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Converting Virtual Community Members Into Online Purchase Customers

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Abstract

While virtual communities (VCs) have been used mainly for information sharing and social networking, little is known as to how online vendors can derive benefits from them in practice. VCs are particularly successful in attracting and retaining members. Online vendors have attempted to capitalize on this characteristic of a virtual community (VC) for obtaining numerous commercial benefits, such as customer service. Online vendors also expect the VC members to become their customers thus improving their online sales. In practice, however, not many online vendors have been successful in converting their VC members into customers. If the VC members could be converted into online customers, online vendors can benefit greatly from having a VC as it is capable of attracting and retaining members. However, there is hardly any study which examines the conversion process of a VC member into an online customer. Therefore, the aim of this study is to examine the transformation process of a VC member into an online customer. Understanding this transformation process would facilitate online vendors in their endeavors for benefitting from their VC. Also, it would provide insights into the usefulness of VC for commercial purposes apart from increasing sales.

Keywords: Virtual Community, Customer Commitment, Loyalty, Classical Conditioning Theory

1. Introduction

Traditionally, virtual communities (VCs) have been widely used as a platform for meaningful discussions among strangers from various parts of the globe. Many people join such communities to fulfill their communication and social needs, such as sharing common interests and building relationships (Armstrong and Hagel 1996). Most of these VCs, which fulfill relationship and interest needs of its customers, are very successful in attracting and retaining members. This capability of VCs to attract and retain members has also attracted the attention of online vendors (Zingale and Arndt 2001). Vendor-sponsored VC, which is the focus of this research, mainly fulfills the transaction needs of its customers, although it may also contain elements of interest, relationship, and/or fantasy.

Vendor-sponsored VCs are potential channels for online vendors to develop deeper and broader relationships with their customers. VCs can be used for easy dissemination of product related information, helping customers in troubleshooting, and streamlining the complaints and returns process. Apart from customer service, VCs can also be useful for advertising brand name and promotion, improving store image, product development, improving sales, gauging demand for products, and increasing barriers to
entry for the competitors (Preece and Maloney-Krichmar 2002). Thus, VCs could be of
great strategic value to the online vendors.

In particular, online vendors expect VCs as a potential source of customers to
improve their reach and increase online sales. While some online vendors (e.g.,
Amazon.com) have been successful in improving sales, many others have failed
miserably in obtaining sales from the virtual community (VC) (Shan et al. 2005). These
VCs suffer from two main problems. First, while these VCs have visitors/members, they
do not have customers (Shan et al. 2005). Most of the customers come for obtaining
information or for troubleshooting. Such customers search for the relevant information in
some discussion threads but do not participate. Moreover, when some VCs do obtain a
significant amount of visitors/members, these members are short-lived and do not exhibit
commitment toward the VC activities. Secondly, the commercial goals (such as
increasing sales) of the online vendor do not match with the goals of the members
(Andrews 2001), who are more interested in troubleshooting or searching information
rather than making a purchase transaction with the online vendor.

If the VC members could be converted into online customers, online vendors can
benefit greatly from having a VC as it is capable of attracting and retaining members.
Although importance of VCs has been resonated widely, there is hardly any empirical
study which examines the mechanism by which a VC member can become an online
customer. In view of the above discussion, the objective of this research is to examine the
transformation of VC member into an online customer. The specific research questions
examined in this study are: (a) how does the transformation of a VC member into an
online customer takes place? And (b) what factors influence this transformation of a VC
member into an online customer?

2. Literature Review and Conceptual Framework

2.1 VC as a Source of Potential Benefits to the Online Vendor
A vendor-sponsored VC can be described as an online social entity comprised of existing
and potential customers that is organized and maintained by an e-retailer to facilitate the
exchange of opinion and information regarding offered products and services (Srinivasan
et al. 2002). VCs could be beneficial to the online vendor in a number of ways
(Srinivasan et al. 2002). First, VCs are highly effective in facilitating word-of-mouth
(Hagel and Armstrong 1997). Second, customers’ ability to exchange information and
compare product experiences can add to customer loyalty (Frank 1997). As many
consumers regularly turn to other consumers for advice and information regarding
products and services that they wish to purchase, an e-retailer can further increase loyalty
among its customers by facilitating this informational exchange among them through the
VC (Punj and Staelin 1983). Third, the VC members identify themselves with a larger
group and thus develop lasting bonds with the VCs (Mael and Ashforth 1992). For
instance, Harley Davidson customers, who call themselves “hogs,” frequently develop
bonds with their VC members that act as strong deterrents to buying any other
motorcycle brand. Fourth, VCs facilitate relationship building among the members based
on a shared interest and thus induce commitment toward the VC (Oliva 1998). For
example, a retailer of recycled paper products can host a community that is focused on
protecting the environment. Members of this VC can be loyal because they value the social interaction and because the retailer’s way of doing business is aligned with their own values. Fifth, a VC can help improve sales and profitability of the online vendor (Hagel and Armstrong 1997). Last, VCs can be useful for market expansion, testing new product ideas, new product development, monitoring customers’ purchase patterns, and gauge early demand for products (Preece and Maloney-Krichmar 2002). VCs help online firms and vendors in reaching customers worldwide via the Internet and direct marketing of products to a diverse group of customers. VCs help accumulate detailed customer profile for target marketing new and existing products and services. In addition, communications between consumers at these sites provides the companies with valuable feedback about the needs, likes and dislikes of their customers (Hagel and Armstrong 1997; Preece 2000).

Although in theory VCs could be of numerous benefits to online vendors, in practice they have not shown such glaring success in e-commerce. A number of studies (e.g., Blanchard and Markus 2004; Koh and Kim 2004) note that successful VCs are characterized by a significant affective bond among members. There are different types of VCs on the web which fulfill one or more of the fantasy, transaction, relationship and interest needs of the members (Armstrong and Hagel 1996). VCs of fantasy (e.g., activeworlds.com) are not useful for a meaningful and mature communication and in VCs of transaction (e.g., eBay.com) participation among members is usually for a short term and is restricted to transactions. Usually the VCs of relationship and VCs of interest are successful in creating commitment among their members (Gupta and Kim 2004). Gupta and Kim (2004) assert that commitment to VC is essential for online firms and vendors to obtain benefit from the VC. This commitment is reflective of customers’ affective bond in the VC. Shan et al. (2005) argue that affective bonds among customers and commitment toward the VC can hasten the process of converting the VC members into online customers. In other words, members’ commitment to participate in the VC is important for online vendors to obtain any commercial benefit from them. Therefore, to understand the mechanism of converting a VC member into an online customer we propose the following conceptual framework (Figure 1).

![Figure 1: Conceptual framework](image)

### 2.2 VC Participation

Participation in VC can take place at various levels. In the beginning, one may participate simply by observation, he may then begin to interact with other members of the VC and in the later stages he may be a very committed, active, and helping member of the VC. As discussed earlier, a successful VC is characterized by committed participation among the members and active helping behavior on the part of the members toward each other.

Commitment to a relationship has been widely studied in marketing studies. Relationship commitment is defined as an exchange partner believing so as to warrant maximum efforts at maintaining the relationship; that is, the committed party believes that the relationship is worth working on to ensure that it endures indefinitely (Morgan
Gundlach et al. (1995) propose three components of commitment, namely an input component, an attitudinal component, and a temporal dimension (Gundlach et al. 1995). Input component refers to an affirmative action taken by one party that creates a self-interest stake in the relationship and demonstrates something more than a mere promise. Attitudinal component signifies an enduring intention by the parties to develop and maintain a stable long-term relationship. This can be recognized as the member’s commitment to go beyond prescribed roles and perform above the call of duty. Existence of a committed relationship implies action instinctively for the benefit of one another and is possible when parties share goals, values and an affective attachment. The temporal dimension highlights the fact that commitment means something only over the long-term, that is, the inputs and attitudes brought to the relationship must reveal consistency over time. In the VC context, commitment can thus be characterized as the members helping behavior and active participation in the VC.

According to attitude-behavior theories (Fishbien and Ajzen 1975; Fazio et al. 1978), behavior in any given situation is a function of an individual’s immediate perception of the attitude object in the context of the situation in which the object is encountered. The attitude in this case is related to past memory and past experiences, which results in an evaluation of the object (decision). Applying the attitude-behavior theory to our current research, a positive attitude toward interaction in the VC will influence members to participate in the VC. As commitment to VC is an intense level of participation among members in the VC characterized by members’ helping behavior toward other VC members, it can be considered as the outcome of one’s positive attitude toward the VC.

2.3 Benefits to the Vendor
As discussed earlier, an online vendor can obtain numerous benefits from its virtual community. The central thrust of the marketing activities of a firm is viewed in terms of development, maintenance and enhancement of customer’s loyalty toward its products and services (Dick and Basu 1994). Hence, we consider loyalty to the vendor as one of the benefits sought by online vendors. Early views of brand loyalty focused on repeat purchase behavior (Srinivasan et al. 2002). Zeithaml et al. (1996) define customer loyalty as a behavioral intention dealing with customer’s intention to do more business with the vendor and to recommend that vendor to other customers. Jacoby and Chestnut, (1978) have suggested that a behavioral definition is insufficient because it does not distinguish between true loyalty and spurious loyalty that may result, for example, from a lack of available alternatives for the consumer. Therefore researchers (e.g., Gremler 1995) have proposed measuring loyalty by means of an attitudinal dimension in addition to a behavioral dimension. Therefore, consistent with Anderson and Srinivasan (2003) we define loyalty to the vendor as a favorable attitude toward the online vendor resulting in repeat buying behavior.

Moreover, many online vendors expect to improve their sales through a VC as a VC is capable of attracting and retaining customers. Intention to purchase represents VC members’ willingness to buy from the online vendor. Therefore, customer intention to purchase is another benefit sought by the online vendor. Loyal customers would engage in repeat purchases from the online vendor. When a VC member becomes a loyal
customer of the online store, he/she would visit the store often, patronize it and conduct transactions with the online store.

2.4 Transfer Process: A Classical Conditioning Approach

A critical issue, and the central thrust of this paper, is to understand the mechanism by which a VC member can be converted into an online customer. The conversion mechanism involves change in the object of behavior. In the beginning the object of behavior (i.e., participation in VC) is the VC. Later the object of behavior changes from VC to the online vendor, whereby the behavior is to conduct transactions with the online vendor. This mechanism can be studied from the stimulus-organism-response paradigm of behavioral learning theories.

Behavioral learning theory is concerned with the impact of environment on eliciting overt behavior from the individual. As a result of experience or practice, there is a relatively permanent change in the behavior of an individual. This phenomenon is known as learning. The behavioral learning theory is represented as a stimulus-response paradigm. In the presence of appropriate stimulus, desired response can be elicited from an individual. Classical conditioning theory (Allen and Madden 1985), proposed by Ivan Pavlov, is the first type of learning discovered and studied within the behaviorist tradition. Classical conditioning theory is based upon the idea that learning is a function of change in overt behavior. Changes in behavior are the result of an individual's response to events (stimuli) that occur in the environment. Classical conditioning procedures can lead people to form attitudes toward objects without any conscious deliberation about those objects’ attributes (Eagly and Chaiken 1993). Therefore, we apply classical conditioning approach to study the transfer mechanism from VC to vendor. In the classical conditioning model, there is an unconditioned/natural stimulus (favorable information about the online vendor), which elicits the response of interest (e.g., purchase from the online vendor) and a neutral or orienting stimulus (e.g., VC), which doesn’t elicit the response of interest. This neutral stimulus is paired with unconditioned/natural stimulus to generate the response of interest. As the learning occurs, this neutral stimulus is transformed into a conditioned stimulus and when presented by itself, it elicits the response of interest. Thus, using this model online vendor can generate interest in the VC members regarding their online store.

To understand its application to VC, we would first understand its application to advertising. A common practice of television advertising is to associate one’s brand with appealing visual imagery (e.g., adorable animals, panoramic vistas, and celebrities) to shape the consumer’s attitude to their brand. The advertisers assume that the affective appeal of the stimulus/source (e.g., celebrity endorsers and physically attractive models) will transfer to their brand and will increase the effectiveness of their advertisement (Brown and Stayman 1992). A VC can be thought of as an advertising channel for an online store whereby reinforcement about the products and services of the online store is also a part of regular communication. With repeated exposure, the VC members’ overtly learn about the online vendor and thus form favorable attitude toward it. Initially a member may feel good about participating in the VC. He associates the VC with the online vendor. So, the member begins to feel good about the online vendor whenever he thinks about the VC. This associating the online vendor with the VC, about which a member has good opinion, conditions him to think good about the online vendor.
sponsoring the VC. Thus, participation in the VC gets transformed into a favorable attitude and overt behavior toward the online vendor. An important point to note in the application of classical conditioning approach is that the reinforcement is positive. That means the VC should impart a positive image about the vendor. If the VC itself is fraught with problems of ephemeral, dry or negative communication, then the member may form a neutral or negative image about the vendor.

3. Research Model and Hypothesis

As discussed earlier, VC participation is reflected by members’ commitment to participate in the VC which can be at various levels beginning from merely lurking to being a very active and helping member of the VC. Commitment to VC is characterized by the members’ helping behavior and active participation (intense interaction) in the activities of the VC based on a strong psychological attachment to the VC. Participation in VC requires a favorable attitude toward VC. Therefore, we include attitude as a predictor of members’ commitment to VC. Attitude toward a VC is an overall evaluation / judgment of the VC based on the members’ cognitive and affective beliefs regarding interaction in the VC. This participation in VC gets transformed into the benefits to the online vendor. Loyalty to the vendor and intention to purchase from the vendor are two of the commercial benefits most expected by the online vendors. Thus, they are represented as benefits to the online vendor. Based on the above discussion, we propose the following research model (Figure 2).

**Figure 2: The Research Model**

Commitment to VC is characterized by an intense level of participation in activities related to VC such as helping behavior toward other members, and playing of an active role in the running of the VC. In situations where past experience and direct experience plays a significant role in determining behavior, the attitude influences behavior directly rather than through behavioral intention (Fazio et al. 1989). Therefore, the direct influence of attitude to commitment (behavior) has been hypothesized in this research. Consumer emotional and judgmental reaction to products or services is considered a key influential factor for customer commitment. As attitude is a summary evaluation (Ajzen 2001) of customer emotional and judgmental reaction to products or services, we hypothesize that a positive attitude toward participation in VC would enhance members’ commitment to participate in the VC.

**H1: Attitude toward the VC is positively related to commitment to the VC.**
Attitude toward VC is a summary evaluation of customers’ overall participation in the VC. A favorable attitude toward the store is essential for an online customer to purchase from the store (Dick and Basu 1994). In a successful VC, the discussions among members would orient them toward a favorable attitude toward the VC. In a VC, members discuss about the products and services provided the online vendor. They discuss their experiences and so on. For a member who has a favorable attitude toward the VC, such discussions would act as unconditioned/natural stimulus. When an online vendor facilitates such information exchange in the VC, the member begins to associate VC (neutral stimulus) with the online vendor (unconditioned response), through such pairing of favorable discussion about the vendor (unconditioned/natural stimulus) with the VC. In the later stages, even without such information exchanges, members would hold a favorable attitude toward the online vendor as they have become conditioned through such pairing of natural stimulus with neutral stimulus. Thus, according to classical conditioning theory the favorable attitude toward VC gets transformed into favorable attitude toward the online vendor. As customer loyalty has been typically defined as a customer’s favorable attitude toward an online store (Anderson and Srinivasan 2003; Srinivasan et al. 2002), we hypothesize:

\[ H2: \text{Attitude toward VC is positively related to loyalty to the vendor} \]

The relationship between commitment and loyalty has undergone a long debate due to lack of clear conceptual distinction between the two constructs (Pritchard et al. 1999). Recent studies (e.g., Pritchard et al. 1999) attempted to draw a conceptual distinction between commitment and loyalty. While customer commitment emphasizes the quality of a relationship with the organization, requiring input on the part of member with an intent to continue relationship over a period of time (Gundlach et al. 1995), customer loyalty signifies loyalty attitudes and behavior toward the organization in general (Too et al. 2001). Thus, commitment becomes a key component of delivering loyalty.

In a VC, members exchange information, compare their product experiences, seek advice and information regarding products and services they wish to purchase with each other (Srinivasan et al. 2002). Since, the members are already committed to VC they would hold favorable opinion about the VC. Thus, they trust the information exchanged in the VC and experiences of other members. Moreover, they themselves participate extensively in helping other members of the VC. When the online vendor facilitates information exchange (unconditioned/natural stimulus) among members in the VC (neutral stimulus), such information exchange makes the members associate the VC with the online vendor. Moreover, seeking support of committed members helps the online vendor to establish a positive image among the VC members who get positive reinforcement from the experience of other members of the VC. Over a period of time the commitment to VC gets transformed into a favorable attitude toward the online vendor. For example, the reviews provided by customers of Amazon.com regarding the products they purchase from Amazon.com help other customers to form their own views about the products. Here, the customer is valuing the input of other customers and thus forming his own opinion about the products sold at Amazon.com. eBay also provides the ratings of their sellers which further reinforce the legitimacy of the seller as well as eBay.
Moreover, customers begin to identify themselves to be a part of the VC (Mael and Ashforth 1992). Such members become loyal to the vendor because they value the social interaction and because the retailer’s way of doing business is aligned with their own values. Thus, the transfer from customer’s commitment to VC to loyalty to the vendor takes place. Hence, we hypothesize:

\[ H3: \text{Commitment toward VC is positively related to loyalty to the vendor} \]

A committed member has an intention to maintain a relationship with a particular VC – that is, he/she will revisit and interact repeatedly in the future. Many researchers (e.g., Garbarino and Johnson 1999) have investigated the relationship between commitment and future intention. They argue that commitment is a predictive construct of future intention. In the VC context, members discuss about the products and services offered by the current online vendor and other online store. They may seek advice from other members about their purchase related experiences from the online vendor. The ready word of mouth regarding purchase and delivery is easily available regarding the current vendor, while it may not be so for other online vendors. The online vendor may offer products and services at a discount to its VC members as is the practice with many online bookstores. When members are committed to their VC, they value the input of other members of the VC. According to classical conditioning theory, such input of other members in the community will act as an unconditioned/natural stimulus regarding favorable intention to purchase from the online vendor. Thus, the members begin to associate their own purchase experience with the online vendor and the experience of other members in the VC (neutral stimulus) with the online vendor, thus forming a favorable intention about the online vendor. With such experiences, the VC becomes a conditioned stimulus and the members develop a favorable intention regarding purchasing from the online vendor. Hence, we hypothesize:

\[ H4: \text{Commitment toward VC is positively related to intention to purchase from the vendor.} \]

According to the theory of planned behavior, attitude toward a behavior influence intention toward that behavior. As loyalty is characterized as an attitude toward the vendor a loyal attitude toward the online vendor would enhance their intention to purchase from the vendor. Loyal customers enhance word-of-mouth communication to others as well as engage in repeat purchases. VC customers who have developed a loyal attitude toward the vendor may engage in telling about it to the other members of the VC and to their acquaintances as well. Moreover, they would consider the online vendor as the first choice when it comes to purchasing. Hence, we hypothesize:

\[ H5: \text{Loyalty to the vendor is positively related to intention to purchase from the vendor.} \]

4. Research Methodology
We choose a Korean online store – Urii.com – which caters to members needs of relationship building (mothers as niche audience), and interest (common interest of baby care). Urii.com also comprises a shopping mall which sells products like milk, infant food, toys, and products for women. The VC in Urii.com is thus formed around the products sold in the online store and therefore, presents an interesting case for the current
study. Also, since online purchasing is well accepted in Korea, therefore this online store would provide us with a good research context.

We developed the survey instrument (Appendix A) by adopting existing validated scales wherever possible or adapting them to the current context, whenever required. We measured the variables on a seven-point Likert scale (1=strongly disagree, 7=strongly agree). The empirical data for the study was collected from the Web site of Urii.com for a period of two weeks. We publicized the online survey with a banner at the homepage of Urii.com. We obtained a total of 632 valid responses (Table 1).

Table 1: Descriptive statistics of the respondent’s characteristics

<table>
<thead>
<tr>
<th>ITEM</th>
<th>ATTRIBUTES</th>
<th>Total</th>
<th>%</th>
<th>Mean (S.D.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>GENDER</td>
<td>Male</td>
<td>26</td>
<td>4.11</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Female</td>
<td>606</td>
<td>95.89</td>
<td></td>
</tr>
<tr>
<td>AGE</td>
<td>20-30</td>
<td>285</td>
<td>45.09</td>
<td>29.97 (3.24)</td>
</tr>
<tr>
<td></td>
<td>30-40</td>
<td>341</td>
<td>53.96</td>
<td></td>
</tr>
<tr>
<td></td>
<td>40-50</td>
<td>6</td>
<td>0.95</td>
<td></td>
</tr>
<tr>
<td>PROFESSION</td>
<td>Housewife</td>
<td>427</td>
<td>67.56</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Professional</td>
<td>53</td>
<td>8.39</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Employed</td>
<td>92</td>
<td>14.56</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Self-employed</td>
<td>16</td>
<td>2.53</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Other</td>
<td>40</td>
<td>6.33</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Not Answered</td>
<td>4</td>
<td>0.63</td>
<td></td>
</tr>
<tr>
<td>USAGE EXPERIENCE</td>
<td>&lt; 1 year</td>
<td>459</td>
<td>72.63</td>
<td>0.81 (0.63)</td>
</tr>
<tr>
<td></td>
<td>1 - 2 years</td>
<td>143</td>
<td>22.63</td>
<td></td>
</tr>
<tr>
<td></td>
<td>&gt; 2 years</td>
<td>30</td>
<td>4.75</td>
<td></td>
</tr>
<tr>
<td>REASONS FOR USING VC</td>
<td>Fulfilling interests / hobby</td>
<td>605</td>
<td>95.73</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Performing transactions</td>
<td>124</td>
<td>19.62</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Having fun by interacting with others</td>
<td>208</td>
<td>32.91</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Forming relationships with the community members</td>
<td>33</td>
<td>5.22</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Total respondents</td>
<td>632</td>
<td>100.00</td>
<td></td>
</tr>
</tbody>
</table>

5. Data analysis and results
According to standard LISREL methodology, the measurement model was revised by dropping one at a time, items that shared a high degree of residual variance with other items (Gefen et al. 2000). The test results indicate that COMM2 violated unidimensionality and dropping it would drop chi-square significantly. Therefore, we dropped COMM2. After dropping COMM2, the CFA showed good model fit.

Next, we assessed the convergent validity and discriminant validity of the constructs. As shown in Table 2, all standardized path coefficients (except COMM3) are above 0.7. The individual path loadings are all greater than twice their standard error. The t-statistic was significant for all the items. The CR for each construct was above 0.7, and
the AVE for each construct was above 0.5. Thus convergent validity was adequately established.

Table 2: Results of Convergent Validity Testing

<table>
<thead>
<tr>
<th>ITEMS</th>
<th>Std. Loading</th>
<th>t-value</th>
<th>Std. Error</th>
<th>Meas. Error</th>
<th>AVE</th>
<th>CR</th>
</tr>
</thead>
<tbody>
<tr>
<td>ATTI1</td>
<td>0.86</td>
<td>26.42</td>
<td>0.038</td>
<td>0.27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATTI2</td>
<td>0.92</td>
<td>29.81</td>
<td>0.036</td>
<td>0.15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATTI3</td>
<td>0.85</td>
<td>26.03</td>
<td>0.036</td>
<td>0.28</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATTI4</td>
<td>0.84</td>
<td>25.46</td>
<td>0.038</td>
<td>0.30</td>
<td>0.75</td>
<td>0.92</td>
</tr>
<tr>
<td>COMM1</td>
<td>0.85</td>
<td>23.13</td>
<td>0.044</td>
<td>0.27</td>
<td></td>
<td></td>
</tr>
<tr>
<td>COMM3</td>
<td>0.53</td>
<td>13.01</td>
<td>0.054</td>
<td>0.72</td>
<td>0.52</td>
<td>0.76</td>
</tr>
<tr>
<td>COMM4</td>
<td>0.75</td>
<td>19.73</td>
<td>0.049</td>
<td>0.44</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LOYA1</td>
<td>0.89</td>
<td>28.39</td>
<td>0.036</td>
<td>0.20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LOYA2</td>
<td>0.92</td>
<td>29.90</td>
<td>0.035</td>
<td>0.15</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LOYA3</td>
<td>0.89</td>
<td>28.14</td>
<td>0.035</td>
<td>0.21</td>
<td>0.74</td>
<td>0.92</td>
</tr>
<tr>
<td>LOYA4</td>
<td>0.73</td>
<td>20.93</td>
<td>0.042</td>
<td>0.47</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PINT1</td>
<td>0.89</td>
<td>28.61</td>
<td>0.040</td>
<td>0.20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PINT2</td>
<td>0.89</td>
<td>28.62</td>
<td>0.040</td>
<td>0.20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PINT3</td>
<td>0.94</td>
<td>31.22</td>
<td>0.040</td>
<td>0.12</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PINT4</td>
<td>0.88</td>
<td>27.98</td>
<td>0.044</td>
<td>0.22</td>
<td>0.81</td>
<td>0.95</td>
</tr>
</tbody>
</table>

Discriminant validity is established if the square root of a construct’s AVE is larger than its correlations with any other construct (Fornell and Lacker 1981). As shown in Table 3, the square root of AVE for each construct exceeded the correlations between that construct and other constructs. Thus, the questions used in this study have discriminant validity.

Table 3: Inter-correlations between Latent Variables

<table>
<thead>
<tr>
<th>MEAN</th>
<th>SD</th>
<th>COMM</th>
<th>LOYA</th>
<th>PINT</th>
<th>ATTI</th>
</tr>
</thead>
<tbody>
<tr>
<td>COMM</td>
<td>5.11</td>
<td>1.04</td>
<td>0.72</td>
<td></td>
<td></td>
</tr>
<tr>
<td>LOYA</td>
<td>5.83</td>
<td>1.03</td>
<td>0.59</td>
<td>0.86</td>
<td></td>
</tr>
<tr>
<td>PINT</td>
<td>5.03</td>
<td>1.23</td>
<td>0.37</td>
<td>0.49</td>
<td>0.90</td>
</tr>
<tr>
<td>ATTI</td>
<td>5.61</td>
<td>1.04</td>
<td>0.66</td>
<td>0.71</td>
<td>0.38</td>
</tr>
</tbody>
</table>

- COMM: Commitment, LOYA: Loyalty, PINT: Purchase Intention, ATTI: Attitude

We then examined the structural model of Urii.com using LISREL (Figure 2). The fit indices suggest good model fit: Normed $\chi^2 = 4.08$, GFI = 0.93, AGFI = 0.90, NFI = 0.98, NNFI = 0.98, CFI = 0.98, RMSEA = 0.070, Std. RMR = 0.039.
The hypothesis testing results indicate that attitude toward VC significantly influences commitment to VC explaining 43% of variance; attitude toward VC and commitment to VC significantly influence loyalty to the vendor explaining 53% of variance; and commitment to VC and loyalty to VC significantly influence intention to purchase from the vendor explaining 25% of variance.

5. Implications and Conclusions
This study has several implications. First, we examined the conversion of VC members into purchase customers based on the classical conditioning approach. Few studies have examined how the customer participation in VC can be converted into their loyalty to the vendor and purchase intention to the store. The classical conditioning approach has been used in advertising to induce a favorable attitude toward a product by associating with something valuable to the customer (e.g., celebrity). The same notion can be transferred to VCs, whereby favorable reinforcement about VC from the vendor and other customers would help converting VC members into loyal customers.

Second, this study provides insight into how a VC could be used to provide benefits to the online vendor other than improving sales. This study demonstrated the important role of commitment to the VC. When the members are committed to the VC, they can be of numerous benefits, provided the online vendor has established a favorable image about itself among the VC members. Establishing a prior favorable image according to classical conditioning theory would be useful to obtain members’ assistance as members would associate VC with a favorable image for the vendor. Then the VC could be used for taking benefits such as product promotion, gauging market demand, and advertising & sales.

Third, this study shows that vendors need to put effort into imparting favorable attitude among the customers regarding the vendor. Both through customer-customer interactions and customer-vendor interactions, a vendor needs to give a positive image among the VC members. A vendor should facilitate its VC members to participate in the VC activities and foster commitment among them. Some of the ways in which this could be done is by organizing community activities, such as contests, quizzes, outdoor events. In other words, a vendor should play an active role in the VC.
Fourth, this study also provides reasons behind failure of so many VCs in generating online sales. The customers are either ephemeral or they lack commitment. Needless to say, such customers would have less favorable attitude toward participation in the VC. Another reason for failure is that many online vendors do not facilitate information exchange among their VC members. So, the members do not get reinforcement about the online store and hence their conversion into loyal customers does not take place. In many of the VCs, especially those related to transaction, members are ephemeral and hence they would not become committed and hence loyal members of the VC. Online vendors should keep the members interest in the VC alive through various events. For example, a retailer of recycled paper products can host a VC that is focused on protecting the environment. Members of this VC can be loyal because they value the social interaction and because the retailer’s way of doing business is aligned with their own values. Kodak website, for example, has an embedded discussion board that serves as a gathering place for discussion of photography and visual storytelling. Amazon.com provides reinforcement to its customers by providing reviews on books from various customers. Thus, new members access the opinions of other members and they may themselves add to this collection of opinions.

We acknowledge the limitations of our study. First, there are different types of online stores on the Internet incorporating a VC and our study examined one of them. This may affect generalizability of the results. Therefore, the framework needs to be validated across different online stores with different focus for establishing generalizability. For example, an online store selling fashion products may have more affective appeal to its VC members than a grocery store thus affecting the results. Secondly, the VC examined was female dominated. Errors may creep in the analysis due to gender as it plays a significant role in influencing the group dynamics in the VC (Gefen and Ridings 2005). Thirdly, apart from loyalty to the vendor, a VC can provide numerous other benefits as discussed earlier. Future studies can examine the role of VC in enhancing product development and other such benefits to the online vendor. Lastly, since Urii.com is a Korean store, cultural, social and technological factors may bias the results. Particularly, Asians are more social as compared to Europeans and Americans (Hofstede 1980). This may influence formation of commitment to the VC and subsequent loyalty to the vendor. Therefore, the results of the model should be validated across various cultures and nations for establishing generalizability.

REFERENCES


## APPENDIX A: SURVEY INSTRUMENT

<table>
<thead>
<tr>
<th>CONSTRUCT</th>
<th>ITEMS</th>
<th>QUESTION WORDING</th>
<th>REFERENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude</td>
<td>ATTI1</td>
<td>Bad – Good</td>
<td>Ajzen 2001</td>
</tr>
<tr>
<td></td>
<td>ATTI2</td>
<td>Dislikable – Likable</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ATTI3</td>
<td>Harmful – Beneficial</td>
<td></td>
</tr>
<tr>
<td></td>
<td>ATTI4</td>
<td>Unpleasant – Pleasant</td>
<td></td>
</tr>
<tr>
<td>Commitment</td>
<td>COMM1</td>
<td>I am proud to belong to the VC of this website.</td>
<td>Garbarino and Johnson 1995</td>
</tr>
<tr>
<td></td>
<td>COMM2</td>
<td>I put my efforts for the success of the VC of this website.</td>
<td>Morgan and Hunt 1994</td>
</tr>
<tr>
<td></td>
<td>COMM3</td>
<td>I actively contribute to the VC of this website.</td>
<td>Self developed</td>
</tr>
<tr>
<td></td>
<td>COMM4</td>
<td>I am very committed to my relationship with the VC of this website.</td>
<td>Morgan and Hunt 1994</td>
</tr>
<tr>
<td>Loyalty</td>
<td>LOYA1</td>
<td>I would say positive things about Urii.com to others.</td>
<td>Zeithaml et al. 1996</td>
</tr>
<tr>
<td></td>
<td>LOYA2</td>
<td>I would recommend Urii.com to someone who seeks my advice.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LOYA3</td>
<td>I would encourage others to use Urii.com.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>LOYA4</td>
<td>I would consider Urii.com as first choice for the needs of any information or products related to baby-care.</td>
<td></td>
</tr>
<tr>
<td>Purchase Intention</td>
<td>PINT1</td>
<td>The probability that I would consider buying product(s) from Urii.com is high.</td>
<td>Dodds et al. 1991</td>
</tr>
<tr>
<td></td>
<td>PINT2</td>
<td>If I were to buy a product, I would consider buying it from Urii.com.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PINT3</td>
<td>The likelihood of my purchasing a product from Urii.com is high.</td>
<td></td>
</tr>
<tr>
<td></td>
<td>PINT4</td>
<td>My willingness to buy a product from Urii.com is high.</td>
<td></td>
</tr>
</tbody>
</table>