

Do We Follow Friends or Acquaintances? The Effects of Social Recommendations at Different Shopping Stages

Tingting Song, Cheng Yi, and Jinghua Huang

School of Economics and Management, Tsinghua University
{songtt.11,yich,huangjh}@sem.tsinghua.edu.cn

Abstract. This article examines the effects of social recommendations on consumers' purchase intentions at different stages of online shopping. Drawing on construal level theory (CLT) and research on social tie strength, this study hypothesizes that the persuasive effects of recommendations from one's close friends (i.e., strong social ties) and those from one's acquaintances (i.e., weak social ties) will differ depending on shopping stages consumers are in. Results from a laboratory experiment reveal that in the initial shopping stage, the effects of recommendations from weak ties on consumers' purchase intentions will be stronger than those from strong ties; however in the latter shopping stage, the reverse will happen. Research and managerial implications are discussed.

Keywords: social recommendations, tie strength, shopping stage, congruency of construal levels.

1 Introduction

The incorporation of social networks into e-commerce platforms is becoming increasingly prevalent nowadays. On one hand, advances in information technology have enabled e-commerce platforms to build social networks among consumers on their sites. For example, Amazon.com allows consumers to access various kinds of recommendations from other known or unknown consumers on its own platform. On the other hand, e-commerce platforms can also collaborate with social network sites such as Facebook and bring information from users' social networks to the shopping process. For instance, TripAdvisor.com highlights the review information from one's Facebook friends on the pages of the cities and hotels. Hence, while browsing and evaluating products online, consumers may receive recommendation information from their own social relationships, be it friends or acquaintances.

Plenty of literature has looked at the roles that different social relationships play in a variety of settings. For example, Bapna and Umjarov (2013) have studied the adoption of a paid online service and identified that the adoption behaviors of close friends play a pivotal role in one's service adoption. In contrast, recent research on viral marketing has found that it is the online acquaintances rather than close friends that contribute to spreading marketing-relevant information and product adoption (Ralf et al., 2010; Arnaud et al., 2008). Hence, it seems that the source of social recommendations, i.e., whether the recommendations are from one's close friends or acquaintances, may

affect the persuasiveness of the recommendations. Questions thus arise in terms of how the effects of recommendations from various social relationships differ.

An examination of previous research suggests that different social relationships reflect different degrees of interpersonal closeness and social distance. Specifically, proximal social relations such as friends represent a high degree of closeness and strong ties between people (Granovetter, 1973). Information related to proximal social relations is often construed at a lower and more concrete level than that related to distal social relations such as mere acquaintances, which typify as a low degree of closeness and weak ties between people (Granovetter, 1973). In other words, consumers may adopt different mindsets when processing information associated with social relationships of different tie strength (Lieberman and Trope 1998).

Literature has also pointed out that consumers' consumption goals and information processing mindsets may change over time as they proceed in the shopping process. According to Lee and Ariely (2006), people's consumption goals are not always highly specified, but tend to change from being abstract to more precise. The different levels of goal specificity may determine consumers' sensitivity to different types of information and recommendations (Chan, Jiang and Tan, 2010). This study thus aims to investigate how the persuasive effects of social recommendations differ based on when consumers are exposed to such information during their shopping process. Answers to this question will advance the field's understanding of consumers' responses to social recommendations, and provide guidance to the design of effective recommendation strategies.

2 Literature Review

2.1 Social Recommendations and Tie Strength

With recent advances in information technology and the rapid development of the Internet, consumers are increasingly relying on advice from their personal networks when making decisions (Hill, Provost and Volinsky 2006; Trusov, Bodapati, and Bucklin 2010; Sheldon et al., 2011; Susarla et al. 2012; Zeng and Wei, 2013). Literature typically characterizes interpersonal relationships by tie strength (Brown and Reingen, 1987). According to Granovetter (1973), tie strength measures the closeness and interaction frequency of a relationship between two parties. Specifically, strong ties exist between close friends who communicate frequently and whose social circles tightly overlap. Close interactions between friends thus decrease their social distance. In contrast, weak ties connect acquaintances who interact infrequently, and the social distance between weakly tied contacts is often distal. Regarding the roles of different social relationships, there is an extensive literature documenting that a message from a friend is more influential than one from an acquaintance because high interpersonal closeness between the sender and recipient may increase the trustworthiness and relevance of the message (Tam and Ho 2005, Tucker 2011). However, many other studies have shown that weak ties are more likely to provide non-redundant information and thus become important sources of novel information (e.g., Granovetter 1973; Levin et al., 2004). Aral and Walker (2011) have also found that weak ties are more effective than strong ties in influencing the adoption of new products.

This study examines the relative effects of recommendations from strong ties versus weak ties on consumers' decision making. In particular, since strong ties and weak ties

reflect different social distance between people (Granovetter, 1973), we investigate the question from the perspective of construal level theory (CLT, Trope, Liberman, and Wakslak 2007; Trope and Liberman 2003), which links people's mental representations and the psychological distance of the information.

2.2 Construal Level Theory

Construal level theory (CLT) contends that people may construe an object at an abstract, high level or at a concrete, low level (Trope and Liberman 2003). High-level construal reflects a general understanding of the object, whereas low-level construal reflects the details and specifics of the object. For example, the same act of getting a new job can be thought of as having an opportunity for career advancement – a higher construal level; or it can be conceived as going through the preparation procedure – a lower construal level.

The core of CLT is the proposition that mental representations of events that are psychologically near tend to be low-level and in details, whereas psychologically distant events are construed at a high and abstract level (Trope and Liberman, 2003). For example, social distance, as one kind of psychological distance, could change people's mental representations of others. More specifically, people's mental representations of close others' behaviors are often concrete and at a low level, whereas distant others' behaviors are construed at a high and abstract level (Zhao and Xie 2011; Kim, Zhang, and Li 2008; Trope, Liberman, and Wakslak 2007). For instance, when people predict whether their close friends will accept a job, they may expect their friends to put more weight on the low-level information, such as the office environment; however, they tend to predict distant others to focus on high-level information, such as interests and opportunities for future promotion. Applying CLT to the context of online product evaluation, we expect that recommendations from weak ties are likely to be processed at a higher and more abstract level while recommendations from strong ties may be represented at a lower and more concrete level.

2.3 Shopping Stage and the Congruency of Construal Levels

CLT also has important implications on how consumers process product information as they proceed in the shopping process. According to CLT, individuals use abstract terms to construe target activities in the distant future and translate them into more concrete actions as the target activities draw nearer (Trope and Liberman, 2003; Lee and Ariely, 2006). Lee and Ariely (2006) applies this idea to the shopping context and proposes a two-stage shopping framework based on the increasing concreteness of shopping goal. Based on this framework, in the initial shopping stage, consumers are uncertain about their goals and in the midst of browsing and deciding what to purchase or how much to spend (Chan, Jiang and Tan, 2010; Gollwitzer et al., 1990). They seek to define a desired outcome and tend to process information at a high construal level. As a result, consumers are likely to narrow down their choices according to the abstract and central value that they attach to the products. In contrast, in the latter shopping stage, consumers have already established their shopping goals and they care about goal attainment. They tend to process information at a low construal level and focus more on the concrete information related to carrying out the purchases.

A considerable amount of research has emphasized the idea that an external stimulus has a greater impact when its level of representation is more congruent with the internal construal level of decision makers (Higgins et al., 2003; Liberman and Trope, 1998; Kim, Zhang and Lee 2008; Zhao and Xie, 2011). In the context of online shopping, this means that consumers are more likely to pay attention to and encode information that is more congruous to their processing mindsets (Gollwitzer et al., 1990). Hence, it is expected that the relative effects of recommendations from strong versus weak social ties will change over time depending on consumers' mindsets in different shopping stages.

3 Hypothesis Development

Based on CLT, users tend to define events in the distant future in abstract terms and translate them into more concrete terms as the events draw nearer (Trope and Liberman, 2003). The two-stage shopping framework (Lee and Ariely 2006) follows this idea and proposes that consumers' natural construal level will change according to the shopping stages they are in. Specifically, in the initial shopping stage, consumers are generally uncertain about their shopping goals (Gollwitzer et al., 1990) and their natural construal level is high. In the latter shopping stage, however, consumers have already established their goals (Gollwitzer et al., 1990) and their natural construal level is low. Since people always put more weight on the type of information that matches their natural construal level at a given time (Liberman and Trope 1998), information which is typically construed at a higher level should exert a strong influence on consumers' product preference in the initial shopping stage whereas low-level and concrete information should be more influential in the latter shopping stage.

Accordingly, we hypothesize that social recommendations will be more effective in shaping users' product preference when the natural construal level of recommendation information is consistent with users' mental representation state. As mentioned earlier, since the perception of social distance towards strong ties is proximal and that of weak ties is distal, recommendations from strong ties are likely to be construed at a low and concrete level, whereas individuals' mental representations of weak-tie recommendations tend to be high-level and abstract (Zhao and Xie 2011; Kim, Zhang, and Li 2008; Trope, Liberman, and Wakslak 2007). Hence, in the initial shopping stage when consumers tend to have a higher level mindset in information processing, recommendations from weak ties will have greater influence than those from strong ties as weak-tie recommendations fit with consumers' existing mindset. Strong ties' recommendations, however, may have a larger effect in the latter shopping stage because perceptions of information from proximal social ties are more congruent with people's low-level mindset in this stage. Thus, we propose,

H1: There will be an interaction effect between shopping stage and tie strength of recommendation source on consumers' purchase intentions.

(a) In the initial shopping stage, recommendations from weak ties will lead to higher purchase intentions than those from strong ties.

(b) In the latter shopping stage, recommendations from strong ties will lead to higher purchase intentions than those from weak ties.

4 Research Methodology

4.1 Experimental Design

A lab experiment was conducted to test the hypotheses. We constructed a shopping website for the experiment, and badminton rackets were selected as the target product category. Since badminton was a common sport for the majority of college students in China, the task of inspecting and considering purchase of badminton rackets represented a realistic scenario for student subjects.

Two shopping stages characterized by different levels of shopping goal concreteness were manipulated based on Tam and Ho (2006). Specifically, subjects in the initial shopping stage were asked to visit the online store and freely browse a list of six badminton rackets. They were told that the listed products were randomly retrieved from the pool of products on sale and no purchase decision was needed to be made at the end of the visit. The six displayed products were similar in terms of price and users' perceived attractiveness based on a pretest. A hypothesized brand name was associated with the products to avoid the potential confounding effects of prior brand involvement. Information presented for each product on the listing page included a picture, product name, and social recommendations. One of the rackets was selected as the target product, of which the recommendation source was manipulated. Specifically, recommendations from strong (weak) ties were presented in the form of three close (distant) others "liking" the product. The social relationship information was reported by each participant two weeks before the experiment¹.

Subjects in the latter shopping stage were asked to search for rackets as they had been considering making a purchase for the new semester. They were directed to the detailed information page of the target product for purchase evaluation, where the recommendation source was manipulated likewise. They were asked to make purchase decision at the end of the visit.

Overall, the laboratory experiment employed a 2 (social recommendation source: strong versus weak ties) \times 2 (shopping stage: initial versus latter) between-subject factorial design. It was ensured that only the two design factors were varied across different treatments.

4.2 Experimental Procedures

The subjects were randomly assigned to one of the four conditions. Following a welcome screen, the subjects were instructed to perform a task, which was either to browse a list of products on sale without decision making (i.e., the initial stage) or to search and evaluate the products in order to make a purchase decision (i.e., the latter stage). After viewing all the pages, the subjects proceeded to answer a questionnaire. All subjects indicated their purchase intentions towards the target badminton racket based on a 7-point Likert scale (likely to buy the rackets, look forward to buying the rackets, and

¹ During the recruitment, registrants were asked to list five of their closest friends with whom they interact frequently on social network sites and microblog, as well as five unfamiliar contacts (except star users or experts) with whom they had not communicated for at least two months.

purchase the rackets next time when needed; adapted from Jiang and Benbasat, 2007 & Mackenzie et al., 1986). Manipulation check questions on shopping stage (Gollwitzer et al., 1990 and Chan, Jiang and Tan, 2010) and tie strength (Levin et al., 2004 and Frenzen and Davis, 1990) were also included. Each session of the experiment lasted for around 15 minutes and a token payment of ¥30 (around \$5) was given upon the completion of the questionnaire.

5 Data Analysis

5.1 Subject Demographics and Background Analysis

68 undergraduate and graduate students from a major university in China were recruited. Prior studies have suggested that the characteristics of university students are deemed to be similar to those of online shoppers (Chan et al., 2010), thus the sample was appropriate for this study. Among the 68 subjects, 36 (52.9%) were females and 32(47.1%) were male. The average age was 22.16. They came from 12 diverse faculties and departments. About 80% of the subjects used social media more than an hour per day. No significant differences were found between subjects in each of the four experimental conditions with respect to age, gender, and past Internet and online shopping experience.

5.2 Manipulation Checks

Independent samples t-tests were conducted to examine the manipulation of the independent variables. Results showed that subjects in the latter shopping stage reported significantly higher level of goal specificity during their interaction with the website (Mean = 5.61, SD=0.77) than those in the initial shopping stage (Mean = 3.38, SD = 1.74; $t = -8.83$, $p < 0.01$). Hence, the manipulation of shopping stages was successful. Subjects also reported that they had more frequent interactions and were closer with the contacts displayed in strong ties conditions (Mean = 6.10, SD = 1.13) than those in weak ties conditions (Mean = 3.23, SD = 1.62; $t = -11.79$, $p < 0.01$). Therefore the manipulation of tie strength of recommendation source was also successful.

5.3 Results on Purchase Intentions

A 2 (weak ties vs. strong ties) *2 (initial shopping stage vs. latter shopping stage) analysis of variance (ANOVA) was conducted to test our hypotheses. As expected, the results showed a significant interaction between the two factors ($F(1, 64) = 9.728$, $p < 0.01$; see Figure 1). Specifically, in the initial shopping stage, recommendations from weak ties led to a significantly higher level of purchase intentions than those from strong ties (M weak ties = 6.29 vs. M strong ties = 5.52; $p < 0.05$). In the latter shopping stage, on the contrary, recommendations from strong ties led to a significantly higher level of purchase intentions than those from weak ties (M strong ties = 5.69 vs. M weak ties = 4.88; $p < 0.05$). Hence, H1 was fully supported.

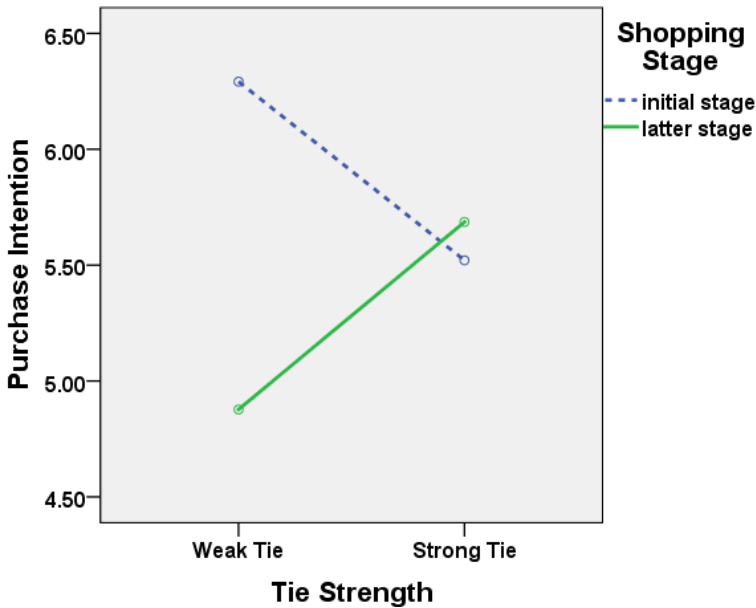


Fig. 1. Plots of Interaction Effect on Purchase Intentions

6 General Discussions

This study draws on CLT and research on tie strength as well as shopping stage to examine how social recommendations influence consumers' purchase intentions. Our findings show that people are more likely to follow weak ties' recommendations in the initial shopping stage, since the natural mental processing of weak ties' information is congruent with their high level mindset in the initial shopping stage. In contrast, when consumers are in the latter shopping stage, they are more likely to follow strong ties' recommendations because perceptions of strong-tie recommendations are congruent with people's low-level mindset in this stage.

6.1 Theoretical and Practical Contributions

Our work contributes to the literature in several areas. First, while past research has examined the importance of weak ties in job hunting (Granovetter 1973; Brown & Konrad 2001) and information dissemination (Burt 1995; Weening 1993; Shi, Rui, and Whinston, 2013; Wilson 1998; Wellman and Wortley 1990; Brown and Konrad 2001; Levin et al., 2004), the persuasive impacts of tie strength in a shopping context is seldom examined. Our results suggest that the effectiveness of weak-tie recommendations is contingent on consumers' shopping stages. Second, our research also contributes to the CLT literature by extending the interrelationships between different dimensions of psychological distance (Lieberman & Trope, 1998; Fujita et al. 2006; Zhao and Xie, 2011; Wakslak et al. 2006). In particular, we have integrated temporal distance (i.e., the shopping stage) and social distance (i.e., recommendation source) and

demonstrated that users' product evaluation depends on the congruency between them. Third, though prior studies have examined the nature of different shopping stages (Lee and Ariely, 2006), little empirical effort has been made to investigate the interaction effects between shopping stages and different types of recommendations. This paper thus makes a contribution to the literature by providing insights into consumers' responses to recommendation information in different shopping stages.

Our research brings managers' attention to factors that might influence the effectiveness of social recommendations—namely, shopping stage and types of recommendation sources. Shopping stage may often be reflected by the webpages being browsed by consumers; hence, online firms may consider designing different recommendation strategies accordingly on different pages.

6.2 Limitations and Further Research

Apart from the usual limitations of experiment design, one limitation of this paper is that only one product type is considered. Hence, our findings may not be generalized to all kinds of products. Second, in the current study, the effects of social recommendations are manifested through self-reported measures after the experimental task, as constrained in a lab setting. Future studies may examine the effects in field settings and capture actual consumption behaviors.

Many noteworthy issues are left unanswered. First, our research considers tie strength between the recommendation provider and the receiver, but there are many other types of social relations. For example, researchers could explore whether and how opinion leaders/ordinary users and experts/non-experts affect people's responses to recommendations in different situations. Second, this study reveals the effects of tie strength moderated by shopping stages. Future work can extend the research by considering other moderating factors. For instance, individuals may be more receptive to information from weak ties in social broadcasting network (Shi, Rui, and Whinston, 2013); however, in other private networks such as WeChat, strong ties may be more persuasive.

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