CREATING VALUE FOR ONLINE SHOPPERS: IMPLICATIONS FOR SATISFACTION AND LOYALTY

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ABSTRACT

Customer value is the foremost driver of competitive advantage in the Internet shopping environment. The authors of this study identify two types of online shopping values - utilitarian value (including price savings, service excellence, time savings, and selection dimensions) and experiential value (including entertainment, visual, escape, and interaction dimensions). Using structural equation modeling, the impact of these online shopping values upon consumers' satisfaction and loyalty is examined. The results of this study indicate that Internet shopping does indeed invoke various types of shopping values. Both utilitarian and experiential values positively affected customer satisfaction, leading to heightened loyalty. Discussions of the results and managerial implications are offered.

INTRODUCTION

The growth of Internet commerce in both business-to-business and business-to-consumer marketplaces has escaped no one in recent years. The popular press and slowly the academic press have begun to consider the influence of issues such as flow (Novak, Hoffman, and Yung 2000), electronic service quality (Zeithaml, Parasuraman, and Malhotra 2000), and fundamental objectives related to Internet commerce (Keeney 1999). At the same time, we have witnessed the rapid demise of some electronic retailers and even assertions that retail sales via Internet commerce are "unimpressive" (Burke 1997). Despite the phenomenal increase of wired populations, the conversion rate - the number of visitors who come to a particular retail site divided by the number of actual buyers - was only 1.8 percent, according to a 1999 survey by Boston Consulting Group and Shop.org (Boston Consulting Group 2000). Surprisingly, two-thirds of online shoppers filled their electronic shopping carts but exited at the check out point without making any purchase (Gurley 2000; Rewick 2000).

In fact, Burke (1997) asserts that most home shopping services have failed to deliver promised benefits, such as time savings, accurate product information, and lower prices. Recent academic and popular press articles have asserted that one-third of experienced Internet surfers find online shopping difficult (see Seminerio 1998; Burke 1997); failing companies devote too much effort to "over-fancy" sites (Mitchell 2000); and e-tailers pour too much money into ads designed to attract visitors and casual browsers rather than spending money on developing "sticky" web content that will keep buyers loyal to a site (Crockett 2000). Because online shoppers choose retailers who offer the best value – value defined by customers (Woodruff 1997) – e-tailers must design a value proposition that is most appealing to e-customers and then must excel in the delivery of that core value.

The examination of customer value determination and value delivery has recently become a focal point in the marketing literature. Moreover, research on value, satisfaction, and loyalty has been important in recent years in advancing marketing knowledge in the services and retailing literatures. However, most empirical studies to date have examined these constructs and their relationships within the context of "off-line" shopping. Moreover, on the subject of on-line shopping, Peterson, Balasubramanian, and Bronnenberg (1997, p. 330) assert that most current research examining the impact of the Internet upon consumer marketing is nothing more than "anecdotes, experiential evidence, and ad hoc descriptive studies." Thus, the need for empirical research on the relationships between value, satisfaction, and loyalty within an on-line shopping context is now ripe for development.

In regards to these issues, a number of unanswered questions exist. Among those, the extant retailing literature identifies different types of customer values for in-store shopping such as utilitarian value and experiential value. Within an

on-line shopping context, are these shopping values equally relevant? To what extent do different shopping values influence customer satisfaction and loyalty? The purpose of this research is to examine these questions. Significant relationships between the study constructs will likely indicate the appropriate shopping value types that managers should emphasize in their electronic commerce strategies.

The study is composed of several sections. First, we review the literature on value, satisfaction, and loyalty, incorporating these constructs into the electronic shopping context. Second, using confirmatory factor analysis and structural equation modeling, we validate the proposed online shopping value types and test the relationships between the study constructs. Finally, research findings and managerial implications are discussed.

CONCEPTUAL BACKGROUND

Value is based upon customer perceptions and not managerial judgments; hence, understanding what customers value is one area in which marketing can have a distinct influence upon the strategy dialogue. Value determination and delivery facilitates the acquisition and ultimately the retention of customer relationships, and is becoming even more necessary as emerging technologies transform markets (Roberts 2000). Past research has conceptualized value as simply a tradeoff between quality and price (Naylor 1996; Bolton and Drew 1991). However, a number of recent researchers argue that value is more complex, that other types of consumption value should be considered by scholars and managers, and that consumer choice is the result of multiple consumption values (Naylor 1996; Bolton and Drew 1991; Holbrook 1994). Although a number of value types have been identified in the literature (i.e., functional, emotional, social, hedonic), there appear to be two universal value types most appropriate to consumer shopping behavior – functional and nonfunctional (Hartman 1967; Sheth 1983).

Within a shopping context, functional motives (i.e., value) relate to tangible attributes, such as convenience, quality, price, merchandise, etc. Nonfunctional motives (i.e., value) relate to nontangible retailer attributes, such as reputation, clientele, and also social and emotional needs for interaction, communication, and interesting shopping experiences. Like Sheth (1983), Babin, Darden, and Griffin (1994) operationalize shopping value as two dimensions – one utilitarian and one hedonic. Hedonistic (experiential) value reflects worth found in the shopping experience itself, and utilitarian value reflects task-related worth.

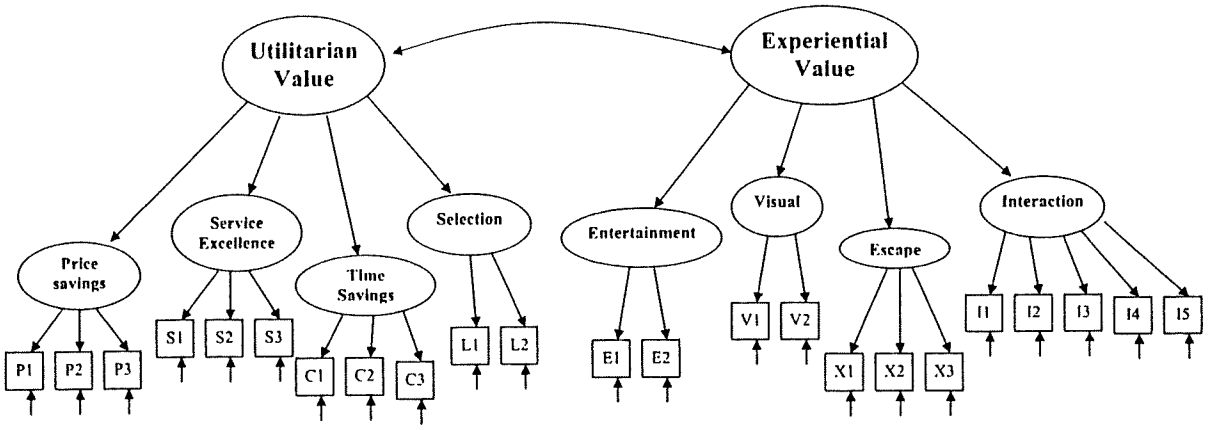
Although functional and experiential value types have been researched in a number of studies related to in-store shopping, the two have rarely been examined simultaneously in other shopping contexts. Eastlick and Feinberg (1999) use this fact as justification for a recent study of catalog shopping in which they include both functional and nonfunctional motives. Given that Internet shopping has been compared to catalog shopping (Direct Marketing 2000), any study of value and satisfaction in an Internet shopping context should therefore incorporate both types of value. In this study, two overall types of value are employed - utilitarian value and experiential value (see Figure 1).

Utilitarian Value

Utilitarian value is defined as an overall assessment of functional benefits incorporating the traditional price savings dimension, a service dimension, a time-savings dimension, and a merchandise selection dimension. Utilitarian value is relevant for task-specific use of online shopping, such as purchase deliberation (i.e., considering the product, service, and price features before actual purchase) (Hoffman and Novak 1996).

Price savings is the economic value dimension. Consumers derive value for the products and services that are offered at the right price, given the quality. For example, online shoppers can browse several retailers to find the lowest price for the product they want. *Service excellence* is the dimension that involves quality judgment for services offered during and after the online shopping (Mathwick, Malhota, and Rigdon 2001). In the off-line service settings, individuals were found to derive value and satisfaction by perceiving excellence of the services offered to them (Zeithaml 1988). Wide assortment of merchandise available

Figure 1
The Measurement Model: Online Shopping Values



Note: All parameter estimates are significant (All p-values are less than 0.01)

online is another important dimension contributing to customer satisfaction on the Internet (Szymanski and Hise 2000). The importance of this *merchandise selection* dimension may increase for those consumers who desire items that are not commonly available in neighborhood stores. Because Internet retailers are not limited by physical shelf space, a wide selection of merchandise is offered with added convenience. A *time savings* becomes an important shopping value for time-pressured consumers. Recent studies have found that time conservation is one of the primary motivations behind Internet shopping (Rutter and Southernton 2000; Seiders, Berry, and Gresham 2000; Szymanski and Hise 2000). Consumers save their time and energy when they shop online because they do not have to leave their home. Shopping online makes it easy to locate merchants, find product information and procure products thus saving time resources for consumers (Mathwick et al., 2001).

Experiential Value

Experiential value is defined as an overall representation of experiential benefits from the entertainment, the escapism, the visual appeal, and the interactivity involved with online shopping. Experiential value is relevant for acquiring affective and social stimulation, which enhances consumers' total Internet shopping experiences (Hoffman and Novak 1996). The experiential value dimensions have been the subject of much research in the in-store shopping literature (see Babin and Attaway 2000; Babin et al. 1994; Darden and Reynolds 1971) and have also begun to be recognized as important elements of online shopping (Burke 1999; Pulliam 1999; Klein 1998; Hoffman and Novak 1996). This value type is consistent with the emotional dimension of value identified by de Ruyter, Wetzels, Lemmink, and Mattson (1997) and Wikström, Carlell, Frostling-Henningsson (2002) including the hedonic and affective motives discussed by Dhar and Wertenbroch (2000), Babin and Attaway (2000), and Eastlick and Feinberg (1999); and the aesthetics and playfulness dimensions identified by Mathwick et al. (2001).

First, consumers on the Internet may browse various web sites for *entertainment* and *fun*. In addition, the aesthetic appeal and "looks" of various web sites can create *visual appeal* for online shoppers. Third, the *escape* value refers to consumers' out-of-routine experiences on the Internet, absorbing the users and letting them "get away from it all" (Mathwick et al. 2001). Finally, the *interaction* value refers to the benefits received

by interacting with marketers or other consumers. With enhanced interactivity, the Internet medium can afford online shoppers the opportunity to exchange product information, reviews, and ideas freely using chat rooms, bulletin boards, or electronic forums (Hoffman and Novak 1996).

Online Shopping Value, Satisfaction, and Loyalty: Research Hypotheses

In this section, theoretical relationships between online shopping value (both utilitarian and experiential), satisfaction, and loyalty are discussed drawing on the existing literature, and research hypotheses are developed. Customer satisfaction is one of the most important metrics companies utilize to measure the success of marketing plans and strategies (Capraro, Broniarczyk, and Srivastava 2003). Customer value (Woodruff 1997) has been investigated in relation to satisfaction. Eggert and Ulaga (2002) investigated the relationship between customer value and satisfaction in terms of predicting business customers' purchase intentions in Germany. Their research found customer value to be antecedent to satisfaction leading to purchasing manager's intentions. In a museum service setting, it was found that museum visitors perceived both emotional (i.e., experiential) and practical/logical (i.e., utilitarian) values on various stages encountered during their visit (de Ruyter et al. 1997). Both the emotional (experiential) and the practical (utilitarian) value dimensions had significant effects on satisfaction, thereby suggesting that these two value dimensions can separately contribute to customer satisfaction. Therefore, it is hypothesized that consumer perceptions of each of these two shopping value types will positively affect satisfaction in an online shopping environment (see Figure 2).

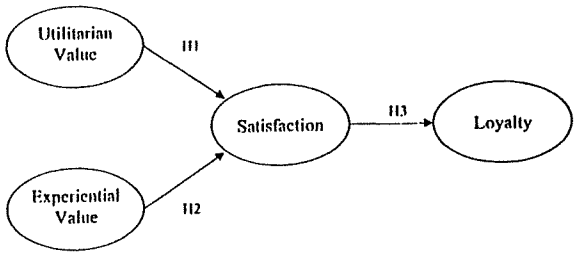
H1: Consumers' perceptions about the utilitarian value of an Internet retailer will be positively associated with their satisfaction with the Internet retailer.

H2: Consumers' perceptions about the experiential value of an Internet retailer will be positively associated with their satisfaction with the Internet retailer.

Interestingly, the mediating role of satisfaction in influencing actual behavior (including repurchase and customer defection) has been examined and shown to be only a weak predictor of behavioral loyalty (Capraro et al. 2003), especially when there were high switching costs. Apparently, high switching costs can mask true customer loyalty because customers may remain loyal when they are actually dissatisfied (Lee, Lee, and Feick 2001; Olson 2002). The Internet provides a new market rule. Because it is extremely easy for consumers to find alternatives and compare prices and service features, switching costs have been considerably lowered on the Internet compared to the traditional marketplace. Therefore, we expect customer loyalty and satisfaction to demonstrate a strong relationship in the online shopping context (see Figure 2).

H3: Heightened consumer satisfaction will likely lead to loyalty toward an Internet retailer.

Figure 2
The Research Model: Value, Satisfaction, and Loyalty



METHODOLOGY

Data Collection and Measures

Previous work on catalog shopping (The Catalog Coalition 1993) and other published scales provided references for the measurement items for this study (c.f., Hirschman 1986; Maddox 1982, Sharma, Netemeyer, and Mahajan 1990; Unger and Kernan 1983). A pilot study using a small number of marketing experts demonstrated face validity for

Table 1
Measurement Scales

Utilitarian Value	
Price Savings (PS) (α=.89)	■ This Internet retailer offers a good economic value. ■ Overall, I am happy with this Internet retailer's prices. ■ The price of the product and/or services I purchased from this Internet retailer are at the right level, given the quality.
Time Savings (TS) (α=.82)	■ Making a purchase from this Internet site makes life easier. ■ When I make a purchase from this Internet site, I save time. ■ Making a purchase from this Internet site is an efficient way to manage my time.
Service (SE) (α=.89)	■ This Internet retailer is a highly skilled expert in the area of services and merchandise it offers. ■ I received excellent service from this Internet retailer. ■ This Internet retailer strives to attain excellence.
Selection (SL) (Guttman's Split half=.80)	■ The wide selection of merchandise and services this Internet retailer offers, meets my needs. ■ This Internet retailer has a good selection of merchandise and/or services.
Experiential Value	
Entertainment (ET) (Guttman's Split half=.80)	■ I think this Internet retailer's site is very entertaining. ■ This Internet retailer doesn't just sell product or services -it entertains me.
Visual (VI) (Guttman's Split half=.96)	■ This Internet retailer's site is aesthetically appealing. ■ The "look" of this Internet site is appealing.
Escape (EX) (α=.77)	■ Making a purchase totally absorbs me. ■ Making a purchase from this Internet site "get me away from it all." ■ Making a purchase from this Internet retailer helps me forget about the day's problems.
Interaction (IN) (α=.80)	■ I come to the aid of others, especially when I'm logged on to this Internet site. ■ I believe it is best to get involved with this Internet retailer's product reviews, surveys, or chat rooms. ■ I enjoy giving other users of this Internet site advice or aid. ■ When I need help, I turn to chat rooms, bulletin boards or other electronic forums provided by this Internet retailer. ■ When this Internet retailer provides me with information or something else of value, I try to reciprocate by providing a comparable level of information or feedback.
Satisfaction (SAT) (α=.88)	■ I really like doing business with this Internet retailer. ■ I have a favorable attitude toward continuing to do business with this internet retailer over the next few years. ■ I believe this Internet retailer has many desirable features.
Loyalty (LOY) (α=.90)	■ I consider this Internet retailers to be my first choice when I need product or services of this type. ■ This Internet retailer is the primary source I consider when I need the type of product of services it offers. ■ I consider this Internet retailer to be my primary source of this type of merchandise or service.

Note: In order to assess reliability, Cronbach's alpha was used for measures with three items. For measures with two items, Guttman's Split half was employed.

the questionnaire items of the shopping value dimensions.

For the main survey, online survey methodology (Graphic Visualization and Usability Center 1998) was used as participants responded to questionnaires posted on the Web. Participants were recruited through various Internet related newsgroups and announcements made to the www-surveying mailing list. Cash prizes were promised to selected participants as an incentive to participate in the Survey. Participants were instructed to think about an Internet retailer from whom they had recently

Table 2
Profiles of the Sample

	Frequency	%		Frequency	%
Gender			**Race**		
Female	263	31.8%	White	744	90.0%
Male	554	67.0%	Other	57	1.9%
			Not Say	16	8.1%
	817	100%		817	100%
Age			**Education**		
Under 20	21	2.6%	High school or less	33	4.0%
21-30	236	28.9%	Vocational/ Technology	25	3.1%
31-40	226	27.7%	Some College	217	26.6%
41-50	188	23. 0%	Bachelor's Degree	299	36.6%
50-60	105	12.9%	Master's Degree	175	21.4%
60-70	27	3.3%	Doctoral Degree	39	4.8%
Over 70	7	0.9%	Professional	24	2.9%
Not Say	7	0.9%	Other	5	0.6%
	817	100%		817	100%
Income			**Marital Status**		
Less than $10,000	15	1.8%	Married	426	52.1%
$10,000-$19,000	28	3.4%	Single	247	30.2%
$20,000-$29,000	49	6.0%	Divorced	59	7.2%
$30,000-$39,000	91	11.1%	Separated	7	0.9%
$40,000-$49,000	88	10.8%	Widowed	12	1.5%
$50,000-$74,000	189	23.1%	Other	57	7.0%
$75,000-$99,000	118	14.4%	Not Say	9	1.1%
Over $100,000	130	15.9%			
Not Say	109	13.3%			
	817	100%		817	100%
Years on the Internet			**Comfortable with the Internet**		
Under 6 months	15	1.8%	Very Comfortable	729	89.2%
6-12 months	36	4.4%	Somewhat Comfortable	80	9.8%
1-3 years	231	28.3%	Neither	6	0.7%
4-6 years	333	40.8%	Somewhat Uncomfortable	1	0.1%
Over 7 years	202	24.7%	Very Uncomfortable	1	0.1%
	817	100%		817	100%
Product Purchased Online					
Books	252	30.5%			
Computers & Electronics	172	20.8%			
Music, Movies & Games	113	13.7%			
Apparel & Gifts	56	6.8%			
Auctions	29	3.5%			
Travel	25	3.0%			
Other	180	21.7%			
	817	100%			

purchased, and they were then asked to complete a survey that measured their perceptions and feelings about the Internet retailer. Respondents were told that there were no right or wrong answers and then

asked to indicate "the degree to which each statement was characteristic of their thoughts and feelings, and the way they interact on-line." Table 1 presents items regarding value perceptions, satisfaction, and loyalty. Each item was measured on a 7-point Likert scale ranging from "strongly disagree" to "strongly agree." The online survey was taken over a several-month period resulting in 817 usable responses.

Table 2 presents profiles of the sample employed in this study. As evident in Table 2, the respondents were, in general, well educated, relatively affluent, and highly experienced Internet users. It should be noted that this survey represents *real* Internet users who maintain a strong presence in the online environment and are likely to be the target of many Internet-based marketers. Thus, this sample is believed to be acceptable for the purpose of this investigation.

RESULTS

Reliability of each construct was assessed with Cronbach's alpha and Guttman's split half method. Cronbach's alpha was used for the constructs with three or more questionnaire items and Guttman's split half was used for the constructs with two items. All reliability coefficients exceeded 0.7 (see Table 1), and thus were deemed acceptable (Nunnally 1978).

In order to investigate the types of online shopping value and their impacts upon satisfaction and loyalty, we adopted Anderson and Gerbing's (1988) two-step approach, which assesses the measurement model and the structural model in a sequential way (Garver and Mentzer 1999). That is, confirmatory factor analysis (CFA) and structural equation modeling (SEM) comprised two subsequent stages of analysis. In the first step (CFA), construct validity of the Measurement Model (see Figure 1) including first and the second-order online shopping value factors was assessed. Next, the Research Model (Figure 2) specified three additional paths: a path from utilitarian value to satisfaction (H1), a path from experiential value to satisfaction (H2), and a path from satisfaction to loyalty (H3). The significance and magnitude of these three paths were estimated using structural equation modeling (SEM) in the second stage.

The Measurement Model

In the first step, the psychometric structure of the eight constructs and two higher-order value constructs was assessed using second-order confirmatory factor analysis (CFA). This second-order CFA model included utilitarian value (UV) and experiential value (EV). UV subsumed price savings, service excellence, time savings, and selection dimensions. EV subsumed entertainment, escape, visual, and interaction dimensions (see Figure 1). The advantage of a second-order CFA over a standard first-order model is that the former is more theoretical than the latter. Since utilitarian value is defined as an overall assessment of price savings, service excellence, time savings, and selection; experiential value is perceived as an overall assessment of entertainment, visual, escape, and interaction, this second-order CFA model acknowledges these latent higher-order value types accordingly. The overall fit of each model was evaluated using the GFI (Goodness of Fit Index), AGFI (Adjusted Goodness of Fit Index), CFI (Comparative Fit Index), IFI (Incremental Fit Index), NFI (Normed Fit Index), TLI (Tucker-Lewis Index), and RMSEA (Root Mean Square Error Approximation). Ideally, a statistically non-significant chi-square value is desirable. However, inferring fit from solely the chi-square test is insufficient because the chi-square test is sensitive to even minor deviations between the observed and reproduced data matrices, and is also susceptible to sample size influences (Marsh, Balla, and McDonald 1988). As Hu and Bentler (1999) note, "At larger sample sizes power is so high that even models with only trivial misspecifications are likely to be rejected" (p. 96). The ideal threshold of GFI, AGFI, CFI, IFI, NFI, TLI should be greater than .90; RMSEA less than 0.05. Realistically RMSEA "values up to .08 represent reasonable errors of approximation in the population" (Joreskog and Sorbom 1996, p. 124). The fit indices in Table 3 for the Measurement Model (GFI=.937, AGFI=.941, CFI=.922, IFI=.962, NFI=.942, TLI=.956, RMSEA=.047) were all above the recommended thresholds for a good fit (Hu and Bentler 1999).

Thus, the overall fit of the second-order CFA model was highly adequate to be employed in the testing of the Research Model.

Next, construct validity of the second-order CFA model was assessed in terms of convergent validity and discriminant validity. Convergent validity is assessed by determining whether each manifest variable's estimated coefficient pattern indeed loads upon its theoretical factor. If each indicator's parameter estimate on the underlying theoretical construct is greater than twice its standard error ($|t|>2$), convergent validity is satisfactory (Hu and Bentler 1999). The parameter estimates for the second-order CFA are reported in Table 4.

Table 3
Model Fit

Model Fit	Measurement Model (CFA)	Research Model (SEM)
Chi-Square	627.951	1078.51
Df	221	365
p	.000	.000
GFI	.937	.916
AGFI	.922	.899
CFI	.961	.954
IFI	.962	.954
NFI	.942	.932
TLI	.956	.949
RMSEA	.047	.049
P-Close	.851	.742

All first-order estimates loaded significantly on their latent variables with all p-values less than 0.01. In second-order models, there is another condition that must be met for convergent validity. The relationship between the endogenous latent factors (price savings, service excellence, time savings, selection; entertainment, visual, escape, interaction) and the exogenous overall factors (i.e., utilitarian value and experiential value) must also be significant. Table 4 shows that all the second-order parameter estimates were significant. Thus, the overall convergent validity of the second-order CFA model was deemed acceptable.

Discriminant validity is assessed for two estimated constructs by obtaining the 95% confidence interval between two constructs and making sure that the confidence interval does not contain 1 (Anderson and Gerbing 1988; Garver and Mentzer 1999). In order to obtain confidence intervals for Pearson's correlation coefficients, the Fisher's Z transformation was conducted (Snedecor and Cochran 1980). Confidence intervals for the correlation coefficients were then computed from Fisher's Z scores. Table 5 displays correlation coefficients between each pair of constructs. Correlation coefficients ranged from -.08 to .76, and none of the confidence intervals included 1. Therefore, it was concluded that discriminant validity of these value factors was acceptable.

Given that the second-order CFA model had acceptable convergent and discriminant validity and acceptable reliability, the proposed Research Model were next estimated and evaluated.

Estimation of the Research Model

The research model specified three paths: (1) UV→SAT, (2) EV→SAT, and (3) SAT→LOY. Tables 3 and 4 report the results of structural equation modeling testing the Research Model. The fit indices in Table 3 for the Research Model (GFI=.916, AGFI=.899, CFI=.954, IFI=.954, NFI=.932, TLI=.949, RMSEA=.049) satisfied the recommended thresholds for a good fit (Hu and Bentler 1999). Table 4 reports the unstandardized parameter estimates of the Research Model. All first-order estimates loaded significantly on their latent variables with all p-values less than 0.01. Moreover, utilitarian and experiential value types were not independent. The correlation coefficient between UV and EV was significant, $\rho=0.272$ ($p<.05$, $t=8.142$). The effect of utilitarian value on satisfaction was positively significant ($b_{UV\text{-}SAT}=1.087$, $t=17.417$) thereby supporting H1. Experiential value also had a significantly positive influence on satisfaction ($b_{EV\text{-}SAT}=0.422$, $t=6.570$). Thus, H2 was also supported. Finally, the effect of satisfaction on loyalty was found to be highly significant ($b_{SAT\text{-}LOY}=1.129$, $t=20.743$), supporting H3.

Table 4
Parameter Estimates (*t* Statistics)

Path	The Measurement Model (CFA)		The Research Model (SEM)	
	Coefficient	*t*	Coefficient	*t*
UV→SAT (H1)			1.087	17.417
EV→SAT (H2)			0.422	6.570
SAT→LOY (H3)			1.129	20.743
UV →PS	0.939	16.926	0.998	17.161
UV →SE	1.311	19.870	1.380	20.447
UV →TS	0.956	14.149	1.015	14.349
UV →SL	1.000		1.000	
EV→ET	1.809	10.229	1.733	10.072
EV→VI	1.506	11.214	1.700	11.140
EV→IN	0.370	5.081	0.361	4.799
EV→ES	1.000		1.000	
PS→ P1	1.091	27.803	1.085	27.961
PS→ P2	1.061	27.756	1.059	28.000
PS→ P3	1.000		1.000	
SE→ S1	0.963	34.040	0.950	34.274
SE→ S2	0.902	29.360	0.900	29.994
SE→ S3	1.000		1.000	
TS→ C1	1.019	20.176	1.009	20.281
TS→ C2	0.966	20.668	0.964	20.901
TS→ C3	1.000		1.000	
SL→L1	1.229	23.207	1.282	23.460
SL→L2	1.000		1.000	
ET→ E1	1.113	19.489	1.136	19.051
ET→ E2	1.000		1.000	
VI→ V1	0.982	41.383	0.968	43.802
VI→ V2	1.000		1.000	
ES→ X1	1.047	16.700	1.041	16.654
ES→ X2	0.964	16.472	0.949	16.376
ES→ X3	1.000		1.000	
IN→ I1	1.601	13.368	1.601	13.367
IN→ I2	1.450	13.103	1.447	13.095
IN→ I3	1.413	12.894	1.413	12.895
IN→ I4	1.346	12.002	1.348	12.010
IN→ I5	1.000		1.000	
A1 →SAT			0.989	29.233
A2 →SAT			0.994	28.682
A3 →SAT			1.000	
B1→LOY			0.992	41.101
B2→LOY			0.794	32.044
B3→LOY			1.000	

Does Product Type Matter?

While the Research Model found that utilitarian value types and experiential value types both influence customer satisfaction significantly, it was suspected that the saliency of utilitarian value over experiential value (or vice versa) might be contingent upon product type. For example, one would expect more experiential products, such as a vacation package or book, to invoke primarily

Table 5
Confidence Intervals for Correlation Coefficients

	PS	SE	TS	SL	ET	VI	ES	IN	SAT	LOY
PS	1.00									
SE	.645 [.59, .67]	1.00								
TS	.511 [.46, .56]	.520 [.47, .57]	1.00							
SL	.567 [.52, .61]	.633 [.59, .67]	.510 [.46, .56]	1.00						
ET	.194 [.13, .26]	.302 [.24, .36]	.196 [.11, .24]	.255 [.19, .32]	1.00					
VI	.313 [.25, .37]	.435 [.38, .49]	.306 [.24, .37]	.385 [.33, .44]	.508 [.46, .56]	1.00				
ES	.126 [.06, .19]	.187 [.21, .25]	.186 [.12, .25]	.133 [.07, .20]	.501 [.45, .55]	.274 [.21, .34]	1.00			
IN	.047 [-.02, .11]	.066 [-.00, .13]	.034 [-.00, .10]	-.015 [-.08, .05]	.216 [.14, .28]	.110 [.04, .18]	.224 [.16, .29]	1.00		
SAY	.654 [.61, .60]	.735 [.70, .76]	.558 [.51, .60]	.630 [.59, .67]	.406 [.35, .46]	.549 [.50, .59]	.263 [.20, .33]	.095 [.03, .16]	1.00	
LOY	.492 [.44, .54]	.530 [.48, .58]	.506 [.45, .56]	.502 [.45, .55]	.266 [.20, .33]	.329 [.27, .39]	.289 [.23, .35]	.059 [-.01, .13]	.661 [.62, .71]	1.00

experiential value in online shopping. On the other hand, in shopping for a utilitarian product, such as a computer, individuals might seek to fulfill primarily utilitarian values. Our sample included 252 book buyers and 172 computer buyers (Table 2). Since the estimation of structural models require a sample size around 200, we imposed the structure of the Research Model on the two sub sets of data: (1) book shoppers (N=252) and (2) computer shoppers (N=178).

Using confirmatory factor analyses, the Measurement Model representing both the utilitarian and the experiential shopping values were first identified for the book buyers, and for the computer buyers, respectively. The two models demonstrated a satisfactory model fit and good convergent validity. Next, the three research hypotheses were tested again, this time separately for the book shoppers and the computer shoppers. The results demonstrated that, for the book shoppers (N=252) the effect of utilitarian value on satisfaction was positively significant ($b_{UV\text{-}SAT}$ =1.385, t=10.548). Experiential value also had a significant influence on satisfaction ($b_{EV\text{-}SAT}$ =0.552, t=4.340). Finally, the effect of satisfaction on loyalty was also found to be highly significant ($b_{SAT\text{-}LOY}$ =1.198, t=11.798). The fit indices, GFI and CFI for the Research Model, were 0.869, and 0.952, respectively.

For the computer shoppers (N=172), the effect of utilitarian value on satisfaction was positively significant ($b_{UV\text{-}SAT}$ =1.166, t=8.098). Experiential value also had a significant influence on satisfaction ($b_{EV\text{-}SAT}$ =0.467, t=3.410). Finally, the effect of satisfaction on loyalty was also found to be highly significant ($b_{SAT\text{-}LOY}$ =1.155, t=10.202). The fit indices, GFI and CFI for this model, were 0.824, and 0.934, respectively.

DISCUSSIONS AND IMPLICATIONS

The Internet can create a variety of types of value for online shoppers. Trade publications have suggested that online shopping values include lowered costs of products and services, maximized access to information, increased time savings, and personal safety in shopping. Internet retailers indeed have the potential to create superior value to customers beyond geographic barriers and enjoy unprecedented business growth (Keeney 1999). Nonetheless, the potential of the Internet has yet to be realized because many consumers, although they browse Internet retailers' Web sites frequently, do

not actually purchase from the Internet retailers. To realize this potential, it is necessary for e-tailers to determine the core value sought by e-customers, and excel in the core value delivery. Theoretical and managerial implications of the findings of the current study include the following.

The significance of this research can be found from its integrative approach to online shopping values. The findings from the current study indicate that Internet shopping invokes different value types and that these value types positively affect customer satisfaction and loyalty. The fact that the second-order Measurement Model verified two overall value types (utilitarian and experiential) in the Internet shopping environment responds to recent calls for more research on consumption goals by Bagozzi and Dholakia (1999) and Woodruff (1997). These findings lend theoretical support to the adoption of more consequence-level value drivers in consumer behavior studies. The use of second-order value types, such a utilitarian value and/or experiential value, provide both an important approach for theory testing and a more goal-oriented, consequence-level approach to predicting customer satisfaction and loyalty. One might suggest that although two overall value types (utilitarian value and experiential value) appear to be relevant in an Internet shopping environment, these two value types might not necessarily influence customer satisfaction and loyalty in the same fashion or same degree.

This study found that consumers perceive online utilitarian value to be important. In fact, when two coefficients in the Research Model ($b_{UV\text{-}SAT} = 1.087$; $b_{EV\text{-}SAT} = 0.422$) are compared, the effect of utilitarian value is stronger than that of experiential value. It appears that most consumers may turn to the Internet primarily for utilitarian reasons, such as price savings, time savings, service excellence, and merchandise selection. Thus, these factors represent the core utilitarian value components sought by consumers and as a result, can increase customer satisfaction with the Web site, ultimately strengthening their loyalty to the Internet retailer. Internet retailers, therefore, should deliver strong utilitarian value to e-customers.

This finding, however, should be interpreted with some caution. Peterson et al. (1997), who categorized product and service characteristics according to likelihood of in-store versus on-line acquisition, assert that frequently purchased intangible or informational products are likely to be acquired on the Internet whereas frequently purchased tangible or physical products are likely to be acquired in a retail store. As evidenced in Table 2, the majority of the respondents answered the survey in terms of online retailers of books, music, and electronics. These types of products are perhaps easy to evaluate online (i.e., cognitive assessment), and, as a result, online purchases of these products are more likely to invoke utilitarian value rather than sensory, experiential value. Moreover, the current online shopping interface demonstrates an apparent shortcoming compared to traditional store shopping. Not only do many online shoppers find Internet retail sites difficult to use (Burke 1997), online shoppers cannot fully enjoy sensory aspects of shopping (Stewart and Zhao 2000), such as taste, smell, touch, and atmospheric aspects due to the bandwidth restraint. Bandwidth to many end user consumers will remain limited since many users connect using modem and low bandwidth wireless networks. This alone may be the reason why online shoppers seek primarily utilitarian value. However, as more sophisticated online virtual reality technologies become available in the future, Internet shoppers will likely desire more intensive visual and entertaining shopping experiences.

Finally, the findings address the question as to whether are utilitarian and experiential value dimensions independent or inter-related. Sheth, Newman, and Gross (1991, p.12) posited that value dimensions are "independent and they contribute incrementally to consumer choice." This study found that utilitarian and experiential value dimensions each affected online satisfaction. The correlation coefficient between the two value types was not strong, though the association was statistically significant. Therefore, it is suggested that marketers need to consider multiple ways to enhance their total consumer value package, stimulating both the utilitarian route *and* the experiential route in order to create the best value proposition for customers.

While some companies attempt to build e-loyalty focusing on incentive-based loyalty programs, the results of this study suggest that firms

providing desired shopping value can harvest online customer satisfaction and e-loyalty. We believe that achieving consumer satisfaction through enhanced customer value is the best way to earn the true customer loyalty on the Internet, where shoppers, rather than sellers, are in control - empowered by lowered information search and switching costs.

LIMITATIONS AND SUGGESTIONS FOR FUTURE RESEARCH

Researchers are just beginning to develop typologies of Internet shopping value dimensions. While various online shopping value dimensions were identified in this study, the possibility of additional Internet shopping value types should also be acknowledged. Holbrook (1994) suggested that consumer value is dynamic and interactive. Similarly, Flint, Woodruff, and Gardial (2002) also noted that "customers periodically change what they value" (p.102) and thus, retailers cannot depend entirely on "what they currently know about customer value to hold into the future." Especially, in the rapidly changing high-tech environment, marketers are encouraged to anticipate new developments and changes of desired online value dimensions. For example, the ability to interact with customer service personnel real-time can potentially improve online shopping experience and may ultimately encourage revisits and/or repurchases with an Internet retailer. With increasing heralds of online hacking and identity theft cases, a promise of transaction security may reduce customer dissatisfaction online. Future research needs to examine how desired Internet shopping values change into the future and how to translate those changes quickly into e-commerce marketing strategies.

It should be noted that our sample might not be representative of the general consumer public in the U.S. because Individuals who do not have access or skills to use the Internet would have been excluded from our sample. However, an online survey is consistent with the context of this investigation since we intended to learn about the shopping values sought by the wired population. The use of an online survey in academic research can also be found in various social science and business studies (Carbonaro and Bainbridge 2000; Clayton and Werking 1995; Dillman and Bowker 2001; Kittleson 1997; Klassen and Jacobs 2001). Moreover, it has been reported that respondents may view online surveys more interesting than traditional mail surveys due to its relative novelty (Edmonson 1997).

Despite some challenges, this study is an integrative attempt to identify different types of value in an Internet shopping environment investigating their impacts upon consumer satisfaction and loyalty. Understanding consumer value will continue to be important with the growth of Internet commerce. Those who can calibrate their value proposition to e-customer value will remain successful on the Internet. In the Internet shopping environment, customer value is, again, the foremost driver of consumer satisfaction and loyalty.

REFERENCES

Anderson, James C. and David W. Gerbing (1988), "Structural Equation Modeling in Practice: A Review and Recommended Two-Step Approach," *Psychological Bulletin,* 103, 411-423.

Babin, Barry J. and Jill S. Attaway (2000), "Atmospheric Affect as a Tool for Creating Value and Gaining Share of Customer," *Journal of Business Research,* 49 (Special Issue), 91-99.

Babin, Barry J., William R. Darden, and Mitch Griffin (1994), "Work and/or Fun: Measuring Hedonic and Utilitarian Shopping Value," *Journal of Consumer Research,* 20 (March), 644-656.

Bagozzi, Richard P. and Utpal Dholakia (1999), "Goal Setting and Goal Striving in Consumer Behavior," *Journal of Marketing,* 63 (Special Issue), 19-32.

Bolton, Ruth N. and James H. Drew. (1991), "A Multistage Model of Customers' Assessments of Service Quality and Value," *Journal of Consumer Research,* 17 (4), 875-884.

Boston Consulting Group (2000), "SHOP.ORG/BCG Survey: Online Retailers Making Slow and Steady Climb Toward Profitability," *BCG Media Release,* August 30, 2000. Available: http://www.bcg.com/News_Media/news_media_releases.jsp?id=971.

Burke, Ken (1999), "Creating a Compelling Online Experience," *Catalog Age* 16 (August), 109.

Burke, Raymond R.(1997), "Do You See What I See? The Future of Virtual Shopping," *Journal of the Academy of Marketing Science,* 25 (Fall), 352-360.

Burke, Raymond R. (1998), "Real Shopping in a Virtual Store," In *Sense and Respond: Capturing the Value in the Network Era.* Eds. Stephen P. Bradley and Richard L. Nolan. Boston: Harvard Business School.

Capraro, Anthony J., Susan Broniarczyk, and Rajendra K

Srivastava (2003), "Factors Influencing the Likelihood of Customer Defection: The Role of Consumer Knowledge," *Journal of the Academy of Marketing Science*, 31 (2), 164-175.

Carbonaro, Michael and Joyce Bainbridge (2000), "Design and Development of a Process for Web-Based Survey Research," *Alberta Journal of Educational Research*, 46(4), 392-394.

Catalog Coalition Research Project (1993), *A Commercial Research Project Sponsored by a Consortium of Catalog Retailers Lead by Sears Shop At Home Services.* Hoffman Estates, IL.

Clayton, Richard L. and George S. Werking (1995), "Using E-mail/World Wide Web for Establishment Survey Data Collection," in *Proceedings of the Section on Survey Methods,* American Statistical Association.

Crockett, Roger O (2000), "Keep 'em Coming Back," *Business Week,* 3681 (May 15), EB20.

Darden, William R. and Fred D. Reynolds (1971), "Shopping Orientations and Product Usage Rates," *Journal of Marketing Research,* 8 (November), 505-508.

de Ruyter, Ko, Martin Wetzels, Jos Lemmink, and Jan Mattson (1997), "The Dynamics of the Service Delivery Process: A Value-Based Approach," *International Journal of Research in Marketing,* 14, 231-243.

Dhar, Ravi, and Klaus Wertenbroch (2000), "Consumer Choice Between Hedonic and Utilitarian Goods," *Journal of Marketing Research,* 37 (February), 60-71.

Dillman, Don A. and Dennis K. Bowker (2001), "The Web Questionnaire Challenge to Survey Methodologists," in *Dimensions of Internet Science*, U. D. Reips and M. Bosnjak Eds.

Direct Marketing (2000), "Survey Reveals Internet Shopping Habits," 62 (January), 15.

Eastlick, Mary Ann, and Richard A. Feinberg (1999), "Shopping Motives for Mail Catalog Shopping," *Journal of Business Research,* 45 (July), 281-290.

Edmonson, Brad (1997), "The Wild Bunch," *American Demographics*, June, 10-15.

Eggert, Andreas and Ulaga Wolfgang (2002), "Customer Perceived Value: A Substitute for Satisfaction in Business Markets?" *The Journal of Business and Industrial Marketing,* 17 (2/3), 107- 118.

Flint, Daniel J., Woodruff, Robert B., and Sarah Fisher Gardial (2002), "Exploring the Phenomenon of Customers' Desired Value Change in a Business-to-Business Context," *Journal of Marketing,* 66 (4), 102-117.

Garver, Michael S. and John T. Mentzer (1999), "Logistics Research Methods: Employing Structural Equation Modeling to Test for Construct Validity," *Journal of Business Logistics,* 20 (1), 33-57.

Graphic, Visualization, and Usability Center (1998), GVU's 10th WWW User Survey. Available: http://www.gvu.gatech.edu/user_surveys/survey-1998-10/.

Gurley, J. William (2000), "The One Internet Metric That Really Matters," *Fortune* 141 (March 6), 392.

Hartman, Robert S. (1967), *The Structure of Value: Foundations of a Scientific Axiology.* Research Concepts. Muskegon, MI.

Hirschman, Elizabeth C. (1986), "The Effect of Verbal and Pictorial Advertising Stimuli on Aesthetics, Utilitarian, and Familiarity Perceptions," *Journal of Advertising,* 15 (2) 27-34.

Hoffman, Donna L., and Thomas P. Novak (1996), "Marketing in Hypermedia Computer-Mediated Environments: Conceptual Foundations," *Journal of Marketing,* 60 (July), 50-68.

Holbrook, Morris B.(1994), "The Nature of Customer Value: An Axiology of Service in the Consumption Experience," In *Service Quality: New Directions in Theory and Practice.* Eds. Roland T. Rust and Richard L. Oliver. London: Sage Publications, 21-71.

Hu, Li-Tze and Peter M. Bentler (1999), "Evaluating Model Fit," In *Structural Equation Modeling: Concepts, Issues, and Applications.* Ed. Rick H. Hoyle, Thousand Oaks, CA, Sage, 16-99.

Joreskog, Karl G. and Dag Sorbom (1996), *LISREL 8: User's Reference Guide.* Chicago: Scientific Software International.

Keeney, Ralph L. (1999), "The Value of Internet Commerce to the Customer," *Management Science*, 45 (April), 533-542.

Kittleson, Mark J. (1997), "Determining Effective Follow-up of E-mail Surveys," *American Journal of Health Behavior,* 21(3), 193-196.

Klassen, Robert D. and Jennifer Jacobs (2001), "Experimental Comparison of Web, Electronic and Mail Survey Technologies in Operations Management," *Journal of Operations Management,* 19(6), 713-728.

Klein, Lisa R. (1998), "Evaluating the Potential of Interactive Media Through a New Lens: Search versus Experience Goods," *Journal of Business Research,* 41 (March), 195-203.

Lee, Jonathan, Janghyuk Lee, and Lawrence Feick (2001), "The Impact of Switching Costs on The Customer Satisfaction-Loyalty Link: Mobile Phone Service in France," *Journal of Services Marketing*, 15 (1), 35-48.

Maddox, R. Neil (1982), "The Structure of Consumers' Satisfaction: Cross-Product Comparisons," *Journal of the Academy of Marketing Science*, 10 (Winter), 37-53.

Marsh, Herbert W., John R. Balla, and Roderick P. McDonald (1988), "Goodness-of-Fit Indices in Confirmatory Factor Analysis: The Effect of Sample Size," *Psychological Bulletin,* 102, 391-410.

Mathwick, Charla, Naresh Malhota, and Esward Rigdon (2001), "Experiential Value: Conceptualization, Measurement, and Application in the Catalog and Internet Shopping Environment," *Journal of Retailing,* 77, 39-56.

Mitchell, Alan (2000), "Why Old Retail Model Won't Work on the Net," *Marketing Week,* 23 (17), 36-37.

Naylor, Gillian (1996), *How Consumers Determine Value: A New Look at Inputs and Processes.* Dissertation. University of Arizona.

Novak, Thomas P., Donna L. Hoffman, and Yiu-Fai Yung (2000), "Measuring the Customer Experience in Online

Environments: A Structural Modeling Approach," *Marketing Science,* 19 (Winter), 22-42.

Nunnally, Jum C. (1978), *Psychometric Theory.* New York: McGraw-Hill.

Olsen, Svein O. (2002), "Comparative Evaluation and the Relationship between Quality, Satisfaction, and Repurchase Loyalty," *Journal of the Academy of Marketing Science,* 30 (3), 240-249.

Peterson, Robert A., Sridhar Balasubramanian, and Bart J. Bronnenberg (1997), "Exploring the Implications of the Internet for Consumer Marketing," *Journal of the Academy of Marketing Science* 25 (Fall), 329-346.

Pulliam, Peggy (1999), "To Web or Not To Web? Is not the Question, but Rather: When and How to Web?" *Direct Marketing,* 62 (May), 18-25.

Rewick, Jennifer (2000), "Clinching the Holiday E-Sale --- Some 65% of Online Shoppers Bolt at the Checkout Point; E-tailers Try to Keep Them," *Wall Street Journal,* (October 9), B1.

Reynolds, Fred D. (1974), "An Analysis of Catalog Buying Behavior," *Journal of Marketing,* 38 (July), 47-51.

Roberts, John H (2000), "Developing New Rules for New Markets," *Journal of the Academy of Marketing Science,* 28 (Winter), 31-44.

Rutter, Jason and Dale Southernton (2000), "E-Shopping: Delivering the Goods?" *Consumer Policy Review,* 10 (July/August), 139-144.

Seiders, Kathleen, Leonard Berry, and Larry G. Gresham (2000), "Attention, Retailers! How Convenient is Your Convenience Strategy?" *Sloan Management Review,* 41 (Spring), 79-89.

Seminerio, Maria (1998), "Study: One In Three Experienced Surfers Find Online Shopping Difficult," *Inter@active Week* (September 10), http://www.zdnet.com/intweek/quickpoll/981007/981007b.html.

Sharma, Subhash, Richard G. Netemeyer, and Vijay Mahajan (1990), "In Search of Service Excellence Revisited: An Empirical Evaluation of Peters and Waterman's Attributes of Excellence," In *Enhancing Knowledge Development in Marketing,* Eds. William O. Bearden and A. Parasuraman, Chicago, IL: American Marketing Association, 322-328.

Sheth, Jagdish N. (1983), "An Integrative Theory of Patronage Preference and Behavior," In *Patronage Behavior and Retail Management.* Eds. William R. Darden and Richard F. Lusch. New York: Elsevier Science Publishing Co., 9-28.

Sheth, Jagdish N. Bruce I. Newman, and Barbara L. Gross (1991), *Consumption Values and Market Choice.* Cincinnati, Ohio: South Western Publishing.

Snedecor, George, and William G. Cochran (1980), Statistical Methods. Iowa State University Press, 185-188.

Stewart, David W. and Qin Zhao (2000), "Internet Marketing, Business Models, and Public Policy," *Journal of Public Policy and Marketing,* 19 (2), 287-296.

Szymanski, David M. and Richard T. Hise (2000), "e-Satisfaction: An Initial Examination.," *Journal of Retailing,* 76 (3), 309-322.

Unger, Lynette S. and Jerome B. Kernan (1983), "On the Measuring of Leisure: An Investigation of Some Determinants of the Subjective Experience," *Journal of Consumer Research,* 9 (March), 381-391.

Wikström, Solveig, Camilla Carlell, and Maria Frostling-Henningsson (2002), "From Real World to Mirror World Representation," *Journal of Business Research,* 55 (August), 647-654.

Woodruff, Robert B (1997), "Customer Value: The Next Source for Competitive Advantage," *Journal of the Academy of Marketing Science,* 25 (Spring), 139-153.

Zeithaml, Valarie A.(1988), "Consumer Perceptions of Price, Quality and Value: A Means-End Model and Synthesis of Evidence," *Journal of Marketing,* 52 (July), 2-22.

Zeithaml, Valarie A., A. Parasuraman, and Arvind Malhotra (2000), "A Conceptual Framework for Understanding e-Service Quality: Implications for Future Research and Managerial Practice," Working Paper. *MSI Report No. 00-115.* Marketing Science Institute.

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