SOCIAL COMPARISON, SOCIAL PRESENCE, AND ENJOYMENT IN THE ACCEPTANCE OF SOCIAL SHOPPING WEBSITES

Jia Shen
College of Business Administration
Rider University
2083 Lawrenceville Rd., Lawrenceville, NJ, 08648
jiashen@rider.edu

ABSTRACT

With businesses seeking to seize the momentum of social media and social networking, technology-enabled social commerce has emerged to combine the power of online social networking with shopping. This study examines an emerging area in E-commerce, i.e., social commerce. Extending the online consumer behavior typology, this study categorizes online consumer behaviors into three types: transactional, informational, and social. While traditional E-commerce supports the transactional and informational aspects of online shopping, social commerce fulfils the social aspects of shopping, and potentially enhances the informational aspect as well. This research examines the online shopper as a prospective user of an emerging social commerce platform, the social shopping website, which are sites designed specifically to support social interactions while online consumers shop. The study augments the Technology Acceptance Model with constructs that enhance the specificity of the model to the social shopping application of social commerce. The model was empirically tested and supported. The results provide empirical evidence to support the importance of distinguishing the social aspect of shopping from the information and transactional aspects, as well as the potential advantage to using technology to promote social interactions on E-commerce sites. Implications and future research are discussed.

Keywords: Social commerce, social shopping, social comparison, social presence, enjoyment

1. Introduction

Social networking technologies continue to gain popularity under the media spotlight. Seeking to tap into the potentials of such technologies for e-commerce to retain existing customers and attract new ones, businesses are actively exploring new methods to combine the power of social networking with online and offline sales. Social commerce has emerged as the latest innovation in e-commerce by combining online social networking with shopping. The distinctive feature of social commerce is its focus on supporting the social aspect of an online shopping experience. In contrast, traditional e-commerce technologies tend to focus exclusively on improving the efficiency of online shopping, providing features such as product search, product categorization, and personalized recommendations based on previous purchases.

Curty and Zhang conducted a longitudinal study of fifteen social commerce sites, and found social features on these sites as early as the late 1990s, long before social networking technologies become popular [Curty and Zhang, 2011]. Companies such as Proctor & Gamble began enhancing their websites to allow consumers to share their experiences of products with other consumers online, and to create online shopping communities [Vranica, 2008]. The social shopping website emerged as a new e-commerce model, designed specifically as an online social networking community devoted exclusively to online shopping. Social shopping sites such as Kaboodle and ThisNext were developed to enable consumers to share shopping advice and recommendations with likeminded individuals. Another application example included Facebook's 2007 introduction of a feature that allowed a user's purchases on a participating website, such as Overstock.com, to automatically appear as an RSS feed on the user's friends' Facebook pages. This feature was later modified due to privacy concerns [Vara, 2007]. Facebook has since moved to a revised model in which users can choose to opt-in to engage in social commerce activities such as sharing RSS feeds or purchasing recommendations with their friends on Facebook.

This paper investigates the social aspect of social commerce, and proposes a new framework to understand the adoption of social shopping websites. In particular, social factors such as social comparison, social presence, as well as enjoyment are examined to augment the Technology Acceptance Model (TAM) for the specificity of social commerce applications. The model was empirically supported. The rest of the paper is organized as follows. Section 2 distinguishes three types of online consumer behaviors and discusses various social commerce

applications. Section 3 provides the conceptual background of new social factors, and the research model and hypotheses are presented in section 4. Section 5 discusses data collection method and the results are presented in section 6. Section 7 provides discussion and implication, followed by conclusion and contribution in section 8, and limitation and future research in section 9.

2. Social Commerce and Applications

While social commerce applications are emerging rapidly [Wesson, 2010], academic studies of these phenomena are at its early stage with no consensus on what is defined as social commerce [Curty and Zhang, 2011]. In this study, social commerce is defined as a technology-enabled shopping experience where online consumer interactions while shopping provide the main mechanism for conducting social shopping activities. These interactions may result in discovering products, aggregating and sharing product information, and collaboratively making shopping decisions.

Research in the marketing literature suggests that consumers have two distinct types of orientations when visiting Business-to-Consumer (B2C) websites: transactional and social [Mathwick, 2002]. The transactional orientation focuses on completing the shopping tasks, while the social orientation focuses on relationship building. The provision of customer reviews and personalized recommendations (such as those on Amazon.com, for example) has been shown to be a significant feature that improves the online shopping experience [Kumar and Benbasat, 2006]. Similarly, electronic word-of-mouth websites (such as epinion.com) where consumers can read the opinions and experiences of other consumers and provide their own comments and ratings on a wide range of products online, have become popular [Lee and Lee, 2009, Park et al., 2007]. Although these technologies enhance the online shopping experience, the focus of these technologies is primarily on shopping efficiency.

Extending the online consumer behavior typology [Mathwick, 2002], we categorize online consumer behavior into three types: transactional, informational, and social. The transactional behavior focuses on the utilitarian aspect of shopping, and the goal is to complete the shopping task in the most efficient manner. Past research in both the marketing and information systems literature suggest that convenience and effortless shopping have traditionally been among the most important factors for shopping online [Jarvenpaa and Todd, 1997, Koufaris et al., 2001]. The informational behavior focuses on collecting information about products or trends, and the goal is to stay informed about products, which may lead to immediate or future purchase. This behavior is also referred to as goal-directed consumer information processing behavior [Hoffman and Novak, 1996, Wang et al., 2009]. The social behavior focuses on relationship building, which tends to lead to new product discovery and the development of feelings of warmth and satisfaction through the online shopping process.

Table 1 lists the main e-commerce technology in support of the three online shopping behaviors. While traditional e-commerce supports the transactional and informational aspects of online shopping, social commerce applications aim to fulfill the social aspects of shopping, and to potentially enhance the informational aspect as well. The three orientations tend to overlap at different stages of the online shopping process.

Table 1: Online Consumer Behavior Orientation and E-commerce Technology Support

Online Consumer Behavior Orientation	Description	E-commerce Technology Support
Transactional	Complete shopping tasks efficiently	Search, Product Categorization, Shopping Cart, Online payment
Informational	Keep informed about products and trends	Consumer Review, Product Rating, Personalized Recommendations, Opinion Forum, eWOM
Social	Discover products through social networks; and develop feelings of warmth and satisfaction	Social Commerce (such as sharing information about products, comparing finds with others, asking others' opinions, and collaboratively making shopping decisions)

Social commerce applications employ a variety of innovative technologies. We classify current applications into the following three categories:

- Social Shopping Websites
- Add-on applications to existing social networking websites

- Mobile applications that support social retailing

2.1. Social Shopping Websites

Social shopping websites are designed to be online shopping communities. Examples of social shopping websites include Kaboodle.com, ShopStyle.com, ThisNext.com, and Wists.com [Steel, 2007, Tedeschi, 2006]. Social shopping websites offer many unique features to facilitate online social interactions while shopping. For example, users of these sites can create rich profiles of themselves with pictures and personal information, create shopping lists to share with others, post blogs, and set up polls to collect opinions on shopping selections. In addition, the predominant method for product organization on social shopping websites is user-driven, in contrast to the conventional product categorization used by traditional retail websites (e.g., shopping.com). Social shopping websites are not retail websites where consumers can make purchases, although they can provide access to retail sites.

2.2. Add-On Programs

Add-on programs to existing online social networking sites include applications such as Beacon and Stylefeeder [Vara, 2007]. For example, StyleFeeder is a social bookmarking service that allows users to browse the Web and add items they find to their RSS StyleFeeds, which they can then share with friends on social networks such as Facebook or blogs. The technology analyzes what the user adds, creating dynamically updated personalized recommendations as well as an improved shopping search engine. Add-on programs provide some of the same features as the social shopping websites, but appear on existing social networks that are not designed exclusive for shopping.

2.3. Mobile Applications

Mobile applications that support social retailing make up the third category of emerging social commerce applications. Using online social networking applications, short-range communications technologies such as RFID and Bluetooth, and mobile phone technologies, shoppers can share information synchronously or asynchronously online as they shop offline [Zaino, 2008]. For example, in a 2007 retail industry expo, product developers collaborated with a New York designer to demonstrate how dressing rooms equipped with technology-enabled interactive mirrors communicated with a consumer's mobile phone to send videos and images of apparel to her friends and family for recommendations. The technology had the capability to capture the live pictures of the consumer wearing the clothes and also provide video and image recommendations, in addition to details such as pricing and sizes of similar or related items that the person could buy.

Despite tremendous business interest and potentials, academic research in social commerce is just starting to emerge. For examples, Wang and Zhang introduced a framework to understand social commerce from four perspectives: people, business strategies, technology, and information [Wang and Zhang, 2012]. Although technology adoption in general and e-commerce adoption in particular are well studied, the specificity of social commerce clearly calls for further theoretical development. Griffiths and Howard [2008] discuss the importance of understanding the effects of social networking and shopping, suggesting that retailers should aim to create a seamless integration of five themes in their marketing strategy: pricing, online strategy, new media, online transactional barriers and social commerce. To date, however, there does not appear to be research that has tested this notion. Empirical work that examines the user's or consumer's intentions to adopt and use social commerce applications is relatively new (e.g., [Shen and Eder, 2009]). In this study, we aim to develop an understanding of the prospective online shopper, or user, of social shopping websites. The specific focus is on what factors are most likely to be associated with a user's intention to use the social shopping application for shopping activities. Increased understanding of the factors associated with social commerce adoption and use should enable business managers to make better strategic decisions regarding the integration of social networking and online commerce. The findings should also aid system designers in the development of the social features integrated with E-commerce applications.

3. Conceptual Background

This research incorporates a number of well-grounded theories and factors that may affect adoption of social shopping sites. Widely used for examining user acceptance of a new information technology, the Technology Acceptance Model (TAM) has been recognized as one of the most powerful models in the information systems literature [Davis, 1989]. To extend TAM to social shopping websites, three additional theories are adopted to enhance the specificity of the model to account for the social and hedonic nature of social shopping applications, including social comparison theory, social presence theory, and the flow theory.

3.1. Social Comparison

Social comparison is an essential social phenomenon where human beings compare themselves with others for self evaluation and information seeking. While the original theory of social comparison [Festinger, 1954] treated

social comparison as a secondary choice when objective information to evaluate oneself is not available, subsequent research suggests that social comparison is a central feature of human social life [Buunk and Gibbons, 2007]. The theory has also been extended to different types of opinion comparison, including preference assessment, belief assessment, and preference prediction [Suls et al., 2000]. The realm of social comparison theory continues to expand into new areas, including the study of economic behavior [Karlsson et al., 2004].

In this study, *tendency to social comparison online (TSCO)* is defined as the degree to which an individual tends to compare his or her opinions with others, and be influenced by others, particularly when shopping online. Recent studies have found that individuals differ quite a bit in their tendency to compare themselves with others [Buunk and Gibbons, 2007, Gibbons and Buunk, 1999]. A related yet different construct that has been studied in extended TAM research is social influence [Hsu and Lu, 2004], which is defined as the degree to which an individual perceives that important others believe he or she should use the new system. The social influence construct is related to the external pressure the person perceives to use or not to use a system, and the pressure comes from important people in the person's life, such like family, friends, and supervisors at work. Kelman [1961] suggests that social influence operates through three processes: internalization, identification, and compliance. Internalization results from accepting information from expert sources as evidence of reality and integrating it into one's own cognitive system. Identification results from feeling some bond with a likable source and persists for as long as the likable source is still salient. Compliance results from a powerful source that has control over the message recipient. While social influence measures individual's compliance with social norms under pressure, the tendency to social comparison factor operates through the internalization and identification mechanisms. Another important difference is that social influence is significant only in mandatory settings, and not in voluntary context as in the case of online shopping [Song and Kim, 2006]. Lee et al. examined informational social influence, and conducted an empirical study and found its positive moderating effect in consumers' intentions to shop online [Lee et al., 2011]. Few studies have examined technology acceptance from the social comparison perspective, yet the increasing interests in information systems for voluntary use and social interactions warrant such an investigation.

3.2. Social Presence

A central difference between B2C e-commerce and the traditional brick and mortar commerce is that retail websites frequently lack the social appeal or human warmth of a face-to-face shopping experience. Online shopping is primarily geared towards reducing the user's cognitive burden, and is characterized as impersonal, anonymous, and automated compared with traditional face-to-face commerce. Some researchers have indicated that the lack of social presence may impede the growth of B2C e-commerce because of the lack of human interactions and thus trust [Gefen and Straub, 2003].

Previous research has been drawn to the concept of social presence to explore the lack of human warmth online (e.g. [Chen et al., 2005]). Rooted in information richness theory [Daft and Lengel, 1984], social presence (SP) is defined as the extent to which a medium allows a user to experience others as being psychologically present [Fulk et al., 1987]. Bare-bone e-commerce websites that only support the transactional aspect of online shopping are considered information-lean. Research has shown that increased sense of social presence can be achieved through stimulating the imagination of interaction with other humans (e.g., through socially rich text and picture content, personalized greetings, human audio and video, intelligent agents), or by providing means for actual interaction with other humans [Hassanein and Head, 2006]. Studies have shown that technologies such as personalization, recommendation, and consumer reviews can enable the feeling of a place where people interact, thus increasing the social presence of websites [Kumar and Benbasat, 2006]. Increased social presence can in turn affect other factors such as perceived usefulness of the website [Gefen and Straub, 2003].

3.3. Enjoyment

Online shopping is a voluntary and hedonic activity, and users participate because they are intrinsically motivated. The experience often offers entertainment and fun, which users have been found to appreciate [Mathwick, 2002]. Developed in the psychology literature, flow theory describes a state in which people are so involved in an activity that nothing else seems to matter [Csíkszentmihályi, 1990]. Adapted into studies of technology adoption, the concept of perceived enjoyment (PE) has been defined and measured as the extent to which the activity of using a specific system is perceived to be enjoyable in it's own right, aside from any performance consequences resulting from system use [Davis et al., 1992].

It has been suggested that traditional usability approaches are too limited to fully explore user technology adoption and should be extended to encompass enjoyment [Blythe et al., 2003]. In this study we postulated that the experience of being engaged or simply having fun can have an impact on intentions to adopt social shopping sites. Studies have found perceived enjoyment to be a significant antecedents to users' intentions to adopt technologies for activities such as web browsing [Novak et al., 2000], and instant messaging [Lu et al., 2008].

3.4. Perceived Ease of Use & Perceived Usefulness

Adapted from the Theory of Reasoned Action (TRA) model, TAM posits that two beliefs – perceived ease of use (PEOU) and perceived usefulness (PU) are significant antecedents to one's behavioral intention to use a technology. PU is the degree to which a person believes that using a particular system would enhance his or her performance, and PEOU is the degree to which a person believes that using a particular system would be free of effort [Davis, 1989]. Studies have shown the PU directly affects behavioral intentions to use a system (BI), and PEOU affects BI through PU (e.g., [Gefen and Straub, 2003]). Subsequent studies have applied TAM to a wide range of information systems and technologies [McGill and Bax, 2007, Davis and Venkatesh, 1996, Fang et al., 2006], including e-commerce [Gefen and Straub, 2003]. Given that the social shopping website is an emerging e-commerce technology, this research study uses TAM as the base model to investigate the factors associated with the intention to use such websites.

While the parsimony of TAM makes it easy to apply to a variety of situations, the leanness of the model is also considered as one of its key limitations. As Chuttur and others pointed out, the model lacks the ability to help business managers or system designers to understand the factors that contribute to the adoption or abandonment of new IT [Chuttur 2009]. A number of studies have been conducted to examine additional antecedents to IT use, such as positive image [Moore and Benbasat, 1996], cultural dimensions [Straub et al., 1997, Mao and Palvia, 2006], and computer playfulness [Venkatesh, 2000]. Similarly, this research aims to extend the model with additional relevant constructs.

4. Research Model and Hypotheses

Based on social comparison theory, social presence theory, flow theory, and TAM, the research model is proposed with six variables: Tendency to Social Comparison Online (TSCO), Social Presence (SP), Perceived Enjoyment (PE), Perceived Ease of Use (PEOU), Perceived Usefulness (PU), and Behavioral Intention to use social shopping sites (BI). Figure 1 shows the research model.

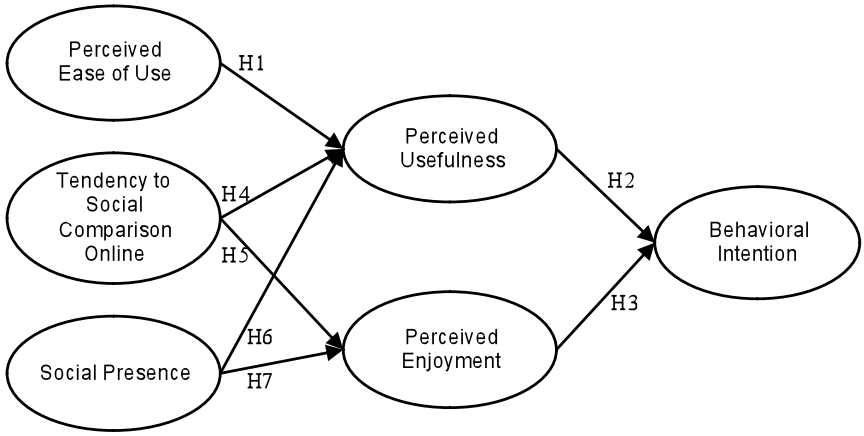


Figure 1: Research Model

According to TAM, IT adoption is affected by prior user-related beliefs. Studies have shown the direct effect of PU on BI, and the indirect effect of PEOU on BI through PU (e.g., [Gefen and Straub, 2003]). Thus the hypothesized relationship among PEOU, PU, and BI are specified in H1-H2:

- H1. Perceived Ease of Use (PEOU) will positively affect PU of social shopping websites.
- H2. Perceived Usefulness (PU) will positively affect BI to use social shopping websites.

Incorporating flow theory and the results of subsequent studies of enjoyment and technology adoption [Novak et al., 2000], it is postulated that the more the users perceive the site to be enjoyable, the more likely they will adopt the site. Thus H3 is:

- H3. Perceived Enjoyment (PE) will positively affect BI to use social shopping websites.

Given the social nature of shopping, tendency to social comparison online is postulated to have an effect on one's intention to use a social shopping website. Empirical studies of online shopping revealed that the provision of recommendations and consumer reviews increase the perceived usefulness of the website [Kumar and Benbasat, 2006]. These findings are consistent with marketing research indicating that consumers are influenced by other consumers in their decision making process, such as information seeking, alternative evaluation, and choice [Duhan et al., 1997, Friedman and Fireworker, 1977]. In technology adoption, Song and Kim [2006] found that the users'

tendency to compare their avatars with users' is an significant antecedent to users' adoption and use of an avatar-based virtual community system. Hennig-Thurau and Walsh [2003] conducted an empirical study of about 2,900 German consumers of eWOM websites, and found that people use such sites to function as "social positioners" which allow them to compare their shopping experience with other shoppers, in addition to obtaining product-related information to reduce the time in information gathering. The social positioning function significantly affected whether users planned to purchase the product (buying behavior) and whether they shared the product information with family and friends (communication behavior). Given the social nature of shopping and the specific features of social shopping websites, it is postulated that people who are more likely to compare and be influenced by others when shopping online are more likely to find the social shopping websites useful (H4), and find the sites enjoyable (H5). Thus the hypotheses are:

- H4. Tendency to Social Comparison Online (TSCO) will positively affect PU of social shopping websites.
- H5. Tendency to Social Comparison Online (TSCO) will positively affect PE of social shopping websites.

Finally, based on studies of social presence and the adoption of e-commerce systems [Suh and Han, 2002, Gefen and Straub, 2003], it is hypothesized that the stronger the social presence of the shopping site, the more useful and enjoyable users will perceive it to be. Thus:

- H6. Social Presence (SP) will positively affect PU of social shopping websites.
- H7. Social Presence (SP) will positively affect PE of social shopping websites.

5. Data Collection

Data were collected through a survey conducted between Fall 2008 and Spring 2010 (F08, S09, F09, S10). The survey was given to undergraduate business students at a university in the northeastern region of United States. The participating students included freshmen enrolled in Introduction to Management Information Systems (MIS) classes, junior-level Electronic Commerce classes, and senior-level MIS classes.

Kaboodle.com was chosen in this study for subjects to explore various shopping site features. As discussed earlier, Kaboodle represents an important type of social commerce applications, i.e., social shopping websites. Kaboodle was selected because it was the leading social shopping site at the time of the research, with about 2.5 million visitors each month as of June 2009 [Kasteler, 2009] and presently over 14 million monthly visitors as of February 2012 (www.kaboodle.com/zm.about). The website offers a number of features to support social interactions while shopping online. For example, the user can select the "Join Now" function to create a rich personal profile including pictures, blogs, shopping lists, and style boards. The user can also take a compatibility test and find his or her "shopping soul mate" with similar shopping tastes. The "Community" feature allows users to create polls to gather other users' feedback, see profiles of other users, and add them as friends. The "Features Kaboodlers" function further promotes a sense of an online shopping community by featuring selected users on the home page, with links to their rich personal profiles on the site. Figure 2 shows the Kaboodle homepage as of August 2010, at the time of the study.

In this study, subjects were asked to assume that they have some extra money, and they want to spend it by buying something online for themselves. They were instructed to explore the various features on the Kaboodle site including both traditional e-commerce functions, such as browsing by brands and searching, and features unique to social shopping websites such as shopping soul mates and compatibility tests, community, and featured shoppers. Subjects were then asked to write up and submit a short essay reflecting on the features provided on the website. The precise purpose of the study and the research model were neither discussed nor alluded to. After completing the assignment, students were given the URL to participate in the online survey. The survey was available online for one week. Students provided their names at the end of the survey for the sole purpose of obtaining extra credits, which was an incentive for survey participation. Students' names were deleted from the survey database as soon as extra credits were awarded.

In constructing the questionnaire, the Perceived Ease of Use, Perceived Usefulness, and Behavioral Intentions items were adapted from Davis [Davis, 1989]. Items for the Tendency to Social Comparison Online scale were adapted from Gibbons and Buunk [1999] study, and were modified for the online shopping context. While some previous studies have treated Perceived Enjoyment as a multi-dimensional concept, the two-item scale of PE is considered to be most robust and widely used, and thus adopted in our study [Novak et al., 2000]. The Social Presence items were adapted from Gefen and Straub [2003]. All items were measured on a seven-point scale ranging from strongly disagree (1) to strongly agree (7). The questionnaire also collected user information such as demographics, current use of online shopping and social networking websites, previous knowledge of social shopping sites, as well as open-ended questions.

Appendix A lists the main constructs measured in the questionnaire.

Figure 2: Kaboodle Homepage

6. Data Analysis and Results

The data were analyzed using Structural Equation Modeling (SEM) and SmartPLS software [Ringle et al., 2005]. This approach allows for simultaneous analysis of the measurement model (factors) and the structural model (path analysis), and is widely used. The sections below provide the results of respondents' demographics, measurement model, and structural model.

6.1. Demographic Statistics

Among a total of 431 students, 230 responses were collected, resulting in a response rate of 53.4%. The response rate reflects the number of students who chose the extra credit assignment. Among the survey participants, about half were male (n= 117) and half were female (n=113). The majority of the respondents were between 20-24 years old (n= 135, 58.7%). The respondents reported very experienced in using a PC (Mean=6.03, SD=1.14), and very experienced in using the Internet (Mean=6.53, SD=1.09).

When asked about their online shopping frequency, the majority (72.6%) reported that they shop online from time to time (every few months), followed by 21.3% who shop online regularly (every month), and 6.1% who had never shopped online before. In terms of their use of social networking sites, the top site that subjects have an account and use regularly is Facebook. Table 2 lists respondents' current use of social networking sites.

Table 2: User of Social Networking Sites

Social Networking Sites	No. of Subjects Use the Site Daily or Weekly	Percent
Facebook	201	87.4%
MySpace	23	10.0%
LinkedIn	6	2.6%

Respondents were also asked about their use of the social shopping site Kaboodle before the study. The great majority had either never heard of Kaboodle before (85.2%), or had heard about Kaboodle but did not have a user

account (12.6%). This finding reinforces the statistics [Kasteler, 2009] about monthly visits to traditional e-commerce site such as Amazon (about 51 million) vs. social shopping site such like Kaboodle (about 2.5 million), and suggests that social shopping sites are an emerging field that needs further exploration.

6.2. The Measurement Model and Means of the Constructs

The reliability of the constructs is reported in Table 3. As shown, the composite reliabilities of the different measures all exceed the recommended 0.70 level as well as the Chronbach's Alpha. The results indicate that the measures are robust in terms of their internal consistency reliability.

Table 3: PLS Results of the Measurement Model

	Composite Reliability	Cronbach's Alpha
Behavioral Intention	0.93	0.89
Perceived Enjoyment	0.94	0.87
Perceived Ease of Use	0.95	0.93
Perceived Usefulness	0.95	0.90
Social Presence	0.93	0.90
Tendency to Social Comparison Online	0.83	0.70

Table 4 lists the mean and standard deviation for each of the main constructs in the model. As shown, overall subjects reported positive attitude towards the social shopping site, and found it easy to use, useful, enjoyable, and are likely to use it in their shopping tasks in the future.

Table 4: Means and Standard Deviations of the Constructs

Construct	N	Mean	Standard Deviation (SD)
Behavioral Intention	230	4.52	1.51
Perceived Enjoyment	230	5.10	1.39
Perceived Ease of Use	230	5.10	1.27
Perceived Usefulness	230	4.97	1.47
Tendency to Social Comparison Online	230	4.37	1.31
Social Presence	230	5.05	1.18

Convergent validity was examined using the factor loadings and cross loadings of the items to all the constructs. All items loaded on their respective constructs from a lower bound of .72 to a higher bound of .96, and they loaded more highly on their respective constructs than others. In addition, all of the items' loadings onto their respective constructs are significant at the .001 level, as indicated by the T-statistics of the outer model loadings ranging from 3.62 to 34.77. The result confirms the convergent validity of the indicators as representing distinct latent constructs. Table 5 provides factors loadings of all the items.

Table 5: Convergent Validity and Factor Loadings (bolded)

	Behavioral Intention	Perceived Enjoyment	Perceived Ease of Use	Perceived Usefulness	Tendency to SC Online	Social Presence
BI1	**0.92**	0.63	0.56	0.70	0.49	0.45
BI2	**0.89**	0.54	0.46	0.62	0.41	0.35
BI3	**0.91**	0.65	0.59	0.65	0.50	0.50
PE1	0.69	**0.95**	0.62	0.77	0.40	0.63
PE2	0.57	**0.94**	0.63	0.66	0.42	0.62
PEOU1	0.54	0.58	**0.93**	0.51	0.45	0.55
PEOU2	0.55	0.61	**0.87**	0.51	0.41	0.51
PEOU3	0.50	0.56	**0.93**	0.45	0.44	0.54
PEOU4	0.54	0.63	**0.89**	0.59	0.42	0.58
PU1	0.68	0.74	0.56	**0.95**	0.43	0.50
PU2	0.71	0.71	0.53	**0.96**	0.38	0.48
TSCO1	0.40	0.24	0.34	0.26	**0.79**	0.21
TSCO2	0.41	0.31	0.40	0.36	**0.84**	0.25
TSCO3	0.40	0.43	0.36	0.35	**0.72**	0.45
SP1	0.39	0.58	0.56	0.44	0.28	**0.87**
SP2	0.38	0.59	0.54	0.45	0.42	**0.85**
SP3	0.44	0.55	0.51	0.41	0.38	**0.89**
SP4	0.47	0.60	0.53	0.49	0.36	**0.90**

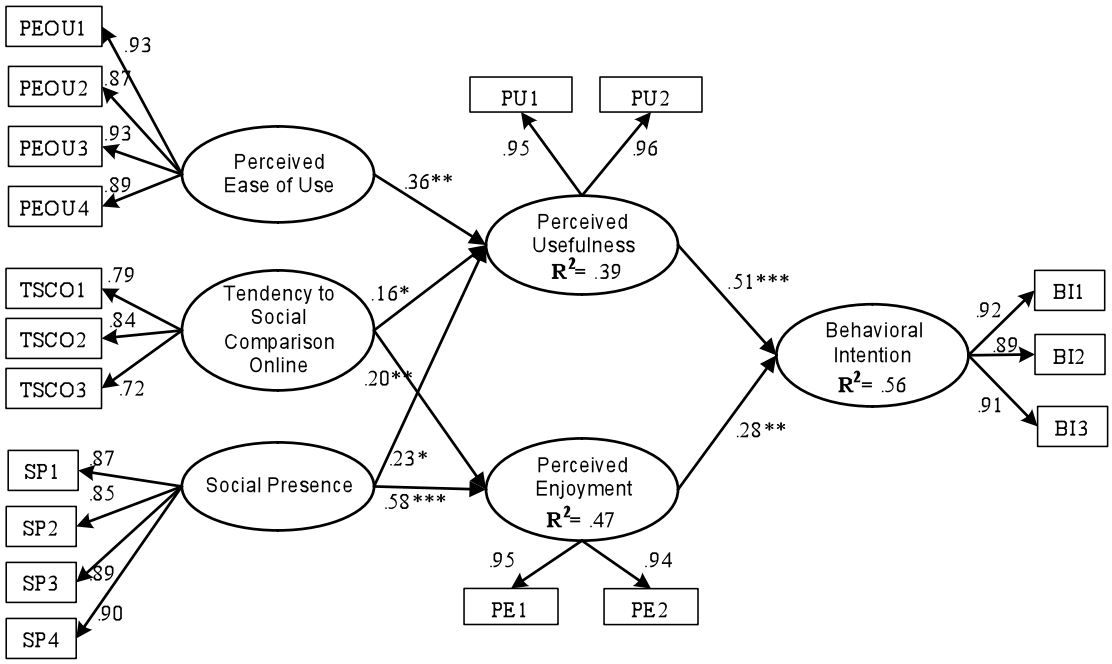
Table 6 reports the discriminant validity of the measurement model. The elements in the matrix diagonals represent the square roots of the AVEs, and they are all greater than the off-diagonal elements in the corresponding rows and columns. This supports the discriminant validity of the scales.

Table 6: Discriminant Validity of Measurement Model

	BI	PEOU	PE	PU	SP	TSCO
BI	**0.91**					
Perceived Enjoyment (PE)	0.67	**0.94**				
PEOU	0.59	0.66	**0.91**			
PU	0.73	0.76	0.57	**0.95**		
Social Presence (SP)	0.48	0.66	0.61	0.51	**0.88**	
Tendency to Social Comparison Online (TSCO)	0.52	0.44	0.47	0.42	0.41	**0.79**

6.3. Structural Model and Hypothesis Testing

Figure 3 shows the results of the structural model. The test yields results of path coefficients (β), which indicates the positive and negative relationships between the constructs, the strength of the relationships, and their statistical significance. The test also yields squared multiple correlations (R^2) values, which indicate the amount of variance of the dependent construct that can be explained by the independent constructs.



Note: Path Coefficients
*** path is significant at the.001 level; ** path is significant at the.01 level; * path is significant at the.05 level

Figure 3: Research Model Results

Overall the model accounts for 56% of variance in behavioral intention, 39% in PU, and 47% in PE. PEOU is an antecedent to PU (β= .36, p<.01). PU has a strong effect on BI (β= .51, p<.001). PE also affects BI significantly (β=.28, p<.01). TSCO has an effect on PE (β= .20, p<.01) and on PU (β= .16, p<.05). SP has a strong effect on PE (β= .58, p<.001), and a modest one on PU (β= .23, p<.05).

Thus the hypotheses testing results are:

H1. Perceived Ease of Use (PEOU) will positively affect PU of social shopping websites.	Supported
H2. Perceived Usefulness (PU) will positively affect BI to use social shopping websites.	Supported
H3. Perceived Enjoyment (PE) will positively affect BI to use social shopping websites.	Supported
H4. Tendency to Social Comparison Online (TSCO) will positively affect PU of social shopping websites.	Supported
H5. Tendency to Social Comparison Online (TSCO) will positively affect PE of social shopping websites.	Supported
H6. Social Presence (SP) will positively affect PU of social shopping websites.	Supported
H7. Social Presence (SP) will positively affect PE of social shopping websites.	Supported

7. Discussion and Implication

The results suggest that features promoting the sense of personal presence and facilitating comparisons and sharing during the online shopping experience are critical to the adoption of such technology. In the open-ended questions, students reported that one of the main reasons they would use these websites for future shopping activities is because of the sense that they are shopping with others online: "I would use Kaboodle over other online shopping sites because it has a more personable feel and the recommendations for other products come from people instead of computer generated outputs." "What I liked best was the ability to meet people. It allowed for a more personal connection and a more trusted opinion." "Amazon is more of an individual experience while shopping online. Kaboodle, (as a) social shopping website makes shopping a little bit more fun." These findings reinforce the importance of supporting the social aspects of shopping in e-commerce applications. While current e-commerce technology tend to focus on supporting the transactional and informational aspects of shopping, emerging technologies that provide specific support for social interactions among shoppers and the sense of an online community are likely to be embraced by online shoppers.

The social features of the website stood out not only in making online shopping more enjoyable, but also serving additional purposes such as making new discoveries of products online. Given the significant effect of social comparison on perceived usefulness and enjoyment, features that promote easy sharing and comparing of shopping ideas and experiences are likely to be important to the adoption and use of such sites. "I like the People function because I found several people that had the same style as me. I could see what they bought, where, and for how much. Their comments helped me decide whether or not I wanted to buy it for myself." "I find the people functions of Kaboodle the most useful. The shopping soul-mates and compatibility test really helped me discover new gift ideas and it was neat to see other people's profile lists and similar tastes that they had to me." "I would (use the website in the future) because it would allow me to see what people with shopping habits similar to mine like and purchase, and because it could help me decide on gifts and purchases in the future." These social features stood out even more when students were asked to compare their experiences of using social shopping sites versus traditional sites. Some commented that "other sites such as BlueFly.com and Overstock.com allow you to narrow your search according to category, price range, and gender, but Kaboodle.com made searching more enjoyable." This also reinforces the relationship between social interactions and the sense of enjoyment in online shopping activities as empirically tested in our research.

When asked about concerns that might prevent them from using the social shopping website in the future, some brought up common E-commerce issues such as site navigation, security, and the lack of physical examination of products before purchasing. Given the rich personal profiles and information users are expected to share on social shopping sites, participants reported more privacy concerns than on traditional E-commerce sites. For example, "Some concerns I may have could possibly be the fact of creating a profile with a picture of myself on it. I would rather just shop." "I am not able to limit what others see on my profile." Related to the social characteristic of the website, another key issue that was pointed out was the loosely defined shopping community composed of otherwise unknown online shoppers. "For me, shopping has always been a social activity. I go with my family or my friends to get their input on certain items. I found it difficult to trust the opinions of the other online shoppers at Kaboodle.com simply because I did not know them." "The (shopping) community and I have divergent tastes and interests". These were caused partly due to the fact that social shopping sites were separate from popular social networking sites, resulting in a shopping community of weak ties (e.g., strangers sharing shopping interests) rather than strong ties (e.g., trusted family and friends). "I like the idea of other people's input, but my friends are not on the website to give me their ideas." These suggests that there may be individual differences in terms of the level of trust with the information provided by other online shoppers, and the strength of the strong vs. weak social relationships of the shopping community may have an impact too. While the social aspect of the site was generally found to be a positive attribute, these comments suggest additional research is necessary to better understand the potential value of social shopping websites in the future.

The findings of the study provide practical implications for the strategic investment and the design of social shopping sites. While our study is exploratory in nature, as it examined a relatively narrow sample population of college students, it provides evidence that the attributes unique to social shopping sites affect user acceptance and use of these sites for online shopping. Within this population, our research model reveals that in addition to ease of use and usefulness, social shopping sites will most likely be used when they (1) enable users to easily compare their shopping experiences and opinions with others, (2) foster a sense of community, and (3) are designed to make the entire process feel enjoyable.

8. Conclusion and Contribution

This study examined factors associated with a consumer's intention to use a social shopping website. A research model with six factors was proposed and analyzed. Using PLS, the results reveal that individual user's tendency to social comparison in online shopping affected how much they enjoyed using the website, and how useful they felt about the website. Social presence conveyed through the website affected PE, and PU. Enjoyment perceived by the users affected BI, suggesting the importance of engaging users and providing an enjoyable experience in designing such website. The results also supported the causal path from PEOU to PU, and from PU to BI, as suggested in the TAM. The responses in the open-ended questions reinforce these findings.

This research contributes to existing information systems theory by extending the Technology Acceptance Model with factors extracted from social comparison theory, social presence theory, and flow theory. First, three new factors: tendency to social comparison, social engagement, and perceived enjoyment were all found to be significant antecedents to intention to adoption, in addition to perceived ease of use and perceived usefulness. Second, the tendency to social comparison scale was adapted and empirically tested as reliable. The scale measured items such as talking with other online shoppers about mutual opinions and experiences, learning about what other online shoppers think, and finding online product reviews helpful. All of the hypotheses were supported. Finally,

our results extend prior research on user acceptance of technology by linking key social variables from the social science and management information systems literature to the well-known TAM variables, and empirically validating the relationship in the context of social commerce applications.

This study is among the first to propose a framework of online user behaviors associated with social commerce and the technologies that support them (see Table 1). The results provide empirical confirmation to support the importance of recognizing the social aspect of shopping in addition to the information and transactional aspects, as well as the potential advantage to using technology to promote social interactions on e-commerce sites. The overall favorable attitudes towards adoption of such sites suggest that users embrace the idea of websites that go beyond consumer reviews and enable them to enjoy the social aspects of shopping online. For business practitioners designing and/or managing online shopping websites, these findings indicate that there is a noteworthy difference between the value of customer-generated reviews alone and the value of integrating these reviews with the powerful capabilities of social networking.

9. Limitation and Future Research

A limitation of this study may be the use of students as subjects; however, the value of students as surrogates in TAM studies has been confirmed by previous meta-analysis of TAM [King and He, 2006]. Additionally, popular press claims suggest that this user group is among the primary target users of these kinds of sites, however, further research that examines perceptions across multiple age-groups and professions is suggested to confirm and broaden our results.

This study focused specifically on social shopping websites. Future research should examine various forms of social commerce applications in order to broaden our understanding of the rapid growth and potentials for social commerce, including mobile applications and virtual reality systems [Curty and Zhang, 2011].

One issue users brought up that may prevent them from adopting the social shopping sites was the lack of strongly associated or familiar social networks on these otherwise independent social shopping sites. Future studies can be conducted to examine, for example, what the difference is, if any, in the strength of the social ties that affect users' adoption of such shopping sites, such as family and friends versus other online shoppers. While social networking websites such as Facebook are rapidly integrating social commerce add-on applications, what is the perceived added value of social shopping websites versus other sites that add social shopping features as an add-on, without being the primary focus of the site? Of the three types of social commerce applications summarized previously, i.e., social shopping websites, add-on applications to existing social networking sites, and mobile applications that support social retailing, future research should clarify the specific attributes and value gained by each in order to better explain the optimal platform for user adoption.

Another future research area is the type of online shopping tasks that may be most suitable for social shopping websites. Research has examined whether users prefer social shopping sites over traditional e-commerce sites for certain kinds shopping activities, such as browsing vs. searching [Hong et al., 2004]. In this study, participants pointed out that while social shopping can be fun and helpful in discoing new products, it can be more time consuming too. For example, "If I don't have a lot of time to look around online then this may not be the ideal way to go." Given the characteristics of using social shopping sites in product discovery, future research on shopping tasks on such sites can provide retailers with meaningful information about how best to market and sell their products or services online. An additional consideration is whether the benefits of social shopping sites could be maximized when users are shopping for particular types of products, such as quality vs. preference products [Lee and Lee, 2009]. That is, would users prefer sites that are more general in nature or more product-specific, i.e., when the product is more relevant to them [Park et al., 2007]? Complementary empirical investigations in these areas may provide valuable information about user perceptions that could improve the potential of social shopping technology investments by online retailers.

As an emerging area in e-commerce, additional research that continues to address the potential power and limitations associated with integrating social networking features with online shopping is timely and important.

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Appendix A

Items for the Latent Constructs

Construct	**Items**	
Perceived Ease of Use (PEOU)	PEOU1	Kaboodle is easy to use.
	PEOU2	My interaction with Kaboodle is clear and understandable.
	PEOU3	Learning to use Kaboodle is easy.
	PEOU4	It is easy to get Kaboodle to do what I want it to do.
Perceived Usefulness (PU)	PU1	Kaboodle enables me to discover new products and get shopping idea more quickly.
	PU2	Kaboodle increases my productivity in discovering products and getting shopping ideas.
Perceived Enjoyment (PE)	PE1	I had fun using Kaboodle.
	PE2	I found my visit to the website interesting.
Behavioral Intention (BI)	BI1	I am very likely to use Kaboodle in the future to discover new products.
	BI2	I am likely to actually purchase products I found on Kaboodle.
	BI3	I will recommend Kaboodle to others.
Social Presence (SP)	SP1	There is a sense of human contact in the website.
	SP2	There is a sense of sociability in the website.
	SP3	There is a sense of human warmth in the website.
	SP4	There is a sense of human sensitivity in the website.
Tendency to Social Comparison Online (TSCO)	TSCO1	I often like to talk with other online shoppers about mutual opinions and experiences.
	TSCO2	I often try to find out what other online shoppers think who face similar problems as I face.
	TSCO3	I find online product reviews helpful.

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