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ABSTRACT

Online shopping behavior can be classified as experiential, utilitarian, and mixed. A questionnaire administered in a laboratory setting was given to several hundred subjects to categorize them along those levels, based on a classification algorithm. The current investigation complements the existing business-to-consumer e-commerce research by defining online shopping behavior in a more complex and comprehensive way. Online shopping behavior is categorized along a ternary classification instead of the traditional binary one in the literature. With the inclusion of mixed behavior, the three-level classification portrays a more realistic representation of the complex consumer behavior over the simpler, polarized, and dichotomous grouping of experiential versus utilitarian behavior.

KEYWORDS

Online Shopping Behavior, Experiential, Utilitarian, E-commerce, Algorithm, Classification

ONLINE SHOPPING BEHAVIOR

Online shopping behavior is defined as the way users shop online and is classified as *experiential, utilitarian* (Assael 1998; Holbrook & Hirschman 1982; Nielsen 2000; Novak et al. 2000; 2003) or *mixed*. Mixed users exhibit qualities of both experiential and utilitarian online shoppers.

Experiential users view shopping as a pleasurable event (Assael 1998; Novak et al. 2000; 2003). Experiential online shoppers enjoy the hunt for bargains online or social interaction with friends while shopping. They like to navigate Web sites to feel and experience the pleasure of shopping for an item, engaged in an emotional and entertaining way. Hence, they may use the Web for entertainment or online chats (Novak et al. 2000; 2003). Sensory stimulation via an interactive Web site would be very important to experiential online shoppers (Assael 1998). They are more likely to revisit sites they find enjoyable. Shopping enjoyment and perceived usefulness of a site are important predictors of revisiting a site in the future (Guo 2003; Koufaris 2002).

Utilitarian online shoppers, on the other hand, view shopping as a means to an end. They are also task-oriented and have a specific goal to look for practical benefits and information regarding product functions while they are visiting a Web site or browsing in a store (Assael 1998; Novak et al. 2000; 2003). For example, they use the Web for work, search for particular reference information, or look up online job listings (Novak et al. 2000, 2003). Hence, experiential behavior is *shopping as a purpose*, and utilitarian behavior is *shopping with a purpose* (Babin et al. 1994).

Mixed users exhibit both experiential and utilitarian qualities. They shop for entertainment and fun coupled with the specific purpose of accomplishing a task or a goal, such as purchasing merchandise. Usability studies show that about a fifth of users are *link-dominant* (i.e. experiential), a little over than a half are *search-dominant* (i.e. utilitarian), and the rest fall under *mixed behavior* (Nielsen 2000). Link-dominant users are experiential in nature and tend to look around the site. Search-dominant users are utilitarian and go directly to the *Search* button to locate a specific piece of information or carry out a task. Mixed-behavior users use both link and search following, depending on a given situation or their needs at a given moment in time.

RESEARCH METHODOLOGY AND CLASSIFICATION ALGORITHM

The subjects of the study were undergraduate college students in a southern university. They possessed basic web skills necessary to browse the Web. The sample consisted of 310 subjects. They were administered a questionnaire in a computer laboratory. This allowed for tighter control and reduced distractions and interruptions. The first section of the questionnaire dealt with demographic information, such as gender, age, educational level, reasons for using the Internet, and time spent online. Babin, Darden, and Griffin's (1994) fifteen-item personal shopping value instrument constituted the second portion of the survey. Babin, Darden, and Griffin's (1994) questionnaire is composed of two scales: experiential and utilitarian. Subjects were assigned to the one of three online shopping behavior categories based on their responses and the classification algorithm below. Each item had a seven-point Likert scale, with the following anchors: 1 = strongly disagree, 4 = neutral, and 7 = strongly agree.

A classification algorithm was developed to assign subjects to the three online shopping behavior groups, based on the experiential and utilitarian scale scores for each subject. The algorithm simply assigned subjects to a particular group if they scored *highly* on the scale for that group and low on the other group's scale. The definition of a high score is explained with an example below.

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avgExp(i) = mean score of the experiential scale items for subject(i)
avgUtil(i) = mean score of the utilitarian scale items for subject(i)
stddevExp = standard deviation of the scores of the experiential scale items for all subjects
stddevUtil = standard deviation of the scores of the utilitarian scale items for all subjects

IF avgExp(i) <> avgUtil(i)
    IF avgExp(i) >= avgUtil(i)
        IF avgExp(i) >= stddevExp
            Experiential
        ELSE
            Mixed
    ELSE
        IF avgUtil(i) >= stddevUtil
            Utilitarian
        ELSE
```

Mixed
ELSE
Mixed

The algorithm uses standardized scores with a zero mean and a unit standard deviation.

Figure 1. Classification Algorithm for the Online Shopping Behavior Groups

As an illustration, after each subject filled out Babin, Darden, and Griffin's (1994) instrument, there were two sets of scores for both the experiential and utilitarian scales for each subject. (These were standardized scores with a zero mean and a unit standard deviation). A composite mean score for a subject's score on each scale was calculated. If the mean scores on both scales were equal, the subject was assigned as mixed. However, for example, if the average on the experiential score was higher than the utilitarian score, then the subject is not a utilitarian online shopper but could be either experiential or mixed. The subject was assigned as experiential (if his/her score was very high, i.e. above the cutoff point for the experiential classification). In this example, this cutoff point was defined as the value that is at least one standard deviation above the average experiential score for all subjects. The cutoff point of having scores be at least one standard deviation meant the subject exhibited a high score on the continuum for that particular group's distribution (in this case, the experiential distribution). On the other hand, if the experiential score for the subject in this example was within less than one standard deviation, the individual was assigned as mixed, since the subject scored low enough on the experiential scale that the subject could not be classified as experiential. (Previously, it was shown that the subject could not be utilitarian either since the utilitarian score was less than the experiential score for the subject.)

RESULTS

It is highly recommended that scholars use previously validated and reliable scales (Straub et al. 2004). The personal shopping value scale had a reported Cronbach's alpha of .93 in the literature (Babin et al. 1994). In the present study, the overall Cronbach's alpha was .74, with .81 for the experiential scale, and .70 for the utilitarian scale. The sample in the study was undergraduate students in an introductory Management Information Systems class.

Item	Frequency	Proportion of Sample (%)
Gender		
Male	115	37
Female	195	63
Age		
18 and under	6	2
19-21	247	80
22-24	50	16
25-27	6	2
28+	1	<1
Educational Level Sought		
Associate's	9	3
Bachelor's	301	97
Reasons for Using the Internet		
School	217	70
Shopping	6	2
Games	13	4

News	25	8
Other	49	16
Hours Online (Weekly)		
9 and under	100	32
10-19	116	37
20-29	72	23
30-39	13	4
40+	9	3

Note: $N = 310$.

Table 1. Demographics of the Sample

The distribution of the three online shopping behavior groups showed that the mixed group represented the largest proportion of the sample (52%) followed by utilitarian (25%) and experiential (23%). Gender was proportionately the same within each respective group as in the sample as a whole.

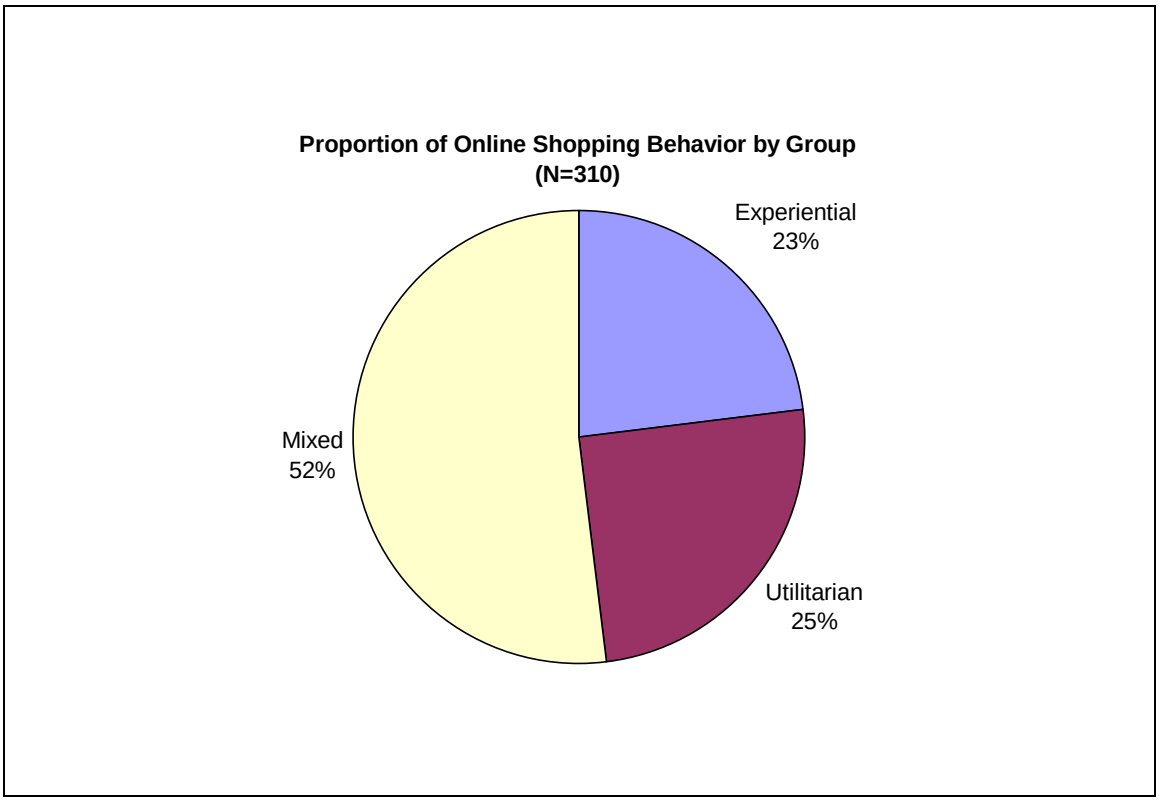

Figure 2. Proportion of Online Shopping Behavior by Group

CONCLUSION AND CONTRIBUTIONS

Online shopping behavior had three levels: experiential, utilitarian, and mixed. The three-group case was used in the present study since it seemed more realistic over the dichotomous two-group case of absolute black and white classifications into experiential and utilitarian categories. The full spectrum of consumer behavior includes a mixed case and not just the polarized, binary twofold categorization. Experiential users like to shop for fun and entertainment, while utilitarian users are goal-oriented and have a specific purpose in mind, such as purchasing an item. Mixed users exhibit both experiential and utilitarian

qualities. The study developed a classification algorithm to categorize online shopping behavior based on Babin, Darden, and Griffin's (1994) personal shopping scale.

By outlining the different behaviors that online users exhibit over the Internet, web developers will have potential guidelines to follow as they design and create applications. Web site designers and managers need to consider integrating these online behaviors to make online shopping experiences both task-oriented and more enjoyable to cater to the differing behaviors. In turn, this will potentially increase purchase intentions, traffic, and repeat visits on the site (Koufaris 2002), resulting in positive site attitudes and more frequent or longer visits, known as site stickiness.

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APPENDIX A: PERSONAL SHOPPING VALUE SCALE (BABIN ET AL. 1994)

(Present tense is used instead of past tense. Furthermore, since the present study deals with online shopping, the words "shopping online" take place of the terms "shopping trips" in the original scale. Also, the word "online" is added to the word "shopping.")

Each item had a seven-point Likert scale, with the following anchors: 1 = strongly disagree, 4 = neutral, and 7 = strongly agree.

Experiential

Cronbach's alpha = .93 (Babin et al. 1994)

1. Shopping online is truly a joy.
2. I continue to shop online, not because I have to, but because I want to.
3. Online shopping truly feels like an escape.
4. Compared to other things I could be doing, the time spent shopping online is truly enjoyable.
5. I enjoy being immersed in exciting new products
6. I enjoy shopping online for its sake, not just for the items I may have purchased.
7. I have a good time because I am able to act on the "spur-of-the-moment."
8. During shopping online, I feel the excitement of the hunt.

9. While shopping online, I am able to forget my problems.
10. While shopping online, I feel a sense of adventure.
11. Online shopping is not a nice time out.*

Utilitarian

Cronbach's alpha = .80 (Babin et al. 1994)

12. I accomplish just what I want to while shopping online.
13. I cannot buy what I really need.*
14. While shopping online, I find just the item(s) I am looking for.
15. I am disappointed because I have to go to another store(s) to complete my online shopping.*

An asterisk (*) indicates an item is reverse-coded, as stated in the original scale.