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Ting-Peng Liang

*National Sun Yat-sen University*

Yu-Wen Li

*National Sun Yat-sen University, d944020005@student.nsysu.edu.tw*

Efraim Turban

*National Sun Yat-sen University*

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# PERSONALIZED SERVICES AS EMPATHIC RESPONSES: THE ROLE OF INTIMACY

Ting-Peng Liang

Chair Professor, National Sun Yat-Sen University and  
Visiting Professor, City University of Hong Kong  
[tpliang@mail.nsysu.edu.tw](mailto:tpliang@mail.nsysu.edu.tw)

Yu-Wen Li

National Sun Yat-Sen University  
Gushan Dist., Kaohsiung 80424, Taiwan, R.O.C.  
[d944020005@student.nsysu.edu.tw](mailto:d944020005@student.nsysu.edu.tw)

Efraim Turban

Visitor Professor, National Sun Yat-Sen University  
Gushan Dist., Kaohsiung 80424, Taiwan, R.O.C.  
[efraimtur@yahoo.com](mailto:efraimtur@yahoo.com)

## Abstract

*Personalization that uses information technology to tailor content and products/services to the preferences and tastes of individual customers has become a useful function for online marketing. Many techniques have been developed, and research on personalized services has increased substantially in recent years. Several theories have been proposed to explain the effect of positive consumer attitude toward personalized services such as reducing information overload and the Elaboration Likelihood Model. These theories are grounded on a rational perspective. As personalization can be treated as an empathic response to the service receivers, we cannot ignore the role of emotion in a **relationship building process**. In this paper, we propose the relationship building (or **Guanxi** in Chinese) perspective in investigating the effectiveness of personalization, which treats intimate experience resulting from personalized response as an important factor to affect the receivers' attitude towards the personalized recommendation. We conducted a controlled laboratory experiment on personalized recommendation to examine the role of intimacy in affecting consumer attitudes. Our findings indicated that intimate experience does mediate the effect of personalized response on consumer attitudes toward the recommendation. The results and findings provide valuable information to practitioners and researchers.*

*Keywords: Personalization, Theory of intimacy, Personalized recommendation.*

## 1 INTRODUCTION

The rapid development and spread of Web applications have made personalization that tailors products or services to meet customer preferences a common practice and a vital communication strategy in today's business, (Adomavicius and Tuzhilin 2005; Ansari and Mela 2003; Chiasson et al. 2002; Murthi and Sarkar 2003). Personalized product recommendation at Amazon.com is a classic example. This personalization method relies on using advanced information technologies to build customer profiles and identify relevant products or services for recommendation. Research in personalized services has received an increasing attention.

Personalization has several definitions and delivery methods. In its online version (also referred to as e-personalization), personalization can be viewed as an interactive process by which information (e.g., content or messaging) or a website is tailored to meet the needs, tasks, and desires of individuals based on their personal data and preferences. Recent empirical evidence indicates that about 80

percent of Internet users are interested in personalized services (Kobsa 2007). Freedman (2007) also reported that 56 percent of frequent online shoppers were more likely to make a purchase at a website that offers personalization features than one that does not. Xiao and Benbasat (2007) developed a conceptual model for the use, characteristics and impact of personalized product recommendation.

Given the popularity of personalization among online vendors, internal portals, and corporate intranet services, an increasing number of studies examined theories that can be used to explain and predict its effect on consumer behavior. Existing literature has adopted two groups of theories for such a purpose. One is based on rational behaviour assumption, such as the information overload theory that argues that personalized services can reduce the complexity of consumer choice. Hence, effort reduction and money savings are the reasons why personalization is liked by customers.

A second perspective is from the personal persuasion perspective that treats personalized services as providing more convincing message to the customer. A typical theory is the Elaboration Likelihood Model originally proposed by Petty and Cacioppo (1986). The model uses a central route and a peripheral route to interpret how attitudes are formed and changed. The central route processes require a great deal of thought and elaboration, while the peripheral route processes often rely on environmental characteristics. Both routes are found to have effect on consumer attitudes (Tam and Ho 2005).

Another perspective that is closely related to personalization but has not yet well investigated is the relationship building (or Guanxi in Chinese) perspective. Personalization can be viewed as using information technology (IT) as a tool to build customer relationships. A large body of literature has indicated the importance of using IT for relationship marketing and customer retention. The classic article by Treacy and Wiersema (1993) and their book in 1995 propose that the key value that IT can create is customer intimacy. This is also in line with the shifting trend of marketing from the transactional approach to the relationship-based approach that focuses on collaboration and partnership (Sheth and Parvatiyar 1995).

The major purpose of this paper is to treat personalized services as empathetic responses from online agents and propose intimacy as a relationship-oriented construct to explain the effect of personalization. Therefore, our research questions are (1) whether personalized recommendation can induce intimate feeling and (2) whether intimate feeling has a positive effect on their attitude toward the received recommendation. Based on existing literature in human relationships, we developed a model that adopts intimacy as a mediator between personalized services and receiver's attitude, which includes communication, comfort, caring, trust, and commitment as its components. The model was then evaluated in a controlled laboratory experiment, regarding its ability to interpret the effect of personalized product recommendation through email advertising.

The remainder of this paper is organized as follows. Section 2 illustrates the theoretical development. Section 3 describes the research model and hypothesis. This is followed by the description of our experimental design and the development of the measurement model in Section 4. Section 5 reports data analysis and results. Finally, major findings and their implications are presented.

## **2 THEORETICAL DEVELOPMENT**

With the rapid growth of Web technologies and other IT innovations, providing personalized services online (i.e., online services supported by personalization technologies) has become a popular mechanism in attempt to establish and to maintain long-term relationships with customers. Personalization services are mushrooming on millions of vendor websites, social networks, and virtual worlds. Providing personalized services, including messages or product recommendation, is considered to be a strategy for one-to-one marketing that can be applied to develop better customer relationships, and increase both customer acquisition and retention (Ansari and Mela 2003; Kotler 2000; Peppers and Rogers 1993; Peppers et al. 1999).

Since personalization focuses on individual-oriented communication aimed at building relationship, the interactions between personalized services provider and a customer must be intimate. Intimate

interaction is the basis of building relationship, and it can create intimate experience on customers (Gore et al. 2006; Laurenceau et al. 2005; Prager 1995). Intimacy, as a feeling of closeness, then contributes to influence consumers' purchasing behavior. Therefore, intimate interaction is a key process for developing positive relationship.

## **2.1 Intimate Interaction on the Internet**

Intimate interaction is a common process between individuals. This relationship, however, can be extended to the relationship between a user and the computer agent. According to Reis and Shaver's (1988) interpersonal process model, intimacy is an interpersonal process and results from intimate interactions between two persons. Prager (1995) argued that intimate interactions are composed of intimate behaviors and intimate experiences. Intimate behavior refers to intimate sharing that involves the disclosure of personal information, preferences, and so on, while intimate experience refers to the positive feelings and perceptions resulting from partner's responsive behavior. Generally speaking, an intimate interaction is initiated when someone is willing to be a speaker and the other one is ready to be a listener. The speaker shares personal information in order to be intimate (intimate behavior), while the listener respond to the speaker's self-disclosure emphatically so that the speaker could experience the interaction as intimate (intimate experience) (Laurenceau et al. 2005; Laurenceau et al. 1998; Prager 1995). Finally, the speaker's intimate experience will prompt him/her to behave intimately with the listener again. Laurenceau (1998) contended that intimacy is created when the speaker perceived the listener's emphatic response. The experience of intimacy is the consequence of the speaker's intimate behavior, and will influence the speaker's future behavior toward the listener.

As websites on the Internet have become a major partner for information collection and online shopping, interaction with these websites has become a common practice for many computer users. In the human-computer interaction process, a Website offering personalized services can be viewed as a listener, and the user can be viewed as a speaker. Personalized services therefore are considered empathetic responses to the user. These personalized services can be delivered by the provider through emails, Web pages or other communication channels. As long as the user is willing to disclose their personal information, contents (e.g., advertising, recommended product) tailored to the receiver's preferences from the websites could generate intimate experience for the user (Gore et al. 2006; Laurenceau et al. 2005; Prager 1995). This personalized service process can be seen as an empathic process responding to users' needs (Adomavicius and Tuzhilin 2005; Mittal and Lassar 1996). Consequently, people who communicate with intelligent software agents that provide personalized systems may feel warm interactions and a closer relationship with the provider (Adomavicius and Tuzhilin 2005; Ansari and Mela 2003). The intimate interaction process can be illustrated in Figure 1.

## **2.2 Major Components of Customer Intimate Experience**

Intimacy has different meanings in different contexts. For example, Schaefer and Olson (1981) described five types of intimacy, including emotional intimacy, social intimacy, intellectual intimacy, sexual intimacy, and recreational intimacy. Depending on the kind of relationships, intimate experience might involve one or more of these five types. For customer relationships, Stern (1997) argued that the customer intimacy is "limited intimacy", and it is different from "full intimacy" in other relationships (e.g., the romantic relationship). The limited intimacy in customer relationships should mainly include emotional intimacy. Stern (1997) further proposed that the basis of emotional intimacy in a service relationship includes five major components, known as the five C's: communication, caring, trust (conflict resolution), comfort, and commitment. These components are shared by all customer relationships and contribute to the relationship quality between service providers and receivers. Recent research also has founded that this kind of emotional intimacy can explain the interaction in customer-provider relationship (Yim et al. 2008). Therefore, we can adopt the five C's as major elements to measure customer's intimate experience during the process of online interaction.

## Intelligent Agent

## User

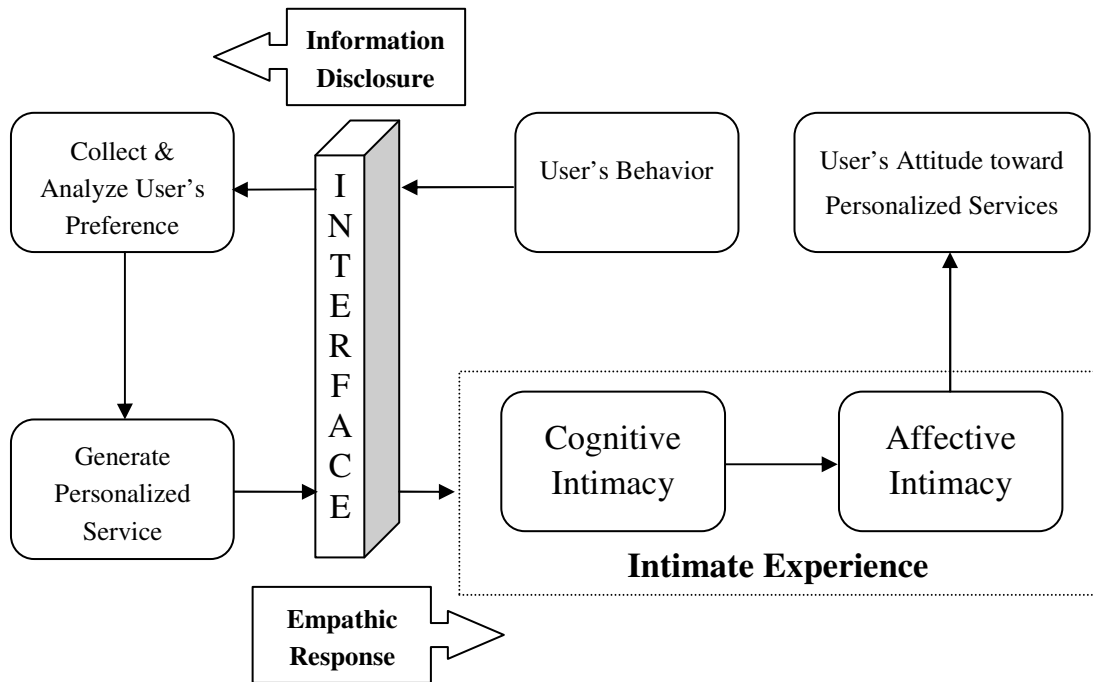


Figure 1. The model of intimacy development on Internet

In reality, the five components are not totally independent from each other. Intimate experience can further be divided into two groups: cognitive and affective intimacy. Cognitive elements of intimacy mainly include perceived communication and perceived caring. For the intimate feeling to be developed, the user must feel that the messages are well communicated in the interaction process and the software agent cares of the user's needs. This allows the speaker to gain psychological support from the listener in an interaction process in order for an affective interdependence to occur (Laurenceau et al. 2005; Laurenceau et al. 1998). Thus, the speaker's perception of been understood and been concerned by listener are two vital components of cognitive intimacy in an interaction for the speaker to experience intimacy (Laurenceau et al. 2005; Scharf et al. 2001).

Cognitive intimacy can lead to positive emotional feelings of commitment, comfort, and trust. They are major affective responses to the listener's empathic behaviour that demonstrate the enjoyment in an intimate interaction. Commitment indicates a psychological state that occurs when an intimate interaction is important that users are willing to spend efforts to maintain it (Gustafsson et al. 2005; Kumar et al. 1995; Morgan and Hunt 1994). Comfort is the degree to which the speaker is physically relaxed and satisfied to get along with the listener (Crosby et al. 1990; Gustafsson et al. 2005; Roberts et al. 2003). Trust refers to the beliefs that the listener is honest and benevolent (Doney and Cannon 1997; Ganesan 1994; Kumar et al. 1995; Morgan and Hunt 1994). These three components are important experiences in an intimate interaction. The five C's together can be used to interpret the feeling of closeness, and it can be viewed as an indicator of relationship quality.

### 3 THE RESEARCH MODEL AND HYPOTHESIS

As intimacy can be a good indicator of relationship quality, this study proposes an intimacy-mediated model for explaining the effect of personalization on user attitudes. In our view, personalized services

can be considered empathetic responses to user's information disclosure and can trigger an affective feeling of intimacy when the message matches the receiver's needs. This intimate experience then induces changes in the receiver's attitudes. Based on this rationale, the intimate experience, a mixed perception or feeling of caring, commitment, communication, comfort, and trust, can be treated as a mediator between perceived personalized response and their effects on receiver's attitudes. Figure 2 shows a schematic view of the proposed model. Three groups of hypotheses can be posited from the model.

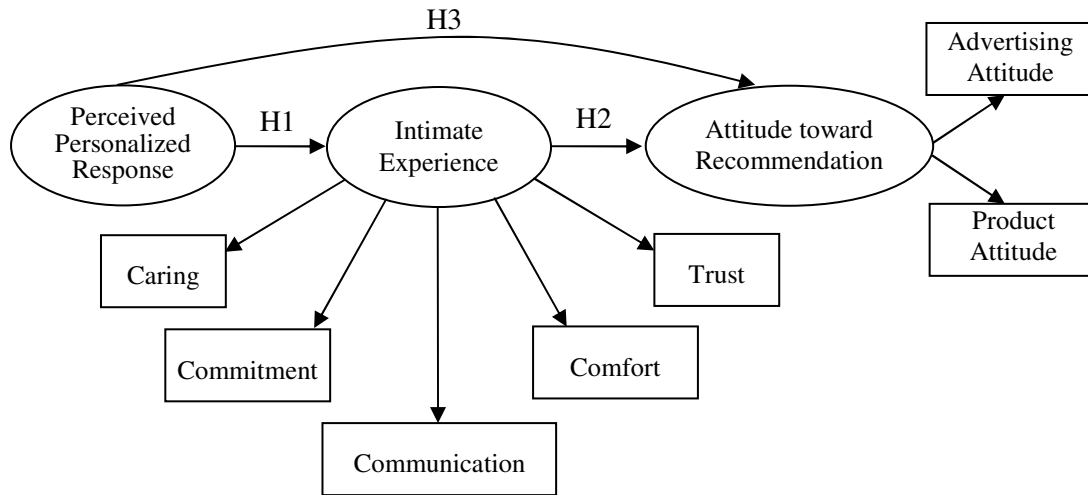


Figure 2. The Research Model

### 3.1 Generation of intimate experience

Several studies have found that personalization is a critical success factor in relationship marketing due to service provider's capability to personalize the design and content of service to meet the receivers' needs (Ansari and Mela 2003; Elsner et al. 2004; Gönül and Hofstede 2006). For offering personalized service, service provider should request the receivers to provide their personal information first, such as name, e-mail address, preference, and so on. Personalization agent then analyzes the receivers' personal information, so service providers can tailor their services to receiver's needs to induce intimate experience. Thus, we posit the following hypothesis:

**H1: Perceived personalized response will have a positive effect on receiver's intimate experience in an interaction with personalized service provider**

### 3.2 The impact of intimacy

As intimacy is a crucial component for building close relationship, it has been extensively researched in the field of sociology and social psychology (Felmlee and Sprecher 2000). Research has highlighted the importance of intimacy in different relationships settings such as service relationship, friendship, counselling relationship, nurse-patient relationship, romantic relationship, and marital relationship (Laurenceau et al. 2005; Robson and Robson 1998; Scott et al. 2006; Stern 1997; Williams 2001). Intimate experience, the service receivers' positive feelings in an interaction, could affect the receivers' attitude toward the recommendation included in the personalized service. Thus, we posit the following hypothesis:

**H2: Intimate experience will have a positive effect on receiver's attitude toward a recommendation included in the personalized service.**

### 3.3 Direct effect of personalized recommendation

In order to serve as a benchmark model for comparison with the mediated model, this hypothesis is for testing whether personalized recommendation generates positive attitudes. Existing literatures have reported that personalization can facilitate the acceptance of advertisement recommendation due to the rational factors such as benefiting from less search efforts, reduced information overload, and improved preference matching (Komiak et al. 2006; Liang et al. 2006; Tam and Ho 2005; Tam and Ho 2006). For the intimacy mediation model to prove itself, the direct effect link must be superseded. Thus, we posit the following direct effect hypothesis for benchmarking:

**H3: The direct effect of personalized recommendation on receiver's attitude toward recommendation included in the personalized service will not be significant.**

## 4 THE EXPERIMENTAL STUDY

In order to test the hypothesis, we conducted a controlled experiment in which a personalized response including a personal shopping report and a personalized advertisement was sent via email. Email advertising was chosen because personalized promotional messages have become a common practice for most online stores. For example, Amazon and other retailers send recommended book information to clients based on their previous purchasing behavior. Many retailers notify customers about sales via emails. The task is similar to a credit card case in which segmented personal advertising is included in the monthly statement.

### 4.1 Measurement Development

This study includes three main constructs: perceived personalized response, intimate experience, and attitude toward recommendation. We developed a questionnaire for measuring the constructs. Personalization is measured by the first three items derived from Adomavicius and Tuzhilin (2005) and Liang et al. (2006) that assessed the degree to which a receiver perceives the respond fits his personal needs. The mediating variable, intimate experience, refers to the feelings or perceptions in an interaction with the service provider. It is a compound construct that includes five dimensions—communication, caring, trust, comfort, and commitment.

Communication was measured by two items that assessed receiver's perception of the degree to which the service provider's response expressed understanding of receiver's self-discourse (the response was relevant to the information provided by receiver). That is, personal information sharing was perceived to be successful (Duncan and Moriarty 1998; Ramsey and Sohi 1997). Caring was measured by two items adapted from Doney and Cannon (1997). The scale assessed the receiver's perception of the degree to which the service provider was concerned with the receivers' welfare and needs. Trust was measured by four items that assessed the receiver's perception of the degree to which the provider's response was honest. The items were adapted from Doney and Cannon (1997) and Komiak and Benbasat (2006). Comfort was measured by three items which were adapted from Roberts et al. (2003). These items assessed the degree to which a receiver was satisfied with "getting along" with the service provider in an interaction. Finally, commitment was measured by four items that assessed the degree to which a receiver had an enduring desire to remain with a specific service provider as a result of enjoying their interaction. These were adapted from Gustafsson et al. (2005) and Roberts et al. (2003). Finally, since the recommendation included in the personalized response was for promoting a product, the receiver's attitude toward recommendation was measured on two dimensions: attitude toward the advertisement (advertising attitude) and attitude toward the product in the advertisement (product attitude).

Consumer attitude was measured by two dimensions: attitude toward the advertisement and attitude toward the recommended product. Advertising attitude was assessed by six items adapted from Brackett and Benjamin (2001), and product attitude was assessed by five items adapted from Berens

et al. (2005). All questionnaire items are measured on a five-point Likert-scale with 1 being least agreed and 5 being most agreed.

## **4.2 Manipulation in the Experiment**

Subjects in the experiment were divided into two groups: those who received personalized response as the experimental group, and those who received non-personalized response as the control group. The design of personalized response included self-reference and goal-relevance, both of which are considered major features of e-personalization (Tam and Ho 2006). Self reference was designed to contain data such as receiver's personal information, including the receiver's name and mention of their request for a report about their preference analysis. Goal relevance was designed to provide the information that was relevant to receiver's needs including a report of personal preference analysis and a personalized advertising chosen by a personalization intelligent agent. In non-personalized responses, the salutation did not include receiver's name, and a general report substituted for personalized. In addition, the advertised product was chosen randomly. A manipulation check for the effect of personalization asked the participants to evaluate the email messages. The difference of the answers between the experimental and the control groups was significant ( $t=-2.249$ ,  $p<0.03$ ).

## **4.3 Data Collection**

An invitation to participate was posted on a popular portal website in Taiwan. To encourage volunteers to participate in this experiment, prizes were offered. All participants were asked to complete the online product preference questionnaire where their purchasing preferences and demographic information were recorded. Demographic information included gender, email address, and so forth. The participants' product preferences were obtained through asking them: "Mark the goods purchased during the preceding year," "Mark the goods you plan to buy in the near future," and "Mark the goods that you are interested in receiving additional information about." Thirty-six products in five categories were listed for their selection, including electronics and computers, sports, travel, men's products, and women's products.

After receiving the email message, all participants were asked to complete the online questionnaire by clicking on a Web link that was attached to the email to collect data about their intimate feeling and their attitude toward the recommendation. We ended up with 463 valid respondents for model testing (369 other users were dropped due to incomplete questionnaires). Among the valid subjects, 157 men and 104 women were in the experimental group that received personalized advertising, while 114 men and 88 women were in the control group that received non-personalized advertising. An analysis revealed no differences in the answers due to gender ( $\chi^2=0.648$ ,  $df=1$ ,  $p=0.421$ ).

# **5 DATA ANALYSIS AND RESULTS**

## **5.1 The Measurement Model**

The measurement model was assessed by confirmatory factor analysis using AMOS 7.0. Construct reliability was tested by composite reliability that reflected the internal consistency of the indicators of constructs. The composite reliability values for all constructs exceed 0.7, meeting the suggested threshold (Hair et al. 2006; Nunnally et al. 1994). For construct validity, both congruent validity and discriminant validity were examined. Congruent validity was assessed by indicator loadings and average variance extracted (AVE), which is the average percentage of variance extracted among construct indicators. All factor loadings were highly significant in a t-test, and loading scores were all above the desired threshold of 0.7, except for three indicators, which still satisfied a minimum requirement of 0.5. In addition, AVE values were greater than the recommended score of 0.5 (Hair et al. 2006). Taken together, these evidences support the convergent validity of the measurement model. For discriminant validity, AVE values for each construct should be greater than the squared



correlation estimates involving the construct. As shown in Table 1, all AVE values (shaded numbers) meet the criterion of greater than off-diagonal numbers to hold the discriminant validity (see Fornell and Larcker (1981), Hair et al. (2006). Thus, our constructs are highly valid for further analysis.

	PPR	CR	CMM	CMU	CF	TT	AA	PA
Perceived Personalized Response (PPR)	0.62							
Caring (CR)	0.32	0.72						
Commitment (CMM)	0.36	0.38	0.67					
Communication (CMU)	0.51	0.38	0.44	0.55				
Comfort (CF)	0.30	0.34	0.42	0.40	0.81			
Trust (TT)	0.24	0.18	0.24	0.26	0.26	0.60		
Advertising Attitude(AA)	0.18	0.20	0.21	0.23	0.21	0.29	0.62	
Product Attitude(PA)	0.12	0.14	0.12	0.20	0.003	0.21	0.59	0.64

Note: The shaded numbers in the diagonal row are the average variance extracted (AVE).

Table 1. Square of Correlation between Constructs

The validity of the structural model was assessed by absolute fit indices and incremental fit indices. Absolute fit indices are direct measures for evaluating goodness of model fit, which include normed  $\chi^2$ , goodness-of-fit index (GFI), adjusted goodness-of-fit index (AGFI), and root mean square error of approximation (RMSEA). Normed  $\chi^2$  and RMSEA are badness-of-fit indices with lower values representing a better fit. Except for normed  $\chi^2$  whose value exceeded 3 due to large sample size, all absolute fit indices satisfied the recommended threshold values. This indicates a good fit with the collected data (Hair et al. 2006). In addition, incremental fit indices that assess how well the research model fits relative to a baseline model (null model), including normed fit index (NFI), incremental fit index (IFI), and a comparative fit index (CFI), also meet the suggested value of 0.9. This provides strong evidence for excellent fit between a structure model and the survey data (Hair et al. 2006). Thus, our measurement model has a high validity.

## 5.2 The Structural Model and Results of Hypotheses Testing

The results of the model estimation are shown in Figure 3. All hypotheses are supported. This indicates that the higher the level of perceived personalized response, the higher is the level of intimate experience by the E-mail receivers. Thus, hypothesis 1 is supported. Besides, the receivers' intimate experience positively influences their attitude toward recommendation as measured by advertisement and product attitudes. That is, hypothesis 2 is also supported. Since the estimated path coefficient from Perceived Personalized Response to Intimate Experience is quite high ( $b=0.93$ ), it implies that perceived personalized response is highly associated with receiver's intimate experience. Intimate Experience is a second order construct and refers to service receiver's feelings or perceptions in an interaction with the service provider, while Perceived Personalized Response indicates that service receiver perceives the respond fits his/her needs. The conceptualization of these two constructs is absolutely different. The result of casual relationship between these two constructs does not affect by their high correlation.

Moreover, we can examine the factor loadings which are similar to regression coefficient in regression analysis to see individual effect of different components. As we can see in Figure 3, intimacy has the highest association with communication and commitment, followed by comfort and caring, and trust lastly. Also, attitude toward recommendation has higher association with the advertising attitude than with the product attitude. With respect to the impact of personalization on receiver's attitude, perceived personalized response has no significant effect on receiver's attitude toward recommendation. Therefore, hypothesis 3 is supported.

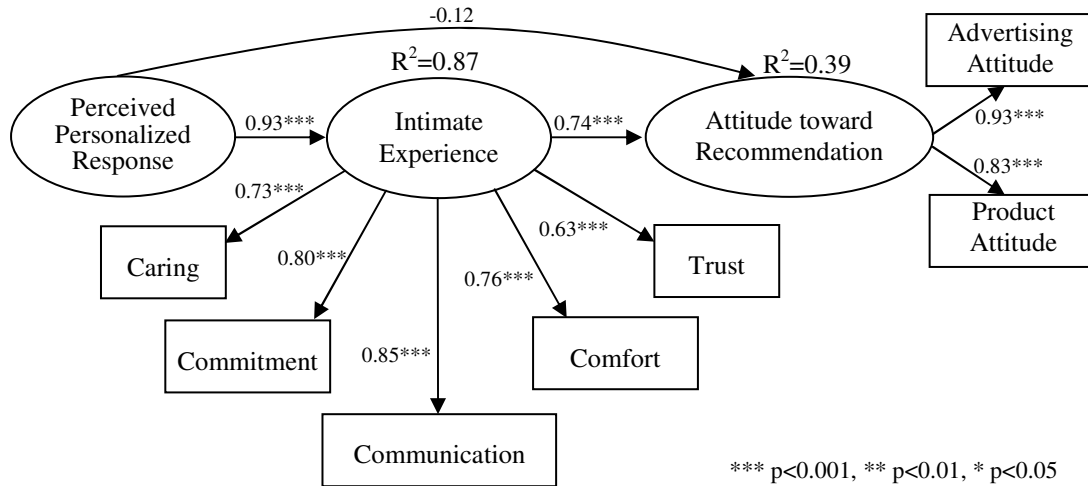


Figure 3 Result of AMOS Analysis

## 6 MAJOR FINDINGS AND CONTRIBUTIONS

In this paper, we have applied the intimate experience in the interpersonal process model to explain the effect of personalization from a relationship building perspective. The intimate experience induced from personalized response is introduced as a construct that mediates the relation between perceived personalized response and its effect on the receiver's attitude toward recommendation. An experimental study involving email advertisement was conducted to empirically test the model. The results show that perceived personalized response increases the receiver's attitudes toward the advertisement and the product recommended in the advertisement through intimate experience. Detail findings and the contributions are discussed below.

First, the full mediation effect of intimate experience was strongly supported. Prior studies mostly verified that personalization effect is generated by rational motivation such as least efforts, preference matching, content relevance, and so on, while our intimacy mediated model demonstrates that an affective factor plays an important role. Human beings are so sensitive that their behaviors are easily influenced by emotions and feelings. Therefore, even though personalization cannot exactly meet receiver's needs due to the limitations of technology, it still could affect receiver's behavior by inducing intimate experience. Second, personalized service can be treated as an empathic response in the interaction between the service provider and the receivers. Research in relationship marketing has taken personalization as a strategy to build relationship with customers. This study provides strong evidence to support the argument that personalized services can make the receiver feel intimate in the interaction process to establish a closer relationship. Third, relationship quality is an important factor to influence one's attitude, which can further influence his/her behavior. Our findings on the role of intimacy can be used as a measure of relationship quality.

The implications of our findings are three folds. First, this study used an affective view to examine the personalization effect by a synergetic construct—intimacy that refers to both feelings and relationship quality. Although early literature has argued that companies can use IT to gain business value through increasing customer intimacy (e.g., Treacy and Wiersema, 1993), not much research has been done along this line. This paper has not only proposed a theoretical model to clearly indicate the role of intimacy in changing customer attitudes but also defined five major components of intimacy. The comprehensive perspective can explain why receivers are willing to accept personalized messages. A receiver's name on an email and relevant content inside the email can cause a receiver to experience intimacy, which further influences his acceptance of a recommendation.

Second, from a practitioner's perspective, intimacy can be used as a new measurement for relationship quality in customer relationship management and other related discipline areas. Even

though relationship quality is a popular construct in relationship marketing, definitions vary due to different viewpoints. In this study, we propose the concept of intimacy as an index of relationship quality to aggregate its five components, which has been applied and examined in interpersonal relationships for a long time. This can be used as a valid instrument for measuring the effect of personalized services or related online promotional activities.

Finally, since intimacy is composed of communication, commitment, comfort, caring, and trust, practitioners who intend to take advantage of personalized services over the Internet may have these factors in mind when they design the services or messages. The designer may assess the potential effect of a particular personalized service by whether it can enhance the communication, increase customer commitment, deliver the feeling of comfort and caring to the customer, and increase the customer's trust. If the answers to most of these questions are positive, the personalized service will be a valuable one.

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