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Hedonic and utilitarian use of user-generated content on online shopping websites

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ABSTRACT

The Internet has made it possible for consumers to share reviews. opinions, and thoughts about products and services on online shopping websites. This user-generated content (UGC), which can be considered to be part of social commerce, is likely to influence other consumers' attitudes toward a product and subsequent purchase intentions. The purpose of this study was to investigate two major uses of UGC: hedonic and utilitarian, and how they impact purchase intentions, along with users' trust for different types of comments and reviews. Also investigated are associations between hedonic use, utilitarian use, and trust, with purchase behavior at online shopping websites. Results of this study will add to the domain knowledge related to marketing and how it impacts consumer psychology and behavior. From a practitioner perspective, marketers need to understand the impact of UGC so they can monitor this method of marketing communication as it can impact trust and purchase intentions.

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KEYWORDS

User-generated content; hedonic and utilitarian behavior: online shopping: social commerce; trust; purchase behavior

Introduction

Marketing researchers have investigated how consumers make decisions regarding a product purchase. The antecedents of making a purchase starts a chain reaction of value creating actions. Consumers indulge in value seeking activities that take place as people go about attempting to address real needs (Venkatesan and Kumar 2004; Kim, Ferrin, and Rao 2008). When a consumer is motivated by needs, a process kicks in as the consumer sets out to find desirable ways in which to meet this need. The process involves multiple psychological events, including thinking, feeling, and behaving and the entire process culminates in value. According to Babin and Harris (2014), consumer purchase intention can be shaped by internal influences such as perception, intuition, information processing, and attitude. External influences such as social environment, peer influence, and social media can also shape the consumption process by fulfilling either utilitarian or hedonic value. In recent years, Marketing communication has been enhanced by incorporating new opportunities to reach customers through social media sites, such as Facebook and Twitter. Online shopping has given rise to a new voice that is driven by consumer experiences with products. This user-generated content (UGC) is communication created by consumers who may have tried the product and are willing to share their experiences with other consumers and users inside or outside their social circle.

Most Web 2.0 platforms such as Facebook, Twitter, YouTube, and Flickr support the use of UGC and thrive if there is user involvement in their online community. The online information market continues to shift toward a user-centric model and away from the conventional media model that was characterized as being publisher centric (Daugherty, Eastin, and Bright 2008). The use of customer engagement and participation in virtual communities has been of research interest to marketers who are looking to investigate phenomena related to UGC in the digital marketplace. Previous research has explored UGC-related topics such as customer engagement, electronic word of mouth, online brand reputation management, customer relationship management, and social network analysis (Chevalier and Mayzlin 2006; Duan, Gu, and Whinston 2008; Ghose and Ipeirotis 2011).

The Internet presents a social and economic opportunity for businesses to capitalize on electronic communities (Armstrong and Hagel 1996). E-commerce has given rise to a new phenomenon, social commerce, which includes reviews and blogs that serve to influence consumers attitude, decision-making, and purchase intention. With the popularity of online shopping that has made information easily accessible, consumer information processing uses an integrated process where product attributes, specifications, and information available from images, videos, blogs, and reviews are used for product evaluation and to make a final purchase decision about the brand that will meet users' needs. The decision-making process that leads to comprehension and attention is influenced by a consumer's motivation, ability, and opportunity to process salient information about their environment (Batra and Ray 1986). UGC has the potential to impact change in attitude toward a product and/or the ability of the consumer to form an opinion of the product which may affect propensity to make purchase decisions about the product. Companies may be contemplating whether favorable UGC results in increased sales or adds business value.

The purpose of this study was to investigate the degree to which UGC can influence consumers' attitude and purchase intentions on online shopping websites. We investigated UGC as a mediating variable in online buying behavior. This research was conducted to verify and replicate previous research in different contexts. For the purpose of this study, UGC is defined as reviews posted by other users for a product. Purchase intention is a cognitive state that reflects a consumer's intent to buying in a specified time period (Howard and Sheth 1969). Another purpose of this study was to replicate previous studies and observe any changes since the Internet and e-commerce have become more mainstream along with issues that relate to trust, privacy, and security. Research conducted from this perspective relies on the notion of theoretical explication to verify previous research in different contexts (Chaffee 1996). While previous studies have looked at UGC in context of opinion leaders and influencers (Geissler and Edison 2005; Goldsmith and Horowitz 2006), this study looked at influence of UGC provided by consumers of the product who share their experience and opinion about the product in a virtual community related to the product. Since consumers are not influenced by the social position of the reviewer, lack of this relationship will force a consumer to evaluate the UGC review solely based on content of the communicated message (Walther 1996). The expected outcome from this research can provide insights into customer buying behavior and how UGC interacts with decision-making of online shoppers.



If it is found that UGC plays a significant role as a motivator or driver in e-commerce, then recommendations for better UGC interaction can logically follow.

Review of literature

Intention and propensity to purchase can be affected by many factors which have been explored by researchers from many disciplines: psychology, behavioral science, economics, and other fields. Purchase intention has also been shown to have a positive impact on an individual's action (Ajzen and Driver 1992; Chandon, Morwitz, and Reinartz 2005; Ling, Chai, and Piew 2010). Researchers have identified more than 80 variables as antecedents to purchase intention. In addition, online consumers' attitude and intention can be greatly influenced by cognitive, psychological, and demographic characteristics (Fang et al. 2013). However, the specific construct of UGC and its mediating influence on purchase intention has not been looked at from the perspective of e-commerce sites. Companies have realized advantages offered by incorporating UGC on their e-commerce sites to create trust and build a community around a product. This is consistent with previous findings that indicate consumption experiences account for consumers' hedonic and emotional sites, in addition to any rational brand decisions (Holbrook 1986). Products that have a high number of positive reviews and active discussions using many question/answers that have been populated by users have the potential for increased sales. For high-involvement products, purchase intentions and social motives which include desire to gather pertinent information about a product were found to be two main predictors of frequency with which consumers visit e-commerce sites (MacDonald and Elahee 2003).

The decision to shop online and make purchase decisions is affected by a decision-making chain used by the customer to shop online which determines the choice to transact or not to transact (Rohm 2004; Allred, Smith, and Swinyard 2006). They found convenience, variety of products, consumers' attitudes toward online shopping, return policy, social interaction with other users create a positive attitude toward shopping online and subsequent purchasing behavior. UGC contributes to building trust among consumers which in turn has been identified as a critical factor in online shopping. Trust was also identified as one of the barriers in early e-commerce research and has often been linked to other related factors such as security and risk perception (McCole 2002; Chang, Cheung, and Lai 2005). In addition, Park and Kim (2003) identified factors such as web design, security, and trust information affect online purchasing behavior. While research has also emphasized on the social capital and social practice aspect of community engagement (Wasko and Faraj 2005; Faraj, Jarvenpaa, and Majchrzak 2011), the construct of information quality, particularly UGC, has not received much attention. Reasons why consumers create content have been studied by Daugherty, Eastin, and Bright (2008) who found that consumers are motivated to create content because it helps them feel a sense of intrinsic wisdom. The researchers also found content creators feel gratified with a sense of self-esteem because they become members of an online community that shares the principles they consider important.

User-generated content

The term user-generated content has a broad scope as evidenced from recent literature where researchers have conducted studies providing different context of UGC. This shows the

multifaceted nature of UGC. Previous studies have resulted in different conclusions related to UGC. Although there has been research on UGC (e.g. Chevalier and Mayzlin 2006, Lee, Park, and Han 2008; Gupta and Harris 2010), most research has not focused on a consistent measurement of attitudes and buyer intention impacted by UGC on a single e-commerce platform. For example, for online reviews of movie box office sales, Duan, Gu, and Whinston (2008) found that online reviews do not affect sales. When looking at book sales at e-commerce sites that sell books, Chevalier and Mayzlin (2006) found online reviews have a positive effect on book sales. The type of comments made by reviewers also has been studied in regards to ability to influence sales. For example, Ghose and Ipeirotis (2011) investigated correlation between product sales and type of reviews that include information richness and readability. They found that the reviews that are mixed with objective and subjective sentences have less impact on product sales than reviews that contain only objective or subjective sentences. There is need for further research that looks at the impact of UGC to change attitude and influence purchase intention of buyers.

The e-commerce, marketing, and retailing literature recognizes both hedonic and utilitarian motives for online shopping and buying (Bridges and Florsheim 2008; Close and Kinney 2010). UGC may influence either utilitarian or hedonic shopping as individuals may be motivated to engage in goal-directed behaviors using the constraints of convenience, product purchase relevance, shopping pleasure, or time available to shop online (Darden and Dorsch 1990). According to Babin, Darden, and Griffin (1994), shopping provides both task-related or product-acquisition and hedonic value through responses evoked during the experience. As a result, it provides more than just functional utility. Utilitarian shopping is task-related and rational where the product is purchased in a goal-oriented efficient manner. When shopping online, it is conceivable that a consumer may use UGC to collect information about the product, price, features, and specifications rather than explicitly make a purchase on an impulse. The focus of this study was on utilitarian or hedonic use of UGC on online shopping websites rather than products which may be classified as utilitarian or hedonic. The goal for this study was to investigate UGC differences that may create heightened involvement, perceived freedom, fantasy fulfillment, and escapism (Bloch and Richins 1983). According to Cheong and Morrison (2008), 'When UGC is negative it can have harmful implications for building and sustaining a brand's equity, an issue compounded by the fact that readers of UGC may consider it more credible than content that originates with the producer' (39). Goldsmith and Horowitz (2006) found that consumers search for opinion from other consumers to reduce their risk and pre-purchase information. Although the consumer may not be consciously aware of all information included in UGC, the mere presence of UGC (positive or negative) may affect behavior. Cheong and Morrison (2008) studied whether consumers trusted UGC more than paid product information. They found that people trusted other consumers more than information about the company itself.

Social influence

Consumers may read UGC and reviews for reasons other than to make an immediate purchase. These consumers may have social reasons such as desire to share information by adding value, become an opinion leader, establish himself/herself as an expert (Bloch, Sherrell, and Ridgway 1986), or to make others aware of his/her knowledge about latest developments in a product category. The term Social Influence Marketing is relevant to UGC as it

refers to the way people can influence each other through the use of blogs and comments. Companies often use social influencers (brand advocates) to increase sales of products in an organization. For example, in exchange for free products, Amazon invites the most trusted reviewers on Amazon to post opinions about new and pre-release items to help other customers make informed purchase decisions. Use of this practice is not without criticism as it was found that most of the reviews were skewed toward being favorable/positive reviews, the reviews were given more prominence than other user reviews, and the reviews were not true representations as experienced by a regular user of the product. Different from the traditional community, participants in Amazon's Communities of Transaction (Armstrong and Hagel 1996) engage for the purpose of getting knowledge about a specific transaction (such as purchasing a product) that is informed by input of other members of the community. Companies have realized the importance of social commerce and are developing strategies to manage customer engagement in communities, blogs, networks, and social media platforms. O'Reilly (2007) observed that Amazon has made a science of user engagement which has resulted in more user activity which is then used to produce better search results. The use of these communities can be for information exchange, or as part of an integrated process to increase sales by e-commerce sites.

Hypotheses

H1 consists of a set of sub-hypotheses relative to hedonic and utilitarian use of online shopping websites, where hedonic use refers to the enjoyment aspect of UGC, and utilitarian use refers to its practical benefits:

H1a: Users of online shopping websites exhibit two distinct forms of use of websites relative to purchase decisions: hedonic and utilitarian usage.

H1b: Utilitarian use is more dominant than hedonic use.

H1c: Hedonic use of UGC is a significant determinant of intention to purchase based on UGC.

H1d: Utilitarian use of UGC is a significant determinant of intention to purchase.

H1e: Utilitarian use of UGC has a greater impact than hedonic use on intention to purchase.

H2 consists of a set of sub-hypotheses on consumers' trust toward UGC on online shopping websites:

H2a: Consumers trust comments and reviews written by users who have bought the product, by the 'average' user, and by their friends, more than they trust manufacturer websites and comments/reviews written by celebrities.

H2b: Consumers' trust in UGC is a significant determinant of intention to purchase.

H3: Consumers' behavior of reading UGC is a significant determinant of intention to purchase based on UGC on online shopping websites.

H4: Frequency of purchase behavior is positively associated with:

H4a: Hedonic use of UGC.

H4b: Utilitarian use of UGC

H4c: Intention to purchase based on UGC.

H4d: Consumer trust in UGC.

H5: Frequency of authoring reviews on online shopping websites is positively associated with:

H5a: Hedonic use of UGC.

H5b: Utilitarian use of UGC.

H5c: Intention to purchase based on UGC.

H5d: Consumer trust in UGC.

Method

Quantitative data were gathered through a questionnaire-based survey of business students at a university in the Southeast. Respondents were provided information on the purpose of the study which was to investigate attitude toward UGC and possible influence of UGC on purchase intention. An example of Amazon.com user review showing an actual product was presented in the Introduction section of the questionnaire to make respondents familiar with the frame of reference being studied in this research. The survey was developed by the authors with construct measures using review of literature and was delivered electronically using online survey method (see Exhibit A). The survey provided Likert scale items related to UGC as a variable affecting purchase intention, hedonic, utilitarian, and social influence of user reviews and comments. The 5-point Likert response scale ranged from 'Strongly Disagree' to 'Strongly Agree'. Items in the survey captured preferences related to the impact of UGC in decision-making processes of customers including impact related to trust while considering or making a purchase. The survey then asked for demographic information. Sin and Tse (2002) had showed demographic variables such as education, gender, age, and Internet use impact online purchase intention so including demographic information was relevant to study in the context of UGC. Institutional Review Board approval was obtained from the university committee to administer the survey to students.

Prior to administration of the survey, it was pilot tested with a group of respondents that included faculty and students (not counted in the actual sample). Feedback from the group was incorporated in the final version of the survey that was given to 234 respondents included in this study. Content validity of survey items was established by two Marketing faculty.

Data analysis and results

The first step was to examine whether we found evidence of two distinct forms of browsing behavior (hedonic and utilitarian use) relative to purchase decisions from online shopping websites. We hypothesized that potential consumers exhibit hedonic and utilitarian use of UGC. The means (on a standard Likert 5-point scale) are shown in Table 1a and in Figure 1 for questions that pertain to each of these types of use in decreasing order.

We note that:

- All eight measures show means significantly above the midpoint (3.0) indicating that consumers tend to agree with all eight statements.
- The three hedonic measures are rated lower than the five utilitarian measures, indicating that hedonic use is less prevalent than utilitarian use.

Table 1a. Means for hedonic and utilitarian use.

	Mean
U_The Internet can be a useful tool to compare information about products from different websites	4.31
U_It is convenient to gather information from the Internet	4.14
U_When shopping online, the availability of high-quality product reviews provided by users is very important to me	4.08
U_Gathering information by using the Internet saves time	3.98
U_Reading user comments/reviews is a worthwhile use of my time	3.90
H_Searching for information on the Internet is a good way to spend time	3.54
H_I find searching for information on the Internet to be enjoyable	3.50
H_Information searching on the Internet is fun rather than tedious	3.36

Utilitarian vs. Hedonic Use U The Internet can be a useful tool to compare... U It is convenient to gather information from the Internet U When shopping online, the availability of high quality... U_Gathering information by using the Internet saves time U Reading user comments / reviews is a worthwhile use... H_Searching for information on the Internet is a good way... 3.54 3.50 H_I find searching for information on the Internet to be... 3.36 H Information searching on the Internet is fun rather... 1 1.5 2.5 3.5 4.5

Figure 1. Means for hedonic and utilitarian use.

Utilitarian use is either not significantly different from 4.0 (i.e. Agree or higher range) or
is significantly higher than 4.0 on a 5-point scale, while hedonic use is at the 3.5 level
or below.

A paired samples *t*-test, shown in Table 1b, revealed that utilitarian use was significantly greater than hedonic use at the 0.001 level. The mean difference between the two was found to be 0.62 on a 5-point scale.

Factor analysis in Table 2 shows that the variables load clearly onto these two factors.

Scales were constructed for each of these constructs. Reliability analysis showed acceptable results; Cronbach's alpha for hedonic use was 0.82 and for utilitarian use was 0.77. Composite measures were constructed for each, and unsurprisingly, the mean of the composite utilitarian measure (4.1) was higher than that of the composite hedonic measure (3.5).

H1a states that users of websites exhibit two distinct forms of use of websites relative to purchase decisions: hedonic and utilitarian use.

Based on the factor loadings and reliability analysis (shown in Tables 1 and 2), H1a is supported.

H1b states that utilitarian use is more dominant than hedonic use of UGC. From the analysis of the means of each of these variables (shown in Table 1) and the composite measures, H1b is supported.

Table 1b. Paired sample test for hedonic and utilitarian use

		Paired samples statistics			
		Mean	Ν	Std. deviation	Std. error mean
Pair 1	Utilitarian 5 Average Hedonic 3 Average	4.0830 3.4628	224 224	.54934 .85034	.03670 .05682

Note: Sig. (two-tailed) = 0.000.

Table 2. Rotated component matrix.

	Compo	onent
	1	2
H_Information searching on the Internet is fun rather than tedious	.279	.773
H_Searching for information on the Internet is a good way to spend time	.217	.821
H_I find searching for information on the Internet to be enjoyable	.245	.861
U_It is convenient to gather information from the Internet	.696	.310
U_Gathering information by using the Internet saves time	.725	.130
U_Reading user comments/reviews is a worthwhile use of my time	.694	.198
U_The Internet can be a useful tool to compare information about products from different websites	.604	.265
U_When shopping online, the availability of high-quality product reviews provided by users is very important to me	.713	.203

Note: Extraction method: principal component analysis.

Table 3. Means for intention to purchase based on UGC.

	Mean	Std. deviation	Ν
P_I feel good purchasing a product that has positive user comments/reviews	4.50	.641	226
P_User comments/reviews of a product are important while making a purchase decision	4.19	.749	226
P_User comments/reviews have in the past influenced my purchase decision	4.16	.687	226
P_If the majority of user comments/reviews are negative, I would not purchase the product	4.15	.793	226
P_User comments/reviews are likely to influence my future purchase decisions	4.10	.718	226
P_If the majority of user comments/reviews are positive, I would purchase the product	3.97	.762	226
P_Reading user comments/reviews of a product would change my mind about purchasing a product	3.96	.736	226

Note: Cronbach's alpha = 0.830.

Intention to purchase, and trust

Two other constructs were examined: intention to purchase based on UGC, and the trust that respondents placed in UGC. These constructs are shown in Tables 3 and 4.

Additionally, while the following question is not intended to be part of the above construct because it does not represent the typical user, it was asked just as a basis for comparison to a previously conducted study:

I trust reviews from celebrities I follow on social networking websites

This variable had a mean of only 2.5 on a 5-point scale, significantly lower than any of the trust dimensions shown above. Celebrity reviews are not particularly well regarded.

H2a states that consumers trust comments and reviews written by those who have bought the product, by the 'average' user, and by their friends, more than they trust manufacturer



Table 4. Means for trust dimensions.

	Mean	Std. deviation	Ν
T_I trust user comments/reviews from people who have purchased the product	4.08	.704	228
T_I believe user reviews of a product are more beneficial than manufacturer provided information	4.07	.910	228
T_I trust user comments/reviews of a product to be reasonably accurate rep- resentations of a product	3.80	.759	228
T_I trust reviews from friends or people I follow on social networking websites	3.77	.881	228
T_I would trust a product review posted by an average user more than a product review posted by an expert	3.33	1.072	228

Note: Cronbach's alpha = 0.632.

websites and comments/reviews written by celebrities. Based on examination of the means in Table 4, H2a is at least partially supported.

Relationship of intention to purchase based on UGC with hedonic use, utilitarian use, and trust

Regression analysis was done with intention to purchase based on UGC as the dependent variable and, as independent variables, composite measures of hedonic use of UGC, utilitarian use of UGC, consumers' trust in UGC, and whether the consumer usually reads user comment and reviews. The results are shown in Table 5.

The adjusted R^2 is 0.63. F value is significant at the 0.000 level.

Another regression analysis was done with intention to purchase based on UGC as the dependent variable and as independent variables, the three individual measures of hedonic use of UGC, the five individual measures of utilitarian use of UGC, the five individual measures of consumers' trust in UGC, and whether the consumer usually reads user comment and reviews. The results are shown in Table 6.

The adjusted R^2 is 0.65. F value is significant at the 0.000 level.

H1c states that hedonic use of UGC is a significant determinant of intention to purchase. In neither of the preceding regressions (using composite measures in Table 5 or individual measures in Table 6) do any hedonic measures show up as being significant determinant of intention to purchase. So, H1c is not supported.

H1d states that utilitarian use of UGC is a significant determinant of intention to purchase based on UGC.

In both the preceding regressions (using composite measures in Table 5 and individual measures in Table 6), utilitarian measures are found to be significant determinants of intention to purchase based on UGC. So, H1d is supported.

H1e states that utilitarian use of UGC has a greater impact than hedonic use on intention to purchase.

Table 5. Regression analysis: intention to purchase as a function of composite measures.

	Unstandard	ized coefficients	Standardized coefficients	_	
	В	Std. error	Beta	t	Sig.
(Constant)	5.092	1.256		4.054	.000
Trust5	.494	.063	.378	7.785	.000
Utilitarian5	.413	.067	.315	6.190	.000
When I am online shopping for a product, I usually read the user comments/reviews	1.370	.231	.293	5.927	.000

Table 6. Regression analysis: intention to purchase as a function of individual measures.

	Unstandard	ized coefficients	_ Standardized		
	В	Std. error	coefficients	t	Sig.
(Constant)	4.183	1.264		3.309	0.001
When I am online shopping for a product, I usually read the user comments/reviews	1.199	0.240	0.257	4.987	0.000
U_The Internet can be a useful tool to compare information about products from different websites	1.680	0.265	0.294	6.334	0.000
T_I trust user comments/reviews of a product to be reasonably accurate representations of a product	0.862	0.233	0.177	3.700	0.000
T_I trust reviews from friends or people I follow on social networking websites	0.488	0.176	0.119	2.770	0.006
T_I trust user comments/reviews from people who have purchased the product	0.731	0.240	0.143	3.044	0.003
T_I believe user reviews of a product are more beneficial than manufacturer provided information	0.540	0.193	0.134	2.807	0.005
U_Reading user comments/reviews is a worth- while use of my time	0.510	0.213	0.111	2.396	0.017

Note: Dependent variable: PurchInt7.

Given that the regression analysis with intention to purchase as the dependent variable shows significant coefficients using composite measures in Table 5 and individual measures in Table 6 for utilitarian use of UGC and none at all for hedonic use, H1e is supported.

H2b states that consumers' trust in UGC is a significant determinant of intention to purchase based on UGC.

In both the preceding regressions (using composite measures in Table 5 and using individual measures in Table 6), trust measures are found to be significant determinants of intention to purchase based on UGC. So, H2b is supported.

H3 states that consumers' behavior of usually reading user comment and reviews is a significant determinant of intention to purchase based on UGC.

In both the preceding regressions (using composite measures in Table 5 and using individual measures in Table 6), consumers' behavior of usually reading or not reading user comment and reviews is found to be a significant determinant of intention to purchase based on UGC. So, H3 is supported.

Analysis of variables by level of purchase behavior

A question was asked about past purchase behavior from online shopping websites (with Amazon.com being used as an example):

Q3 How many times have you purchased from Amazon.com within the last 6 months?

- 0 times (1)
- 1-3 times (2)
- 4–7 times (3)
- More than 7 times (4)



How many times have you purchased from Amazon.com within the last 6 months	0 times	1–3 times	4–7 times	>7 times	Mean
Hedonic use composite	9.4	10.2	11.0	10.9	10.4
Utilitarian use composite	19.3	20.1	20.8	21.6	20.4
Purchase intention composite	27.7	28.8	29.4	30.3	29.0
Trust composite	17.8	18.9	19.2	20.3	19.1

H4 states that: (a) hedonic use of UGC, (b) utilitarian use of UGC, (c) intention to purchase based on UGC, and (d) consumer trust in UGC are positively associated with frequency of purchase behavior from websites.

An Analysis of Variance (ANOVA) was done to test whether the level of purchase behavior was associated with an increased score on of the hedonic, utilitarian, purchase intention, and trust composite constructs. The results are shown in Table 7a and the ANOVA table is shown in Table 7b.

In Table 7a, the highest value in each row is emphasized in boldface. In all but one case (the exception being in hedonic use with a difference of only 0.1 from the highest value), the greater the number of online purchases, the higher the score on each variable. All four composite variables – hedonic browsing behavior, utilitarian browsing behavior, purchase intentions, and trust, show significant increases as the number of online purchases increase. Thus:

H4a is partially supported, H4b is supported, H4c is supported, and H4d is supported.

Analysis of variables by level of online review authoring behavior

A question was asked about the number of online reviews authored on websites: Q4 How many times have you written a review for a product on an online website?

- 0 times (1)
- 1-3 times (2)
- 4–7 times (3)
- More than 7 times (4)

Table 7b. ANOVA by how many times have you purchased from amazon.com within the last 6 months.

		Sum of squares	df	Mean square	F	Sig.
Hedonic3	Between groups	67.817	3	22.606	3.614	.014
	Within groups	1394.703	223	6.254		
	Total	1462.520	226			
Utilitarian5	Between groups	106.896	3	35.632	4.992	.002
	Within groups	1577.486	221	7.138		
	Total	1684.382	224			
PurchInt7	Between groups	132.072	3	44.024	3.540	.015
	Within groups	2760.711	222	12.436		
	Total	2892.783	225			
Trust5	Between groups	111.528	3	37.176	5.062	.002
	Within groups	1644.941	224	7.343		
	Total	1756.469	227			



Table 8a. Analysis of composite variables by level of purchase by
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How many times have you written a review for a product on an online website?	0 times	1–3 times	4–7 times	> 7 times	Mean
Hedonic use composite	9.9	10.6	11.0	11.2	10.4
Utilitarian use composite	19.9	20.8	21.0	21.2	20.4
Purchase intention composite	28.4	29.6	28.3	30.8	29.0
Trust composite	18.5	19.4	18.6	20.4	19.1

Table 8b. ANOVA by how many times have you written a review for a product on an online website.

		Sum of squares	df	Mean square	F	Sig.
Hedonic3 Betwee	Between groups	46.484	3	15.495	2.440	.065
	Within groups	1416.036	223	6.350		
	Total	1462.520	226			
Utilitarian5	Between groups	59.332	3	19.777	2.690	.047
	Within groups	1625.050	221	7.353		
	Total	1684.382	224			
PurchInt7	Between groups	131.470	3	43.823	3.523	.016
\	Within groups	2761.313	222	12.438		
	Total	2892.783	225			
Trust5 Between groups Within groups	78.621	3	26.207	3.499	.016	
	Within groups	1677.848	224	7.490		
	Total	1756.469	227			

H5 states that: (a) hedonic use of UGC, (b) utilitarian use of UGC, (c) intention to purchase based on UGC, and (d) consumer trust in UGC, are all positively associated with frequency of online review authoring behavior on websites.

An ANOVA was done to test whether the level of online review authoring behavior was associated with an increased score on the hedonic, utilitarian, purchase intention, and trust composite constructs. The results are shown in Table 8a for the composite measures, with bold highlights showing the highest score for each variable. The ANOVA table is shown in Table 8b.

In Table 8a, the highest value in each row is emphasized in boldface. All the hypotheses are supported for these composite variables, the highest scores being associated with the highest level of online review authoring behavior. From Table 8b we note that three composite variables – utilitarian browsing behavior, purchase intentions, and trust, show significant increases as the number of online purchases increases. Hedonic behavior also shows an increase, but the difference is not significant (p = 0.065). Thus:

H5a is weakly supported,

H5b is supported,

H5c is supported, and

H5d is supported.

Discussion and managerial implications

A significant finding of this research was the identification and operationalization of hedonic and utilitarian uses of websites. This is consistent with observations of Bloch, Sherrell, and Ridgway (1986) that perceived enjoyment is an important hedonic benefit provided through shopping activities. When shopping online, this can be enhanced by reading and responding

to UGC to enhance the hedonic shopping experience. The factor loadings and reliability analysis showed that consumers and potential consumers use UGC because it is enjoyable to read these reviews and because there is a real practical benefit to do so. From the perspective of managerial applications, it is useful to look again at Table 1 which shows the component variables that went into the construction of the composite scales. Design of websites and browsing experiences, should keep both utilitarian and hedonic aspects in mind. Reading UGC is an enjoyable experience to consumers and web design should reflect that. We note that all eight measures show means significantly above the midpoint (3.0) indicating that consumers do tend to agree with all eight statements.

However, we also found that utilitarian use of UGC is more important so the major emphasis should be on the utilitarian aspect of the design. Results of this study showed the means for each one of the component questions on utilitarian use exceed those for every one of the component questions on hedonic use, and the difference between the lowest rated utilitarian use question and the highest rated hedonic use question is 0.36 on a 5-point scale. Further, the mean of the composite utilitarian measure (4.1) was 0.6 higher than that of the composite hedonic measure (3.5). A paired samples t-test revealed that utilitarian use was significantly greater than hedonic use at the 0.001 level. The mean difference between the two was found to be 0.62 on a 5-point scale. So, we conclude that consumers and potential consumers clearly regard utilitarian use to be the predominant.

In addition, although we expected to find that utilitarian use would have more influence on intention to purchase based on UGC, we postulated that both hedonic and utilitarian use of websites would have a significant effect on it. However, our hypothesis on hedonic use was not supported and we found that hedonic use of websites did not have a significant effect on intention to purchase. Studies are needed to confirm this finding, but in the interim, our managerial conclusion is to emphasize utilitarian use (the regression done on composite variables showed a standardized β for utilitarian use of 0.315, p = 0.000 in an equation with an adjusted R^2 of 0.63) in website design. Further, based on the regression analysis done on individual component variables we found a good adjusted R^2 of 0.65, and strong and significant results that:

- The Internet can be a useful tool to compare information about products from different websites (standardized $\beta = 0.294$, p = 0.000).
- Reading user comments/reviews is a worthwhile use of my time (standardized $\beta = 0.111$, p = 0.017).

Based on these findings, we recommend that the website designers incorporate UGC areas on the website which will make it convenient to facilitate interaction among users. Also important to the consumer are designs that allow comparisons from different sites and sources, and those which have high-quality reviews.

Another important dimension in determining purchase intention is that of trust. We found that our composite measure of trust has a positive and very significant effect on intention to purchase (standardized $\beta = 0.378$, p = 0.000 in an equation with an adjusted R^2 of 0.63), so we are confident in our recommendation that trust is very important to cultivate. Our regression analysis on individual components of trust showed that four of the five components had a very significant effect on intention to purchase, in a regression equation with an adjusted R² of 0.65:



- I trust user comments/reviews from people who have purchased the product (standardized $\beta = 0.143$, p = 0.003).
- I believe user reviews of a product are more beneficial than manufacturer provided information (standardized $\beta = 0.134$, p = 0.005).
- I trust user comments/reviews of a product to be reasonably accurate representations of a product (standardized $\beta = 0.177$, p = 0.000).
- I trust reviews from friends or people I follow on social networking websites (standardized $\beta = 0.119$, p = 0.006).

We also found that consumers trust reviews most from people who have purchased the product. To further reinforce the preceding points, we found that potential consumers trust UGC to be reasonably accurate representations of a product (3.80 on a 5-point scale). Other important findings on the trust dimension were that potential consumers trust reviews from friends and people they follow on social networking sites, and they trust reviews posted by an average user more than that posted by an expert. They do not trust reviews from celebrities they follow on social networking sites. As a result of this finding, for a product which is considered by management to be a good, strong product, purchasers should be strongly encouraged to write detailed quality reviews. Perhaps incentives (such as a discount on future purchases) may provide an additional incentive to do so. Potential consumers also regarded user reviews as being more beneficial than manufacturer provided information (4.07 on a 5-point scale). This finding reinforces the conclusion that UGC is regarded as a very trustworthy source of information. All of the above findings provide guidance to the manager as to who should be encouraged to write reviews on their sites. Management does not control the content of the review authored by a previous buyer of the product or of the average user. They do control the content of their own (manufacturer-provided) information and possibly that of celebrities who might be persuaded to write reviews. But the former is trusted and not the latter. So our recommendation to management to encourage strongly previous purchasers and the average user to write reviews, is predicated on the assumption that these managers have confidence in their products and believe that they will lead to very good reviews without exerting any control over the actual content. The managerial conclusions are clear that management needs to develop and publicize these dimensions of trust in the manner suggested in previous paragraphs.

We also found that the behavior of usually reading UGC had a strong and significant effect on intention to purchase (standardized $\beta = 0.257$, p = 0.000). The review platform where UGC is posted is, for the most part, an anonymous platform where authenticity of the comments based on usage experience is not guaranteed. Although some e-commerce sites (including Amazon) have attempted to provide a 'verified purchase' status, the system can be abused by competitors or users who may be dissatisfied with a company for reasons other than the product or service quality. The UGC posted on websites can be of a false positive nature (positive comments posted by the company assuming the role of an anonymous user) or a negative review posted to undermine the product or service of a competitor. Users posting negative reviews may not choose to do so because of recent cases of litigation against users who prefer to remain anonymous while providing negative reviews. Unless there is protection provided to negative reviewers the reviews may be out of balance with sites only showing positive reviews.

Next, the level of purchase behavior was studied. Respondents classified themselves into four groups based on how frequently they had purchased from an Internet/marketing website in the preceding six months: never (0 times), 1–3 times, 4–7 times, or more than 7 times. We hypothesized that the frequency of purchase behavior would have a significant effect on the four composite variables we had created in this study: hedonic use, utilitarian use, intention to purchase, and trust, and further, that past purchase behavior would be positively associated with each of these. These hypotheses were supported (with one very slight exception in hedonic use in which the mean of the highest level of purchase behavior was 0.1 less than the next highest level). So, the managerial implication is that purchase behavior can be impacted by and has an impact on each of these variables. These findings were reinforced by the ANOVAs done on the component variables as well.

Finally, the effect of authoring reviews was studied. Respondents classified themselves into four groups based on how frequently they had authored a review for an Internet/marketing website: never (0 times), 1-3 times, 4-7 times, or more than 7 times. We hypothesized that the frequency of authoring reviews would have a significant effect on the four composite variables we had created in this study: hedonic use, utilitarian use, intention to purchase, and trust, and further, that past purchase behavior would be positively associated with each of these. These hypotheses were supported, though the hedonic use composite, while showing the expected trend, had an α of 0.065. Therefore, the managerial implication is that the act of authoring reviews can be impacted by, and has an impact on, each of these variables. These findings were reinforced by the ANOVAs done on the component variables as well. This finding again reinforces our earlier recommendation that management strongly encourage previous purchasers and the average user to write reviews. As before, this recommendation is predicated on the assumption that these managers have confidence in their products and believe that they will lead to very good reviews.

UGC has implications for marketers as consumer perceptions mediated by UGC can impact attitudes and purchase intention toward a product. Wang et al. (2012) found that popular e-commerce sites have shown remarkable results can be achieved by harnessing the power of the masses using crowd-sourcing systems. Service, value, and online ambiance should be carefully tailored to meet the desires and expectations of each customer type. UGC is one component that may convince the reticent shopper to complete the purchase by providing information on attributes such as quality, value, and benefits of a product or service. Advertising is changing in the online environment. As a result, consumer behavior is also changing so new advertising models are needed to take advantage of UGC and leverage this in product promotion. Manufacturers should care about user engagement and acknowledge the fact that consumers are interacting with their products. Manufacturers can also use UGC to help learn about content and features that may impact consumption of their product.

Limitations and directions for future research

One limitation of this study is that it analyzed subjects' reported behavior rather than their actual behavior. This strategy may have introduced a source of measurement error that can be eliminated in future studies by monitoring subjects' actual behavior as they interact with UGC by reading or posting reviews. Another limitation of the study pertains to the questionnaire items that asked for feedback on UGC across all products. An example of a utilitarian product (screwdriver) only was presented in the introduction of the survey which

may have introduced a slight bias. As mentioned earlier, the focus of this study was not on the products but on the influence of UGC on purchase intention.

Future research could look at how companies can connect with influencers who can generate sales based on their comments on blogs and e-commerce sites. These influences may have the propensity to impact or change attitude of buyers, as well as change buyers' belief about the product or service to result in a purchase. The ability of influencers or bloggers to monitor social media, get involved in the right conversation, and generate a value-added dialog to create a buzz about a product could also be investigated. Another way to build on this research would be to do a more detailed examination of how UGC can impact demographics such as gender and age, as predictors of purchase intention. Research could also compare effectiveness of UGC with motivation to comply based on UGC. This can be further explored on international e-commerce sites in high- and low-context cultures. According to Johansson (2009), motivation to comply relates to the willingness of the individual to listen to what others say and think. In high context and homogeneous cultures where norms are both enforceable and enforced, the motivation to comply will usually be great. Most people will know what products, features, brands, and stores are 'acceptable', and adhering to the norm will have tangible benefits. Another stream of research could look at which products within utilitarian and hedonic categories are more sensitive to UGC.

Exhibit A: Ouestionnaire

Effects of User-Generated Comments on purchase intention and attitude toward product brand

Impact of User-Generated Comments

The purpose of this study was to investigate your attitude toward UGC of a product and their possible influence on your purchase intentions. The research has been approved by the Institutional Review Board at ********* and the approval code is 15 01403. Participation in this study is voluntary and there are no known risks for the survey. No individual respondent's results will be reported - only aggregated data will be used. Yet, if any part of this study is bothersome to you, you may decline to answer that/those question(s). An example of user comments you may see on Amazon.com website is shown below:





In this survey, there are no right or wrong answers. In this part of the survey, please respond to the statements given in the survey by checking the appropriate response related to the degree of agreement with the statement, ranging from Strongly Disagree to Strongly Agree. Some questions are used only for demographic analysis. For this survey, the terms, 'user comments' and 'reviews' are used interchangeably.

	Strongly Disagree (1)	Disa- gree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
l enjoy reading user comments/reviews of a product (1)	•	•	•	•	•
I feel good purchasing a product that has positive user comments/reviews (2)	•	•	•	•	•
I love shopping online because of user comments/ reviews of a product (3)	•	•	•	•	•
I usually go on the Internet to read user com- ments/reviews of a product (4)	•	•	•	•	•
I believe user reviews of a product are more beneficial than manufacturer provided information (5)	•	•	•	•	•
I usually shop online with an intent to purchase during that session (6)	•	•	•	•	•
I believe user comments/reviews of a product (7)	•	•	•	•	•
I would trust a product review posted by an average user more than a product review posted by an expert (8)	•	•	•	•	•
If the majority of user comments/reviews are neg- ative, I would not purchase the product (9)	•	•	•	•	•
If the majority of user comments/reviews are positive, I would purchase the product (10)	•	•	•	•	•
Information searching on the Internet is fun rather than tedious (11)	•	•	•	•	•
It is convenient to gather information from the Internet (12)	•	•	•	•	•
It is important for me to make a purchase decision based on user comments/reviews of a product (13)	•	•	•	•	•
It is risky to rely on user comments/reviews of a product when making purchase decisions (14)	•	•	•	•	•
It saves time to gather information by using the Internet (15)	•	•	•	•	•
Reading user comments/reviews is a worthwhile use of my time (16)	•	•	•	•	•
Reading user comments/reviews of a product would change my mind about purchasing a product (17)	•	•	•	•	•
Reviews found on company websites influence my purchase decision (18)	•	•	•	•	•
I trust reviews from celebrities I follow on social networking websites (19)	•	•	•	•	•
User comments/reviews have in the past influ- enced my purchase decision (20)	•	•	•	•	•
I trust reviews from friends or people I follow on social networking websites (21)	•	•	•	•	•
I trust reviews from identified experts on social networking websites (22)	•	•	•	•	•
I trust user comments/reviews from people who have purchased the product (23)	•	•	•	•	•
Searching for information on the Internet is a good way to spend time (24)	•	•	•	•	•
Searching for information on the Internet is not obligatory but enjoyable (25)	•	•	•	•	•
The Internet can be a useful tool to compare information about products from different websites (26)	•	•	•	•	•

	Strongly Disagree (1)	Disa- gree (2)	Neither Agree nor Disagree (3)	Agree (4)	Strongly Agree (5)
When shopping online, the availability of high-quality product reviews provided by users is very important to me (27)	•	•	•	•	•
User comments/reviews are likely to influence my future purchase decisions (28)	•	•	•	•	•
When purchasing a laptop, I am more likely to be influenced by a user comment/review if it is obviously written by a female (29)	•	•	•	•	•
When purchasing a laptop, I am more likely to be influenced by a user comment/review if it is obviously written by a male (30)	•	•	•	•	•
When purchasing a laptop, it makes no difference to me if a user comment/review has been writ- ten by a male or female (31)	•	•	•	•	•

Q4 How many times have you purchased from Amazon.com within the last 6 months:

- 0 times (1)
- 1-3 times (2)
- 4-7 times (3)
- More than 7 times (4)

Q5 How many times have you written a review for a product on an online website?

- 0 times (1)
- 1-3 times (2)
- 4–7 times (3)
- More than 7 times (4)

Q4 What is your gender?

- Male (1)
- Female (2)

Q6 What is your approximate age?

Q7 What is your major/intended major at ****?

Q8 Please feel free to add any additional thoughts or comments you have on the topic of user comments or reviews in the box below.

Q9Thank you for responding to this survey! Please check your responses before the final step of submitting the survey. When you are done, please click the blue button below to submit the survey.

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