in computing an evaluation of the

brand, the positive affect makes the individual retrieve the positive details from his prior experience with the brand. Therefore, we propose the following hypotheses:

H8: emotional attachment is positively related to perceived usefulness.

H9: emotional attachment is positively related to perceived ease of use.

Methods

A survey instrument to measure the constructs of the model will be created. After these measures have been developed and validated, a pilot survey will be performed. The survey forms will be distributed to university students who are adopters or potential adopters of certain brands of personal computers. The collected data will be analyzed in two stages: the assessment of the reliability and validity of the measurement model, and the assessment of the structural model.

Implications/Conclusions

Implications to both the research community and practitioners will result from this study. This research is an attempt to investigate the influence of emotion or affect in the decision of technology acceptance. The research community will benefit from a better understanding of the impact of affect which is largely neglected in traditional TAM research. For the practitioners, this research reveals the key factors underlying the formation of emotional attachment. Closer attention to these factors can help the practitioners engender favorable consumer emotions.

References

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes, 50*(2), 179-211.

Baldwin, M. W. (1992). Relational schemas and the processing of social information. *Psychological bulletin, 112*(3), 461-484.

Baldwin, M. W., Keelan, J. P. R., Fehr, B., Enns, V., & Koh-Rangarajoo, E. (1996). Social-cognitive conceptualization of attachment working models: Availability and accessibility effects. *Journal of Personality and Social Psychology, 71*(1), 94-109.

Bower, G. H. (1981). Mood and memory. *American Psychologist, 36*(2), 129-148.

Bowlby, J. (1979). *The Making and Breaking of Affectional Bonds*: Routledge.

Chaudhuri, A., & Holbrook, M. B. (2001). The Chain of Effects from Brand Trust and Brand Affect to Brand Performance: The Role of Brand Loyalty. *Journal of Marketing Research, 65*(2), 81-93.

Clore, G. L., & Parrott, W. G. (1991). Moods and their vicissitudes: Thoughts and feelings as information. *Emotion and Social Judgments*, 107?123.

Davis, F. D. (1989). Perceived Usefulness, Perceived Ease of Use, and User Acceptance of Information Technology. *MIS Quarterly, 13*(3), 319-340.

Davis, F. D., Bagozzi, R. P., & Warshaw, P. R. (1989). User Acceptance of Computer Technology: A Comparison of Two Theoretical Models. *Management Science, 35*(8), 982-1003.

Delgado-Ballester, E., Munuera-Aleman, J. L., & Yague-Guillen, M. J. (2003). Development and validation of a brand trust scale. *International Journal of Market Research, 45*(1), 335-353.

Escalas, J. E. (1990). Narrative Processing: Building Consumer Connections to Brands. *JOURNAL OF CONSUMER PSYCHOLOGY, 14*(1&2), 168-180.

Feeney, J. A. (1999). *Adult romantic attachment and couple relationships*: Guilford.

Fishbein, M., & Ajzen, I. (1975). *Belief, Attitude, Intention and Behavior: An Introduction to Theory and Research*: Addison-Wesley Reading, MA.

Forgas, J. P. (1995). Mood and judgment: the affect infusion model (AIM). *Psychological bulletin, 117*(1), 39-66.

Forgas, J. P., & Bower, G. H. (1988). Affect in social judgments. *Australian Journal of Psychology, 40*(2), 125?145.

Garbarino, E., & Johnson, M. S. (1999). The Different Roles of Satisfaction, Trust, and Commitment in Customer Relationships. *Journal of Marketing Research, 63*(2), 70-87.

Hazan, C., & Shaver, P. R. (1994a). Attachment as an Organizational Framework for Research on Close Relationships. *Psychological Inquiry, 5*(1), 1-22.

Hazan, C., & Shaver, P. R. (1994b). Deeper into Attachment Theory. *Psychological Inquiry, 5*(1), 68-79.

Holmes, J. G. (2000). Social relationships: the nature and function of relational schemas. *European Journal of Social Psychology, 30*(4), 447-495.

Kleine, R. E., Kleine, S. S., & Kernan, J. B. (1993). Mundane Consumption and the Self: A Social-Identity Perspective. *Journal of Consumer Psychology, 2*(3), 209-235.

Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An Integrative Model of Organizational Trust. *The Academy of Management Review, 20*(3), 709-734.

Mikulincer, M., Hirschberger, G., Nachmias, O., & Gillath, O. (2001). The affective component of the secure base schema: affective priming with representations of attachment security. *Journal of personality and social psychology, 81*(2), 305-321.

Park, C. W., & Macinnis, D. J. (2006). What's In and What's Out: Questions on the Boundaries of the Attitude Construct. *Journal of Consumer Research, 33*, 16-18.

Schwarz, N., & Clore, G. L. (1988). *How do I feel about it? Informative functions of affective states*: Hogrefe International.

Sirgy, M. J. (1982). Self-Concept in Consumer Behavior: A Critical Review. *The Journal of Consumer Research, 9*(3), 287-300.

Sirgy, M. J., Grewal, D., Mangleburg, T. F., Park, J. O., Chon, K. S., Claiborne, C. B., et al. (1997). Assessing the Predictive Validity of Two Methods of Measuring Self-Image Congruence. *Journal of the Academy of Marketing Science, 25*(3), 229.

Thomson, M., MacInnis, D. J., & Park, C. W. (2005). The Ties That Bind: Measuring the Strength of Consumers' Emotional Attachments to Brands. *Journal of Consumer Psychology, 15*(1), 77-91.

Tractinsky, N. (2004). *Toward the Study of Aesthetics in Information Technology*. Paper presented at the International Conference on Information Systems.

Venkatesh, V., & Davis, F. D. (2000). A Theoretical Extension of the Technology Acceptance Model: Four Longitudinal Field Studies. *Management Science, 46*(2), 186-204.

Waters, E., & Cummings, E. M. (2000). A Secure Base from Which to Explore Close Relationships. *Child Development, 71*(1), 164-172.

Zajonc, R. B., & Markus, H. (1982). Affective and Cognitive Factors in Preferences. *The Journal of Consumer Research, 9*(2), 123-131.

Zinkhan, G. M., & Hong, J. W. (1991). Self concept and advertising effectiveness: a conceptual model of congruency, conspicuousness, and response mode. *Advances in Consumer Research, 18*, 348-354.