Social Media Peer Communication and Impacts on Purchase Intentions: A Consumer Socialization Framework

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Abstract

Consumer socialization through peer communication using social media websites has become an important marketing issue through the development and increasing popularity of social media. Guided by a socialization framework, this article investigates peer communication through social media websites; individual-level tie strength and group-level identification with the peer group as antecedents; and product attitudes and purchase decisions as outcomes. Survey data from 292 participants who engaged in peer communications about products through social media confirm that the two antecedents have positive influences on peer communication outcomes. Online consumer socialization through peer communication also affects purchasing decisions in two ways: directly (conformity with peers) and indirectly by reinforcing product involvement. In addition, consumer's need for uniqueness has a moderating effect on the influence of peer communication on product attitudes. These findings have significant theoretical and managerial implications.
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Keywords: Peer communication; Online socialization; Social media; Product attitude; Purchase intention

Introduction

The Internet and especially social media have changed how consumers and marketers communicate (Hennig-Thurau et al. 2004; Nambisan and Baron 2007). Social media websites attract millions of users, many of whom integrate the sites into their daily lives and business practices (Lueg et al. 2006; Muratore 2008; Okazaki 2009). Moreover, social media allow users to connect with peers by adding them to networks of friends, which facilitates communication, particularly among peer groups (Ahuja and Galvin 2003; Zhang and Daugherty 2009). The resulting new, unconventional channel for consumer socialization through the Internet is changing consumer behavior (Lueg et al. 2006; Muratore 2008; Okazaki 2009).

The change prompted by the emergence of social media also applies to the consumer decision making process and marketing communications (Hennig-Thurau et al. 2011; Shankar and Malthouse 2007). For example, social media websites provide a public forum that gives individual consumers their own voices, as well as access to product information that facilitates their purchase decisions (Kozinets et al. 2010). User-generated online product reviews have proliferated through social media, with great impact on marketing (e.g., Hennig-Thurau et al. 2004; Trusov, Bodapati, and Bucklin 2010). Such communal word-of-mouth (WOM) not only increases marketing messages but also alters consumer information processing (Casteleyn, Mottart, and Rutten 2009; Kozinets et al. 2010). In particular, peer communication through social media, a new form of consumer socialization, has profound impacts on consumer decision making and thus marketing strategies (Casteleyn, Mottart, and Rutten 2009; Okazaki 2009).

Consumer socialization refers to the process by which individual consumers learn skills, knowledge, and attitudes from others through communication, which then assist them in

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functioning as consumers in the marketplace (Ward 1974). Conventional socialization occurs among consumers who know one another, such as parents and children, colleagues, relatives, friends, and neighbors (e.g., Kim, Lee, and Tomiuk 2009; Moschis and Moore 1984; Mukhopadhyay and Yeung 2010). However, online social media enable socialization through virtual communities among both people who know one another and strangers (Lueg et al. 2006; Muratore 2008; Okazaki 2009). Although peers are widely acknowledged as key forces affecting consumer socialization (e.g., Moschis and Churchill 1978), peer communication in online socialization processes has received limited research attention (Ahuja and Galvin 2003). Particularly, the influence of peer communication through social media websites on consumers' purchase decisions rarely has been investigated (Iyengar, Han, and Gupta 2009; Trusov, Bodapati, and Bucklin 2010). To fill this gap, we investigate consumption-related peer communication through social media and its impacts on consumers' product attitudes and purchase intentions, from a consumer socialization perspective.

Peer communication initially was defined as overt peer interactions among adolescents, focused on goods and services (Moschis and Churchill 1978). In social media, such peer communication entails interactions about products/services among individual consumers through computer-aided social networks (Dhar and Chang 2009), also referred to as virtual communities of consumption (Kozinets 1999). We use the term "peers" to capture "the richness of this interpersonal communication construct" in an online context (Lueg and Finney 2007, p 29). Thus our focus is on how an individual becomes socialized through positive interactions on a social media website to use some product/service. Hereafter, we refer simply to peer communication, instead of consumption-related peer communication on social media.

By investigating the influence of peer communication on consumer behavior, this research contributes to existing literature in three ways. First, the results can help scholars and interactive marketing practitioners understand the role of social media for consumer behavior and marketing. Second, we investigate the influence of preselected antecedents of peer communication and outcomes of the consumer socialization process, which can expand the application scope of socialization theory to an online setting and provide theoretical implications for scholars. Third, by testing the moderating effect of consumer characteristics, such as need for uniqueness, we provide insights into how consumer characteristics might strengthen or weaken the influence of peer communication on consumer behavior through social media.

Theoretical Background

Consumer Socialization through Social Media

Consumer socialization theory predicts that communication among consumers affects their cognitive, affective, and behavioral attitudes (Ward 1974). Through socialization, consumers learn consumption-related skills, knowledge, and attitudes in the marketplace. The widely applied socialization framework delineates consumer learning processes and how people perform their roles as consumers in society (e.g., Churchill and Moschis 1979; De Gregorio and Sung 2010; Moschis and Churchill 1978).

Consumer socialization theory also offers two theoretical perspectives for understanding and predicting consumer-to-consumer information transmission: a cognitive development model and social learning theory (Moschis and Churchill 1978). The former, focused on cognitive/psychological processes regards socialization as a function of qualitative stages in cognitive development which occur between infancy and adulthood (Kim, Lee, and Tomiuk 2009). The latter instead emphasizes external, environmental sources of learning, or "socialization agents" (peers), which transmit norms, attitudes, motivations, and behaviors to learners (Köhler et al. 2011; Moschis and Moore 1984; Shim 1996). This perspective has been adopted to explain consumer socialization processes among adult populations, particularly among non-family members (e.g., Ahuja and Galvin 2003; De Gregorio and Sung 2010; Taylor, Lewin, and Strutton 2011). For example, De Gregorio and Sung (2010) find that adult consumers' placement-related attitudes and behaviors always are subject to the influence of circles of friends and acquaintances; they also show that peer communication is the strongest predictor of product placement attitudes and behaviors.

Social media, especially social network sites, provide a virtual space for people to communicate through the Internet, which also might be an important agent of consumer socialization (Köhler et al. 2011; Lueg and Finney 2007; Lueg et al. 2006; Muratore 2008; Zhang and Daugherty 2009). Social media provide three conditions that encourage consumer socialization among peers online. First, blogs, instant messaging, and social networking sites all provide communication tools that make the socialization process easy and convenient (Muratore 2008). For example, in virtual communities Ahuja and Galvin (2003) find that new members can be socialized easily into virtual groups through electronic communication and quickly learn task-related knowledge and skills through their interactions with other members. Second, increasing numbers of consumers visit social media websites to communicate with others and find information to help them make various consumption-related decisions (Lueg et al. 2006). Third, social media facilitate education and information because they feature multitudes of friends or peers who act as socialization agents and provide vast product information and evaluations quickly (Gershoff and Johar 2006; Taylor, Lewin, and Strutton 2011). Drawing on the consumer socialization framework, Taylor, Lewin, and Strutton (2011) find that online consumers' attitudes toward social network advertising depend greatly on socialization factors (i.e., peers). Lueg and Finney (2007) further reveal that peer communications online can influence consumers so strongly that they convert others into Internet shoppers. They suggest retailers should encourage such communication by setting up tell-a-friend functions on websites.

On the basis of socialization theory and this previous research, we thus establish a model of consumer socialization through social media to explain consumer social learning processes through peer communication and the outcomes of these

processes (Fig. 1). The main elements of the model consist of antecedents, socialization agents, socialization processes, and outcomes (De Gregorio and Sung 2010; Moschis and Churchill 1978).

Socialization Agent: Peers

Interactions with peers are fundamental human acts, arising from psycho-physiological and sociological need gratification (Ward 1974). Consumer socialization literature indicates that peers are the primary socialization agents, beyond family members (Köhler et al. 2011; Moschis and Churchill 1978; Shim 1996). Consumers tend to interact with peers about consumption matters, which greatly influence their attitudes toward products and services (Churchill and Moschis 1979; Mukhopadhyay and Yeung 2010). The influence of reference group peers on consumer behavior also has been well documented (e.g., Bearden and Rose 1990). Previous research consistently has shown that peer communication has a strong impact on attitudes toward advertising (De Gregorio and Sung 2010), shopping orientations (Lueg et al. 2006; Mangleburg, Doney, and Bristol 2004), and consumer decision-making (Shim 1996; Smith, Menon, and Sivakumar 2005). For example, more frequent communication with peers about consumption matters leads to stronger social consumption motivations (Moschis and Moore 1984; Shim 1996). Agent–learner communication patterns, such as the level of interpersonal communication, also affect various consumer behaviors (e.g., De Gregorio and Sung 2010). In line with socialization theory, we argue that peers act as socialization agents through social media and that newcomers are influenced by peers through communication, as a result of a social learning process.

Peer Communication as a Social Learning Process

Socialization theory suggests that a consumer develops consumption-related attitudes and behaviors by learning from socialization agents, through interactions with them (Churchill and Moschis 1979; Lueg and Finney 2007). Consumers learn values, attitudes, and skills by observing others or various media, including social media. The process can take three forms: modeling, reinforcement, or social interaction. Each represents a different mechanism by which the individual is socialized to adopt particular behaviors or intentions (Moschis and Churchill 1978). In the modeling process, a mechanism of imitating or mimicking the socialization agent exists because the agent's behavior appears meaningful or desirable to the learner (Moschis and Churchill 1978). A reinforcement process implies that the learner is motivated to adopt (or not) some behaviors or intentions because of a reward (or punishment) offered by the socialization agent. This reward reinforcement can be delivered via written communication and social media. Finally, the social interaction mechanism involves interactions with socialization agents in social contexts, which may combine modeling and reinforcement (Moschis and Churchill 1978).

In a social media setting, the consumer learns attitudes and purchase behaviors through written messages that peers send (i.e., peer communication). Previous research indicates that learning processes through social media involve modeling, reinforcement, and social interaction mechanisms simultaneously (e.g., Lueg and Finney 2007). Peers' ownership of a certain product or service constitutes a modeling process; to be like peers, the consumer can buy the same brand or avoid other brands (Lueg and Finney 2007). The potential for peer pressure also motivates the focal consumer to like or purchase the product, which can prompt rewards (e.g., more intimate relationships)

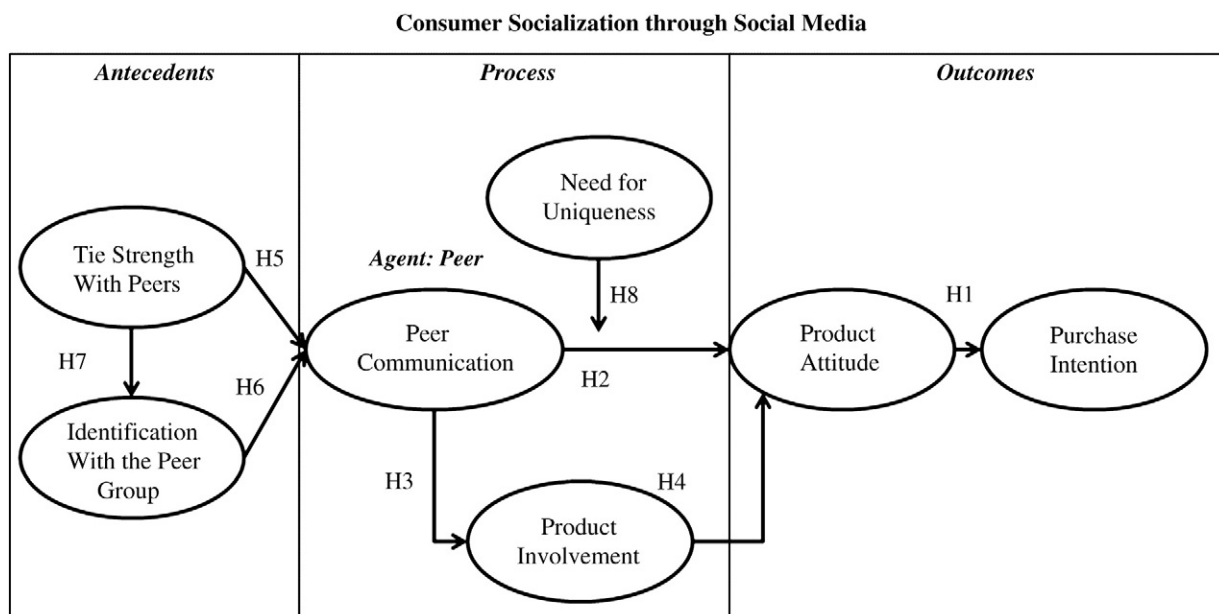**Consumer Socialization through Social Media**

Fig. 1. Consumer socialization framework through social media.

from peers, whereas a lack of purchase can lead to punishment (e.g., exclusion from the group). For this learning process, peers exert influences in written messages, such as positive and negative reviews, comments, suggestions, discussions, or experiences. In summary, in the course of the ongoing peer communication process, a consumer becomes socialized to adopt some product that is new to him or her; peers (socialization agents) also provide models to be matched, rewards to be pursued, and punishment to be avoided.

Consumer Socialization Outcomes: Involvement, Attitude, and Purchase Intention

Peer communication is associated with learning about consumption, such as brand preferences, involvement, or purchase intentions. Consumer behaviors or attitudes tend to result from learning acquired through interactions between the consumer and socialization agents. Involvement, a psychological construct that occurs during a buyer's decision-making process, refers to the perceived relevance of an object, based on the consumer's needs, values, or interests (Zaichkowsky 1985). Consumer involvement with products motivates reactions to marketing and advertising stimuli, such that high involvement consumers are more interested in and more likely to purchase a product (Karmarkar and Tormala 2010; Kim, Haley, and Koo 2009).

Interpersonal influence research also identifies two forms of peer influence: normative and informational (Bearden, Netemeyer, and Teel 1989). We believe they intertwine with peer communication and produce different outcomes. *Normative* influences push people who choose to be affiliated to some social group to conform with group norms and modify their attitudes and behaviors based on peers' expectations (Bearden, Netemeyer, and Teel 1989). Conformance thus emerges in social media and other online communities (e.g., De Bruyn and Lilien 2008; Iyengar, Han, and Gupta 2009; Trusov, Bodapati, and Bucklin 2010). Members of a social networking group face conformity pressures when they make purchase decisions. *Informational* influences instead drive people to learn about some product/service by seeking information from peers. They might search for information from knowledgeable peers or learn by observing others' behavior. Informational influences thus affect consumer decision processes and product evaluations. Social media provide a new channel to acquire product information through peer communication, from many peers or third parties (Kozinets 1999) at a very low or no cost.

In turn, we propose that through peer communication, socialization agents influence newcomers both directly and indirectly. The direct influence stems from the normative influence manifested by conformity with peers (agents); the indirect influence moves from the informational influence through product involvement. When newcomers face normative pressures, they conform with group norms by exhibiting like or dislike for some product or services (Trusov, Bodapati, and Bucklin 2010). When newcomers are under an informational influence, they instead rely on what they have learned or observed from peers (agents) to determine their product involvement, which ultimately may affect their attitudes toward the product or purchase decisions

(Lord, Lee, and Choong 2001; Lueg et al. 2006). With more information obtained from agents, newcomers become more interested in a product, as well as more eager to learn about it (Franke, Keinz, and Steger 2009). High involvement newcomers thus are more likely to show positive attitudes toward the product (Kim, Haley, and Koo 2009) and purchase it than are those with low involvement (Martin and Stewart 2000; Zaichkowsky 1985). Therefore, we suggest:

H1. Product attitude is positively associated with purchase intention.

H2. Consumption-related peer communication on social media is positively associated with product attitude.

H3. Consumption-related peer communication on social media is positively associated with product involvement.

H4. Product involvement is positively associated with product attitude.

Consumer Socialization Antecedents: Tie Strength and Identification with the Peer Group

The social setting in which learning takes place is particularly important for explaining learning processes, which can directly and indirectly affect learning (Moschis and Churchill 1978). Consumer socialization is a product of several antecedent variables, including social class, gender, and family size (e.g., De Gregorio and Sung 2010; Shim 1996). Relationships (networks) built through social media also may have strong influences on communication with peers (Kozinets 1999; Okazaki 2009; Zhang and Daughety 2009). In line with prior literature, we suggest that peer communication through social media depends on tie strength with peers and identification with the peer group.

Tie Strength with Peers. We define tie strength with peers as to the degree to which a person is willing to maintain some relationship with peers through some social media. The relationship may be very close, such as dear friends, or very casual, such as with acquaintances or strangers. Tie strength offers significant explanatory power regarding the influence of WOM communications (Brown, Broderick, and Lee 2007; De Bruyn and Lilien 2008). Strong ties are more likely to transfer useful knowledge (Levin and Cross 2004) and thus have more influence on receivers than do weak ties (De Bruyn and Lilien 2008; Smith, Menon, and Sivakumar 2005). We therefore propose that in the context of social media, a strong tie between an individual and his or her peers is more likely to lead to communication about a product than is a weak tie.

H5. Tie strength with peers is positively associated with peer communication.

Identification with the Peer Group. Identification with the peer group refers to the conception of the self, in terms of "the defining features of a self-inclusive social category that renders self stereotypically interchangeable with other in-group members" (Hogg 1992, p 90). Identification with the

group is a key determinant of virtual community participation (Dholakia, Bagozzi, and Pearo 2004), such that when identification with a group has been established, the person develops we-intentions and wants to maintain a positive, self-defining relationship with the group (Bagozzi and Dholakia 2002), places greater value on relationships with the community (Nambisan and Baron 2007), and is willing to engage in community activities (Algesheimer, Dholakia, and Herrmann 2005).

Moreover, the tie between an individual and peers precedes and contributes to his or her identification with the peer group (Algesheimer, Dholakia, and Herrmann 2005). Therefore, a harmonious relationship with peers should lead consumers to seek out and interact with other similar members of the group (Algesheimer, Dholakia, and Herrmann 2005). Thus we predict:

H6. Identification with the peer group is positively associated with peer communication.

H7. Tie strength with peers is positively associated with identification with the peer group.

Moderating Role of Need for Uniqueness

Marketing literature demonstrates that consumer product preferences always depend on need for uniqueness (e.g., Irmak, Vallen, and Sen 2010; Tian, Bearden, and Hunter 2001). The social influence of other members of a community affects an individual's decisions because of that individual's concern about the impressions his or her behavior gives other people (Amaldoss and Jain 2005). Consumer's need for uniqueness also affects willingness to generate WOM (Cheema and Kaikati 2010) or comply with others' preferences (Irmak, Vallen, and Sen 2010).

We propose that the impact of peer communication on product attitude should be moderated by consumer's need for uniqueness. In the consumer socialization process, need for uniqueness has a significant moderating effect on consumer evaluations; when others serve as a reference point, high-uniqueness consumers are less likely to be influenced by those others' opinions or purchase the product than low-uniqueness consumers (Irmak, Vallen, and Sen 2010). The former also are less willing to conform and less likely to be affected by peer communication. As Tian, Bearden, and Hunter (2001) show, among high uniqueness consumers, peer reviews or recommendations even can activate "counterconformity motivations" if they sense a threat to their identity, such as when they think others are too similar to them. Thus, we propose:

H8. Need for uniqueness moderates the association between peer communication and product attitude: High (versus low) uniqueness consumers are less likely to conform to peers' influence.

Method

Sample

The data collection focused on Chinese consumers who are frequent users of social media websites. In recent years, the number of Internet users has increased dramatically in China; recent predictions suggest that the number of social network users also will more than double from 207 million in 2010 to 488 million in 2015 (Emarketer Report 2011). New online network websites appear every day, and Chinese enterprises have taken advantage of this technological trend to promote products and brands to various social media users (Harrison and Hedley 2011). To find the most frequent users of social media websites, we chose the largest Internet portal, www.sina.com, to collect our data. The website serves more than 95.3% of the Internet users in China. With the permission from the website, we built a link on its front page to our online survey. When participants clicked the link, they were directed to an invitation and instructions page. A screening question excluded unqualified participants who had never used any social media websites: "Did you visit one of the listed social network websites in the past six months to acquire information on some products, services, or activities you were interested in?" Those who clicked "yes" were invited to continue the survey; those who chose "no" were told to stop. The listed social media websites included QQpengyou, Renren.com, Kaixin.com, and 51.com because these websites are among the most frequently used by Chinese consumers (China Internet Network Center Report 2009)— similar to Facebook in the United States. Participants who completed the survey had a chance to win a laptop as an incentive.

The survey did not ask participants to specify the products, services, or activities they had communicated about on social media; instead, our focus centered on the peer communication process. We also did not examine the agent–learner interactions in reference to the type of learning (e.g., modeling, reinforcement) because a cross-sectional design is not suitable for studying the processes, though it facilitates an investigation of the extent of agent–learner interactions (Moschis and Churchill 1978).

To specify the peer communication, each participant indicated a website on which he/she engaged in peer communication; the members with whom they had communicated; topics that they had communicated about with those peers; the types of their relationships with the peers (e.g., friends, strangers) and the importance of those relationships to them; frequencies with which they communicated with peers; and the extent to which they were affected by the communications. Other questions pertained to surfing behavior on social media websites and demographics, such as age, gender, income, and education. After completing the survey, participants provided additional personal information for the prize drawing.

Data

The data were collected in December 2010, over a period of approximately three weeks. A total of 935 participants clicked the survey link, and 421 of them passed the screening question and took the survey. To clean the data, we removed incomplete responses or responses submitted from the same computer Internet protocols, leaving a usable sample of 292 questionnaires for the analysis. Approximately 33.9% of participants were

frequent users of the social media website QQPengyou and sought product information through interactions with the peer members; 29.5% had used Renren.com; 17.8% used Kaixin. com; and approximately 18.9% of the participants had used 51.com or other social media websites. Among the complete and usable responses, 61% of the participants were men. The average age of the respondents was 29.5 years. Most (85.6%) had college degrees, and about 70.8% of the participants reported a monthly income of less than 5000 Yuan (RMB). Regarding social media website usage, approximately 15.5% of the participants spent more than 3 h on their chosen social media website per day, 11.9% spent 2–3 h per day, 43.3% spent 1–2 h per day, and 29.2% spent less than an hour per day. The demographic characteristics of the sample thus indicated a higher level of education and younger respondents, relative to the total population of China, but they were consistent with social media users in the country (i.e., 52.9% men, 52.6% between 20 and 29 years of age, 59.1% with college degrees; China Internet Network Center Report 2009).

Measure Development

We adopted the construct items from published articles, with some minor changes to accommodate the social media context of our research. We measured the exogenous variable, tie strength with peers, using four items adapted from the validated scale proposed by De Bruyn and Lilien (2008). Identification with the peer group was measured with five items adapted from the scale for measuring community identification by Algesheimer, Dholakia, and Herrmann (2005). We also used adaptations of existing measures for peer communication (Moschis and Churchill 1978), product involvement (Zaichkowsky 1985), product attitudes (Crites, Fabrigar, and Petty 1994), and purchase intentions (Taylor, Houlahan, and Gabriel 1975). The moderating variable, consumer's need for uniqueness, was measured using a scale adapted from Tian, Bearden, and Hunter (2001). The items were scored on seven-point Likert scales, ranging from strongly disagree (1) to strongly agree (7), except for the measure of tie strength with peers, which ranged from very unlikely (1) to very likely (7). The questionnaire was first drafted in English and then translated into Chinese using a translation and back-translation procedure (Myers et al. 2000). Table 1 contains the final pool of items and their reliability values.

The confirmatory factor analysis for the measurement models relied on LISREL 8.80 (Jöreskog and Sörbom 1996), which can deal with a wide variety of models to analyze latent variables (Anderson and Gerbing 1988). We investigated the measurement model, incorporating all study constructs. The results (Table 1) reveal a satisfactory fit (Chi-square = 734.66, df = 329, non-normed fit index [NNFI] = .97, confirmatory fit index [CFI] = .98, incremental fit index [IFI] = .98, root mean square error of approximation [RMSEA] = .065). The overall fit was acceptable, and all relevant loadings were substantial and highly significant. Moreover, construct reliability values exceeded the recommended threshold of .60 (Bagozzi and Yi 1988). Construct reliability ranged from .84 for need for

Table 1
Item statistics and measurement model results.

	Loading	Construct reliability	Average variance extracted
Tie strength with peers			
How likely would you share personal confidences with your peers?	0.85	0.94	0.80
How likely would you spend some free time socializing with your peers?	0.90		
How likely would you perform a large favor for your peers?	0.91		
How likely would your peers perform a large favor for you?	0.91		
Identification with the peer group			
I am very attached to the peer group on social media.	0.86	0.93	0.72
My peers on social media and I share the same objectives.	0.81		
The friendships I have with my peers mean a lot to me.	0.90		
If my peers planned something, I'd think of it as something "we" would do rather than "they" would do.	0.82		
I see myself as a part of the peer group on social media.	0.86		
Peer communication			
I talked with my peers about the product on social media.	0.87	0.92	0.70
I talked with my peers about buying the product on the Internet.	0.90		
I asked my peers for advice about the product.	0.87		
I obtained the product information from my peers.	0.74		
My peers encouraged me to buy the product.	0.81		
Product attitude			
Dislike–like	0.91	0.95	0.85
Bad–good	0.92		
Undesirable–desirable	0.93		
Purchase intention			
Unlikely–likely	0.88	0.92	0.79
Uncertain–certain,	0.86		
Definitely not–definitely	0.91		
Product involvement			
Uninterested–interested	0.87	0.95	0.80
Not involved–highly involved	0.92		
Of no concern–of concern to me	0.93		
Unimportant–important	0.91		
Irrelevant–relevant	0.83		
Need for uniqueness			
I actively seek to develop my personal uniqueness by buying special products or brands.	0.83	0.84	0.63
The products and brands that I like best are the ones that express my individuality.	0.86		
I have often violated the understood rules of my social group regarding what to buy or own.	0.68		

uniqueness to .95 for product involvement and product attitude. We assessed discriminant validity by comparing the average variance extracted (AVE) values with the squared correlation between each pair of constructs and constructing 95% confidence intervals around the inter-construct correlations (Fornell and Larcker 1981). In support of discriminant validity, the AVE for each construct exceeded the squared correlation between the construct and any other construct; in addition, the AVE for each latent construct exceeded the .50 threshold, ranging from .63 to .85, and the item factor loadings for the latent constructs all were greater than .6. Therefore, the scale items provided a good representation of the constructs. The correlation matrix of latent variables is in Table 2.

Results

We used LISREL 8.80 software with maximum likelihood estimation to test the hypothesized relationships. Tie strength with peers provided an exogenous variable; the other constructs were endogenous variables. According to the existing thresholds (e.g., Hu and Bentler 1999), the model exhibits good fit to the data (Chi-square=674.20, df=268, NNFI=.97, CFI=.98, IFI=.98, RMSEA=.072), as the results in Table 3 show.

All the hypotheses were supported ($p<.01$). Regarding the main effects, peer communication affected product attitudes, which in turn enhanced purchase intentions (H1). Furthermore, both the direct effect of normative impact (conformity with peers) (H2) and the indirect effect of informational impact through product involvement (H3 and H4) were confirmed in their direct (β=.26, $p<.01$) and indirect (β=.31, $p<.01$) effects on product attitudes. We also found a significant indirect effect of peer communication on purchase intention (β=.45, $p<.01$).

The analyses of the antecedents revealed that tie strength with peers and identification with the peer group had positive influences on peer communication (H5 and H6). Tie strength also related positively to identification with the peer group (H7).

Moderating Effect of Need for Uniqueness

We have proposed that consumers' need for uniqueness would moderate the relationship between peer communication

Table 2
Means, standard deviations, and correlation matrices.

	Mean	SD	1	2	3	4	5	6	7
1. Tie strength with peers	4.99	1.45	1.00						
2. Identification with the peer group	4.69	1.21	0.65	1.00					
3. Peer communication	4.88	1.56	0.54	0.50	1.00				
4. Product attitude	5.23	1.45	0.49	0.54	0.51	1.00			
5. Purchase intention	4.75	1.39	0.44	0.43	0.46	0.74	1.00		
6. Product involvement	4.96	1.54	0.55	0.56	0.77	0.56	0.46	1.00	
7. Need for uniqueness	4.59	1.32	0.51	0.59	0.40	0.44	0.28	0.42	1.00

Table 3
Structural equation modeling results for hypotheses.

Hypothesized effect	Standardized coefficient	t-Value	p-Value	Conclusion
H1: Product attitude→purchase intention	0.79	15.43	<0.01	Supported
H2: Peer communication→product attitude	0.26	2.61	<0.01	Supported
H3: Peer communication→product involvement	0.82	15.28	<0.01	Supported
H4: Product involvement→purchase intention	0.38	3.88	<0.01	Supported
H5: Tie strength with peers→peer communication	0.44	5.76	<0.01	Supported
H6: Identification with the peer group→peer communication	0.26	3.50	<0.01	Supported
H7: Tie strength with peers→identification with the peer group	0.70	12.21	<0.01	Supported

and product attitude. To test this moderating effect, we first divided the participants into two subgroups, according to their scores on the need for uniqueness scale, using cluster analysis approach (Dickinger and Kleijnen 2008). The cluster solution yielded two subgroups: 137 participants who scored high on need for uniqueness, and 155 participants who scored low. We conducted a multiple group analysis to examine the moderating effects. In addition, we tested the structural model with free parameter estimates and a model with an equality constraint imposed on the path between peer communication and attitude simultaneously. A poorer fit, indicated by a higher chi-square, would confirm a significant difference between the models for the high versus low need for uniqueness groups. As we show in Table 4, the moderating effect of need for uniqueness is significant ($\Delta\chi^2=30.77$, $\Delta df=1$). The estimated coefficient of peer communication on attitude decreased from .50 (low need for uniqueness, t=3.78, $p<.01$) to −.15 (high need for uniqueness, t=−1.10, $p>.05$). That is, the direct effect of peer communication on attitude appeared more evident for consumers who scored low in their need for uniqueness.

Discussion

This research models the antecedents and outcomes of peer communication through social media from the perspective of a consumer socialization framework. The results support all our hypotheses, and these findings provide unique insights into peer communication and its impact on consumer attitudes in an online consumer socialization process. Peer communication

Table 4
Moderating effect of need for uniqueness.

Hypothesized relationship	Group	Standardized coefficient	$\Delta\chi^2$	Δdf
Peer communication→product attitude	High need for uniqueness	−0.15	30.77	1
	Low need for uniqueness	0.50 *		

* $p<.01$.

through social media positively influences purchase intentions in two ways: a direct influence through conformity and an indirect influence by reinforcing product involvement. This finding is in line with previous research (Bearden, Netemeyer, and Teel 1989), which suggests that socialization theory can be applied effectively to a social media setting. Moreover, peer communication on social media can be promoted by strengthening both individual-level tie strength with peers and group-level identification with a peer group. In our examination of the direct impact of peer communication on product attitude, we also confirm the moderating effect of need for uniqueness. The findings provide both theoretical and managerial insights.

Theoretical Implications

The emergence of virtual communities of consumption has transformed consumer information search processes into "a source of community and understanding" (Kozinets 1999, p 254). This study has set out to examine the impact of peer communication through social media on consumer product attitudes and purchase intentions from a socialization theory perspective. Previous research mainly focused on the impact of four consumer socialization agents—parents, mass media, school, and peers (Moschis and Churchill 1978). The primary contribution of our findings to theory is that consumption-related peer communications through social media are becoming increasingly relevant for consumer socialization issues and can significantly influence newcomers' attitudes toward the product. By incorporating more variables into the socialization framework (Moschis and Churchill 1978), we have created a model that describes socialization processes that take place in virtual communities of consumption. Our model incorporates interaction attributes (individual-level tie strength, group-level identification with the peer group) related to peers as socialization agents, which enhances understanding of the antecedents of peer communication. It also includes product attitudes and purchase intentions as outcomes of the online socialization process. Perhaps most important, our finding that online peer communication drives consumer behavior through conformity and informational routes extends the socialization framework proposed by Moschis and Churchill (1978). The moderating role of need for uniqueness also helps account for the impact of virtual agent–consumer interactions; other moderators also might exist in online socialization process. Our findings suggest that the social learning process in virtual communities remains a complex process that features multilevel variables, beyond the scope of traditional socialization theory. Marketing researchers should build their future research plans accordingly.

Managerial Implications

Ahuja and Galvin (2003) suggest a need for organizational mechanisms that focus on virtual member socialization. The findings of this research indicate that understanding consumer online socialization processes—and specifically the influence of peer communication—is vital. The findings also provide meaningful implications for interactive marketing practitioners, online advisers, and social media website operators.

Implications for Marketers

Social media websites provide an opportunity for businesses to engage and interact with potential consumers, encourage an increased sense of intimacy with consumers, and build all-important relationships with potential consumers (Mersey, Malthouse, and Calder 2010). Marketers should take advantage of consumer participation through active communication to strengthen their relationships (Brown, Broderick, and Lee 2007; Kozinets 1999). They also should examine the extent to which they can assist members of prominent social media websites by connecting them with more other people they know and identifying with other media users with whom they would not otherwise have made contact. In particular, firms should sponsor online communities on influential social media websites and offer consumers the ability to develop relationships with others who share similar interests so they can exchange product information and experiences, which should effectively generate product interest among many people.

Corporate social networking websites also should allow consumers to not only exchange information about products or services but also engage in "participating and socializing" experiences, across both current and potential consumers (Mersey, Malthouse, and Calder 2010). Kozinets (1999) divides members of virtual communities of consumption into four types—tourists, minglers, devotees, and insiders—according to the strength of their relations with the consumption activity and with the virtual community. Only insiders maintain strong social ties and strong personal ties to the consumption activity. Thus, marketers should target this group and attempt to turn others into insiders. With a good understanding of their visitors, social media websites can use structural and content features to stimulate visitors' desire to learn more about a product or think more about the product category, whether by highlighting the values of their offerings, the commonalities between the reviewer and the reader, or the need for empathy with the reviewer. As Kozinets (1999, p 255) suggests, websites should make the social contact through peer communication "a valuable reinforcement" mechanism that stresses "longer-term personal gain through cooperation with other communities of consumption members." Marketers then can take measures to build trust between the reviewer and the reader and especially aim to increase the trustworthiness of active reviewers who contribute most to the site by developing effective tools to enhance the persuasive effects of their peer communication.

Finally, marketers who use social media tools should actively monitor peer communication by target consumers, audit the effectiveness of the two routes from peer communication to brand attitude and purchase intention, and handle with care any negative peer communication about products and services transmitted by written messages. They must be sensitive to changes in consumer behavior patterns, identify new areas of consumer values and interest, and integrate the values, needs, and wants that consumers express in writing. Experienced employees might be deployed to deal with negative opinions or

service failures. By tracking the potential for positive social effects of social media use, marketers also might experiment with more effective ways to stimulate peer communication among consumers who are less socially connected, which can lead to benefits through WOM about products. Although great efforts should focus on enriching the social experience of social media users, special care must be taken to ensure that peer communication does not mislead or overwhelm those users who prefer less complex message exchanges through social media.

Implications for Online Advertisers

The findings of this study also provide implications for advertising. The literature shows that online advertising effectiveness is related to consumer engagement with a website, as manifested in "finding a basis for conversation and social interaction" (Calder, Malthouse, and Schaedel 2009, p 323). Online advertisers therefore should work with companies that operate social media websites to increase the persuasive effects of interactivity, make advertised products more intangible for potential consumers, identify the most important attributes, and use these attributes in advertising. Increased interactivity in the user-to-user domain may encourage visitors to build new kinds of relationships with the sponsoring corporation. It also could provide customers with the ability to share opinions and information through social media, spread opinions about the company or advertised brand, and improve the relationship between the brand/company and the user who regards the website as interactive. An advertiser that can use social media to respond effectively to consumer commentary on review sites gains a great advantage because it can engage customers in conversations to understand their needs and build relationships throughout the purchase and after-purchase process (Bronner and de Hoog 2010).

Implication for Social Media Website Operators

Social media operators should study the importance of both their social and informational functions, then provide some additional support for the key functions through their website design. For example, a social media website can provide users with the ability to share their consumption-related experiences, opinions, and knowledge with others with similar interests. Therefore, the website designers must ensure they can acquire the information at their own pace and refer back to online discussions to absorb even more personal information. Users would be able to see what they want, as well as write comments or rate products or services. Operators also should ensure their online social media forums offer credibility, relevance, and the ability to evoke empathy through WOM communication. Advanced technology and safety mechanisms should be in place and constantly upgraded to ensure high-quality peer communication and trust-based interactions among peers.

Limitations and Directions for Further Research

Despite these interesting implications, this study has several limitations that also provide salient future research issues. First, the social websites included in our sample were Chinese, which enabled us to study a linguistically homogenous sample. These respondents likely differ from consumers with other cultural backgrounds, especially Western consumers. For example, Singh, Zhao, and Hu (2005) find that local websites in India, China, Japan, and the United States differ significantly in their cultural dimensions. Therefore, additional research should test our proposed model in other cultural contexts. Second, we focused on positive impacts of peer communication on product attitudes. Yet in many cases, peer communication yields negative product reviews or feedback. Previous research has indicated that even a small amount of negative information from a few postings can have substantial impacts on consumer attitudes (Schlosser 2005). Further research should investigate this impact on consumer attitudes, as well as how to minimize or mitigate undesired effects. Third, the participants were not asked to specify a product category, but consumer interest in peer communication may vary with product categories. Thus, we call for research that integrates the product/service category into the model tests. Fourth, our study did not include other potentially influential variables, such as trust, empathy, or website credibility. Researchers should explore the roles of those variables in terms of creating and sustaining interest in peer communication, to help identify more moderators that have significant impacts on peer communication outcomes.

Acknowledgments

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