Association for Information Systems
AIS Electronic Library (AISeL)

December 2003

Website Personalization for Relationship Building: A Conceptual Framework

Fatemeh Zahedi
Univeristy of Wisconsin, Milwaukee

Ying Lu
Univeristy of Wisconsin, Milwaukee

Follow this and additional works at: http://aisel.aisnet.org/amcis2003

WEBSITE PERSONALIZATION FOR RELATIONSHIP BUILDING: A CONCEPTUAL FRAMEWORK

Fatemeh "Mariam" Zahedi
University of Wisconsin, Milwaukee
zahedi@uwm.edu

Ying Lu
University of Wisconsin, Milwaukee
yinglu@uwm.edu

Abstract

Online vendors could use website personalization to build a closer relationship with their customers. Based on the theory of planned behavior and theoretical works in psychology, marketing, and communication, we propose a conceptual model for exploring the underlying behavioral process of relationship building with website personalization and for testing the efficacy of website personalization.

Introduction

The introduction of the Internet as an important new medium of communications has dramatically changed the way business is conducted. As more people are turning to the web to seek product information, information overload and the need for more customized experience are also on the rise. Meanwhile, the traditional one-to-many business model is shifting to a new consumer-centric model with web-enabled two-way interactivity. Accordingly, web personalization has become one of the fast-growing areas in e-commerce. There is a growing body of practical literature on web personalization, focusing primarily on areas such as enabling technologies, personalization application in marketing, and privacy issues (Cingil et al. 2000; Harney 2002; Lindquist and Connolly 1999; Rubini 2001). Although the importance of web personalization has been widely recognized in e-commerce, there is little knowledge about the efficacy of website personalization. A number of recent published papers have discussed related issues, with an emphasis on personalization methodology, such as search algorithms and technology-related issues (Andre and Rist 2002; Billsus et al. 2002). However, few have discussed the theoretical basis for understanding the relationships between web personalization and online consumer behavior. This paper explores the efficacy of web personalization on changing web-customers' behaviors by answering the following research question. What is the process by which website personalization may influence web-customers' behaviors and create stronger ties with the online vendor providing personalization services?

In answering this research question, we draw from the theory of planned behavior (TPB) and theories in relationship building and trust to conceptualize a theoretical model for the behavior process of relationship building through website personalization. In developing the model, called *personalization of websites for e-commerce relationship-building* (abbreviated as POWFER henceforth), we rely on the literature from psychology, communication and marketing to form a theoretical framework for the identification of salient determinants of consumer commitment behavior toward online vendors. The findings of this research could provide useful insights to the efficacy of website personalization as well as its role in shaping web-customers' relationships with online vendors. In addition, it could guide the adoption of personalization technologies and may offer helpful guidelines for practitioners in designing e-commerce websites.

The POWFER Model

The personalization of websites for e-commerce relationship-building (POWFER) model is presented in Figure 1.
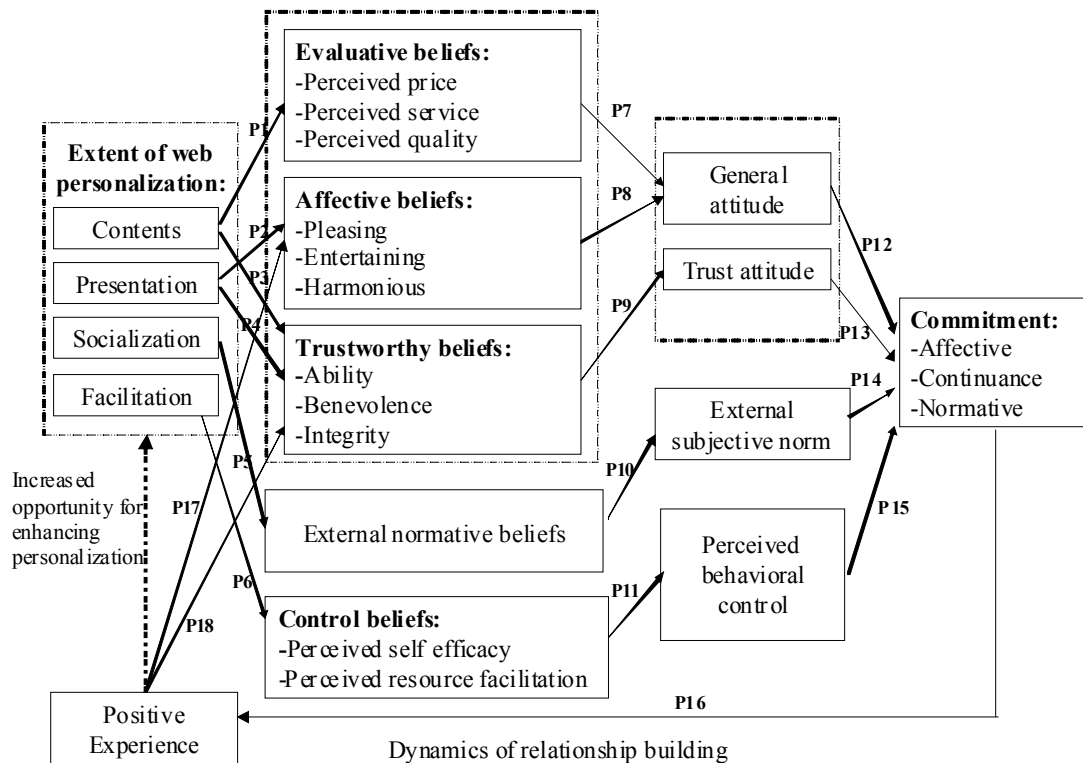
Figure 1. The POWFER Model

The Extent of Website Personalization

The concept of personalization is not new. In marketing literature, it is also known as "individualization" or "mass-customization" and has been introduced as a new factor to the marketing mix (Goldsmith 1999). Indeed, the importance of personalization has long been recognized, especially in service marketing, by using it as an approach to improve customer satisfaction and service quality. For example, Surprenant and Solomon (1987) studied personalization in service encounter and observed that service personalization is a multidimensional construct. They argued that the central theme of personalized service is to recognize the customer's unique individuality. Even before the popularity of the web, Peppers and Rogers (1993), in their book *The One to One Future* emphasized the importance of one-to-one marketing, and introduced the 1:1 media concept – a new media for communicating directly with customers individually. They argued that the new 1:1 media should have three characteristics: *individually addressable*, *two-way messaging*, and *inexpensive*. The web fits these characteristics quite well, and has been since recognized as a powerful marketing communication channel (Morgan 1996).

Similarly, in MIS, Palma-dos-Reis and Zahedi (1999) have differentiated the concepts of personalization and customization in the context of personalized intelligent financial decision support systems. Through an empirical study, they have demonstrated the impact of investors' unique personal characteristics in DSS model selection. In addition, the concept of adaptive web was introduced recently in MIS literature (Andre and Rist 2002; Billsus et al. 2002). The primary objective of the concept of "adaptive web" is to develop systems with an ability to adapt their behavior to the goals, tasks, interests, and other features of individual users and groups of users.

In summary, the content and extent of personalization is still not well understood. As put by Zoellick (2000), the concept of website personalization is still "very general and fuzzy" (p. 119), it is "*a set of approaches and techniques* for engaging the customer more directly. It is not a single product or technology, but *a combination of activities* that needs to make sense for your business and your customers" (p.127).

In the POWFER model, we attempt to increase the clarity of website personalization by classifying the types and extent of personalization. More specifically, we identify four types of website personalization: contents, presentation, socialization, and facilitation. Table 1 shows the personalization inputs required for each personalization type and the possible personalization factors within each category. Our categorization of personalization types is in line with the work by Pelsmacker et al. (2001), who identified elements of one-to-one marketing based on *demographic*, *psychographic*, and *geo-demographic* profiles that make it possible to offer highly personalized products and messages. Furthermore, in the adaptive web approach (Andre and Rist 2002; Billsus et al. 2002), three adaptation technologies are used: *adaptive content selection, adaptive navigation support,* and *adaptive presentation*. The personalized socialization draws on the actor-network theory (Latour 1987) in that actors, in our case customers, have networks of relationships for their activities, including economic activities (Callon 1999). Providing personalized socialization taps into customers' networks on which they partly rely for their decision making.

Table 1. Website Personalization

Personalization Type	Personalization Inputs	Personalization Factors
Contents	• **Demographics:** age, gender, education, occupation, marital status, family size, income • **Geographic:** region, city, climate • **Personality type:** extrovert, open, conscientious, neurotic, agreeable, risk averse • **Lifestyle:** family, hobbies, spending habits, entertainment, leisure, health, wealth • **Culture:** ethnicity, national cultural dimensions	Dynamically changing the contents of the website based on web customer's input. Intelligent agents and web agents could be used to enable personalized content delivery based on user profile created from the inputs obtained automatically or by observing the online behavior.
Presentation	• Emotion • Mood • Risk orientation	• **Emotion enhancing factor,** such as personalized warm salutations and helpful comments • **Mood enhancing factors,** such as personalized colors, music, animation • **Trust enhancing factors,** such as displaying policy statements about privacy disclosure or security, security logos, security certificates
Socalization	• Community support • Groups support	• Personalized information about online communities, bulletin boards, and discussion forums • Personalized links for interest groups
Facilitation	• Facilitation for navigation • Facilitation for user control	• Personalized links • Customization of products and services

In essence, the ultimate objective of website personalization is to provide personalized online experience and build a long-term one-on-one relationship by recognizing and addressing the individual consumer's uniqueness and needs. In the following section, we use the TPB to formulate the impact of web personalization on web-customers' behavior intention in the form of commitment to the online vendor.

Impacts of Personalization on Web-Customers' Beliefs

The theory of planned behavior (TPB) has been widely and successfully used to explain and predict human behavior. According to the TPB, human behavior can be explained by an individual's intention to perform a given behavior, as intentions are assumed to capture the motivational factors that influence a behavior (Ajzen, 1991). Behavioral intentions are influenced by attitudes toward the behavior, subjective norms, and perceived behavioral control; which, in turn, are a function of a set of salient

behavioral, normative, and control beliefs about the behavior. In POWFER model, we rely on the TPB in identifying the process by which website personalization may influence web-customers' behaviors.

Web-Customers' Commitments

Since personalization is intended to establish a relationship, preferably long term, with web-customers, the most salient behavior intention in relationship building is web-customers' commitment to the online vendor. Hence, in applying TPB in the context of website personalization, we identify the intended behavior as web-customers' commitment. Commitment is a psychological state, which governs the behavioral outcomes (Wilson and Mummalaneni 1986); and its role is defined by Wiener (1982) as "an intervening process, mediating between certain antecedents and behavioral outcomes, commitment can be viewed as a motivational phenomenon" (p. 419). The theoretical work in relationship marketing identifies three components for commitment: affective, continuance, and normative (Gruen, Summers, and Acito 2000; Allen and Meyer 1990; Mathieu and Zajac 1989). Applying the theories in commitment to personalization in e-commerce, we define *affective commitment* as the degree to which web customers psychologically bond with an online vendor on the basis of how favorable they feel about the website (Gruen et al. 2000); *Normative commitment* is defined as a web-customer's sense of obligation toward the online vendor (Allen and Meyer 1990; Gruen et al. 2000). Finally, following Wiener (1982) and Gundlach et al. (1995), and adopting from the definition by Gruen et al. (2000, p. 37), we define *continuance commitment* as the degree to which web-customers are "psychologically bonded" with the online vendor based on "the perceived costs (economic, social, and status related)" associated with not using the online vendor. In the following sections, we use the TPB to describe how personalization may impact the extent of web-customers' commitment to an online vendor. Furthermore, we provide a conceptualization of the dynamics of relationship building through subsequent interactions with the personalized website.

Web-Customers' Beliefs

According to the TPB, beliefs play a fundamental role in forming attitudes and behaviors. Following the TPB, we posit that personalization has direct impact on web-customers' beliefs. In addition, we categorize beliefs into three sets: *behavior*, *normative*, and *control*.

Behavior beliefs. In applying the TPB to personalization, we have identified three sets of behavior beliefs: *evaluative*, *affective*, and *trustworthy* beliefs (Figure 1). In the TPB, behavior beliefs have two dimensions: evaluative (cognitive) beliefs and affective beliefs (Ajzen 1991). This bi-dimensional nature of behavior beliefs and the semantic distinction between the two dimensions has been further documented in more recent studies (Conner and Armitage 1998; Trafimow and Sheeran 1998). On one hand, evaluative beliefs refer to the cognitive and judgmental aspects of beliefs. On the other hand, the affective beliefs refer to the emotional content. Basically, evaluative beliefs are measured as harmful-beneficial while affective beliefs are measured with pleasant-unpleasant adjective pairs. In the case of smoking cigarette behavior, they refer to affective (pleasant vs. unpleasant) and cognitive (wise vs. foolish) beliefs (Trafimow and Sheeran 1998).

In the context of e-commerce, the evaluative beliefs relate to web-customers' views of the economic and functional benefits involved in the transaction with the online vendor; and the evaluative beliefs are identified as *perceived price*, *perceived service* (Song and Zahedi 2001) and *perceived quality* (McKinney, Yoon, and Zahedi 2002).

The second type of behavior beliefs consists of *affective beliefs*. Affect is a generic term that encompasses a multiplicity of feelings and emotions (Fiske and Taylor 1984). Emotions have been variously categorized as joy, acceptance, expectancy, surprise, fear, anger, sadness, and disgust (Plutchik 1980). Similarly, Izard (1977) lists emotions as interest, enjoyment, surprise, sadness, anger, disgust, contempt, fear, shame/shyness, and guilt. Holbrook and Barta (1987) categorize emotions in advertising into *pleasure* (pride, affection, gratitude, joy), *arousal* (interest, activation, surprise, involvement), and *domination* (helplessness, sadness, fear, and disgust). In the context of website personalization for e-commerce, we follow Holbrook and Barta (1987) and identify dimensions of affective beliefs as *pleasing*, *entertaining*, and *harmonious*. The belief about a website to be "pleasing," is the expectation that using it would be pleasant. Similarly, the belief in a website to be "entertaining" is the expectation that using it would lead to experiencing arousal emotions. The "harmonious" dimension of affective beliefs is the expectation that the use of the website does not lead to negative feelings of domination.

As indicated in marketing literature, the cognitive beliefs are affected by an individual's personal characteristics, such as a person's demographics, sociocultural memberships and other personal characteristics such as personality and lifestyle (Pelsmacker

et al. 2001). For example, several recently published studies have examined the impact of the psychographics such as lifestyle and personality on individual behavior. (Gonzalez and Bello 2002; Moon, 2002). Similarly, the importance of values and culture on individual cognitive beliefs has been investigated in a number of studies (Allen et al. 2002; Chau et al. 2002; Brumbaugh 2002). Thus, demographics including age, gender, education and marital status serve as the foundation for evaluative behavioral beliefs, while other factors such as lifestyle, personality and cultural values form additional layers of evaluative behavioral beliefs. Furthermore, Song and Zahedi (2003) have shown that certain web elements influence evaluative beliefs of web-customers. Presentation personalization, on the other hand, is designed for enhancing emotion, mood, and trust of web-customers, thus impacting their affective and trustworthy beliefs. A large body of literature on intelligent presentation agents and affective computing support this assertion (see, for example, *Affective Computing* by Picard 1997).

The third category of behavior beliefs consists of *trustworthy beliefs*. Trust is central to commercial relationships. To emphasize the importance of the trust construct in an online environment, in this paper, we separate trustworthy beliefs from evaluative and affective beliefs. Evaluative beliefs are related to the nature of the product or services that are offered by the online vendor, whereas trustworthy beliefs are related to trust in the behavior of the vendor. This differentiation is in line with Plank et al. (1999) who discuss trust in separate contexts of salesperson, product and company.

Trust has been examined in various contexts with different and unique perspectives. Mayer et al. (1995) have offered an integrative definition of trust by synthesizing multiple perspectives as: "the willingness of a party [trustor] to be vulnerable to the action of another party [trustee] based on the expectation that the other [trustee] will perform a particular action important to the trustor, irrespective of the ability to monitor or control that other party [trustee]" (p. 712). Following McKnight and Chervany (2001-2002) and Bhattacherjee (2002), we identify the three dimensions of trustworthy beliefs as *ability*, *benevolence*, and *integrity*.

In the POWFER model, we argue that contents and presentation personalization influence web-customers trustworthy beliefs. Trust has been identified as one of two dimensions of perceived relationship quality (Crosby et al. 1990). They have shown that salesperson attributes such as similarity in appearance, lifestyle and socioeconomic status, in addition to service domain expertise and relational selling behavior (e.g., interaction intensity, mutual disclosure, cooperative intentions) are the antecedents of relationship quality. In the context of e-commerce, websites take up the role of salespersons. Based on the actor-network theory (Latour 1987), we argue that relationship building between humans and non-humans (in this case personalized websites) is part of the e-commerce process, and hence personalizing the contents and presentation of websites would enhance the quality of the relation in the form of increased trustworthy beliefs.

In sum, we posit that content personalization positively impacts evaluative beliefs, presentation personalization positively impacts affective beliefs, and both content personalization and presentation personalization impact trustworthy beliefs:

> *Proposition 1. A higher level of content personalization positively influences web-customers' evaluative beliefs.*

> *Proposition 2. A higher level of presentation personalization positively influences web-customers' affective beliefs.*

> *Propositions 3. A higher level of contents personalization positively influences trustworthy beliefs.*

> *Propositions 4. A higher level of presentation personalization positively influences trustworthy beliefs.*

External normative beliefs. This set of beliefs is related to social influence. The TPB postulates the presence of normative beliefs. In the context of this research, normative beliefs relate to the likelihood that referent individuals or groups, who are important to web-customers, may approve or disapprove of their behavior as related to their interactions with the online vendor.

In an online environment, the social pressure of significant referents is not well understood. On one hand, the Internet is generally considered impersonal, also known as "the chilly Internet" (Wallace 1999, p15). The social cues and non-verbal cues that are important in traditional interpersonal communication are filtered out (Walther, 1996), which may suggest a lesser impact of social pressure. On the other hand, social relations are important in commercial relationships and thus there must be a way to restore such elements in web interaction. For example, Frenzen and Davis (1990) proposed that preexisting social ties between buyers and sellers modify the operation of markets; and the market could be segmented on the basis of the relations that bind together its members instead of on the basis of individual attributes such as age, gender, and education. Thus, the emerging of the online community may provide an alternative social context for online interpersonal relationships (Preece 2000) and be the source of

normative beliefs for online consumers. Song and Zahedi (2003) use social network theory (Callon 1986; Latour 1987) to argue that in the context of e-commerce, web-customers' important referent groups are not limited to those with whom individuals have close relationships, but should include external referents, such as experts and communities of buyers of similar products and services. Consequently, we argue that socialization personalization facilitates web-customers' access to their preferred external referent groups and hence influences web-customers' external normative beliefs. Hence we posit that:

> *Proposition 5. A higher level of socialization personalization positively influences web-customers' external normative beliefs.*

Control Beliefs. Control beliefs, beliefs about resources, can be decomposed into two parts: the internal notion of individual "self-efficacy" and external resource constraints, or facilitating conditions (Taylor and Todd, 1995; Song and Zahedi 2001). With respect to online behavior, the former is related to individual's perceived ability, while the latter refers to resource factors such as language and efforts, as well as technology facilitating factors such as navigation and security. In sum, personalized facilitation could increase the perception of control, either through the change in self-efficacy belief or in resource facilitation. Hence, we posit that:

> *Proposition 6. A higher level of personalized facilitation positively influences web-customers' control beliefs.*

Mediated Impacts of Beliefs on Commitments

According to the TPB, individuals' beliefs impact their behavioral intentions through changing their attitudes, subjective norms, and perceived behavioral control (Azjen 1991). The POWFER model in Figure 1 follows the TPB closely in that beliefs impact web-customers' commitments through the mediation of attitude, external subjective norms, and perceived behavioral control.

Attitudes. In the TPB, attitude is defined as the individual's feelings with respect to an intended behavior (Azjen 1991). In the context of customer-relationship building through website personalization, trust attitude plays an important role. While a positive general attitude may be adequate for one-time encounters in e-commerce, the strengthening of relationships through time depends to a large extent on trusting attitude (Lewicki and Bunker 1996). Hence, in this study we identify two dimensions for attitude: general attitude and trust attitude.

Positive affects or happy feelings have been shown to exercise a favorable effect on consumer attitudes (Barone et al. 2000; Lee and Sternthal 1999; Howard and Gengler 2001). In MIS research, Webster and Martocchio (1992) have reported the impact of computer playfulness on computer users' attitudes. Furthermore, trust research has shown that trustworthy beliefs positively impact the trust attitude of individuals in various settings (McKnight and Chervany 2001-2002; Bhattacherjee 2002). Hence, we posit that:

> *Proposition 7. Higher levels of web-customers' evaluative beliefs positively influence their general attitudes.*

> *Proposition 8. Higher levels of web-customers' affective beliefs positively influence their general attitudes.*

> *Proposition 9. Higher levels of web-customers' trustworthy beliefs positively influence their trust attitudes.*

Subjective norm. In the TPB, subjective norm refers to the social pressures on the individual to perform the intended behavior. Following Song and Zahedi (2001, 2003), in the context of personalization, we use external referents as the important groups for web-customers and identify their social pressure as *external subjective norm* in the POWFER model. Hence, we posit that:

> *Proposition 10. Higher levels of web-customers' external normative beliefs positively influence their external subjective norm.*

Perceived behavioral control. Based on the TPB, perceived behavioral control (PBC) reflects the feeling of control over the execution of the intended behavior and it is influenced by control beliefs. Hence, we posit that:

> *Proposition 10. A higher level of web-customers' control beliefs positively influence their perceived behavior control.*

Finally, following the postulate of the TPB, attitudes, external subjective norms, PBC impact web-customers' level of commitment. Hence:

> *Proposition 12. Higher levels of web-customers' attitudes positively influence the strength of their commitment.*

> *Proposition 13. Higher levels of web-customers' trust attitudes positively influence the strength of their commitment.*

> *Proposition 14. Higher levels of web-customers' external subjective norms positively influence the strength of their commitment.*

> *Proposition 15. Higher levels of web-customers' perceived behavioral controls positively influence the strength of their commitment.*

Dynamics of Relation Building through Personalization

Customer-relationship building through personalization requires repeated interaction. According to the social exchange theory (Molm 1994), actors' behaviors are in line with increasing their positive outcomes and reducing their negative outcomes in the relationship. Furthermore, the social exchange theory posits that interdependence and quality of relationship increases through repeated interactions (Lawler et al. 1993). Increased dependency in the relationship requires positive benefits on both sides. Applying to website personalization, the increased commitment of web-customers would increase the likelihood of their purchasing behavior, which combined with the delivery of goods and services as promised, would create a positive and satisfying experience for web-customers. Hence, we posit that:

> *Proposition 16. Given the online vendor's ethical business behavior, higher levels of web-customers' commitments positively influence their positive experience in using the online vendor.*

In such an exchange process, since both the online vendor and web-customers have gained from the interaction, the online vendor has more incentive to allocate resources to increase the personalization of websites. Meanwhile, web-customers' positive experiences in using the online vendor would lead to their increased affective and trust worthy beliefs. Hence we posit that:

> *Proposition 17. Higher levels of web-customers' positive experience strengthen their affective beliefs.*

> *Proposition 18. Higher levels of web-customers' positive experience strengthen their trust beliefs.*

This completes the circle of relationship building through web-personalization, as conceptualized in the POWFER model in Figure 1. Thus we argue that personalization is not a one-way interaction but a dynamic bi-directional interaction between web-customers and online vendors. In other words, it includes dynamic interaction that converges for the goal of better understanding and better service. As posited by Kunoe (1998), the core of building the interactive relationship is the recognition of treating each customer as an individual. Website personalization is a useful approach to incorporate the individual uniqueness in online business interactions, which, in turn, could lead to long-term interactive relationship.

Conclusion

Drawing on the theory of planned behavior, and theoretical arguments in social psychology, marketing and communication, we conceptualized the POWFER model. The model explains the underlying process by which personalization could impact web-customers' commitment to an online vendor. We postulated that website personalization could be the vehicle for online interactive relationship-building and dynamic development. Testing this theoretical framework for website personalization could provide useful insights for future research in the area of e-commerce. In addition, the identification and categorization of personalization factors could be beneficial for website design and customer-relationship building in e-commerce.

References

Ajzen, I. "The Theory of Planned Behavior," *Organizational Behavior and Human Decision Processes*, 50(1), 1991, 179-211.

Allen, N. and Meyer, J. P. "The measurement and antecedents of affective, continuance, and normative commitment in organizations," *Journal of Occupational Psychology*, 63(1), 1990, 1-18.

Allen, M., Ng, S.H., and Wilson, M. "A functional approach to instrumental and terminal values and the value-attitude-behavior system of consumer choice," *Europe Journal of Marketing,* 36(1/2), 2002, 111-135.

Andre, E., and Rist, T. "From adaptive hypertext to personalized web companions," *Communications of the ACM*, 45(5), 2002, 43-46.

Barone, M.J., Miniard, P.W., and Remeo, J.B. "The influence of positive mood on brand extension evaluations," *Journal of Consumer Research* 26(1), 2000, 387-402.

Bhattacherjee, A. "Individual Trust in online Firms: scale development and initial test," *Journal of Management Information Systems*, 19(1), 2002, 211-241.

Billsus, D., Brunk, C.A., Evans, C., Gladish, B., and Pazzani, M. "Adaptive interfaces for ubiquitous web access," *Communications of the ACM,* 45(5), 2002, 34-38.

Brumbaugh, A.M. "Source and nonsource cues in advertising and their effects on the activation of cultural and subcultural knowledge on the route to persuasion," *Journal of Consumer Research,* 29(September), 2002, 258-269.

Callon, M. Some elements of a sociology of translation: Domestication of the scallops and the fishermen. In *Power, Action, and Belief: A New Sociology of Knowledge?* J. Law (ed.), Routledge & Kagan Paul, London, 1986, 196-229.

Callon, M. "Actor-network theory—The market test," *The Editorial Board of the Socialogical Review,* Blackwell Publishers, Oxford, UK, 1999, 181-195.

Chau, P., Cole, M., Massey, A., Montoya-Veiss, M., and O'Keefe, R. "Cultural differences in the online behavior of consumers," *Communication of the ACM,* 45(10), 2002, 138-143.

Cingil, I., Dogac, A., and Azgin, A. "A broader approach to personalization," *Communications of the ACM*, 43(8), 2000, 136-141.

Conner, M., and Armitage, C.J. "Extending the Theory of Planned Behavior: A Review and Avenues for Further Research," *Journal of Applied Social Psychology,* 28(15), 1998, 1429-1464.

Crosby, L.A., R. Evans, K., and Cowles, D. "Relationship quality in service selling: an interpersonal influence perspective," *Journal of Marketing* 54(July), 1990, 68-81.

Fiske, Susan T. and Taylor, Shelley E.. 1984. *Social Cognition. Random House*, New York.

Frenzen, J.K., and Davis, H.L. "Purchasing behavior in embedded markets," *Journal of Consumer Research,* 17(June), 1990, 1-12.

Goldsmith, R.E. "The personalized marketplace: beyond the 4Ps," *Marketing Intelligence & Planning,* 17(4), 1999, 178-188.

Gonzalez, A., and Bello, L. "The construct "lifestyle" in market segmentation: the behaviour of tourist consumers," *Europe Journal of Marketing* 36(1/2), 2002, 51-85.

Gruen, T., Summers, J. O., and Acito, F. "Relationship marketing activities, commitment, and membership behavior in professional associations," *Journal of Marketing*, 2000, 64, July, 34-49.

Guundlach, G. T.; Achrol, R. S. and Mentzer, J. T. "The structure of commitment in exchange," *Journal of Marketing*, 1995, 59 (January), 78-92.

Harney, J. "The value of personalization in customer management," *E-Doc,* 16(2), 2002, 24-26.

Holbrook, M.B., and Batra, R. "Assessing the role of emotions as mediators of consumer responses to advertising," *Journal of Consumer Research*, 14 (December), 1987, 404-420.

Howard, D.J., and Gengler, C. "Emotional contagion effects on product attitudes," *Journal of Consumer Research*, 28(1), 2001, 189-201.

Izard, C. E. 1977. *Human Emotions*, Plenum, New York.

Kunoe, G. "On the ability of ad agencies to assist in developing one-to-one communication." *European Journal of Marketing*, 32(11/12), 1998, 1124-1137.

Lawler, E. J., Ridgeway, C. and Markovsky, B. "Structural social psychology and macro-micro problem," *Sociological Theory*, 11(3), 1993,268-290.

Latour, B. 1987. *Science in Action: How to Follow Scientists and Engineers Through Society,* Harvard University Press, Cambridge, MA.

Lee, A., and Sternthal, B. "The effects of positive mood on memory," *Journal of Consumer Research*, 26(1), 1999, 115-127.

Lewicki, R. J. and B. B. Bunker (1996), "Developing and Maintaining Trust in Work Relationship," in *Trust in Organizations: Frontiers of Theory and Research*, Kramer, R. M. and T. R. Tyler (eds.), Sage Publications, CA: Thousand Oaks, pp. 114-139.

Lindquist, C., and Connolly, J.M. "Personalization in e-commerce," *Computerworld,* (33:12), 1999, 74-77.

Mathieu, J. E. and Zajac, D. M. "A review and meta analysis of the antecedents, correlates, and consequences of organizational commitment," *Psychological Bulletin*, 108(2), 1989, 171-194.

Mayer, R. G., J. H. Davis, and F. D. Schoolman. "An Integrative Model of Organizational Trust," *Academy of Management Review*, 20(3), 1995, 709-734.

McKinney, V., Yoon, K., and Zahedi, F. M. "A measurement of web-customer satisfaction: An expectation and disconfirmation approach," *Information Systems Research*, 13(3), 2002, 296-315.

McKnight, H., and Chervany, N.L. "What trust means in e-commerce customer relationships: an interdisciplinary conceptual typology," *International Journal of Electronic Commerce,* 6(2), 2001-2002, 35-59.

Molm, L. D. "Dependence and risk: Transforming the structure of social exchange," *Social Psychology Quarterly,* 57(3), 1994, 163-176.

Moon, Y. "Personalization and personality: some effects of customizing message style based on consumer personality," *Journal of Consumer Psychology,* 12(4), 2002, 313-325.

Morgan, R.F. "An Internet marketing framework for the World Wide Web (WWW)," *Journal of Marketing Management,* 12(1), 1996, 757-775.

Palma-dos-Reis, A. and Zahedi, F. M. "Designing Personalized Intelligent Decision Support Systems: The Impact of Risk Attitude on Using Security Selection Models," *Decision Support Systems,* 26(1), 1999, 31-47.

Pelsmacker, Patrick De, Geuens, Maggie and Bergh, Joeri Van den. 2001. *Marketing Communications*, Pearson Education Limited, Harlow, England

Peppers, Don and Martha Rogers. 1993. *The One to One Future: Building Relationships One Customer at a Time*, Doubleday, New York.

Picard, R. *Affective Computing*, The MIT Press, Cambridge, MA, 1997.

Plank, R. E., Reid, D. A., and Pullins, E. B. "Perceived trust in business-to-business sales: A new measure," *Journal of Personal Selling and Sales Management*, (XIX:3), 1999, 61-71.

Plutchik, Robert. 1980. *Emotion: A Psychoevolutionary Synthesis*. Harper & Row, New York.

Preece, Jenny. 2000. *Online Communities: Designing Usability, Supporting Sociability*, John Wiley & Sons, Chichester, England

Rubini, D. "Overcoming the paradox of personalization: building adoption, loyalty, and trust in digital markets," *Design Management Journal,* (12:2), 2001, 49-55.

Song, J., and Zahedi, F. M. "Web-Design Web Design in E-commerce: A Theory and Empirical Analysis," *Proceedings of 22nd International Conference on Information Systems (ICIS),* December 2001, New Orleans, 205-219.

Song, J. and Zahedi, F. M. " A theoretical approach to web design in e-Commerce: Belief reinforcement model," working paper, University of Wisconsin Milwaukee, 2003.

Surprenant, C.F., and Solomon, M.R. "Predictability and Personalization in the Service Encounter," *Journal of Marketing* 51(April), 1987, 86-96.

Taylor, S., and Todd, P.A. "Understanding Information Technology Usage: A Test of Competing Models," *Information Systems Research* 6(2), 1995, 144-176.

Trafimow, D., and Sheeran, P. "Some Tests of the Distinction between Cognitive and Affective Beliefs," *Journal of Experimental Social Psychology* 34(1), 1998, 378-397.

Wallace, Patricia. 1999. *The psychology of the Internet*, Cambridge University Press, Cambridge, UK

Walther, J.B. "Computer-mediated communication: impersonal, interpersonal, and hyperpersonal interaction," *Communication Research* 23(1), 1996, 3-43.

Webster, J. and Martocchio, J. "Computer playfulness: Development of measure with workplace implications," *MIS Quarterly* 16(2), 1992, 201-226.

Wener, Y. "Commitment in organizations: A new normative view," *Academy of Management Review,* 7 (3), 1982, 418-428.

Wilson, D. T. and Mummalaneni, V. "Bonding and commitment in buyer-seller relationships: A preliminary conceptualization," *Industrial Marketing and Purchasing*, 1(3), 1986, 44-58.

Zoellick, Bill. 2000. *Web Engagement: Connecting to Customers in e-Business*, Addison-Wesley, Boston