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# SOCIAL COMMERCE: THE CRITICAL ROLE OF ARGUMENT STRENGTH AND SOURCE DYNAMISM OF EWOM

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## Abstract

*Due to the increasing popularity of social media, social commerce has been emerging as a new form of e-commerce. As a driving force of the popularity and growth of social commerce, electronic word-of-mouth (eWOM) plays an important role during the process of consumers' purchase decision making in social commerce. There are adequate studies that have offered a broad view on what makes the helpfulness perception of eWOM. However, little research has investigated the effect of argument strength and source dynamism of eWOM. Drawing on Stimulus–Organism–Response (S–O–R) model and Elaboration Likelihood Model (ELM), an integrated research model is proposed and tries to explore the impact of argument strength and source dynamism of eWOM on consumers' affective response and cognitive response and how do they affect the formation of consumers' purchasing intention. We expect that our study can make a contribution to theoretical development and provide some guidance for retailers to carry out a better management strategy of eWOM.*

*Keywords: eWOM, Argument Strength, Source Dynamism, Social Commerce.*

# 1 INTRODUCTION

With the ubiquity of the Internet and the popularity of Web2.0, social commerce has quickly emerged and drastically developed. The popularity and growth of social commerce can be attributed to product information sharing via social media which has provided new sources for social interactions and user contributions through communities and social networks(Pookulangara & Koesler 2011). In the face of market competition in social commerce, electronic word-of-mouth (eWOM) communication becomes increasingly essential in shaping consumers' attitudes and behaviours.

In this study, we define eWOM as the spreading of customer ratings and reviews, recommendations, and other user generated content (UGC) that pertain to personal experiences. It can assist following consumers to access to the acquisition of products and services. Social commerce is the concept of applying eWOM to e-commerce, and it is the combination of a retailer's products and shoppers' interaction with contents(Dennison et al. 2009). Since social media has been readily accessible, consumers have more opportunities to obtain social knowledge and experiences to support them in making a better informed and more accurate purchasing decision(Dennison et al. 2009; Novak et al. 2000). Meanwhile, online businesses are capable of capturing consumers' behaviours, which makes a deeper understanding of their shopping experiences and expectations, then helps them develop successful business strategies(Constantinides & Fountain 2008). A survey shows that one-third of shoppers would like to make a purchase directly from Facebook (35%) or Twitter (32%)(Shop.org 2011). According to the statistics posted by Cara Pring, social commerce sales are expected to climb to \$30 billion in 2015, and the number of users that shop online will increase to 192 million by 2016(Pring 2012). Following the mentioned above, eWOM marketing inherent in a social commerce site may be one of the most powerful drivers that strengthen the expansion of social commerce market and the growth of consumers' purchasing behaviours.

Various previous research have postulated huge amounts of antecedent factors which can affect information readers' attitudes towards eWOM, and they basically focused on two aspects of eWOM: the eWOM information characteristics and the eWOM sender characteristics. The studies on characteristics of eWOM information including volume(Duan et al. 2008; Luo et al. 2013), length(Mudambi & Schuff 2010; Racherla & Friske 2012), rating(Chintagunta et al. 2010; Luo et al. 2013; Zhu & Zhang 2010), and positive/negative statement(Cheung et al. 2009; Connors et al. 2011; Schlosser 2011). Chevalier and Mayzlin (2006) took Amazon.com and Barnes&Noble.com for instance to examine the effect of consumer reviews on relative sales of books, they found that the larger amount reviews and longer reviews could increase relative sales. Moreover, negative reviews had a much greater effect than positive reviews. Mudambi and Schuff (2010) developed and tested a model of customers' reviews helpfulness perception by using the data from Amazon.com, the result showed that review extremity (rating stars) and review depth affect the perceived helpfulness of reviews. Chintagunta et al. (2010) conducted an empirical analysis using review data from the Yahoo! Movies website, the finding revealed that user rating and the volume of reviews were two main drivers of box office performance of movies.

Scholars also have investigated the characteristics of eWOM sender, they mainly focused on the identity(Forman et al. 2008; Ghose & Ipeirotis 2011) and expertise(Connors et al. 2011; Racherla & Friske 2012) of eWOM sender. Hu et al. (2008) assessed the effectiveness of the online review market depending on a portfolio approach and confirmed that consumers not only pay attention to the review ratings but also concern with reviewer exposure and reviewer's reputation. This viewpoint is similar to Forman et al. (2008), who noted that reviewer disclosure of identity-descriptive information shapes community members' perception of reviews usefulness and judgment of products quality. An empirical study conducted by Racherla and Friske (2012) was tested on reviews collected from Yelp.com, their finding similarly suggested that the reviewer identity disclosure and reviewer's reputation are associated with perceived helpfulness of reviews, in addition, they confirmed that the reviewer expertise also plays a crucial role. The finding is consistent with the conclusion from Connors et al. (2011), which indicated that participants regard reviews written by experts more helpful.

Quite a lot of research has been studied on eWOM from the perspective of characteristics of eWOM information and characteristics of eWOM sender. However, only a few studies have investigated the role of argument strength and source dynamism of eWOM. For example, consumers' confidence in their publically stated choices can be diminished if observed others make the same choice but justify the choice using different reasoning (Lamberton et al. 2013). Kwark et al. (2012) indicated that the information embedded in eWOM fits in with consumers' needs influences consumers to readily identify related product and service, which in turn influences consumers' decision making. Additionally, researchers also emphasized the importance of energy level of eWOM sender. Arousal-related effects caused by emotions can influence sharing behaviour in written communication (Stieglitz & Dang-Xuan 2013). Anxiety and anger are very close to each other in terms of valence, but they involve distinct phenomenology and tend to induce different behaviours. The findings from Yin (Forthcoming) also revealed that anxiety-embedded reviews are considered more helpful than anger-embedded reviews, because anxious senders of eWOM are perceived to pay more efforts and think more carefully about the content they provide than angry senders. Thus it can be seen that the role of argument strength and source dynamism of eWOM are significant to be concerned. However, there is a dearth of empirical studies examining these two factors. In order to bridge this gap, we propose a theoretical model which is grounded on Stimulus–Organism–Response (S–O–R) model and Elaboration Likelihood Model (ELM). The specific research questions we focus on:

RQ1: What are the predominant variables of argument quality and source credibility for consumers' response cues in the context of social commerce?

RQ2: How argument strength and source dynamism influence consumers' affective response and cognitive response?

RQ3: How consumers' affective response and cognitive response contribute to the formation of consumers' purchasing intention?

The remainder of the paper is structured as follows: in the next section, prior relevant literature that related to S–O–R model and ELM are reviewed and present the theoretical development. Following that, the research model and hypotheses are proposed. Then, the proposed methodology is explained. Finally, the expected contribution is discussed.

## **2 THEORETICAL BACKGROUNDS**

### **2.1 Stimulus–Organism–Response (S–O–R) Model**

The Stimulus–Organism–Response (S–O–R) model posits that environmental cues (i.e., stimulus) affect an individual's affective and cognitive reactions (i.e., internal states of organism), which further influence his or her behaviour intention (i.e., responses) (Mehrabian & Russell 1974). Sherman et al. (1997) used S–O–R model to identify and explore the various dimensions that influence consumers' purchasing behaviour. They confirmed that cognitive factors account for store selection and purchasing intention, and emotional state is one of the significant determinants of purchasing behaviour. Based on S–O–R model and the privacy calculus framework, Li et al. (2011) examined the circumstance under which people make an online information disclosure decision, they found that it can be explained by the affective and cognitive responses of online consumers during the initial and a subsequent information exchange stages. Besides, Parboteeah et al. (2009) applied the model to explain the consequence that online consumers' impulse buying based on cognitive and affective responses to the website characteristics.

When exploring the impact of eWOM on consumers' purchasing intention, eWOM is considered to be an external stimulus which is capable of producing significant sensations to arouse affective and cognitive states, which in turn influence consumers' purchasing intention or behaviour. The S–O–R model is suitable for providing a theoretical framework in our study. Therefore, we adopt S–O–R

model as the overarching theory to understand how eWOM influence consumers' affective response and cognitive response as well as their impact on the formation of consumers' purchasing intention.

## **2.2 Elaboration Likelihood Model (ELM)**

The Elaboration Likelihood Model (ELM) is an information-processing theory that proposed by Petty and Cacioppo (Cacioppo & Petty 1983). It explains that the information recipients think about the messages and arguments of persuasive communication, then their attitudes form or change depending upon the extent of elaboration likelihood. According to ELM, persuasive messages can be processed by these two major routes: the central route and the peripheral route. The central route entails deliberate scrutiny of the information and cognitive effort of elaboration, and recipients consider the ideas presented in the message carefully and weigh the real merits of argument prudently. In contrast, the peripheral route requires less cognitive effort, so the recipients with relatively low motivation and ability prefer to use environmental cues rather than the information itself to assess the believability of a message, then ultimately decide whether to accept it or not (Petty & Cacioppo 1986a; Petty & Cacioppo 1986b).

A large amount of studies have widely applied ELM to understand individuals' information processing, and how it leads to their outcomes of decision making in online environments (Bhattacharjee & Sanford 2006; Sussman & Siegal 2003). In prior research, Mak et al. (1997) used ELM to examine the system's recommendations acceptance among potential users. Bhattacharjee and Sanford (2006) concerned with the study of users' acceptance of IT grounding on ELM. In addition, researchers also used ELM to explain eWOM communication. For instance, Lee et al. (2008) asserted the persuasive effect of the proportion and quality of negative online consumer reviews depending on product involvement. Baek et al. (2012) explored the impact of readers' objectives and review cues on the perceived helpfulness of online reviews. Besides, Shih et al. (2013) conducted an empirical study from the perspective of informational and normative determinants to examine the perceived credibility of online consumer recommendations. All these studies consistently confirmed the interactive effect of both central and peripheral cues on the online users' attitude towards the received information.

In the context of social commerce, consumers not only focus on eWOM information, but also care about eWOM sender characteristics before making their purchasing decisions. Given this, our model illustrates that consumers take into account both central route and peripheral route in order to evaluate the information and judge the believability of message. Thus, on the basis of ELM, we adopt argument quality as the central route and source credibility as the peripheral route which are considered to be environmental stimulus to assess the impact of eWOM on shaping consumers' purchasing intention.

## **3 RESEARCH MODEL AND PROPOSITIONS**

### **3.1 Consumers' Response and Purchasing Intention**

The literature conceptualizes attitude in line with two separate dimensions: affect and cognition (Petty et al. 1997). When online consumers interact with a specific social commerce site, they experience a variety of situational factors, coupled with affective response and cognitive response. Affective response, also known as affective reaction, is a broader term including both a person's emotions induced by stimulus and affective evaluations of the stimulus. In other words, affective response can be both emotion and affective evaluation (Zhang 2013). Cognitive response is an individual's mental processes occurring in his or her mind when interacting with the stimulus, such as producing or recruiting opinions, thoughts, knowledge, and beliefs from memory (Eroglu et al. 2001).

In our study, the affective response refers to the degree of the emotional attraction towards an attitude object. The cognitive response refers to the extent to which an individual develops specific beliefs related to an attitude object. According to the theory of consumer behaviour, consumers' cognition and

affect are the basis of their motivation and purchasing intention (Peck & Childers 2006). Stimulus can be both static and action, once the information regarding actions is appraised to be relevant to an individual's concerns, needs, or goals, emotions will generate subjective feelings (e.g., joy or anger), generate motivational states with action tendencies (Adolphs et al. 2003). An empirical study from Compeau et al. (1998) revealed that subjects' affective and cognitive responses positively affect their judgments on the product quality. The finding from Li et al. (2011) was consistent with the idea that consumers' emotional reactions and their privacy beliefs have a salient effect on their intention to disclose personal information to a specific unfamiliar online vendor. From the dyadic view of attitude (Triandis 1979), the affective and cognitive dimensions are independent determinants of behavioural intention. Hence, we adopt consumers' affective response and cognitive response to predict consumers' purchasing intention. In sum, we posit the following propositions:

P1: Affective response will have a positive effect on consumers' purchasing intention.

P2: Cognitive response will have a positive effect on consumers' purchasing intention.

Furthermore, affective processes often accompany with thoughts, evaluations, judgments, and other cognitive components. Early literature has argued that cognitive process of evaluating and judging the significance of environmental stimulus consequentially preceded affective response, which means that an individual's affective response to an object develops based on his or her cognitive appraisal of the object's attributes and functions (Lazarus 1982). Yang and Yoo (2004) emphasized the importance of cognitive attitude in predicting IS usage behaviour and suggested a causal link from cognitive attitudes to affective attitudes. An empirical study of an online consumer discussion forum conducted by Shih et al. (2013) indicated that cognitive attitude positively influences affective attitude towards an online forum. That is, the greater level of cognitive response, the stronger affective response will come into being. This leads to the following proposition:

P3: Cognitive response will have a positive effect on affective response.

### **3.2 Argument Quality and Consumers' Response**

Petty et al. (1981) define argument quality as the receiver's subjective perception of the arguments in the persuasive message as strong and convincing on the one hand versus weak and specious on the other hand. Previous researchers almost consider it as a single variable in their research model. In fact, it can be separated into two distinct components: argument strength and argument valence (Areni & Lutz 1988). Previous studies almost only pay attention to the volume, length, and rating of eWOM, but lose sight of the text comments. There are studies indicated that the eWOM information which highly fits in with consumers' needs is perceived more helpfulness (Kwark et al. 2012; Lamberton et al. 2013). So the role of argument strength of eWOM can't be ignored.

Argument strength refers to the receiver's subjective probability that the object of attitude is associated with some outcomes or consequences (Areni & Lutz 1988). In our study, we define it as the degree to which the information embedded in eWOM fits in with consumers' needs. The content of eWOM, as a description of a reviewer's experience or suggestions, may potentially overemphasize a certain aspect that containing the reasoning inconsistent with other readers' attitude (Sengupta & Fitzsimons 2000). Kwark et al. (2012) believed that eWOM provides additional information in the dimensions of both quality and fit, the highly consistent information in the fit dimension is required by the consumers urgently, and it's more effective on shaping consumers' purchasing decision. Moreover, a recent research showed that an individual's choice confidence would be diminished when others make the same choice but provide reasons differing from one's own (Lamberton et al. 2013). In other words, if the content in eWOM is not fit for consumers' needs, they will perceive emotional dissatisfaction and weigh the information irrelevant to themselves. Thus, we provide the following propositions:

P4: Argument strength will have a positive effect on consumers' affective response.

P5: Argument strength will have a positive effect on consumers' cognitive response.

Argument valence is the receiver's evaluation of that outcome or consequence (Areni & Lutz 1988), the evaluation expressed by arguments can be either positive or negative. Argument valence, in our study, refers to the overall positive degree of eWOM, it's the indicator of consumers' satisfaction with a product or service. Cui et al. (2012) stated that positive reviews by other consumers signal a product's reputation and quality, while negative reviews are indicative of lacking confidence in the product, their study confirmed that the valence of reviews greatly affect new product sales for consumer electronics and video games. The findings from Ye et al. (2011) indicated that the traveller reviews valence has a significant effect on online bookings in the tourism industry. In traditional e-commerce, negative information is rare or unexpected (Resnick & Zeckhauser 2002). Yet, in social commerce, eWOM generated by users through the social media can be obtained more easily and believable, especially the negative words. We deduce that the valence of eWOM enhances the consumers' affect and cognition. Then, we give the following propositions:

P6: Argument valence will have a positive effect on consumers' affective response.

P7: Argument valence will have a positive effect on consumers' cognitive response.

### **3.3 Source Credibility and Consumers' Response**

Source credibility is defined as the extent to which an information source is perceived to be believable, competent, and trustworthy by information recipients (Sussman & Siegal 2003). A wealth of evidence indicates that source credibility can directly form or change a recipient's attitude, and that information provided by a highly credible source will produce a greater effect on consumers' perception (Cheung et al. 2009). Source credibility becomes more important in social commerce, because community members play a substantial role in driving consumers' decision making process (Zhang, Zhou et al. 2013). Especially the role of source dynamism which has rarely focused on in previous research, but it's an essential factor in shaping consumers' attitude toward eWOM and their behaviours (Jensen et al. 2013; Stieglitz & Dang-Xuan 2013; Yin Forthcoming).

Source competence refers to the degree to which a communicator is perceived as competent of providing correct assertions (Johnston & Warkentin 2010). It refers to the ability that whether the eWOM sender can provide accuracy information and participate in discussing a specific issue or not. A person who has earned the position through a history of competent behaviours within an organization will be regarded as an authority, resulting in a more positive perception of his or her message (Johnston & Warkentin 2010). The agreement or disagreement with the reviewed product or service from opinion leaders has been found to be essential on the eWOM effect (Sun et al. 2006). One key finding of an experimental study conducted by Connors et al. (2011) is that reviews written by a self-described expert are more helpful than those that are not, because an expert is considered erudite about the presenting topic. In social commerce, the eWOM sender with more competence is usually regarded as authoritative, which leads to a stronger response in both affect and cognition. Thus, we give the following propositions:

P8: Source competence will have a positive effect on consumers' affective response.

P9: Source competence will have a positive effect on consumers' cognitive response.

Source trustworthiness is defined as the extent to which a message recipient perceives those assertions from a communicator to be valid and believable (Hovland et al. 1953). It refers to the degree of perceived justice and honesty of the eWOM sender. Social commerce is a trusted environment in which prospective consumers make buying decisions based on the online suggestions coming from friends and family rather than strangers they don't know or trust (Lee Raito.com 2007). Kang and Johnson (2013) focused on the social commerce working for shopping of apparel, and the perceived trustworthiness is discovered to have a significantly positive influence on consumers' purchasing intention. In an online community, the exposure of a user's identity influences active participation in contributing one's knowledge (Ma & Agarwal 2007). Likewise, consumers evaluate the helpfulness of eWOM depending on reviewer disclosure of identity-descriptive information (Forman et al. 2008;

Ghose & Ipeiritos 2011). Given this, under the consumers perceived trustworthiness (e.g., high credit scores, real name, picture, telephone etc.), they will feel satisfied and cognitively evaluate the eWOM useful for increasing their shopping effectiveness. Then, we provide the following propositions:

P10: Source trustworthiness will have a positive effect on consumers' affective response.

P11: Source trustworthiness will have a positive effect on consumers' cognitive response.

Prior research almost focused on the dimensions of competence and trustworthiness, but dynamism is also a crucial factor to estimate source credibility which refers to the extent to which the source is able to project an image of energy, power, forcefulness or attractiveness(Johnston & Warkentin 2010). In our study, source dynamism is defined as the degree to which consumers perceive the eWOM sender is aroused or active. Johnston and Warkentin (2010)confirmed that the perception of source dynamism has a significant positive effect on an end user's attitude toward engaging in recommended IT actions. The result from Yin (Forthcoming) indicated that anxiety-embedded reviews are considered more helpful than anger-embedded reviews, because anxious senders of eWOM are perceived to pay more efforts and think more carefully about the content they provide. Moreover, the user's activity level has a positive effect on the perceived credibility of a review(Cheung et al. 2009). For example, a recommendation composer may discuss a product in a forum with a low level of arousal or activation, which leads to consumers regarding the recommendation as neither convincing nor valid in supporting them to make an effective shopping. Thus, we give the following propositions:

P12: Source dynamism will have a positive effect on consumers' affective response.

P13: Source dynamism will have a positive effect on consumers' cognitive response.

Drawing from the argument above, the research model is proposed and it is depicted in Figure 1.

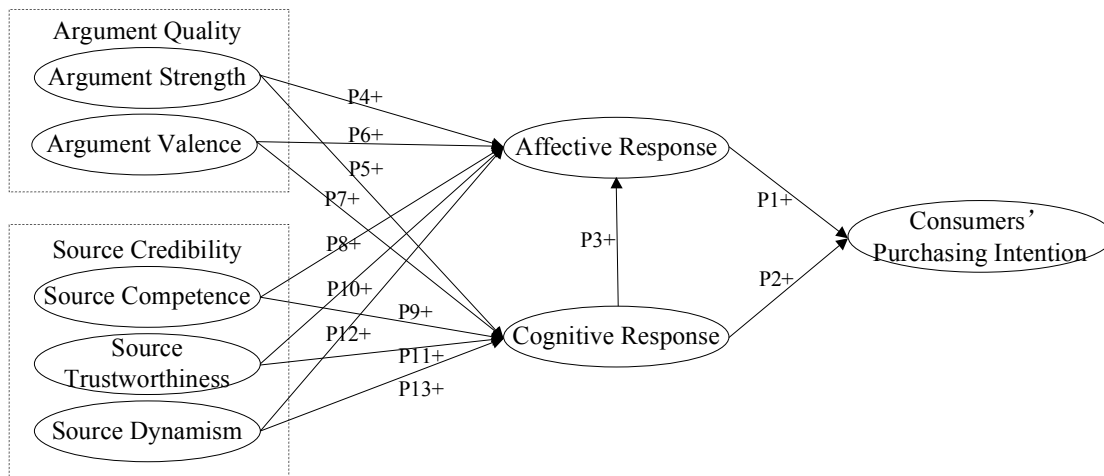


Figure 1. Research model

## 4 PROPOSED METHODOLOGY

We propose our research model to explore the impact of eWOM on consumers' purchasing intention and to examine the critical role of argument strength and source dynamism of eWOM. The target respondents are college students who are social media users and have online shopping experiences. An empirical study will be conducted to test the propositions. The questionnaire will be developed from an integrated process referencing the results from literature review and the research framework, and most scale items are adapted from prior research. All items will be measured on a seven-point Likert scale ranging from "strongly disagree" to "strongly agree". The items and their references are shown in Table 1.



Considering the convenience for data collection and representativeness of the sample, part of the survey data will be collected from three universities in the north of China for college students who are active users in social commerce. Meanwhile, we will also conduct an online survey for collecting online data through the online survey platform. In order to implement the survey in the context of social commerce, before participants answer the questions, they will be asked to think back to their impressive experiences that they once read online reviews about a product or service through online platforms recently, such as microblog, micro letter, SNS, online forum, and other social media. We will get rid of the participants who don't own such experiences. Structural equation modelling (SEM) analysis will be used. To prevent common methods bias, we will first include several reverse-scored items in the major constructs to avoid acquiescence problems. Second, after collecting the data, Harman's one-factor test will be used. Third, we will also ensure there is not any highly correlated constructs in the correlation matrix.

## 5 DISCUSSIONS

The expected findings of our study may contribute to offering a new research perspective on eWOM. In this paper, we not only extend the concepts of argument quality and source credibility, but also attempt to confirm that the source credibility will perform a predominant role in shaping consumers' attitudes and behaviours in social commerce. One of our key anticipated contributions is exploring the impact of argument strength and source dynamism of eWOM on consumers' purchasing intention.

Secondly, by drawing upon S-O-R model, we adopt affective response and cognitive response to measure consumers' attitudes. We posit that the formation of consumers' purchasing intention is influenced by both affect and cognition.

Finally, we believe our study also provides practical implications for both consumers and retailers. We hope to illustrate that the eWOM information which highly fits in with consumers' needs will be perceived more helpfulness. Furthermore, the eWOM sender with a modest level of arousal who is considered to be rational and composed will be perceived as producing more credible message. In other words, if social commerce companies are able to determine what kind of eWOM and eWOM sender offer greater potential value to their consumers, the retailers can strive to implement helpful reviews to help consumers make better decisions. Moreover, the retailers can carry out better management and communication strategies of eWOM in order to obtain a long-term expansion and development in social commerce market.

Constructs	Items	References
Argument Strength	1 The content embedded in eWOM fits in with my needs. 2 The content embedded in eWOM is what I'm concern about. 3 The content embedded in eWOM is relevant to the information which I focus on.	(Kwark et al. 2012)
Argument Valence	1 The proportion of positive reviews is higher among all the reviews. 2 Among all the reviews, most reviewers' attitudes are positive. 3 Among all the reviewers, they almost recommend others to buy the product.	(Chan 2000)
Source Competence	1 I think the reviewer has very rich experience about the product. 2 I think the reviewer is an expert in the field of the product. 3 I think the reviewer has authority in the field of the product.	(Johnston & Warkentin 2010)
Source Trustworthiness	1 I insist that the reviewer is a very honest person. 2 I believe that the reviewer is very just and fair. 3 I think that the recommender is kind and can't be contemptible.	(Johnston & Warkentin 2010)
Source Dynamism	1 I think the reviewer was very active when he/she wrote the review. 2 I think the reviewer was very fired up when he/she wrote the review. 3 I think the reviewer was in a very high level of energy when he/she wrote the review.	(Johnston & Warkentin 2010; Yin Forthcoming)

Affective Response	1 It made me very pleasant after looking through the online review. 2 I felt very enjoyable after looking through the online comment. 3 I couldn't restrain excitement when I saw the recommendation.	(Li et al. 2011; Parboteeah et al. 2009)
Cognitive Response	1 Referring to this online review can improve my shopping performance. 2 Referring to this online review can increase my shopping productivity. 3 Referring to this online review can increase my shopping effectiveness.	(Li et al. 2011; Parboteeah et al. 2009)
Purchasing Intention	1 I would like to buy the product that recommended by the reviewer. 2 If conditions permit, I will consider buying the product in the future. 3 I would like to recommend this product to my friends.	(Pavlou 2003)

Table 1. List of model constructs, items, and references

## References

- Adolphs, R., Tranel, D., and Damasio, A. R. (2003). Dissociable neural systems for recognizing emotions. *Brain and Cognition*, 52 (1), 61-69.
- Areni, C. S., and Lutz, R. J. (1988). The role of argument quality in the elaboration likelihood model. *Advances in Consumer Research*, 15 (1), 197-203.
- Baek, H., Ahn, J., and Choi, Y. (2012). Helpfulness of online consumer reviews: Readers' objectives and review cues. *International Journal of Electronic Commerce*, 17 (2), 99-126.
- Bhattacharjee, A., and Sanford, C. (2006). Influence processes for information technology acceptance: An elaboration likelihood model. *MIS Quarterly*, 30 (4), 805-825.
- Cacioppo, J. T., and Petty, R. (1983). Central and peripheral routes to persuasion: Application to advertising. *Advertising and Consumer Psychology*, Lexington, MA: Lexington Books, 3-23.
- Chan, H. (2000). Adaptive word-of-mouth behavior: A conceptual framework and empirical tests. University of Wisconsin--Madison.
- Cheung, M. Y., Luo, C., Sia, C. L., and Chen, H. (2009). Credibility of electronic word-of-mouth: Informational and normative determinants of online consumer recommendations. *International Journal of Electronic Commerce*, 13 (4), 9-38.
- Chevalier, J. A., and Mayzlin, D. (2006). The effect of word of mouth on sales: Online book reviews. *Journal of Marketing Research*, 43 (3), 345-354.
- Chintagunta, P. K., Gopinath, S., and Venkataraman, S. (2010). The effects of online user reviews on movie box office performance: Accounting for sequential rollout and aggregation across local markets. *Marketing Science*, 29 (5), 944-957.
- Compeau, L. D., Grewal, D., and Monroe, K. B. (1998). Role of prior affect and sensory cues on consumers' affective and cognitive responses and overall perceptions of quality. *Journal of Business Research*, 42 (3), 295-308.
- Connors, L., Mudambi, S. M., and Schuff, D. (2011). Is it the review or the reviewer? A multi-method approach to determine the antecedents of online review helpfulness. 44th Hawaii International Conference on System Sciences (HICSS), 1-10.
- Constantinides, E., and Fountain, S. J. (2008). Web 2.0: Conceptual foundations and marketing issues. *Journal of Direct, Data and Digital Marketing Practice*, 9 (3), 231-244.
- Cui, G., Lui, H.-K., and Guo, X. (2012). The effect of online consumer reviews on new product sales. *International Journal of Electronic Commerce*, 17 (1), 39-58.
- Dennison, G., Bourdage-Braun, S., and Chetuparambil, M. (2009). Social commerce defined. White Paper, IBM Systems Technology Group, Research Triangle Park, NC.
- Duan, W., Gu, B., and Whinston, A. B. (2008). Do online reviews matter?—An empirical investigation of panel data. *Decision Support Systems*, 45 (4), 1007-1016.
- Eroglu, S. A., Machleit, K. A., and Davis, L. M. (2001). Atmospheric qualities of online retailing: A conceptual model and implications. *Journal of Business Research*, 54 (2), 177-184.
- Forman, C., Ghose, A., and Wiesenfeld, B. (2008). Examining the relationship between reviews and sales: The role of reviewer identity disclosure in electronic markets. *Information Systems Research*, 19 (3), 291-313.

- Ghose, A., and Ipeiritos, P. G. (2011). Estimating the helpfulness and economic impact of product reviews: Mining text and reviewer characteristics. *Knowledge and Data Engineering, IEEE Transactions on*, 23 (10), 1498-1512.
- Hovland, C. I., Janis, I. L., and Kelley, H. H. (1953). *Communication and persuasion; psychological studies of opinion change*. New Haven, CT, US: Yale University Press.
- Hu, N., Liu, L., and Zhang, J. J. (2008). Do online reviews affect product sales? The role of reviewer characteristics and temporal effects. *Information Technology and Management*, 9 (3), 201-214.
- Jensen, M. L., Averbeck, J. M., Zhang, Z., and Wright, K. B. (2013). Credibility of Anonymous Online Product Reviews: A Language Expectancy Perspective. *Journal of Management Information Systems*, 30 (1), 293-324.
- Johnston, A. C., and Warkentin, M. (2010). The influence of perceived source credibility on end user attitudes and intentions to comply with recommended IT actions. *Journal of Organizational and End User Computing (JOEUC)*, 22 (3), 1-21.
- Kang, J.-Y. M., and Johnson, K. K. P. (2013). How does social commerce work for apparel shopping? Apparel social e-shopping with social network storefronts. *Journal of Customer Behaviour*, 12 (1), 53-72.
- Kwark, Y., Chen, J., and Raghunathan, S. (2012). Online product reviews: Implications for retailers and competing manufacturers. Available at SSRN 2255097.
- Lamberton, C. P., Naylor, R. W., and Haws, K. L. (2013). Same destination, different paths: When and how does observing others' choices and reasoning alter confidence in our own choices?. *Journal of Consumer Psychology*, 23 (1), 74-89.
- Lazarus, R. S. (1982). Thoughts on the relations between emotion and cognition. *American Psychologist*, 37 (9), 10-19.
- Lee, J., Park, D.-H., and Han, I. (2008). The effect of negative online consumer reviews on product attitude: An information processing view. *Electronic Commerce Research and Applications*, 7 (3), 341-352.
- LeeRaito.com 2007. "Social Commerce Chapter." <http://leeraito.com/socialcommerce-chapter/>.
- Li, H., Sarathy, R., and Xu, H. (2011). The role of affect and cognition on online consumers' decision to disclose personal information to unfamiliar online vendors. *Decision Support Systems*, 51 (3), 434-445.
- Luo, C., Luo, X. R., Schatzberg, L., and Sia, C. L. (2013). Impact of informational factors on online recommendation credibility: The moderating role of source credibility. *Decision Support Systems*, 56, 92-102.
- Ma, M., and Agarwal, R. (2007). Through a glass darkly: Information technology design, identity verification, and knowledge contribution in online communities. *Information Systems Research*, 18 (1), 42-67.
- Mak, B., Schmitt, B. H., and Lyytinen, K. (1997). User participation in knowledge update of expert systems. *Information & Management*, 32 (2), 55-63.
- Mehrabian, A., and Russell, J. A. (1974). *An approach to environmental psychology*. the MIT Press.
- Mudambi, S. M., and Schuff, D. (2010). What makes a helpful online review? A study of customer reviews on Amazon. com. *MIS Quarterly*, 34 (1), 185-200.
- Novak, T. P., Hoffman, D. L., and Yung, Y.-F. (2000). Measuring the customer experience in online environments: A structural modeling approach. *Marketing Science*, 19 (1), 22-42.
- Parboteeah, D. V., Valacich, J. S., and Wells, J. D. (2009). The influence of website characteristics on a consumer's urge to buy impulsively. *Information Systems Research*, 20 (1), 60-78.
- Pavlou, P. A. (2003). Consumer acceptance of electronic commerce: Integrating trust and risk with the technology acceptance model. *International Journal of Electronic Commerce*, 7 (3), 101-134.
- Peck, J., and Childers, T. L. (2006). If I touch it I have to have it: Individual and environmental influences on impulse purchasing. *Journal of Business Research*, 59 (6), 765-769.
- Petty, R. E., and Cacioppo, J. T. (1986). *Communication and persuasion: Central and peripheral routes to attitude change*. New York: Springer.
- Petty, R. E., and Cacioppo, J. T. (1986). The elaboration likelihood model of persuasion. *Advances in Experimental Social Psychology*, New York: Academic Press, 19, 123-205.

- Petty, R. E., Cacioppo, J. T., and Goldman, R. (1981). Personal involvement as a determinant of argument-based persuasion. *Journal of Personality and Social Psychology*, 41(5), 847-855.
- Petty, R. E., Wegener, D. T., and Fabrigar, L. R. (1997). Attitudes and attitude change. *Annual Review of Psychology*, 48 (1), 609-647.
- Pookulangara, S., and Koesler, K. (2011). Cultural influence on consumers' usage of social networks and its' impact on online purchase intentions. *Journal of Retailing and Consumer Services*, 18 (4), 348-354.
- Pring, C. (2012). "99 New Social Media Stats for 2012." <http://thesocialskinny.com/99-new-social-media-stats-for-2012/> .
- Racherla, P., and Friske, W. (2012). Perceived 'usefulness' of online consumer reviews: An exploratory investigation across three services categories. *Electronic Commerce Research and Applications*, 11 (6), 548-559.
- Resnick, P., and Zeckhauser, R. (2002). Trust among strangers in Internet transactions: Empirical analysis of eBay's reputation system. *Advances in Applied Microeconomics*, 11, 127-157.
- Schlosser, A. E. (2011). Can including pros and cons increase the helpfulness and persuasiveness of online reviews? The interactive effects of ratings and arguments. *Journal of Consumer Psychology*, 21 (3), 226-239.
- Sengupta, J., and Fitzsimons, G. J. (2000). The effects of analyzing reasons for brand preferences: Disruption or reinforcement?. *Journal of Marketing Research*, 37 (3), 318-330.
- Sherman, E., Mathur, A., and Smith, R. B. (1997). Store environment and consumer purchase behavior: Mediating role of consumer emotions. *Psychology & Marketing*, 14 (4), 361-378.
- Shih, H.-p., Lai, K.-h., and Cheng, T. C. (2013). Informational and relational influences on electronic word of mouth: An empirical study of an online consumer discussion forum. *International Journal of Electronic Commerce*, 17 (4), 137-166.
- Shop.org. (2011). "New Study Evaluates Consumer Behaviors, Attitudes toward "Social Commerce"." <http://www.shop.org/press/20110527> .
- Stieglitz, S., and Dang-Xuan, L. (2013). Emotions and information diffusion in social media—Sentiment of microblogs and sharing behavior. *Journal of Management Information Systems*, 29 (4), 217-248.
- Sun, T., Youn, S., Wu, G., and Kuntaraporn, M. (2006). Online Word-of-Mouth (or Mouse): An exploration of its antecedents and consequences. *Journal of Computer-Mediated Communication*, 11 (4), 1104-1127.
- Sussman, S. W., and Siegal, W. S. (2003). Informational influence in organizations: An integrated approach to knowledge adoption. *Information Systems Research*, 14 (1), 47-65.
- Triandis, H. C. (1979). Values, attitudes, and interpersonal behavior. Nebraska symposium on motivation, University of Nebraska Press.
- Yang, H.-d., and Yoo, Y. (2004). It's all about attitude: revisiting the technology acceptance model. *Decision Support Systems*, 38 (1), 19-31.
- Ye, Q., Law, R., Gu, B., and Chen, W. (2011). The influence of user-generated content on traveler behavior: An empirical investigation on the effects of e-word-of-mouth to hotel online bookings. *Computers in Human Behavior*, 27 (2), 634-639.
- Yin, D. (Forthcoming). Anxious or Angry Effects of Discrete Emotions on the Perceived Helpfulness. *MIS Quarterly*.
- Zhang, P. (2013). The affective response model: A theoretical framework of affective concepts and their relationships in the ICT context. *MIS Quarterly*, 37 (1), 247-274.
- Zhu, F., and Zhang, X. (2010). Impact of online consumer reviews on sales: The moderating role of product and consumer characteristics. *Journal of Marketing*, 74 (2), 133-148.