Abstract

Group buying websites typically need a pre-determined minimum number of buyers for a deal before that deal is on. With the proliferation of these websites, it becomes very crucial for marketers to understand how they can capture online group sales early. Consumers at group buying websites are usually not aware of the deals prior visiting the websites. Therefore purchases made at group buying websites are usually impulse purchases, i.e. unplanned buys. With a 24-hour countdown timer or an indication of the number of deals sold in real time, consumers may be misled into committing to purchases, which may cause them to have negative feelings and hence low loyalty. This study therefore serves to investigate loyalty in group buying websites. In trying to “tempt” consumers to buy the deals impulsively, it is important to understand how this will eventually affect their loyalty. Knowing what can motivate consumers to make a purchase as early as possible is also important. Our findings help group buying websites understand how they can better design their online platforms so that they can get consumers to commit fast, while still build loyalty in them. This is very important in ensuring the long-term survival of group buying websites.

Keywords: social influence, impulse behavior, loyalty, group buy.
1 INTRODUCTION

Group buying websites such as Groupon have created much hype amongst consumers and are re-shaping online shopping (Wei et al. 2011). Before visiting group buying websites, consumers are usually unaware of the deals that are available. They do not have any intention of owning a particular deal prior exposure to the promotions. For these consumers, such purchases are unplanned. We termed these as “impulse purchases”. To attract as many consumers into buying as possible, group buying websites typically show a 24-hour countdown timer and state the deal’s popularity by showing how many persons have bought it. Consumers may be pressured into making a purchase without careful considerations (Hahn et al. 1992). This may lead to diminishing loyalty and reduced purchases from the same consumers over time (Zhang & Wang 2010). It is fundamental to understand how group buying websites can build loyalty in their customers to ensure survival in the long run rather than become just another online fad. This research therefore aims to answer three key questions, using group buying websites as the study platform:

- What are the impacts of impulse purchase behavior on e-loyalty?
- What are the impacts of social influence on impulse purchase behavior?
- How does product type (i.e., hedonic and utilitarian) influence the impacts of social influence on impulse purchase behavior?

E-loyalty refers to the deeply held commitment to rebuy or repatronize a preferred product/service from an online store (Reichheld & Schefter 2000), thereby causing repetitive purchasing behavior despite situational influences and marketing efforts having the potential to cause switching behavior (Oliver 1997). Loyal consumers are valuable assets (Chaudhuri 1999; Fournier 1998) and contribute greatly to the success of a company (Chaudhuri & Holbrook 2001; Oliver 1999). It is more expensive for group buying websites to attract new consumers than retain existing ones (Dick & Basu 1994; Saren & Tzokas 1998). Consumers who are loyal often require fewer resources to retain (Fournier 1998). Moreover, loyal consumers engage in favorable word-of-mouth, acting like a form of “free” and powerful advertising vehicle, and demonstrate greater resistance to competitive strategies such as price discounts and free gifts.

Impulse behavior is typically driven by impulses that are biochemically and psychologically stimulated (Rook 1987). In turn, an impulse is defined as “a strong and sometimes irresistible urge: a sudden inclination to act without deliberation” (Goldenson 1984). The impulse to buy a product/service is a complex decision that constitutes cognitive and affective dimensions – here, the cognitive aspects concern the lack of planning and deliberation when making purchases, while the affective aspects concern feelings of pleasure and excitement, and urge to buy, the difficulty to leave things and possible regret afterwards (Verplanken & Herabadi 2001). Research has shown that consumers may develop negative post-purchase feelings from these two dimensions of impulse behaviors (Rook 1987), which can eventually cause them to be less loyal (Zhang & Wang 2010). Although impulse buy can drive up sales in a short period of time, it is crucial for group buying websites to not only understand how to urge consumers into buying, but balance this with loyalty problems that may arise in consumers from their impulsive behaviors.

One of the most pervasive determinants of impulse behaviors is social influence (Burnkrant & Cousineau 1975). Deutsch and Gerard (1955) identified two types of social influences: informational social influence and normative social influence. They mentioned that in informational social influence, individuals use the information provided by others as a source of the true value of the object under consideration; while on the other hand, normative social influence refers to an individual’s assumed need to align their attitude with that of some valued others, such as a reference group. This means that informational social influence addresses one’s need to be right and it therefore impacts one’s cognitive impulse behavior, while normative social influence stresses one’s need to be liked and in turn, it impacts one’s affective impulse behavior.

Scholars have long recognized the differential effects of product types on consumer behavior and developed various ways of categorizing products. One of the most established ways is to classify products as either utilitarian or hedonic based on consumers' purchase motivation or usage experience
(Hirschman & Holbrook 1982). Further, researchers have pointed out that the underlying distinctions between utilitarian products and hedonic products lead to different psychological processes when consumers evaluate a product (Hirschman & Holbrook 1982). The evaluation process for utilitarian products tends to be more cognitively driven, meaning that consumers focus primarily on the objective and tangible attributes of the product. On the other hand, the evaluation process for hedonic products tends to be highly subjective and affect driven, implying that cognitively based processes is less important. It is therefore necessary to study how social influence has an impact on impulsive behavior based on the product type a consumer is considering to buy.

This paper makes three main theoretical contributions. First, it adds on to the growing literature in the fast emerging area of group buying behaviors (e.g., Banker et al. 2011; Jing & Xie 2011) and proposes a new theoretical model to help group buying websites understand how to tempt consumers to buy impulsively and yet build long-term loyalty in them. Second, the study takes into consideration an interesting moderator, i.e. the product type, to understand how different product types can affect the relationship between social influence and impulse behavior. Third, it builds on concepts from various disciplines such as social psychology, consumer behavior, marketing and information systems to frame this study in order to understand how social influence can affect impulsive behavior.

There are three main practical contributions. First, this research provides insights as to how group buying websites can better design information push to consumers so as to tempt them into buying the group deals. This will greatly improve the success of the group buying websites. Second, the research model also enables group buying websites to understand what can create loyalty in consumers via impulsive buying behaviors. This is important as loyal consumers are usually more willing to promote the group buying websites. In fact, such is a win-win situation for both consumers and group buying websites – while consumers enjoy value-for-money deals, the group buying websites are able to convince more merchants to ride on their platforms to increase sales and revenue, and to move inventories faster.

2 THEORETICAL FOUNDATION AND HYPOTHESES

2.1 E-Loyalty, Impulse Behavior and Social Influence

While loyalty can be studied in terms of repeat purchasing frequency or relative volume of same-brand purchasing (e.g., Tellis 1988), it is often defined as a deeply held commitment to buy or patronize a preferred product/service consistently, causing repetitive purchases despite switching behaviors that can be resulted from situation influences and marketing efforts (Oliver 1999). In our context, we are looking at e-loyalty, which has been defined as the commitment to repeatedly purchase products/services from the same group buying website over time.

Consumers are usually not aware of the deals prior visiting group buying websites. Should they decide to get the deals eventually, these purchases can be regarded as unplanned buys. Unplanned buys can be termed as “impulse purchases” (Bellenger et al. 1978; Cobb & Hoyer 1986; Engel et al. 1978). Moreover, the design nature of these websites is such that consumers may be pressured into getting the deals fast with little consideration. For example, group buying websites typically offer 24-hour deals and display the number of deals purchases in real time to attract potential buyers. According to Rook (1987), impulse buying occurs when a consumer experiences a sudden powerful and persistent urge to buy something immediately. Such an impulsive decision to buy is very complex and may stimulate emotional conflict such as regrets that can lead to diminishing loyalty. It is thus important to study how impulse behavior on group buying websites can affect customer loyalty.

Living in a social world, it is a known fact that an individual's choice can be influenced by other people (Silvera et al. 2008). Social influences can be important triggers for consumers’ urge to buy something immediately. There are two types of social influences, namely informational social influence and normative social influence (Deutsch & Gerard 1955). Informational social influence measures an individual's tendency to obtain information about the group buying website by observing or directly seeking information from other people; while, normative social influence measures an
individual's need to use a group buying website in order to identify with, or enhance, his or her image in the eyes of significant others and a willingness to confirm to the expectations of others in making purchase decisions.

2.2 Hypothesis Development

Individual differences do play a role in consumers' propensity to buy impulsively (Dittmar & Drury 2000; Hausman 2000; Verplanken & Herabadi 2001). In particular, Verplanken and Herabadi (2001) have developed the impulse buying tendency scale to measure (i) a cognitive facet related to the lack of planning in association with purchase decisions, and (ii) an affective facet associated with feelings of excitement and overpowering urges to buy. Investigating both cognitive and affective dimensions of impulse buying is important because recently, researchers have agreed that impulse buying may lead to consumer loyalty through either the cognitive or affective routes (Cobb & Hoyer 1986; Piron 1991; Rook 1987; Rook & Fisher 1995; Weinberg & Gottwald 1982).

Cognitive impulse behavior has been found to cause more regrets in an individual. This is mainly due to the fact that not enough planning or consideration is devoted prior a purchase decision. Therefore during the post-purchase process of reflecting back on the buys, consumers who display cognitive impulse behavior will be more likely to develop negative post-purchase feeling of their actions. Negative post-purchase feeling is likely to result in him or her not returning to the group buying website. On the contrary, affective impulse behavior elicits an individual and induces positive post-purchase feeling in him or her, thereby forming stronger loyalty or higher probability of future revisits to the group buying website. For example, when buying an item that one feels very passionate about say branded accessories, the process of purchase will most likely trigger off feelings of excitement and paint beautiful picture of the usage scenarios, hence eliciting him or her further. Therefore we posit:

• H1: Cognitive impulse behavior is negatively related to e-loyalty.
• H2: Affective impulse behavior is positively related to e-loyalty.

According to Silvera et al. (2008), an individual's susceptibility to interpersonal influence can be associated with a variety of consumer behaviors, and in particular, with those behaviors that combine lack of impulse control with relief from negative emotions. It consists of two dimensions: informational social influence and normative social influence (Deutsch & Gerard 1955). Consumers with high levels of informational social influence may have the tendency to actively seek information about potential purchases, which may lead to low cognitive impulse behaviors involving purchases without seeking or even considering information relevant to the purchase. On the other hand, high levels of normative social influence indicate an individual's willingness to submit to forces within the social environment when making purchase decisions; such submission to external forces can positively influence the affective dimension of impulse buying, which involves submission to the demands of the immediate purchase context. Therefore we posit:

• H3: Informational social influence is negatively related to cognitive impulse behavior.
• H4: Normative social influence is positively related to affective impulse behavior.

Finally, utilitarian products are those whose consumption is more cognitively driven, instrumental, goal-oriented and accomplishes a functional or practical task (e.g., microwaves, minivans, personal computers, etc.), whereas hedonic products are those whose consumption is primarily an affective and sensory experience of aesthetic or sensual pleasure, fantasy, and fun (e.g., designer clothes, sports cars, luxury watches, etc.) (Strahilevitz & Myers 1998; Hirschman & Holbrook 1982). In reality, few products are purely utilitarian or hedonic in nature because consumers are known to have both considerations when evaluating products and functionalities (Batra & Ahtola 1990; Dhar & Wertenbroch 2000). However, many products involve both utilitarian and hedonic dimensions to varying degrees, and we can still characterize some as primarily utilitarian and others as primarily hedonic. Here, we say that utilitarian products are mainly evaluated based on utilitarian values such as savings, convenience and product quality, whereas hedonic products are mainly assessed according to its hedonic values such as entertainment, exploration and self-expression (Ailawadi et al. 2001; Chandon et al. 2000). Therefore we posit:
• H5: Informational social influence is more negatively related to cognitive impulse behavior for utilitarian products compared to hedonic products.
• H6: Normative social influence is more positively related to affective impulse behavior for hedonic products compared to utilitarian products.

Figure 1 presents the research model.

Figure 1. Research Model

3 RESEARCH METHODOLOGY

3.1 Research Design

The research is in progress. A survey instrument was used to test the research model. The survey items (see Table 1; only two examples of the items were given for each factor) were adapted from prior literature with slight modifications to suit our research context. The survey was posted online using Google Docs and with proper settings, we eliminated the issue of missing values.

3.2 Participants

Undergraduate students from a large university in Southeast Asia were invited to take part in the survey. All participants were briefed and understood what group buying websites were before proceeding with the survey. On average, the participants took approximately 30 minutes to complete the questionnaire. They were then paid and debriefed. The participants did not make enquiries about the survey, suggesting that the questions were clear.

After removing five outliers, we collected a total of 98 valid responses. The 98 respondents were quite fairly distributed in terms of gender (55.1% male and 44.9% female). They were mostly in the age group of 20-24 years old (81.6%). Majority of them have online shopping experiences (88.8%), and quite a few of them have actually bought deals on group buying websites before (62.2%).
### Table 1. Survey Items

<table>
<thead>
<tr>
<th>Factor</th>
<th>Definition</th>
<th>Measurement Item</th>
<th>Source</th>
</tr>
</thead>
<tbody>
<tr>
<td>Informational Social Influence (ISI)</td>
<td>Measures an individual’s tendency to obtain information about the group buying website by observing or directly seeking information from other people.</td>
<td>I often consult other people to help choose the best group buying website that is available.</td>
<td>Silvera et al. (2008)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I frequently gather information from friends or family about a particular group buying website before I commit to any purchases.</td>
<td></td>
</tr>
<tr>
<td>Normative Social Influence (NSI)</td>
<td>Measures an individual’s need to use a group buying website in order to identify with, or enhance, his or her image in the eyes of significant others and a willingness to confirm to the expectations of others in making purchase decisions.</td>
<td>I often identify with other people by purchasing from the same group buying website that they also visit.</td>
<td>Silvera et al. (2008)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I like to know which group buying websites I visit will make good impressions on others.</td>
<td></td>
</tr>
<tr>
<td>Cognitive Impulse Behavior (CIB)</td>
<td>Unplanned purchases on a group buying website that are related to a lack of planning in association with the purchase decisions.</td>
<td>I usually do not think carefully before I buy something from this group buying website.</td>
<td>Verplanken and Herabadi (2001)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Before I buy something from this group buying website, I make sure I consider very carefully whether I need it. (R)</td>
<td></td>
</tr>
<tr>
<td>Affective Impulse Behavior (AIB)</td>
<td>Unplanned purchases on a group buying website that are associated with feelings of excitement and overpowering urges to buy.</td>
<td>I sometimes cannot suppress the feeling of wanting to buy something from this group buying website.</td>
<td>Verplanken and Herabadi (2001)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I can become very excited if I see something I would like to buy on this group buying website.</td>
<td></td>
</tr>
<tr>
<td>e-Loyalty (EL)</td>
<td>Repetitive purchasing of items from the same group buying website over time.</td>
<td>I try to use this group buying website whenever I need to make a purchase. (R)</td>
<td>Sivadas and Baker-Prewitt (2000)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>I always consider switching to another group buying website. (R)</td>
<td></td>
</tr>
</tbody>
</table>

### 4 DATA ANALYSIS

We conducted an exploratory factor analysis using principle component analysis with varimax rotation in SPSS. By dropping those items that did not load onto the intended factors, we get five factors that account for 71% of the total variance extracted. Using LISREL, we further dropped some items based on the standardized item loadings and modification indices in an attempt to improve the chi-square value and goodness-of-fit (GFI) index. Finally, 15 items were retained with a five-factor measurement model that has a GFI of 0.88, adjusted goodness-of-fit index (AGFI) of 0.83, non-normed fit index (NNFI) of 0.96 and normed fit index (NFI) of 0.88, which are relatively close to the recommended ranges of more than 0.90, 0.80, 0.90 and 0.90 respectively (Sharma 1996; Hair et al. 1998).

The results of the various convergent validity tests were shown in Table 2. All the values exceeded the commonly recommended levels. All survey items had standardized loadings exceeding 0.50. Result of the discriminant validity test was shown in Table 3. Here, the variance extracted by each factor was larger than its shared variance with the other factors. This indicated a high correlation among items measuring the same factor, but not across different factors.
### Table 2. Convergent Validity Tests

<table>
<thead>
<tr>
<th>Factor</th>
<th>Cronbach’s Alpha</th>
<th>Composite Reliability</th>
<th>Average Variance Extracted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Informational Social Influence (ISI)</td>
<td>0.885</td>
<td>0.891</td>
<td>0.734</td>
</tr>
<tr>
<td>Normative Social Influence (NSI)</td>
<td>0.887</td>
<td>0.890</td>
<td>0.730</td>
</tr>
<tr>
<td>Cognitive Impulse Behavior (CIB)</td>
<td>0.826</td>
<td>0.827</td>
<td>0.614</td>
</tr>
<tr>
<td>Affective Impulse Behavior (AIB)</td>
<td>0.759</td>
<td>0.776</td>
<td>0.548</td>
</tr>
<tr>
<td>e-Loyalty (EL)</td>
<td>0.840</td>
<td>0.853</td>
<td>0.664</td>
</tr>
</tbody>
</table>

Recommended Range
- 0.70 and above (Nunnally 1978)
- 0.80 and above (Nunnally 1978)
- 0.50 and above (Fornell and Larker 1981)

### Table 3. Shared Variance among the Factors

<table>
<thead>
<tr>
<th>Factor</th>
<th>ISI</th>
<th>NSI</th>
<th>CIB</th>
<th>AIB</th>
<th>EL</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISI</td>
<td>0.86</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NSI</td>
<td>0.49</td>
<td>0.85</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CIB</td>
<td>0.37</td>
<td>-0.18</td>
<td>0.78</td>
<td></td>
<td></td>
</tr>
<tr>
<td>AIB</td>
<td>0.04</td>
<td>0.46</td>
<td>-0.41</td>
<td>0.74</td>
<td></td>
</tr>
<tr>
<td>EL</td>
<td>0.05</td>
<td>0.12</td>
<td>-0.02</td>
<td>0.21</td>
<td>0.81</td>
</tr>
</tbody>
</table>

To test the structural model, we conducted structural equation modelling (SEM) with LISREL for both datasets separately – 54 data points for hedonic product and 44 data points for utilitarian product.

The exploratory power and predictive validity of the structural model can be evaluated by using the $R^2$ values for the dependent factors, namely cognitive impulse behavior, affective impulse behavior and e-loyalty. For hedonic product, the model accounts for 34%, 16% and 9% of the variance in the dependent factors respectively. Except for the last value, the other two exceeded 10%, which was suggested by Falk and Miller (1992) as an indication of substantive explanatory power. We can therefore say that this model possesses a relatively high predictive validity. For utilitarian product, the model accounts for 1%, 24% and 9% of the variance in the dependent factors respectively. Except for the second value, the other two values are below 10%, which was suggested by Falk and Miller (1992) as the benchmark for an indication of substantive explanatory power. We can therefore say that this model does not possess as high predictive validity as the earlier model for hedonic product.

As only unidirectional relationships have been hypothesized, a one-tailed test is performed at significance levels of 0.05, 0.01 and 0.001 with the degrees of freedom at infinity; the acceptable T-values are 1.645, 2.326 and 3.090 respectively. For hedonic product, using a significance level of 0.05 as the benchmark, only three path coefficients were significantly positive, but as we have predicted negative relationship for H3, eventually, we can only conclude that two hypotheses (i.e., H2 and H4) were supported. Results were shown in Table 4. For utilitarian product, only one hypothesis, i.e. H4 was supported. Results were shown in Table 5.

The path coefficients of H4 for utilitarian product was stronger (i.e., more positive) than that for hedonic product. This contradicts our prediction for H6, which was therefore not supported. H5 was also not supported since H3 was not supported in both cases.

<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Path Coefficient</th>
<th>Standard Error</th>
<th>T-value</th>
<th>Outcome*</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>-0.03</td>
<td>0.16</td>
<td>-0.17</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H2</td>
<td>0.30</td>
<td>0.18</td>
<td>1.71*</td>
<td>Supported</td>
</tr>
<tr>
<td>H3</td>
<td>0.58</td>
<td>0.16</td>
<td>3.64***</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H4</td>
<td>0.40</td>
<td>0.18</td>
<td>2.19*</td>
<td>Supported</td>
</tr>
</tbody>
</table>

* Significance levels of *p<0.05, **p<0.01 and ***p<0.001.

### Table 4. Summary of Hypotheses Testing for Hedonic Product
<table>
<thead>
<tr>
<th>Hypothesis</th>
<th>Path Coefficient</th>
<th>Standard Error</th>
<th>T-value</th>
<th>Outcome*</th>
</tr>
</thead>
<tbody>
<tr>
<td>H1</td>
<td>0.11</td>
<td>0.15</td>
<td>0.75</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H2</td>
<td>0.27</td>
<td>0.17</td>
<td>1.63</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H3</td>
<td>0.10</td>
<td>0.17</td>
<td>0.60</td>
<td>Not Supported</td>
</tr>
<tr>
<td>H4</td>
<td>0.49</td>
<td>0.21</td>
<td>2.34**</td>
<td>Supported</td>
</tr>
</tbody>
</table>

* Significance levels of *p<0.05, **p<0.01 and ***p<0.001.

Table 5. Summary of Hypotheses Testing for Utilitarian Product

5 CONCLUDING REMARKS

5.1 Discussion

H1 is not supported for both hedonic and utilitarian products. From the results, it seems that cognitive impulse behavior has a positive (and not a negative) relationship with e-loyalty. This goes to show that perhaps when an individual engages in unplanned purchases with little pre-planning and consideration, he or she is more likely to return to the group buying websites later on. One potential reasoning could be that when there are little cognitive activities into making the impulse purchase, one will end up saving more time and experiencing less tedious thinking process, hence resulting in more positive feelings being developed. With good feelings, chances of him or her returning is therefore higher.

H2 is supported for hedonic product, but not utilitarian product. This means that affective impulse behavior has a positive and significant impact on e-loyalty for only hedonic product. This shows that when an individual decides to buy a hedonic product, he or she tends to experience more positive feelings such as excitement. Hence the feel-good factor is strengthened and thus loyalty that the individual has for the group buying website increases.

H3 is not supported in both cases. This is interesting as logically, informational social influence should have an impact on the cognitive aspect of impulse behavior. However, from the findings, they showed that regardless of product type, the amount of information given does not impact on one’s impulsiveness. Hence impulsive purchase behaviors are mainly hedonic in nature (Rook 1987).

H4 is supported. However, it seems that normative social influence has a weaker impact in the presence of a hedonic product as compared to an utilitarian product. This is indeed a surprising outcome as hedonic product should rightfully have more effect on normative social influence instead. For hedonic products, perhaps it is more advisable for group buying websites to not start a forum or social exchange platforms for individuals to interact and directly recommend good deals to one another.

5.2 Implications

An important theoretical implication by this paper is that it taps into the area of online group buying behaviors that is relatively less researched on and proposes a model to facilitate group buying websites in understanding how to get sales fast and build loyalty in consumers. It also looks at a phenomenon that is contradictory, that is impulse behavior typically leads to more negative post feelings, so instead, this research is looking at how to work around the negative forces to attract repeat visits to or repeat purchases from these websites. Our research also adds on to the existing vast literature from various disciplines such as social psychology and information systems to see how social influence can potentially affect impulse behavior.

In terms of practical implications, the findings first serve to guide group buying websites on how to design their information push to get consumers to purchase early. Second, and more importantly, how impulse purchases from consumers need not compensate loyalty in the long run. Finally, this research paints a very complete picture on how to push for quicker and more sales, while at the same time, ensuring loyalty in consumers that further brings about repeat visits or purchases. In this way,
merchants who sell through group buying websites not only can move their inventories faster and able to clear existing stock, they are also able to build strategic assets, meaning loyal consumers.

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References


