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Customers' Psychological Ownership towards Personalized Spaces on e-Commerce Sites

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ABSTRACT

Some leading e-Commerce sites (B2C) provide customers with over-personalized spaces which do not seem to be necessary. Why do the site providers provide such unnecessary capabilities for customers? Is it an effective marketing strategy? This study proposes the concept of "psychological ownership" for examining the impact of e-Commerce sites' personalized spaces on customer perception and behavior. Research questions are: first, can customers develop feelings of psychological ownership towards particular spaces on e-Commerce sites? Second, what are the relationships between customers' psychological ownership and their perception of the personalized spaces? Third, what is the impact of the sense of psychological ownership on customers' behavior on e-Commerce sites? A causal model is proposed to test hypotheses based on the research questions. Finally, strategic implications of customer psychological ownership for e-Commerce marketing will be discussed.

Keywords

Psychological ownership, personalization on e-Commerce sites, e-Loyalty

INTRODUCTION

Betty is a good customer of an e-Commerce site (B2C). The e-Commerce site provides each user with a certain space; Betty also has her own space on the site entitled "Betty's Space." She manages her own space by controlling some component of the interface. She has her own recommendation lists, and also a page called "About Betty." On the page, she chose a cute dog picture as her mascot and nicknamed it "Scooby" although she knows that no one cares what she is doing on those pages. She can check out her rank as a reviewer on the site. When she clicks the "Just like you" link, an interface tells her that an anonymous guy who lives in Alaska has certain interests "just like her." What is she doing on the e-Commerce site? Why does the site provide such a space for her?

Recommender Systems for e-Commerce sites provide customers with personalized information based on the individual customer's preferences and on similar purchase patterns of other customers identified by certain algorithms. Some leading e-Commerce sites now provide not only personalized information about goods, but also something that does not seem to be related to selling items, like Betty's example.

Appendix B provides an example of a personalized space. Betty regularly manages her spaces (e.g., Betty's Space, About Betty Pages, etc.) provided by the e-Commerce site. She seems to enjoy the "personalized" space that is only for Betty, but will it make her buy something from the site and make profits for the site? Is the strategy of the site effective? What will customers perceive from the personalized spaces? What will they do on the site after perceiving something from the spaces? This study addresses these questions by examining how psychological ownership might be a key dimension in explaining the strategic function of advanced recommend systems providing personalized user interfaces. Finally, this study will clarify the effectiveness of this strategy.

THE ROOTS OF PSYCHOLOGICAL OWNERSHIP

It is necessary to conceptually define "psychological ownership," and distinguish it from legal ownership and other similar concepts such as commitment, identification, and internalization. Pierce et al. (2001) provide a useful theoretical basis for psychological ownership in management. First, the sense of ownership manifests itself in the meaning and emotion commonly associated with my, mine and our. Second, psychological ownership reflects a relationship between an individual and an object in which the object is experienced as having a close connection with the self, as becoming part of the extended self. As the last feature of psychological ownership, they emphasize that the state of psychological ownership is complex and is composed of a cognitive and affective core. The object of psychological ownership might be either material or immaterial,

and psychological ownership can exist without legal ownership. Legal ownership is recognized by society, and hence the rights are specified, and protected, by the legal system. In contrast, psychological ownership is recognized by the individual who holds these feelings, and the individual manifests the felt rights associated with psychological ownership (Furby, 1978; Etzioni, 1991).

The core of psychological ownership is the feeling of possessiveness and of being psychologically tied to an object (Belk, 1988; Furby 1978). Pierce et al. (2001) conceptually categorized a motive for possession through three desires: efficacy and effectance, self-identity, and need for place. These three psychological desires are called the “roots of psychological ownership.” The phenomenon of psychological ownership is rooted in these three motives, and an individual can develop feelings of ownership towards a variety of objects as long as these objects allow the motives to operate and be satisfied. This study establishes a conceptual model for the individual roots of psychological ownership as shown in Figure 1, and uses the model to illustrate how the concepts function in developing feelings of ownership in an individual’s mental core.

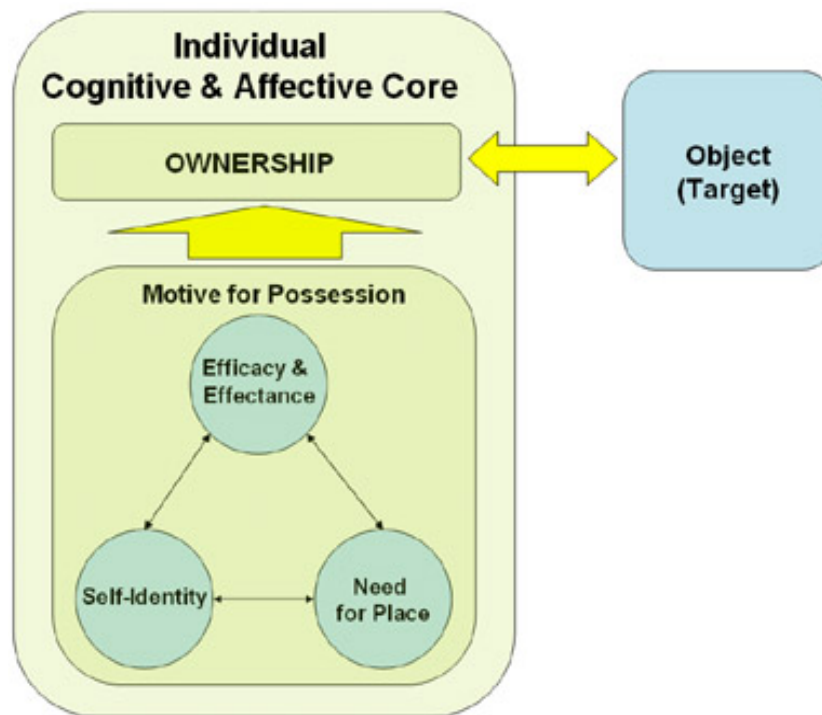


Figure 1. Roots of psychological ownership

THE DEVELOPMENT OF FEELINGS OF OWNERSHIP

A literature review, including Belk’s study (1988), supports a finding that particular experiences help the individual develop feelings of psychological ownership. Pierce et al. (2001) examined how an individual develops feelings of ownership, and then identified three key experiences through which psychological ownership emerges: controlling the target, coming to know the target intimately, and investing the self in the target. Selected sub-constructs of each key experience for this study can be found in appendix A. Heckhausen and Schulz (1995) take the view that “control” can be divided into primary control and secondary control. Primary control is defined as bringing the environment (object) into line with one’s wishes. Secondary control is defined as bringing oneself in line with the environment. That is, primary control targets the external world and attempts to achieve effects in the immediate environment external to the individual, whereas secondary control targets the self and attempts to achieve changes directly within the individual. The narrower concept of control in Pierce et al. (2003) is very similar to the primary control in Heckhausen and Schulz (1995). The secondary control in Heckhausen and Schulz (1995) is exactly the same as the other two items. This implication is that the three items in key experience constructs are potentially interrelated.

This study establishes the Development of Feelings of Ownership Model (DFOM) based on a literature review, especially inspired by Heckhausen and Schulz (1995) and Pierce et al. (2003). The model represents the way a person develops feelings of ownership towards a target (Figure 2).

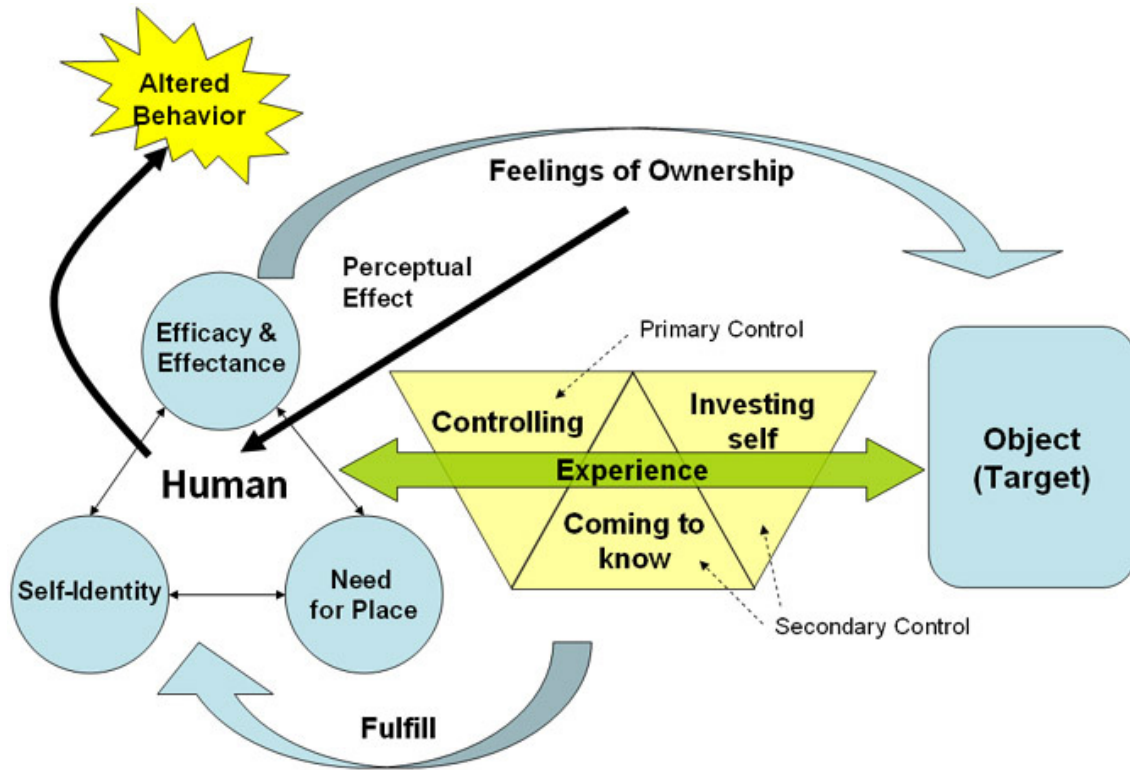


Figure 2. The Development of Feelings of Ownership Model (DFOM)

The DFOM has a process: first, an individual, having a set of motives (efficacy and effectance, self-identity, and need for place) wants to satisfy these motives by possessing an object. He/she starts to interact with the object. Second, the individual undergoes three key experiences connected with the object. Third, he/she starts to fulfill his/her desire in undergoing these three key experiences. Fourth, the feelings of ownership towards the object emerge. Fifth, his/her feelings of ownership start to have a psychological and perceptual effect on him/herself. Finally, he/she will show altered behavior, depending on the degree of ownership he/she feels. In the next section we will apply the model to virtual space on e-Commerce sites.

PSYCHOLOGICAL OWNERSHIP IN VIRTUAL SPACE

Previous studies indicate that the target towards which an individual may develop feelings of psychological ownership can be tangible or intangible, or what Furby (1978) refers to as immaterial. This is a natural standpoint for applying the concept to web spaces. Using the DFOM, this research will establish certain environments of an e-Commerce site, and then allow customers to have the three key experiences related to interacting with personalized spaces. The goal is to stimulate customers' motives for possession. It is asserted that different degrees of psychological ownership will become manifest in different customers because each customer's perceived level of experience may vary. Finally, this study will examine how customers' perceptual and behavioral differences are influenced by psychological ownership towards the personalized spaces. Figure 3 illustrates the conceptual research model for this study.

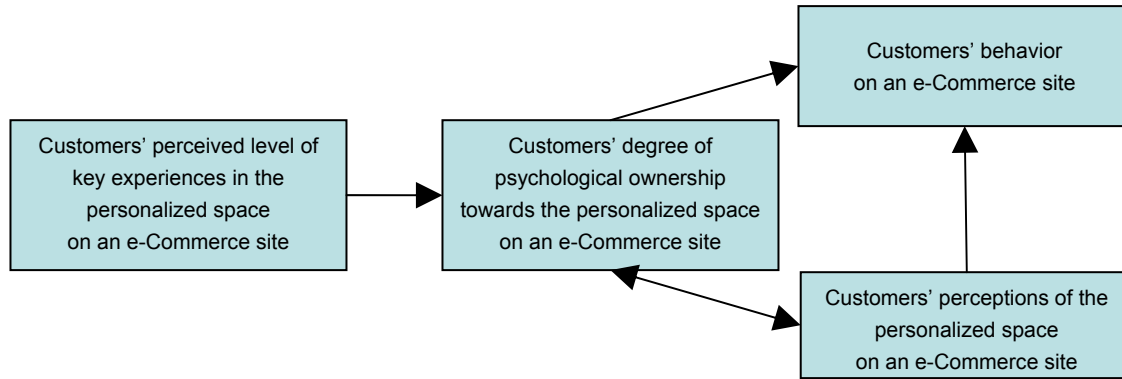


Figure 3. Conceptual Model of the Current Study

PSYCHOLOGICAL OWNERSHIP IN THE DISCIPLINE OF MIS

The concept of psychological ownership is seldom mentioned in the management area. Few studies in the discipline of MIS have dealt with psychological ownership; ownership was considered more an issue of human resources or an issue of information sharing in organizations (e.g., Constant et al., 1994; Avital & Vandenbosch, 2000; Jarvenpaa & Staples, 2001). Previous studies were interested in fostering organizational efficiency or integrating the organization with psychological ownership. This study concentrates on users' perceptual and behavioral issues related to ownership at the individual level. The primary interest in this study is the development of individuals' feelings of psychological ownership, and also in behavioral issues resulting from the individual development of psychological ownership. It will be the first empirical study on this subject at the individual level.

RESEARCH MODEL AND HYPOTHESES

The objective of this study can be represented as three simple questions. First, how do customers develop feelings of psychological ownership towards personalized spaces provided by e-Commerce sites? Second, is the degree of customers' psychological ownership towards the spaces related to the degree of their perception of the personalized spaces? Third, do the degree of their psychological ownership and the degree of their perception yield behavioral difference on e-Commerce sites? Figure 4 illustrates the interactions between a customer and an e-Commerce site from the customers' perspective related to three research questions in this study.

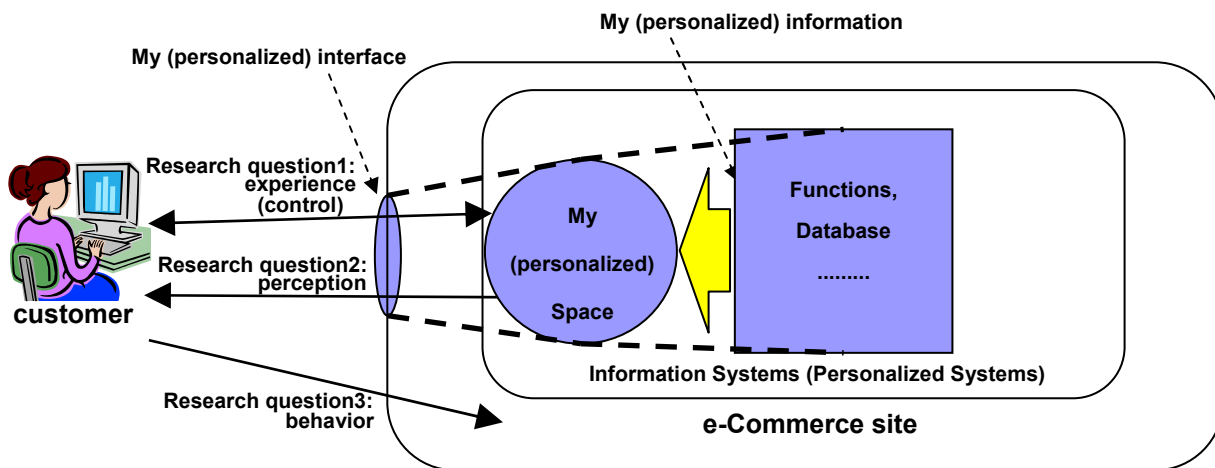


Figure 4. Interaction between a Customer & an e-Commerce Site from the User's Perspective

Based on the previous research we propose a causal model representing the expected relationship among the constructs to achieve answers to the initial research questions. Figure 5 represents the research model. The rationale for the model and consequent hypotheses based on research questions are presented below.

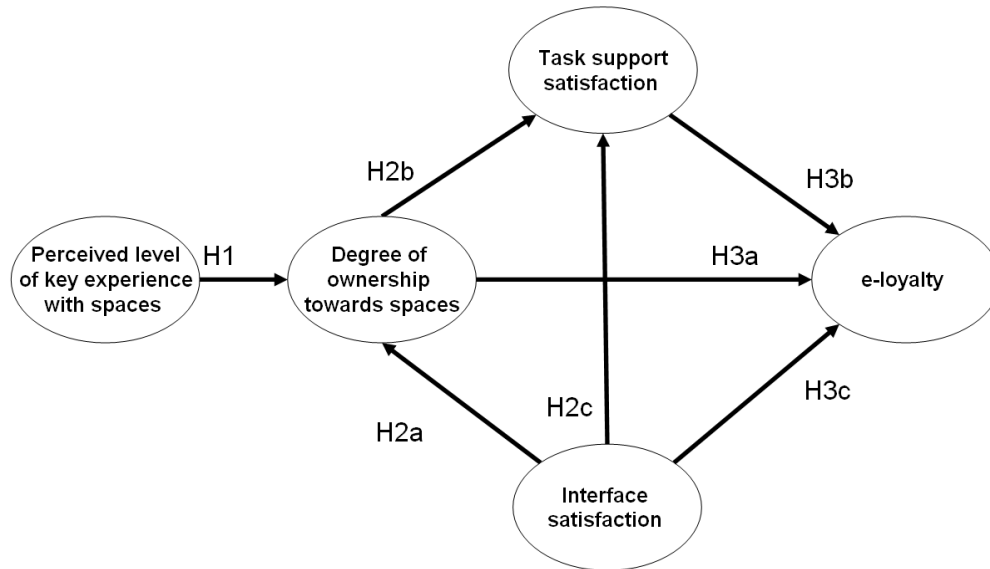


Figure 5. Research Model

Research Question1: Customers' Developing of Psychological Ownership

The primary research question is whether customers develop psychological ownership towards personalized spaces on an e-Commerce site through the three key experiences as shown in the DFOM. It is expected that if a customer perceives that he/she has enough experience controlling the personalized spaces, he/she may develop a high degree of psychological ownership towards the space on an e-Commerce site. Selected sub-constructs of perceived level of key experience and the degree of psychological ownership are shown in appendix A.

H1: Customers' *perceived level of key experiences* with the personalized spaces on an e-Commerce site has a positive effect on their *degree of psychological ownership* developed towards the personalized spaces.

Research Question2: Customers' Psychological Ownership and Perceptions

This study supposes that customers' interface satisfaction will affect their psychological ownership towards personalized spaces. In this study, customers can interact with an e-Commerce site only through interfaces, that is, only through interfaces they experience (control) through the personalized spaces (Figure 4). Also, customers' interface satisfaction will affect their task support satisfaction. It is posited that customers can use the personalized space to help themselves shop or get information on goods on the e-Commerce site. The current mode predicts that customers whose ownership level is high will perceive personalized spaces as being more helpful for their task – shopping or searching for information.

H2a: Customers' *interface satisfaction* has a positive effect on their *degree of psychological ownership* towards the personalized spaces on an e-Commerce site.

H2b: Customers' *degree of psychological ownership* towards personalized spaces has a positive effect on the *task support satisfaction* that they perceive.

H2c: Customers' *interface satisfaction* has a positive effect on their *task support satisfaction*.

Sub-constructs related to interface satisfaction and task support satisfaction appear in the appendix A.

Research Question3: Customers' Psychological Ownership and Behavior

Can psychological ownership be used as a factor in marketing strategies aimed at locking in customers? The model predicts that a high degree of psychological ownership towards the personalized spaces by customers will lead them to perceive a

high level of loyalty to the e-Commerce site. Schultz (2000) describes e-loyalty as an evolution from the traditional product-driven, marketer-controlled concept towards a distribution-driven, consumer-controlled, and technology-facilitated concept. Accordingly, the current study supposes that the concept "consumer-controlled" would be highly related to psychological ownership. Also it is expected that customers' task support satisfaction and interface satisfaction will affect their e-loyalty.

H3a: Customers' *degree of psychological ownership* towards personalized spaces has a positive effect on their level of *e-loyalty* to an e-Commerce site.

H3b: Customers' *task support satisfaction* has a positive effect on their level of *e-loyalty* to an e-Commerce site.

H3c: Customers' *interface satisfaction* has a positive effect on their level of *e-loyalty* to an e-Commerce site.

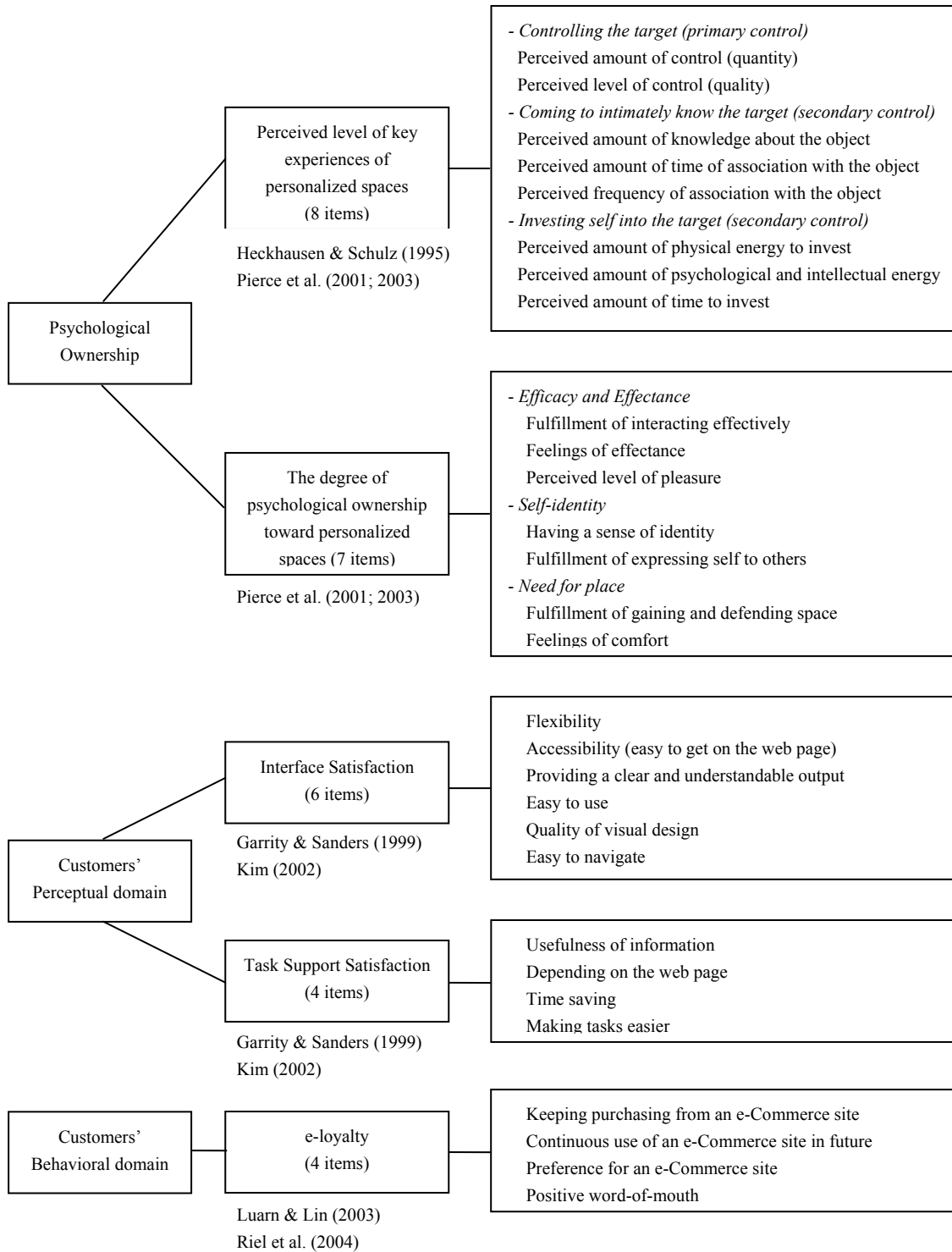
The sub-constructs of e-loyalty can be found in the appendix A.

FUTURE PLANS AND DISCUSSION

Before collecting the data a pre-test will be conducted with samples from a leading e-Commerce site to explore feasibility of this study. At the data collection stage, this study will design personalized spaces including a user-adaptive interface based on recent studies of personalization systems. These will be installed on a real e-Commerce site. The e-Commerce site sells groceries and presently has about 40,000 members. It has an average of 130 sales transactions a day. It will provide customers with "key experiences" so that customers can develop feelings of ownership towards the spaces installed on a real e-Commerce site for this study. Customers will have enough time to experience the spaces, and then the prepared survey will be conducted. A questionnaire will be organized based on selected items as shown in the appendix A. Confirmatory factor analysis will be conducted to develop relevant measurement scales for each construct. The refined questionnaire will be distributed to customers of the site. Likert scales (1~7), with anchors ranging from "strongly disagree" to "strongly agree" will be used for questions pertaining to each construct.

The purpose of this study is to provide evidence that customers develop feelings of psychological ownership towards personalized spaces on e-Commerce sites. We also expect that it will illustrate that customers' psychological ownership will affect their perceptions and behavior on these sites. As a result, this study will demonstrate that personalized spaces will arouse customers' psychological ownership towards the spaces, and should lead to increased revenue for e-Commerce sites. The ultimate goal of the study is to provide a new theoretical and practical basis for e-Business marketing strategies.

APPENDIX A: OPERATIONALIZATION OF LATENT VARIABLES



APPENDIX B: AN EXAMPLE OF PERSONALIZED SPACES ON AN E-COMMERCE SITE

Shop in **Sports & Outdoors** (Beta-What is this?)

WELCOME | BETTY'S STORE | BOOKS | APPAREL & ACCESSORIES | ELECTRONICS | TOYS & GAMES | MUSIC | SOFTWARE | SEE MORE STORES

YOUR FAVORITE STORES | YOUR RECOMMENDATIONS | NEW FOR YOU | THE PAGE YOU MADE | FRIENDS & FAVORITES

Search People: All [GO] Your Favorite People: Select [GO]

Friends & Favorites > Your About You Area

SEARCH

People [GO]

BROWSE

Your Content

- [Wish List](#): 32 items
- [Reviews Written](#): 10 (43 helpful votes)
- [Listmania Lists](#): 1
- [Baby Registry](#)
- [Wedding Registry](#)
- [Shared Purchases](#): 55

Gift Helpers

- [Free e-Cards](#)
- [Gift Certificates](#)
- [Your Reminders](#)

Community Features

- [Purchase Circles](#)
- [Discussion Boards](#)
- [Top Reviewers](#)

About You

Viewable by the public:

Name: Betty
Nickname: scooby-doooo
Reviewer rank: [31923](#)
About me: Hello, This is Betty's personalized space provided by a leading e-Commerce company. Everyday I visit this page to check out my rank as a reviewer on this site. I feel very happy when other customers vote 'helpful' on my review. Also, I like checking out items of Community Features on the left frame. It is really interesting to discuss new products with other customers! [see less](#)

[Edit Name](#) [Edit About You](#) [Edit Image](#)

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Your Wishlist - [See your entire Wishlist](#)

Orchestral Excerpts for Violin ~ William Preucil (Performer), et al
List Price: \$18.98
Buy new: **\$18.98** [Used & new](#) from **\$14.97**
[Add to cart](#)
Availability: Usually ships in 24 hours

REFERENCES

1. Avital, M. and Vandenbosch, B. (2000) The Relationship between Psychological Ownership and IT-driven Value, *Proceedings of the 21st international conference on Information systems*, 652-659.
2. Belk, R. (1988) Possessions and the Extended Self, *Journal of Consumer Research*, 15, 139-169.
3. Constant, D., Kiesler, S. and Sproull, L. (1994) What's Mine Is Ours, or Is It? A Study of Attitudes about Information Sharing, *Information Systems Research*, 5, 4, 400-421.
4. Etzioni, A. (1991) The Socio-economics of Property, *Journal of Social Behavior and Personality*, 6, 465-468.
5. Furby, L. (1978) Possession in Humans: An Exploratory Study of Its Meaning and Motivation, *Social Behavior and Personality*, 6, 1, 49-65.
6. Garrity, E. and Sanders, G. L. (1998) Dimensions of Information Systems Success, Information Systems Success Measurement, *Series in Information Technology Management*, Idea Group Publishing, 13-45.
7. Heckhausen, J. and Schulz, R. (1995) A Life-span Theory of Control, *Psychological Review*, 102, 2, 284-304.
8. Jarvenpaa, S. and Staples, D. (2001) Exploring Perception of Organizational Ownership of Information and Expertise, *Journal of Management Information Systems*, 19, 1, 151-183.
9. Kim, Y. (2002) Measuring Web-based Business to Business Support System Success Based on User Satisfaction, Ph.D. dissertation, University at Buffalo.
10. Luarn, P. and Lin, H. (2003) A Customer Loyalty Model for E-service Context, *Journal of Electronic Commerce Research*, 4, 4, 156-167.
11. Pierce, J., Kostova, T. and Dirks, T. (2001) Toward a Theory of Psychological Ownership in Organizations, *Academy of Management Review*, 26, 2, 238-310.

12. Pierce, J., Kostova, T. and Dirks, T. (2003) The State of Psychological Ownership: Integrating and Extending a Century of Research, *Review of General Psychology*, 7, 1, 84-107.
13. Riel, van, A., Lemmink, J. and Streukens, S. (2004) Boost Customer Loyalty with Online Support: the Case of Mobile Telecoms Providers, *International Journal of Internet Marketing and Advertising*, 1, 1, 4-23.
14. Schultz, D. (2000) Customer/Brand Loyalty in an Interactive Marketplace, *Journal of Advertising Research*, 40, 3, 41-53.