Shoppers in Cyberspace:

Are they from Venus or Mars and does it Matter?

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Abstract

Internet shopping (or e-shopping) is emerging as a shopping mode and with its requirement of computer access and use, it is interesting to know whether consumers associate e-shoppers with any gender-specific stereotypes. Such stereotypes may be expected since shopping is considered a "female typed" activity while technology is considered to be in the male domain. In this paper, we address this central question in an empirical study that varies the shopping context in terms of outlet type, product type and purchase purpose. The respondents are college students with Internet access and familiarity with online shopping. The experimental results suggest that the global stereotype, held by both male and female respondents, is that of a shopper as a woman. This stereotype *reverses* when the product purchased is technical and expensive (DVD player). In terms of personality attributions, the female shopper is seen to be less technical, less spontaneous and more reliable and attributions regarding personal characteristics are not influenced significantly by product type, outlet type, or purchase purpose.

Introduction

As consumers gain experience with Internet shopping (or e-shopping), the gender composition of online buyers is coming to resemble mainstream buyers in the U.S. Donthu and Garcia (1999) found no gender differences between online and offline shoppers and a survey by PeopleSupport suggests that almost two-thirds of online shoppers are now women (Nua Internet Surveys 2000). Other sources of data, however, suggest a very different e-shopper profile. Research by ebates.com, for example, reports that online shoppers are primarily men (71%) and only in one category – health and apparel – did women account for more purchases than men (Are you an online window shopper – Or an actual buyer, 2000). A study by Unilever also suggests that online shoppers are more likely to be men than women (Women online: Statistics on likes, dislikes from Unilever, 2001).

Early research on computer adoption and use had found strong associations of computers with the male domain, particularly by males (Shashaani, 1993). With the introduction of e-shopping and with its requirement of computer access and use, two questions are of interest at the early stage of this innovative shopping method:

- Do consumers associate e-shoppers with any gender-specific stereotypes? and
- whether these e-shopper stereotypes are associated with any specific personality traits?

If any such stereotypes exist, it may explain the popularity (or lack) of the new shopping mode. In this study we explore the gender-based stereotypes associated with shopping on the Internet as compared to brick-and-mortar stores. We report an empirical study conducted among college students representing consumers, who have grown up with modern technology but have not yet settled into domestic roles, to see if such stereotypes exist. First the literature on gender, shopping and technology is reviewed. Then an empirical study to test some of the hypotheses is

described. After discussion of the findings, the paper concludes with implications for e-shopping and further research.

Stereotypes and Consumer Behavior

While extensive research has shown gender stereotypes of occupations (e.g., Mackie, Hamilton, Susskind, & Rosselli, 1996), there is very little research regarding gender stereotypes of customers. It is very likely that these stereotypes exist and influence how managers allocate customer service personnel, how customers interact with employees, and how customers choose among various service providers (Fischer, Gainer, & Bristor, 1998). To the extent shoppers are stereotyped based on gender, it is likely to affect various aspects of consumer behavior (Bristor & Fischer, 1993).

Gender and Shopping

In the industrial and post-industrial economies of the West, sex and gender developed such that "feminine (female) was the consumer: located in the home, the private domain. Masculine (male) was the producer: located in the workplace, the factories, the offices, the political arena, the public domain" (Firat & Dholakia, 1998, p.17). As a result, the woman has become the primary shopper for the household (Dholakia, 1999; Hawfield & Lyons, 1998) and shopping is categorized as "female typed" task (South & Spitze, 1994). A recent study found that women in an average household are responsible for over 80 percent of purchasing decisions (Nua Internet Surveys, 1999).

Researchers have started to suggest systematic differences in how men and women enact their consumer roles. Davies and Bell (1991) found gender differences in the number of items bought, amount of expenditure and time spent in supermarkets. Recent evidence on types of online shoppers suggest women dominate the "click and mortar" types who shop online but buy

offline while male shoppers dominate the "hooked" and "hunter-gatherer" types who use online shopping the most (What kind of Dot-shopper are you, 2000). While women have come to dominate household roles as shoppers, they are also under increasing pressure from role overload (Reilly, 1982; Dholakia, 1987). Evidence shows that even when market wages increase (for example, in dual-career professional families), household tasks do not shift significantly (Berk, 1985). Actual disparities in husbands and wives' participation in household work indicate normative constraints such as male and female stereotypes (Berk, 1980).

Gender and Technology

In addition to gender-specific roles in the domestic sphere, there appears to be systemic gender shaping of technology. This is evident at several levels, both macro as well as micro. Gatignon, Eliashberg, and Robertson (1989) found *gender roles* to influence the diffusion patterns of six products in 14 European countries. Countries with national cultures characterized by higher level of masculinity had higher degrees of consumer innovativeness (Steenkamp, Hofstede, & Wedel 1999). It is not surprising that a study of technology adoption behavior in Turkey indicated that the agricultural tasks that were traditionally men's responsibility became capital intensive whereas women's work remained labor intensive (Behrooz, 1992).

The gendered nature of technology at the macro level is mirrored at the micro level. Venkatesh and Morri (2000) reported gender differences in importance assigned to various factors for the adoption of information technology. The two genders appear to derive different meanings from the same use of a multifunctional technology (Gefen & Straub, 1997) and differ significantly in the purpose of using a multi-functional technology such as the Internet (Hoffman, Kalsbeek, & Novak, 1996).

There are many different reasons for the gender bias including differences in attitudes toward risk (Slovic, 1966), attitude toward technology in general (Brunner & Bennett, 1998), gendered design (Abernathy, 1999; Cockburn & Dilic, 1994), and differences in role specializations and preferences (Firat & Dholakia, 1998). Given that computer-based e-shopping involves a computer technology with specific masculine associations, it is likely that e-shoppers will be associated more with males than females.

Research Design and Methodology

Hypotheses

Because the consumer role has been assigned to females, it is likely that as new shopping alternatives emerge, such as TV shopping or factory outlets, they will be associated with female shoppers. As technology-intensive shopping outlets emerge, such as Internet or e-shopping, they are likely to create some conflicts in the association because while shopping is "female-typed", technology is in the "male domain." In addition to global stereotypes, there are likely to be important variables that affect these perceptions. In this study, we explore the role of outlet type, product type, and purchase purpose.

Outlet type. Many types of retail formats, both store and non-store, have developed over the years. Early successes in e-shopping were attributed to male shoppers. According to some analysts, "what you see here on the Internet is for the first time, you've got a retailing space where a guy will go and browse, they'll go and shop" (Moran, 1998, p.E1). Women, on the other hand, had been associated with shopping trips to the brick and mortar store. In fact, Oakley (1974) had noted that going shopping was a major source of relaxation as well as a household chore. We therefore expect very specific gender associations with types of outlets patronized by specific buyers.

Product type. Successes of retail formats are determined, to a large extent, by the characteristics of the products and services they offer (Peterson, Balasubramanian, & Bronnenberg, 1997). In this study, we look at products, which are relatively new and complex (DVD player), have some degree of success in online sales (particularly music CD), available in multiple retail formats (both CD and DVD players) and used extensively by younger people. Because DVD players are more complex than CDs, we expect female shoppers to be less associated with DVD players and more with CDs. The reverse is expected for DVD players.

Purchase purpose. Buttle (1992) described shopping as a "contextualized act" with the three most common shopping episodes consisting of shopping for groceries and household items, for clothing and for gifts. The motives for these shopping episodes are different as well as the frequency of purchase, the purchase process and the outlets at which the purchases are made. Dholakia (1999) reported greater sharing of shopping responsibility among husbands and wives when the product was a household item (grocery products) than when it was a personal item (clothing). Thompson (1996) found female shoppers to show feelings of care and concern since females are generally responsible for the maintenance and nurturance of family and community. It is likely, therefore, that shopping for gifts will be seen as more "female typed" than shopping for oneself.

To explore these issues regarding shopper stereotypes, we offer the following hypotheses:

H1: Because feminine roles are culturally determined and include primary roles as shoppers, any shopping scenario is more likely to be associated with a female buyer than a male buyer. (Overall gender stereotype)

H2: Because technology, in general, is associated more with males than females and new technology is risky, the purchase of technology-intensive, new and complex products

(such as DVD players) is more likely to be associated with male rather than female buyers. (Product type)

H3: Because computer technology is associated more with males than females and new technology is risky, the adoption of e-shopping is more likely to be associated with male than female buyers. (Outlet type)

H4: Because feminine roles are culturally determined and include roles as caregivers, creators of intimacy and community, purchase of a gift is more likely to be associated with a female than a male buyer (Purchase type)

Method

Research Procedure

A structured paper-pencil questionnaire was distributed in introductory marketing classes as part of extra credit assignments for students. Each student was requested to read an "excerpt of a recent purchase" from the diary of a consumer panelist participating in a research project. The purchase scenario (2x2x2) varied the outlet type (online store or physical store), product type (music CD or DVD player), and purchase purpose (for self or as a gift for mother).

After reading the cover story, each student answered the following questions:

a. The likely characteristics of the consumer diarist in terms of gender, age and marital status. In this paper, we only examine the reported gender of the diarist.
b. Using a 7 point scale, the likely personality traits of the consumer diarist;
c. Respondent characteristics, including personal experience with Web shopping and demographics.

Sample Description

112 students completed the questionnaire; 110 provided complete information used for the analysis. The composition of the respondents indicates that there were more male (59%) than female students (41%); 92 percent were aged between 18 – 22 years; and 100 percent had Internet access. Both male and female respondents were comparable in terms of Internet access and familiarity with online shopping ($\chi^2<1$).

Results

Gender Stereotyping

When asked to label the gender of the consumer diarist, more respondents thought the consumer was a female (64.5%) than a male (34.5%). The *Z*-test reveals the proportions to be statistically different ($Z=3.1$, $p<.05$), supporting H1 regarding overall gender stereotyping. The association with the reported gender of the consumer diarist is strongest for the product type condition (H2), with more female than male buyers being associated with the purchase of music CD than with the DVD Player (χ^2,$p<.00$). We found no support for our hypotheses regarding outlet type (H3) and purchase purpose (H4)(see Table 1).

We created a variable (called GenderMatch) to determine the influence of the respondent's own and reported gender on gender-specific stereotypes. First, we find the mis-match to be greater for male respondents than for female respondents – 58.5% of the male respondents thought the scenario represented a female buyer; only 26.7% of the female respondents thought the scenario represented a male buyer. The relationship of GenderMatch with product type is highly significant ($\chi^2=11.1$, $df=3$, $p=.01$). Among male respondents, music CD purchase was associated with more female buyers; among female buyers, purchase of DVD players is associated more

with male buyers. We found a marginal relationship between GenderMatch and outlet type and no significant relationship between GenderMatch and purchase purpose (see Table 2).

Personality Attributions

In order to determine the personality traits associated with the consumer diarist, the questionnaire included a 7-point scale using bipolar adjectives to describe the consumer diarist. Factor analysis yielded six factors, explaining 67 percent of the variance, labeled reliable, outgoing, spontaneous, youthful, technical and modern after retaining only those variables that had a loading greater than .5 on at least one factor. Scale reliabilities ranged from .73 to .33.

The three experimental variables – outlet type, product type and purchase purpose - had no significant main or interaction effects on personality traits associated with the consumer diarist. The reported gender, however, had a statistically significant effect on personality traits attributed to the consumer diarist, $F(5, 103) = 11.9$ $p < .00$. An examination of the individual traits showed three – technical, $F(1, 108) = 46.7$ $p < .00$), spontaneous, $F(1, 108) = 9.5$, $p < .01$), and reliable, $F(1, 108) = 8.1$, $p < .00$) to be particularly significant. A comparison of the mean values on the bi-polar scale suggests that the diarist stereotyped as male is seen to be more technical, more spontaneous and less reliable than the diarist stereotyped as female (see Figure 1).

Respondent's own gender, captured in the GenderMatch variable, also had a statistically significant effect, $F(1, 103) = 3.8$, $p < .00$; attributions regarding three traits - technical, spontaneous and reliable - were significantly affected. As Table 3 reveals, there are systematic differences in the ways males and females describe the consumer diarist. In general, the male respondents rated the consumer diarist to be more technical; the opposite is true for the female respondents. Among male respondents, those who described the buyer as female also rated the

female buyer as more technical, accentuating the difference among male and female buyers. This difference is statistically significant. Female respondents did not make a similar distinction.

In terms of the "spontaneous" personality trait, both male and female respondents assigned similar scores to the hypothetical buyer. The only significant difference in paired comparisons is when the GenderMatch shows correspondence (i.e., respondent's gender matched the reported gender): the male respondents thought the male buyer was more spontaneous. So did female respondents who thought the buyer was a female.

In terms of the personality trait "reliable," there is a distinct difference between male and female respondents. In general, female respondents rated the consumer diarist to be more reliable than did male respondents; but both male and female respondents did not make any further distinctions.

Discussion

In this study on gender stereotypes, we find that both male and female respondents associate a hypothetical shopper with a female than a male. This suggests that even within our sample of young college students, both males and females, there is a little change in the acceptance of this gender specialization in consumer roles.

Gender stereotypes are, however, dependent on some contextual variables. We found product type to be particularly important. When the product is relatively more expensive, technical, new (e.g., DVD player), the gender association *reverses* itself. More males are associated with the purchase of DVD players while more females are associated with the purchase of music CD, which is relatively less expensive and less technical. Outlet type was less important (the difference was marginally significant) while purchase reason (self or gift) did not appear to make a difference on the gender stereotypes.

The overriding factor influencing attribution of personal characteristics is the gender stereotype held by the respondent. The male buyer is seen to be more technical, more spontaneous and less reliable. Both male and female respondents make similar attributions, particularly when the respondent's gender matches the reported gender of the diarist.

Based on this study we conclude that at this stage of the retail evolution, it is the role specialization of the females as household shoppers that is more likely to influence future developments. These gender associations raise interesting questions regarding the future of e-shopping. If more females accept e-shopping, and use this shopping mode more regularly, it is likely to stimulate the growth of this new method of shopping but unlikely to change the gender-stereotyped shopper roles. If men engage in e-shopping, they are more likely to buy technical products such as DVD players; this is consistent with data reported by ebates.com, which suggest that men tend to buy "boy toys" – videos/DVD and computers/electronics. Only if males expand the assortment of goods and services bought on the Internet, and include goods and services traditionally associated with purchases by females, only then is there a possibility of a large transformation in household roles.

Research Limitations and Directions for Further Research

There are several limiting conditions of this specific research study. The sample chosen for the study - young college students who are technologically more competent – may not represent the general population. We had also made efforts to include products likely to be of interest to our chosen sample, but it may not have included the "best" products to explore the phenomenon of gender stereotyping. Perhaps items like grocery or household and beauty aids may have produced a different set of results. Replication of this study among other respondent groups – particularly in terms of age or familiarity with online shopping – needs to consider the

choice of appropriate products. On the other hand, since product type emerged as the most important contextual variable, this study may be seen as a conservative effort to find stereotypes.

One of the fundamental assumptions underlying this study was that shopping, along with other household activities that are gender stereotyped, inhibits male participation. This is probably valid for shopping in more visible consumption settings. Online shopping, invisible to the social world outside the household, may be determined by a different set of rules. We need to question how the social relationships established in the brick and mortar world will translate into the cyber world.

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Table 1

Gender Stereotyping

	Reported Gender of Consumer Diarist		*Chi-Square Test*
	Male	*Female*	χ^2, *df*, *p*
Outlet Type			
Physical Store	16 (14.5%)	41 (37.3%)	2.82, *df*=1,
Online Store	23 (20.9%)	30 (27.3%)	*p*=.07
Product Type			
Music CD	12 (10.9%)	41 (37.3%)	7.34, *df*=1,
DVD Player	27 (24.5%)	30 (27.3%)	*p*<.00
Purchase Reason			
Self	22 (20.0%)	34 (30.9%)	<1, *df*=1
Gift	17 (15.5%)	37 (33.6%)	ns

Table 2

GenderMatch and Experimental Conditions

Respondent's Gender	Male		Female		Significance
Reported Gender of Diarist	Male	Female[a]	Male[a]	Female	χ^2, *df*, *p*
Outlet Type					7.5,
Online	19	17	4	13	*df*=3, *p*=.06
	(17.3%)	(15.5%)	(3.6%)	(11.8%)	
Physical	8	21	8	20	
	(7.3%)	(19.1%)	(7.3%)	(18.2%)	
Product Type					11.1,
DVD Player	18	20	9	10	*df*=3, *p*=.01
	(16.4%)	(18.2%)	(8.2%)	(9.1%)	
Music CD	9	18	3	23	
	(8.2%)	(16.4%)	(2.7%)	(20.9%)	
Purchase Purpose					4.75,
Self	15	14	7	20	*df*=3, *p=ns*
	(13.6%)	(12.7%)	(6.4%)	(18.2%)	
Gift	12	24	5	13	
	(10.9%)	(21.8%)	(4.5%)	(11.8%)	
	27	38	12	33	
	(41.5%)	(58.5%)	(26.7%)	(73.3%)	
	65 (59.1 %)		45 (40.9 %)		

Note. [a] Mis-match

Table 3

Gender Match and Personality Attributions

Respondent's Gender	*Male*		*Female*		Significance
Personality Attribution	*Reported Gender*		*Reported Gender*		Mult. *F*., (*p*), *df*=3/105
	Male	*Female*	*Male*	*Female*	
Technical[1]	3.7	3.0	5.0	4.9	19.4, (.00)
Spontaneous[2]	4.4	4.5	4.6	5.2	2.6, (.05)
Reliable[3]	3.1	3.2	2.5	2.6	3.7, (.01)
	65 (59.1%)		*45 (40.9%)*		

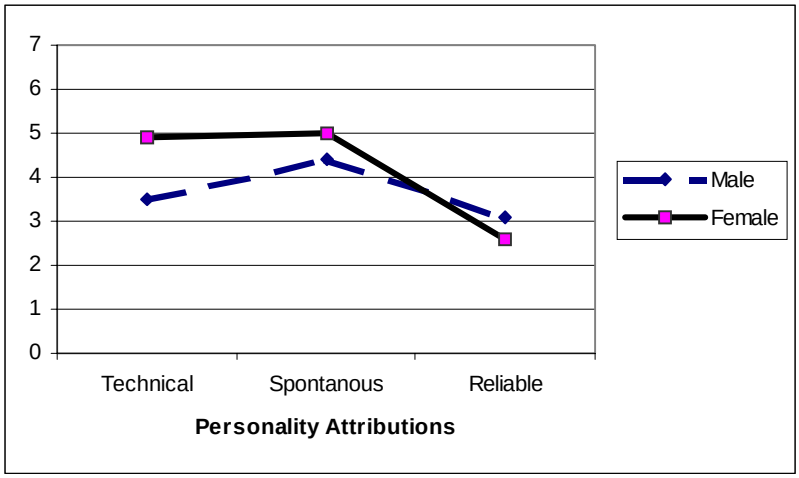
Note.

[1] All pairs significantly different EXCEPT male-female comparison within female respondents.

[2] Only significant difference between gendermatched pairs (male/male with female/female)

[3] No difference within male and female respondents; significant difference between male and female respondents.

Figure 1. Personality Attributions and Gender Stereotypes



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